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The Eighty Percent and Twenty Percent Solutions to Nuclear Proliferation

I. INTRODUCTION: NON-PROLIFERATION AT THE CROSSROADS

Nuclear non-proliferation issues abound in the news. Of note, the U.S. Air Force has been reprimanded for lax nuclear security measures,¹ Iran is accused of trying to build a bomb,² and experts predict that the forty-year-old Treaty on the Non-Proliferation of Nuclear Weapons (NPT)³ is failing.⁴ These nuclear proliferation fears correspond to the issues of loose nukes, nations developing nuclear arms, and inability of the international community to control nuclear non-proliferation. Whether or not these fears become reality depends on the effectiveness of the international nuclear non-proliferation system.

Prognostications tend towards failure. In a worst-case scenario, we could find ourselves living in a world with nuclear terrorists, nuclear wars, and no international organizations able to control the chaos.⁵ To avert the nuclear parade of horrors, most academics and politicians agree that something must be done, but solving these problems is difficult due to political differences inherent in the issues of security, energy, and national interest. Some think that the current mechanisms of non-proliferation are broken. They often advocate

1. Tom Vanden Brook, *Nuclear Mishaps Lead to Air Force Resignations*, USA TODAY, June 6, 2008, at A4 (discussing the resignations of U.S. Air Force Secretary Michael Wynne and U.S. Air Force Chief of Staff General Michael Mosley following a report of “an overall decline in nuclear weapons stewardship”).

2. Brian Ross & Christopher Isham, *Exclusive: Iran Nuclear Bomb Could Be Possible by 2009*, http://blogs.abcnews.com/theblotter/2007/04/exclusive_iran_.html (Apr. 2, 2007, 6:15 EST).

3. Treaty on the Non-Proliferation of Nuclear Weapons, *opened for signature* July 1, 1968, 21 U.S.T. 483, 729 U.N.T.S. 161 [hereinafter NPT].

4. See, e.g., Jason D. Ellis, *The Best Defense: Counterproliferation and U.S. National Security*, WASH. Q., Spring 2003, at 115, 119–20; Jack I. Garvey, *A New Architecture for the Non-Proliferation of Nuclear Weapons*, 12 J. CONFLICT & SEC. L. 339 (2008); William C. Martel, *The End of Non-proliferation?*, STRATEGIC REV., Fall 2000, at 16.

5. See *Quick Read Synopsis: Confronting the Specter of Nuclear Terrorism*, ANNALS AM. ACAD. POL. & SOC. SCI., Sept. 2006, at 167, 201–02 (summarizing a parade of horrors that could come to pass if nuclear proliferation is not controlled).

either for abandoning the system in favor of national action or for strengthening the system. This discussion, however, focuses on the NPT and neglects existent *ad hoc* approaches to non-proliferation. These *ad hoc* mechanisms developed to fill the formal mechanisms' gaps in capability, and they are part of the nuclear non-proliferation solution.

This Comment argues that the formal mechanisms of non-proliferation are not broken, but that even when they are most effective they do not prevent all forms of proliferation. While the formal mechanisms may be strengthened, they will essentially remain the eighty percent solution⁶ to nuclear non-proliferation, because the irreconcilable political interests of major world nations and the existence of rogue state and non-state actors necessitates an *ad hoc* approach. Informal methods currently in use, multilateral and bilateral negotiations and preemptive strikes, supply the remaining twenty percent solution to nuclear non-proliferation. The undesirable legal and political effects of *ad hoc* action do not justify attempts to eliminate them.

This Comment proceeds in Part II by examining the non-proliferation problem, viewing the problem through historical and political contexts. Part III examines the current mechanisms for controlling proliferation and their legal doctrines. The oft pointed-to mechanism of non-proliferation is the NPT, but it is only one instrument in an array of instruments available to enforce the goal of non-proliferation. The formal mechanisms are here characterized as 1) the enforcement provisions of the Nuclear Non-Proliferation Treaty as embodied by the International Atomic Energy Agency; 2) action taken by the U.N. Security Council; and 3) multilateral organizations.⁷ In contrast, informal mechanisms include bilateral

6. This is a broad allusion to the Pareto 80/20 rule, an economics theory positing that eighty percent of a problem is solved by twenty percent of the effort given to resolve it. In the context of nuclear non-proliferation, this would mean that the twenty percent solution now provided by *ad hoc* mechanisms solves the eighty percent majority of remaining nuclear non-proliferation problems. For more information on the Pareto 80/20 rule, see JOSEPH M. JURAN, CRITICAL EVALUATIONS IN BUSINESS AND MANAGEMENT 381-82 (John C. Wood & Michael C. Wood eds., 2005) (explaining the theory and also that the theory is misnamed).

7. Export controls are an important part of the formal nuclear non-proliferation regime, but as they are usually reflections of the International Atomic Energy Agency (IAEA), Security Council, multilateral agreements, and national policies, they are not analyzed separately in this article. For a discussion on current export controls, see James E. Bartlett III et al., *Export Controls and Economic Sanctions*, 42 INT'L LAW 301 (2008).

and multilateral negotiations engaged in on an *ad hoc* basis by interested parties and preemptive strikes (often unilateral). These methods, collectively, address the non-proliferation problem, and should be considered in a holistic discussion of nuclear non-proliferation.

Part IV examines the relationship between the formal and informal mechanisms, evaluating the political constraints that would limit a mandatory regime and examining the legality of *ad hoc* efforts under international law. This part also justifies unilateral action to prevent nuclear proliferation with the doctrine of humanitarian intervention and posits that preemptive action is legal under international law. Although the formal mechanisms are unable to control some aspects of the proliferation problem, *ad hoc* mechanisms adequately fill these system gaps. The international community should recognize their value and not act to prevent them when they are appropriate.

II. NUCLEAR WEAPONS ON THE WORLD STAGE: THE NON-PROLIFERATION PROBLEM

On August 9, 1945, the United States military dropped a nuclear bomb on Nagasaki, Japan. Since that day, no nuclear weapon has been used in conflict, but nuclear weapons remain terrifying instruments of war—perhaps the most terrifying. Although many militaries around the world can put a conventional bomb on a building and leave the neighboring buildings untouched via precision targeting,⁸ nuclear weapons are city and civilization killers. An all-out nuclear war would surely result in far more civilian than military deaths. During the Cold War, political efforts and the threat of mutually assured destruction prevented the use of nuclear weapons.⁹ That same period birthed the movement to limit and

8. See, e.g., Air Force Link, Joint Direct Attack Munition GBU-31/32/38, <http://www.af.mil/information/factsheets/factsheet.asp?fsID=108> (last visited Sept. 14, 2009) (revealing the accuracy of the United States' JDAM kit to within five meters). Nations unable to produce their own precision-guided munitions are able to purchase them on the open market. See Piotr Butowski, *Ukraine Develops Indigenous Guided Airborne Weapons*, JANE'S AIR FORCES NEWS (Aug. 17, 2006), http://www.janes.com/defence/air_forces/news/misc/misc060817_1_n.shtml (announcing Ukraine's entrance into the precision-targeted munitions market and an intention to sell the weaponry).

9. Charles H. Fairbanks, Jr., *MAD and U.S. Strategy*, in GETTING MAD: NUCLEAR MUTUAL ASSURED DESTRUCTION, ITS ORIGINS AND PRACTICES 137, 137 (Henry D. Sokolski ed., 2004) (presenting the theory of mutually assured destruction while asserting that

eventually remove nuclear weapons from the world, which today is a major policy method for providing security against a nuclear attack.

Through the NPT, nuclear powers agreed to limit their warhead stockpiles (vertical proliferation) and nations without nuclear weapons agreed not to seek them (horizontal proliferation).¹⁰ The latter is currently the major concern because it is unlikely that recognized nuclear powers would engage in nuclear war, and therefore this Comment primarily addresses horizontal proliferation.¹¹ To prevent horizontal proliferation, the NPT structure assumes that when a nation possesses nuclear weapons, neighboring states feel more pressure to develop their own arsenals for protection. The treaty sought to induce the opposite effect, where nations without nuclear weapons could rely on the treaty to provide that their neighbors would not develop weapons and that current nuclear powers would eventually disarm. The success of the treaty, however, is hotly debated. To many policymakers and bureaucrats it is “arguably the most successful arms control treaty in human history,”¹² whereas many academics see it as a failure.¹³

Those that argue the NPT is failing point to recent proliferation. As the polar world of the Cold War fades further into history, nations have increasingly used nuclear power and nuclear weapons to play in the international power game. This technique is a doctrinal snowball that gains more truthfulness as it is more broadly used. India, for example, never signed the NPT, became a possessor of nuclear weapons in 1974,¹⁴ and then completed a treaty normalizing its civil nuclear status with the United States in 2008.¹⁵ Pakistan

it was not U.S. policy).

10. Richard L. Williamson, Jr., *Law and the H-Bomb: Strengthening the Nonproliferation Regime to Impede Advanced Proliferation*, 28 CORNELL INT'L L.J. 71, 77 (1995) (discussing horizontal, vertical, and advanced proliferation).

11. There are advocates for more reductions of the U.S. and Russian nuclear stockpiles, but worry that a rogue state would develop a nuclear weapon resonates as the greater danger.

12. JIM WALSH, LEARNING FROM PAST SUCCESS: THE NPT AND THE FUTURE OF NON-PROLIFERATION 3 (2006), available at <http://www.wmdcommission.org/files/no41.pdf>.

13. See, e.g., Ellis, *supra* note 4, at 119; Garvey, *supra* note 4, at 339; Martel, *supra* note 4, at 16.

14. India said that it had a “peaceful nuclear explosion experiment” on May 18, 1974. George Perkovich, *India Explodes A “Peaceful” Nuclear Device, in INDIA’S NUCLEAR BOMB: THE IMPACT ON GLOBAL PROLIFERATION* 161, 178 (1999).

15. Secretary of State Condoleezza Rice and Indian Minister of External Affairs Pranab Mukherjee, At the Signing of the U.S.-India Civilian Nuclear Cooperation Agreement (Oct. 10, 2008), available at <http://www.state.gov/secretary/rm/2008/10/110916.htm>

successfully tested a nuclear weapon in 1998,¹⁶ and currently faces no sanctions from the U.N.¹⁷ North Korea signed the NPT, later withdrew ratification,¹⁸ and in 2006 successfully detonated a nuclear device.¹⁹ Adept at using the nuclear card, North Korea has since traded a promise of disarmament for a removal of sanctions and access to foreign capital²⁰ and once again backed out of that deal after realizing the benefits of the agreement.²¹ Advocates of the NPT's failure also point to problems in Iran²² and advertise various solutions.²³

The advent of sophisticated non-state actors expands proliferation concerns. Failure proponents point out that the risk of terrorists acquiring nuclear weapons increases proportionately with the number of nuclear weapons states, which has grown. While conventional terrorism theorists take the position that “[t]errorists want a lot of people watching, not a lot of people dead,”²⁴ with the rise of al-Qaeda, the problems of “loose nukes” and continued

[hereinafter Signing of U.S.-India Nuclear Deal].

16. Nuclear Threat Initiative, Pakistan Profile, Nuclear Overview, http://www.nti.org/e_research/profiles/Pakistan/Nuclear/index.html (last visited Sept. 14, 2009) (providing a history of Pakistan's nuclear program).

17. The closest Pakistan has come to sanctions was in 2001, but that issue involved support of the Taliban and not nuclear weapons. Barbara Crossette, *Russia Seeks Sanctions Against Pakistan for Aid to Taliban*, N.Y. TIMES, Apr. 9, 2001, at A4.

18. North Korea's Minister of Foreign Affairs sent a letter dated March 12, 1993, to the President of the Security Council announcing North Korea's intention to withdraw from the NPT. S.C. Res. 825, U.N. Doc. S/RES/825 (May 11, 1993).

19. Nuclear Threat Initiative, North Korea Profile, Introduction, http://www.nti.org/e_research/profiles/NK/index.html (last visited Sept. 14, 2009) (providing an overview of North Korea's nuclear program).

20. Glenn Kessler & Edward Cody, *U.S. Flexibility Credited in Nuclear Deal with N. Korea*, WASH. POST, Feb. 14, 2007, at A11.

21. For some analysis on North Korea's ever-changing status, see Editorial, *The Latest North Korea Deal*, N.Y. TIMES, Oct. 14, 2008, at A28.

22. Editorial, *Key Judgments From a National Intelligence Estimate on Iran's Nuclear Activity*, N.Y. TIMES, Dec. 4, 2007, at A14 (offering a moderate to high assessment that Iran does not have nuclear weapons, but that it had an active program as late as 2003 and that it may still intend to develop weapons).

23. See, e.g., MARK STEYN, *AMERICA ALONE: THE END OF THE WORLD AS WE KNOW IT* 149 (2006) (asserting that Iran is intent on obtaining nuclear weapons and that the use of force will be required at some point); Kamran Riaz Akhtar, *Does Pakistan Hold the Key?*, NATION, July 10, 2006 (arguing that the U.N. Security Council can act, but that it will need Pakistan's help to mediate).

24. Brian M. Jenkins, Testimony Before the Committee on Energy and Diminishing Materials of the California State Assembly: Will Terrorists Go Nuclear? (Nov. 19, 1975).

proliferation, that wisdom may be out of date. According to several intelligence agencies, Bin Laden's organization is actively seeking nuclear capability.²⁵ The non-proliferation system will indeed be irreversibly weakened if terrorists obtain the bomb.

Additionally, disarmament has stalled. The NPT was intended to limit and eventually lay a framework for the elimination of nuclear weapons,²⁶ and this has not been the case. Of all the nations to possess nuclear weapons, only South Africa has destroyed its stockpile and national production ability.²⁷ Other possessor nations are actually updating nuclear capability, including the United States²⁸ and Russia.²⁹ This arms race is not one of more warheads, but of better warheads, delivery systems, and missile defenses.³⁰ Policies also change; the U.S. Department of Defense's 2005 Doctrine for Joint Nuclear Operations—later cancelled—explained how nuclear weapons could be used to “support both strategic and theater nuclear plans” via various weapons systems, including cruise missiles, and that they could be used in a “preemptive” attack.³¹ Judged in

25. See, e.g., Stefan Leader, *Osama bin Laden and the Terrorist Search for WMD*, 11 JANE'S INTELLIGENCE REV. 34, 34–37 (1999); KENNETH KATZMAN, TERRORISM: MIDDLE EASTERN GROUPS AND STATE SPONSORS, 1999, available at <http://digital.library.unt.edu/govdocs/crs/permalink/meta-crs-1003:1>. Of course, any would-be nuclear terrorist would have to do more than just obtain a weapon. To use it would require overcoming the difficulties of undiscovered transportation of a large weapon and bypassing detonation safeguards.

26. The NPT required a good-faith effort at disarmament.

27. Bill Keller, *South Africa Says It Built 6 Atom Bombs*, N.Y. TIMES, Mar. 25, 1993, at A1 (quoting former South African President F.W. de Klerk).

28. See, e.g., AMY F. WOOLF, U.S. NUCLEAR WEAPONS: CHANGES IN POLICY AND FORCE STRUCTURE 9–10 (2005).

29. See, e.g., *Russia: Countering U.S. Missile Plans*, N.Y. TIMES, Dec. 2, 2008, at A16 (explaining that an upgrade will allow Russian missiles to evade the planned U.S. missile shield based in Eastern Europe).

30. See Judy Dempsey, *Accords on U.S. Missile Shield Are Taking Shape, Czech Says*, N.Y. TIMES, Jan. 17, 2008, at A7.

31. JOINT PUBLICATION 3-12: DOCTRINE FOR JOINT NUCLEAR OPERATIONS, FINAL COORDINATION (2), MAR. 15, 2005, at III-3, available at http://www.globalsecurity.org/wmd/library/policy/dod/jp3_12fc2.pdf. The Pentagon officially announced the cancellation of the document on Feb. 2, 2006, after it was exposed by the *Washington Post*. Walter Pincus, *Pentagon Revises Nuclear Strike Plan: Strategy Includes Preemptive Use Against Banned Weapons*, WASH. POST, Sept. 11, 2005, at A1. Following the exposure, the Senate Armed Services Committee asked for a briefing, and sixteen Democratic lawmakers protested. Press Release, Congresswoman Ellen O. Tauscher, Rep. Tauscher Cautions Against Aggressive Nuclear Policy (Dec. 2, 2005), available at http://www.nukestrat.com/us/jcs/JP_Congress120205.pdf. The press release contains the text of the letter to President Bush. Although the documents were cancelled, the policies may still be in effect.

light of these arguments, it seems that NPT-related non-proliferation mechanisms are indeed failing.

For the policy and bureaucratic communities that see the NPT as a success, however, the arguments hinge on what the world would be like without the NPT. In 1962, John F. Kennedy predicted that proliferation was inevitable,³² which echoed the academic community's prognostication.³³ In a recent examination of the NPT, however, Professor Walsh points out that only seventy-five percent of countries that could have become nuclear weapons states ever took that step.³⁴ Additionally, countries like Egypt and Australia specifically gave up nuclear weapons programs when they joined the NPT.³⁵ The NPT has also shaped perceptions. In the 1960s, a country seeking nuclear weapons was viewed as pursuing normal military technology, but today these countries would be labeled as "rogue states."³⁶ Lastly, there is some evidence that the NPT has strengthened over time as more countries have joined and the inspections process has been strengthened.³⁷

While the NPT has accomplished much, there are still many proliferation problems that it has failed to successfully conquer. World leaders are worried. While the bold predictions on proliferation from the 1960s have not come to pass, the U.S. Government today warns that the NPT is collapsing,³⁸ and U.S. Secretary of Defense Robert Gates says that the long term prognosis

32. President Kennedy predicted that "by 1970, unless we are successful, there may be 10 nuclear powers instead of 4, and by 1975, 15 or 20." PUBLIC PAPERS OF THE PRESIDENT OF THE UNITED STATES: JOHN F. KENNEDY 1963, at 280 (1964).

33. See, e.g., Sir John Cockcroft, *The Perils of Nuclear Proliferation*, in UNLESS PEACE COMES 30, 37 (Nigel Calder ed., 1968); PIERRE GALLOIS, THE BALANCE OF TERROR: STRATEGY FOR THE NUCLEAR AGE 229 (Richard Howard trans., 1961).

34. WALSH, *supra* note 12, at 12-13 (pointing out that Argentina, Australia, Belarus, Brazil, Canada, Egypt, Germany, Greece, Indonesia, Iraq, Italy, Japan, Kazakhstan, Libya, Norway, Romania, South Korea, South Africa, Sweden, Switzerland, Taiwan, Turkey, Ukraine, and Yugoslavia all could have developed nuclear weapons but did not). Whether or not all of these countries' decisions are attributable to the NPT regime is debatable. See *infra* Part III.B.

35. WALSH, *supra* note 12, at 14.

36. *Id.* at 16.

37. *Id.* at 17. The IAEA has been strengthened by the Model Additional Protocol that has made IAEA safeguard agreements more meaningful. See *infra* Part III.A.1.

38. See John R. Bolton, *The Bush Administration's Forward Strategy for Nonproliferation*, 5 CHI. J. INT'L L. 395, 395 (2005) (arguing that "cumbersome treaty-based bureaucracies" are no longer working to achieve non-proliferation). John Bolton was the Under Secretary of State for Arms Control and International Security.

is “bleak.”³⁹ France committed to abolish nuclear weapons at the 2000 NPT review conference, but French President Sarkozy recently defended France’s nuclear arsenal, stating, “All those who would threaten our vital interests would expose themselves to severe retaliation by France resulting in damages unacceptable to them, out of proportion with their objectives. Their centres of political, economic and military power would be targeted on a priority basis.”⁴⁰ This statement reflects France’s lack of confidence in the NPT for protection. The containment of nuclear weapons for the most part is a success story, but fears of proliferation still exist, and nations are not completely willing to rely on the NPT.

III. THE MECHANISMS OF NON-PROLIFERATION

Faced with the destructive ability of nuclear weapons, leaders throughout the world began to advocate for limiting nuclear arsenals in the 1950s.⁴¹ The problem these world leaders recognized is that mutual nuclear exchanges or attacks are a zero sum game that all humanity loses. The non-proliferation movement had two major aims. First, to combat the threat of mutually assured destruction, it was imperative to limit the number of players in the game. Proponents argued that fewer nations with nuclear weapons meant a more stable political environment. Second, participants sought to limit the number of nuclear weapons, both in simple quantity and quality. This meant limiting the overall warheads in existence and curtailing further development of more variants. Over time, political will grew to a level that allowed for international action.

A. Formal Mechanisms of Non-Proliferation

The International Atomic Energy Agency (IAEA), the United Nations Security Council, and various regional treaties are the primary instruments of international power that have enforced non-

39. Robert Gates, U.S. Secretary of Defense, Speech at the Carnegie Endowment for International Peace (Oct. 28, 2008), *available at* http://www.carnegieendowment.org/files/1028_transcrip_gates_checked.pdf.

40. Rebecca Johnson, *Is the NPT Being Overtaken by Events?*, DISARMAMENT DIPL., Spring 2008, *available at* <http://www.acronym.org.uk/dd/dd87/87npt.htm>.

41. *E.g.*, INTERNATIONAL ATOMIC ENERGY AGENCY, A SHORT HISTORY OF NON-PROLIFERATION (1976) (explaining that several nations began advocating for the non-proliferation of nuclear weapons in the late 1950s).

proliferation. By statute and charter, these bodies seek to create peace among nations by removing the threat of nuclear war.

1. *International Atomic Energy Agency*

Created in 1957, the IAEA has a dual mandate to promote the peaceful use of nuclear technology and to prevent its military use.⁴² It is an “autonomous” international non-governmental organization closely affiliated with the United Nations.⁴³ According to the two organizations’ bilateral agreement, the Agency reports to the U.N. General Assembly at each regularly scheduled session and to the Security Council as appropriate.⁴⁴

While the IAEA seeks to proliferate the peaceful uses of nuclear technology, its role in the non-proliferation of nuclear weapons is much more public. By its own assertions, the IAEA intends to be the world’s nuclear watchdog—the primary body responsible for controlling the proliferation of nuclear technology and weaponry.⁴⁵ The Agency’s statute empowers it to “establish and administer safeguards” to ensure that a nation’s nuclear program will not “further any military purpose.”⁴⁶

The IAEA accomplishes this mission by entering into bilateral safeguard agreements with the various nations that have nuclear programs. Agency inspectors enforce the safeguard agreements by reviewing required national reports and physically inspecting nuclear sites.⁴⁷ In the event of non-compliance, the Agency’s statute limits IAEA organic remedies to requesting corrective action from the offending nation’s government, withholding additional nuclear assistance—often technical expertise—and removing materials and

42. Statute of the International Atomic Energy Agency, Oct. 26, 1956, 276 U.N.T.S. 3 [hereinafter IAEA Statute]. Eighty-one nations approved the IAEA statute on October 26, 1956 at the Conference on the Statute of the International Atomic Energy Agency, and the Agency opened its doors July 29, 1957. International Atomic Energy Agency, *History of the IAEA*, <http://www.iaea.org/About/history.html> (last visited Sept. 14, 2009).

43. International Atomic Energy Agency [IAEA], *The Texts of the Agency’s Agreements with the United Nations*, art.1, ¶ 2, IAEA Doc. INFCIRC/11 (Oct. 30, 1959).

44. *Id.* at art. 3.

45. Mission Statement of the International Atomic Energy Agency, <http://www.iaea.org/About/mission.html> (last visited Sept. 14, 2009) (stating that the IAEA is “the global focal point for nuclear cooperation” and is “independent”).

46. IAEA Statute art. III, ¶ A.5.

47. *Id.* at art. XII.

equipment previously furnished by the Agency to the country.⁴⁸

The IAEA may claim some success, in conjunction with the NPT, in preventing proliferation. Twenty-four Agency member states with peaceful nuclear programs—many that formerly sought weapons—have not developed nuclear weapons and today are not seeking them.⁴⁹ Currently, analysts point to two problem states in the world,⁵⁰ North Korea and Iran, with only Iran being an IAEA member.⁵¹ Other states that sought weapons in the past, like Egypt and Australia, now do not.⁵² In spite of these successes, however, there are weaknesses in the IAEA's system.

Most commentators opine that the IAEA is not effective in preventing non-proliferation. One obvious limitation is that for the IAEA to act, the nation concerned must be a member state. As of July 2009, one hundred fifty states are Agency members.⁵³ Non-member states of note are few: North Korea withdrew its membership on June 13, 1994, and Cambodia withdrew on March 26, 2003.⁵⁴ The Agency is also conflicted by the mandate to *proliferate* civilian nuclear technology but to be the guardian of nuclear weapons *non-proliferation*. Because civilian technology and weapons technology are closely related, accomplishing the first mission sometimes defeats the latter.

Another limitation is in the Agency's inspection process, which has been inadequate and has produced some high profile failures. The original Agency statute required nations to declare their nuclear sites to legitimize their programs with the IAEA and then allow limited inspections to the declared sites. This requirement resulted in an unintended loophole, whereby a nation could forgo declaring all

48. *Id.* at art. XII, ¶ A.7.

49. The countries with nuclear power that do not have nuclear weapons programs are Argentina, Australia, Belarus, Brazil, Canada, Egypt, Germany, Greece, Indonesia, Iraq, Italy, Japan, Kazakhstan, Libya, Norway, Romania, S. Korea, S. Africa, Sweden, Switzerland, Taiwan, Turkey, Ukraine, and Yugoslavia. WALSH, *supra* note 12, at 12–13.

50. *Id.* at 13.

51. List of IAEA Member States, <http://www.iaea.org/About/Policy/MemberStates/> (last visited Sept. 14, 2009).

52. WALSH, *supra* note 12, at 13–15. Australia ratified the NPT in 1973, and Egypt ratified the NPT in 1981. *Id.*

53. List of IAEA Member States, <http://www.iaea.org/About/Policy/MemberStates/> (last visited Sept. 14, 2009).

54. *Id.*

nuclear sites and escape inspection.⁵⁵ To close the loophole, in 1997 the IAEA Board of Governors approved a Model Additional Protocol that, when implemented, amends safeguard agreements to require the IAEA to determine if undeclared facilities exist and empower the inspectors to conduct “snap inspections.”⁵⁶ These developments strengthen the IAEA, but some nations have not updated their safeguards agreements to incorporate the Additional Protocol’s provisions.

Even with the implementation of the Additional Protocol, inspections remain problematic. A recent report commissioned by the U.S. Government cites the view that, “IAEA inspections are too sketchy to ferret out nuclear misbehavior (e.g., North Korea, Iraq, and Iran) and . . . in the rare cases when such violators are found out (almost always by national intelligence agencies), the IAEA’s board of governors is loath to act.”⁵⁷ IAEA inspectors have had success, such as being the only ones to correctly assess Iraq’s nuclear program in 2002 and 2003,⁵⁸ but the failure rate is too high to inspire a high degree of confidence that the Agency can detect bad faith actors.

Events in the early 1990s sowed doubt regarding the IAEA inspection process and its enforcement of safeguard agreements. Three years after the fall of Romania’s communist dictator Nicolae Ceaușescu in 1989, the country’s new government shocked the world by announcing to the IAEA that it had discovered evidence of a communist-era clandestine nuclear weapons program.⁵⁹ Romania had signed the NPT in 1970 and had publicly denounced nuclear weapons. It had entered into a safeguard agreement with the IAEA in 1972⁶⁰ and, in 1978, had contracted with a Canadian company for

55. Saddam Hussein’s Iraq exploited this loophole with particularity. See Charles D. Ferguson, *Nuclear Safeguards for a New Nuclear Age*, BULL. OF THE ATOM. SCIENTISTS (web ed. Dec. 18, 2007), available at <http://www.thebulletin.org/node/77>.

56. *Id.*; IAEA, *Model Protocol Additional to the Agreement(s) Between State(s) and the International Atomic Energy Agency for the Application of Safeguards*, IAEA Doc. INF/CIRC/540 Corr. (Sept. 1997).

57. NONPROLIFERATION POLICY EDUCATION CENTER, FALLING BEHIND: INTERNATIONAL SCRUTINY OF THE PEACEFUL ATOM I (2007), available at <http://www.npec-web.org/Frameset.asp?PageType=Single&PDFFile=20070731-NPEC-ReportOnIaeaSafeguardsSystem&PDFFolder=Reports>.

58. *Id.*

59. Ion Miahî Pacepa, *Tyrants and the Bomb: There’s a Deep History to this Latest Kim Jong Il Move*, NAT’L REV., Oct. 17, 2006, available at <http://article.nationalreview.com/?q=YmU3NjM4ZTg3NjViMTUyNWJmYWYzMDE4ZmRhOTQxZmI=>.

60. See the IAEA factsheet on Romania, available at <http://ola.iaea.org/factSheets/>

a nuclear reactor to supply electricity.⁶¹ In December of that same year Ceaușescu was dead, and in 1992 Romania's new government discovered separated plutonium, a bomb ingredient, at a TRIGA research reactor in the town of Pitești.⁶² Mihai Balanescu, the former director of the Magurele Nuclear Research Institute, asserts that Ceaușescu began a military program in 1978—the same year Romania ordered the Canadian reactor—and that if the Romanian Revolution of 1989 had not occurred, Ceaușescu would have had a bomb in only a few more years.⁶³ This failure demonstrated that a country could have a secret weapons program in spite of the IAEA safeguards.

A second failure in the early 1990s was the confirmation of Iraq's clandestine weapons program, started in 1971, in the aftermath of the 1991 Persian Gulf War. In the years that followed, information on the Iraqi program added shame to the IAEA system, for the Iraqis had purposefully manipulated the Agency in building their weapons program. According to Khidhir Hamza, a lead scientist that worked on the program, "the IAEA proved extremely useful."⁶⁴ Because of the Agency's dual mandate, Iraq was able to utilize "civilian" nuclear technologies and IAEA training to almost develop the bomb.

The program's first step was to develop weapons grade plutonium. In 1973 Iraq approached the IAEA and requested help to build a nuclear power plant.⁶⁵ Iraq then acquired a "research reactor, a fuel-manufacturing plant, and nuclear fuel-reprocessing facilities" through the IAEA in order to develop nuclear power

CountryDetails.asp?country=RO, which signals the signing of the Application of safeguards in connection with the Treaty on Non-Proliferation of Nuclear Weapons, Romania-IAEA on Mar. 8, 1972.

61. DUANE BRATT, *THE POLITICS OF CANDU EXPORTS* 17 (2006) (noting that Romania ordered a CANDU reactor from AECL in 1978, but that it was not completed until 1996).

62. Pacepa, *supra* note 59, at 1. It is interesting to note that the reactor was given to Romania by the U.S. in the 1970s. Wendy Mbekelu, *Tracking Nuclear Proliferation: Romania*, *THE ONLINE NEWS HOUR* (May 2, 2005), available at http://www.pbs.org/newshour/indepth_coverage/military/proliferation/countries/romania.html.

63. Baietul' lui Ceausescu, Mort in Fasa, *Evenimentul Zilei*, Dec. 10, 2002, available at <http://www.evz.ro/articole/detalii-articol/513785/Baietulul-lui-Ceausescu-mort-in-fasa/>.

64. Khidhir Hamza, *Inside Saddam's Secret Nuclear Program*, 54 *BULL. OF THE ATOM. SCIENTISTS*, Sept.–Oct. 1998, at 26, 30. Hamza served in various posts in the program, including the position of director of weaponization. *Id.* at 26.

65. *Id.* at 28.

plants, but with the “hidden agenda” to develop weapons grade plutonium.⁶⁶ In Iraq, scientists began weapons research, while in Vienna at the IAEA’s headquarters, Iraq successfully obtained a seat on the board and learned how IAEA inspections worked, with the ultimate goal of learning how to thwart them.⁶⁷ After several years the Agency, convinced of Iraq’s peaceful intentions, allowed Iraq to import highly enriched uranium fuel and the components for plutonium production, and provided the needed training to use the technology.⁶⁸ The IAEA never became aware of Saddam Hussein’s weapons program through their interactions with Iraq.

When IAEA inspectors came, the Iraqi research teams followed strict guidelines that prevented discovery of the weapons work. A few years after starting their nuclear program, Iraq successfully placed a spy in the Middle East seat of the Agency’s Board of Governors who reported to the government the details of the inspection processes.⁶⁹ Based on a thorough understanding of the inspection rules and the pressures on individual inspectors, the Iraqis masked their development program well. Locked doors prevented inspectors from entering certain rooms, and berms prevented inspectors from seeing new buildings.⁷⁰

Only after the Persian Gulf War, when the IAEA received aerial photos of nuclear sites in Iraq, did the inspectors realize that they had been duped.⁷¹ As a result of this failure, nations around the world lost confidence in the IAEA. As stated by Egypt’s permanent representative to the U.N., “[a]fter what happened in Iraq, no one is one hundred percent sure and has full confidence in the verification system and safeguards as applied by the IAEA.”⁷²

The IAEA’s weaknesses in preventing proliferation stem from a lack of covert intelligence, a conflicted dual mandate, and little real power to punish perpetrators. “Watchdog” is an appropriate term—

66. *Id.*

67. *Id.*

68. *Id.* at 30–31.

69. KHIDHIR HAMZA & JEFF STEIN, SADDAM’S BOMBMAKER: THE TERRIFYING INSIDE STORY OF THE IRAQI NUCLEAR AND BIOLOGICAL WEAPONS AGENDA 74–77 (2000).

70. Hamza, *supra* note 64, at 32.

71. *Id.*

72. Nabil Elaraby, Permanent Rep. of Egypt to the U.N., The Security Council and Nuclear Weapons, Address Before the NGO Working Group on the Security Council (May 28, 1996), in GLOBAL POLICY FORUM, available at <http://globalpolicy.igc.org/security/docs/elaraby.htm>.

the Agency watches and can do little more. It is not an attack dog. If the IAEA were the only non-proliferation entity, there would indeed be cause to worry. As the “failures” amply demonstrate, however, the Agency does not act alone, and in both the case of Romania and of Iraq, neither country developed an atomic bomb. When the Agency does discover a violation that would require some executive action, it appeals to the U.N. Security Council.

2. U.N. Security Council

The U.N. Charter announces that the first purpose of the United Nations is to “maintain international peace and security.”⁷³ The U.N. Security Council accomplishes this mandate by authorizing economic and political sanctions and by authorizing the use of force.⁷⁴ The Security Council has five permanent members—China, France, Russia, the United Kingdom and the United States—and ten members elected from the General Assembly.⁷⁵ The chief limitations on the Council’s powers are political and structural: permanent members may veto any substantive action.⁷⁶

This limitation has typically prevented the Security Council from acting decisively in the area of nuclear non-proliferation. In 1996, a Security Council member lamented the lack of solid action on the part of the Council to address the issues of non-proliferation.⁷⁷ By Resolution 255 of 1968, the Council sought to assure states forgoing nuclear weapons that they would be protected by signing the NPT,⁷⁸ but this said nothing that the U.N. Charter did not already say. In 1995, the Security Council adopted Resolution 984, which “did not include effective deterrence against the threat or use of nuclear weapons, [or] provide any general protection against an attack or a threat.”⁷⁹ The indictment at the time was that “the Security Council has always been very reluctant to get involved in disarmament matters and in nuclear weapons.”⁸⁰

73. U.N. Charter art. 1, para. 1.

74. *Id.* at arts. 39, 41–42.

75. *Id.* at art. 23.

76. *Id.* at art. 27.

77. *See* Elaraby, *supra* note 72.

78. S.C. Res. 255, ¶ 1, U.N. Doc. S/RES/255 (June 19, 1968).

79. Elaraby, *supra* note 72.

80. *Id.*

Since 1996, the Security Council increasingly has passed resolutions dealing with the issue of nuclear non-proliferation. Many of these invoke targeted sanctions against North Korea and Iran. North Korea's nuclear weapon test in 2006, for example, brought the Security Council into action via Resolution 1718, which imposed nuclear- and arms-focused economic sanctions in addition to travel restrictions on nuclear program personnel.⁸¹ Prior to that resolution, the Council had asked North Korea to reconsider its 1993 withdrawal from the NPT,⁸² and to suspend ballistic missile development.⁸³ The only effect of these resolutions, however, seems to be in demonstrating to North Korea that China is not the ally that it once was. China abstained from the 1993 Resolution,⁸⁴ but voted for the more recent 2004 and 2006 Resolutions.⁸⁵ This reflects a change in Chinese policy from a proponent of proliferation to a proponent of non-proliferation and de-nuclearization of the Korean Peninsula.⁸⁶ The Resolutions did not prevent North Korea from gaining nuclear weapons, or the missiles to deliver warheads to states within the region.⁸⁷ Upon the passage of Resolution 825 and the implementation of targeted sanctions, however, North Korea did return to the negotiating table at the "six-party talks."⁸⁸ In this sense the Security Council did play a role in this latest round of North Korean non-proliferation efforts, but on the whole the Council has not greatly affected a resolution of the situation.

When the IAEA began having problems with Iran, in July 2006

81. S.C. Res. 1718, ¶¶ 8, 12, U.N. Doc. S/RES/1718 (Oct. 14, 2006).

82. S.C. Res. 825, *supra* note 18, at ¶ 1.

83. S.C. Res. 1695, ¶ 2, U.N. Doc. S/RES/1695 (July 15, 2006).

84. U.N. Security Council Resolution 825 on the North Korean Nuclear Issue, 4 U.S. DEPT. OF STATE DISPATCH, Issue 21, at 383 (May 24, 1993).

85. Press Release, Security Council, Security Council Condemns Democratic People's Republic of Korea's Missile Launches, Unanimously Adopting Resolution 1695 (2006), U.N. Doc. SC/8778 (July 15, 2006); Press Release, Security Council, Security Council Condemns Nuclear Test by Democratic People's Republic of Korea, Unanimously Adopting Resolution 1718 (2006), U.N. Doc. SC/8853 (Oct. 14, 2006).

86. Press Release, Security Council, Security Council Condemns Nuclear Test by Democratic People's Republic of Korea, Unanimously Adopting Resolution 1718 (2006), U.N. Doc. SC/8853 (Oct. 14, 2006).

87. *North Korea's Missile Programme*, BBC NEWS, available at <http://news.bbc.co.uk/2/hi/asia-pacific/2564241.stm> (last visited Sept. 14, 2009).

88. Ed Henry, Elise Labott & Susie Xu, *North Korea Links Talks to Money*, CNN.COM, Nov. 1, 2006, available at <http://www.brudirect.com/DailyInfo/News/Archive/Nov06/021106/wn01.htm>.

the Security Council approved Resolution 1696 by a 14-1 vote,⁸⁹ calling upon Iran to comply fully with IAEA directives and inspections processes, suspend uranium enrichment by August 31, 2006, and begin negotiating a long-term nuclear safeguard agreement.⁹⁰ Iran did not comply with the Resolution, and so the Security Council again took up the matter that December. Via Resolution 1737, adopted unanimously,⁹¹ the Council imposed sanctions on Iran, cutting it off from access to foreign markets for technology that could be used in the Iranian nuclear program.⁹² The IAEA reported Iran's noncompliance the following February, and so the Council passed Resolution 1747, calling upon states to restrict the travel of Iranians engaged in nuclear work and expanding sanctions to cover all arms and related material as well as any kind of financial aid not for humanitarian or developmental purposes.⁹³ With the IAEA reporting another round of noncompliance,⁹⁴ the Council further tightened sanctions in March 2008, freezing certain financial assets and calling upon states to inspect Iranian cargo shipments.⁹⁵

The Security Council's ability to prevent the proliferation of nuclear weapons is limited by political will and structural processes. Without organic intelligence capability, the Council is most often in a reactive mode, and because it is a deliberative body, deciding on a course of action often takes time. When a nuclear proliferation situation arises, the Security Council may pass a Resolution, but historically sanctions have not deterred leaders determined to obtain nuclear weapons. Thus, while many nations have decided to forgo nuclear weapons, covert weapons programs have not been effectively

89. Qatar was the lone dissenter, citing instability in the Middle East as justification. Press Release, Security Council, Security Council Demands Iran Suspend Uranium Enrichment by 31 August, or Face Possible Economic, Diplomatic Sanctions, U.N. Doc. SC/8792 (July 31, 2006).

90. S.C. Res. 1696, ¶¶ 1-4, U.N. Doc. S/RES/1696 (July 31, 2006).

91. Qatar changed its vote. Speaking for his country, Nassir Abdulaziz Al-Nasser affirmed that Qatar believes that Iran's nuclear intentions are peaceful, but cannot condone Iran's failure to comply with the NPT. Press Release, Security Council, Security Council Imposes Sanctions on Iran for Failure to Halt Uranium Enrichment, Unanimously Adopting Resolution 1737 (2006), U.N. Doc. SC/8928 (Dec. 23, 2006).

92. S.C. Res. 1737, ¶¶ 3-12, U.N. Doc. S/RES/1737 (Dec. 23, 2006).

93. S.C. Res. 1747, ¶¶ 2, 6-7, U.N. Doc. S/RES/1747 (Mar. 24, 2007).

94. Press Release, Security Council, Security Council Tightens Restrictions on Iran's Proliferation-Sensitive Nuclear Activities, Increases Vigilance over Iranian Banks, Has States Inspect Cargo, U.N. Doc. SC/9268 (Mar. 3, 2008).

95. S.C. Res. 1803, ¶¶ 10-11, U.N. Doc. S/RES/1803 (Mar. 3, 2008).

addressed by the Security Council, as in the cases of Korea and Iraq. The Resolutions take slow, incremental steps, instead of decisive action, and have not yet involved authorizing the use of force when justified solely from the standpoint of nuclear non-proliferation.⁹⁶ Political will and the structure of the Security Council create this effect, because to pass a Resolution over a permanent member's veto, the Resolutions end up at the lowest common denominator. In other words, if a permanent member is unwilling to vote for a Resolution, then the other members can hold the vote as a matter of public record or they can alter the Resolution to find a form that will satisfy all the permanent members: the lowest common denominator. One alternative to this kind of political problem is to create regional pacts not subject to U.N. structural limitations.

3. Regional regimes: the Nuclear Weapon Free Zones

There are currently five regional areas of the world declared free from nuclear weapons, as well as the seabed and outer space. Through the Treaty of Tlatelolco, Latin American and Caribbean nations agreed to forgo nuclear weapons in 1968.⁹⁷ Most of the nations of the South Pacific agreed to prohibit the presence of nuclear weapons and nuclear testing through the Treaty of Raratonga, entered into force in 1986.⁹⁸ African nations agreed at the first session of the Organization of African Unity that it would be a good idea to have a continent free from nuclear weapons.⁹⁹ Negotiations endured for some time, however, and although the

96. When the Security Council decided to take no action to prevent the "Coalition of the Willing" from using military force in Iraq, the goal of preventing Saddam Hussein from acquiring weapons of mass destruction—thought to be chemical and biological, but not nuclear—was one reason among many. See Press Release, Briefing Security Council, U.S. Secretary of State Powell Presents Evidence of Iraq's Failure to Disarm; Several Council Members Call for More Time for Inspections; France Proposes Strengthening of Inspection Regime, U.N. Doc. SC/7658 (Feb. 5, 2003); Press Release, Security Council Hears Over 60 Speakers in Two-Day Debate on Iraq's Disarmament; Many Say Use of Force Should Be Last Resort, Others Urge Swift Action, U.N. Doc. SC/7666 (Feb. 19, 2003); Press Release, U.S. Secretary of State Colin Powell Addresses the U.N. Security Council, (Feb. 5, 2003), *available at* <http://www.whitehouse.gov/news/releases/2003/02/20030205-1.html> (offering a transcript of Secretary Powell's remarks to the Security Council).

97. Treaty for the Prohibition of Nuclear Weapons in Latin America [Treaty of Tlatelolco], Feb. 14, 1967, 634 U.N.T.S. 326.

98. South Pacific Nuclear Free Zone Treaty [Treaty of Raratonga], Aug. 6, 1985, 24 I.L.M. 1442.

99. G.A. Res. 47/76, U.N. Doc. A/47/49 (Dec. 15, 1992).

Treaty of Pelindaba opened for signature in 1996, it has not yet come into force.¹⁰⁰ The Treaty of Bangkok created a nuclear weapon free zone in South East Asia in 1996.¹⁰¹ The Antarctic treaty prohibits nuclear testing and disposal of radioactive waste in Antarctica.¹⁰² Other treaties ban nuclear weapons from the seabed¹⁰³ and space.¹⁰⁴ To provide more security, the treaties commonly feature protocols signed by NPT-recognized nuclear weapons powers, whereby the nuclear states agree to respect the nuclear free zones.¹⁰⁵

Most of these regional treaties were signed or first gained impetus in the late 1960s, and the trend for the creation of new treaties has since slowed. There have been discussions about the creation of new zones in Central Asia, the Middle East, South Asia, North East Asia, and Central Europe,¹⁰⁶ but active efforts to draft treaties for these areas are not underway. In 1992, North and South Korea signed a bilateral declaration to ban nuclear weapons from the Korean peninsula,¹⁰⁷ but although it entered into force that year, North Korea has not honored it. Excepting the Korean peninsula, the areas of the world with regional treaties are free from nuclear weapons.

100. African Nuclear Weapon Free Zone Treaty [hereinafter Treaty of Pelindaba], Apr. 11, 1996, 35 I.L.M. 698. The zone consists of Africa and islands surrounding the continent in the Atlantic and Indian oceans.

101. Treaty on the South-East Asia Nuclear Weapon-Free Zone [Treaty of Bangkok], Dec. 15, 1995, 35 I.L.M. 635.

102. Antarctic Treaty, Dec. 1, 1959, 402 U.N.T.S. 71.

103. Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Seabed and the Ocean Floor and in the Subsoil Thereof [Seabed Treaty], Feb. 11, 1971, 955 U.N.T.S. 115.

104. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies [Outer Space Treaty], Jan. 27, 1967, 610 U.N.T.S. 205.

105. *See, e.g.*, U.S. Department of State, Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean [Treaty of Tlatelolco], (article on file with author) (discussing the treaty protocols signed by nuclear weapons powers).

106. *See* Nuclear Age Peace Foundation, *Nuclear Weapon-Free Zones*, available at http://www.nuclearfiles.org/menu/library/treaties/nuclear-free-zones/trty_nuclear-free-zone-index.htm (last visited Sept. 14, 2009).

107. Joint Declaration on the Denuclearization of the Korean Peninsula, N. Korea-S. Korea, Jan. 20, 1992, available at <http://www.ppnn.soton.ac.uk/nb17.pdf>, at 16. The declaration entered into force one month after it was signed on February 19, 1992. *See* Nuclear Threat Initiative, Inventory of International Nonproliferation Organizations & Regimes, <http://cns.miis.edu/inventory/pdfs/koreanuc.pdf>, at 1 (last visited Sept. 14, 2009).

Whether or not the treaties are the cause or result of these nuclear free zones is debatable. Within the treaty areas, only South Africa was required to disarm to become a signatory. South Africa, then not a signatory to the NPT, built several nuclear weapons in the 1980s.¹⁰⁸ Soviet and U.S. intelligence communities monitored South Africa's nuclear program and suspected that the country had nuclear weapons.¹⁰⁹ African leaders argued that their continent should be free from nuclear weapons, but no formal agreements were initially signed. After the fall of apartheid, South Africa destroyed its weapons and disclosed its program to the world.¹¹⁰ The Treaty of Pelindaba was signed shortly thereafter.¹¹¹ It may be argued that either the nations of Africa were unwilling to sign the treaty until they were sure that no nuclear weapons existed on the continent, or that they were galvanized to sign the treaty to prevent nuclear weapons from again appearing on the continent. Perhaps both may be true. But no treaty has yet been successful in a region of the world where a nation had nuclear weapons and then gave them up as a result of the treaty. Regional treaties are effective to the extent that they deny nations within their boundaries an incentive to obtain nuclear weapons.

The formal framework of nuclear non-proliferation established by the IAEA, the U.N., the NPT, and other treaties is loose, often slow to react, and inadequate to prevent proliferation in many instances. Regional treaties are effective at preventing further proliferation but are not yet practicable solutions in areas of the world that already have nuclear weapons. While these mechanisms have largely prevented the predicted proliferation of nuclear weapons, they remain as a partial, eighty percent solution to the problem of nuclear non-proliferation.

B. Informal Methods

The remaining twenty-percent of the non-proliferation problem does not remain completely unsolved. When formal mechanisms fail, informal mechanisms emerge to fill the gaps. Because the IAEA

108. HELEN E. PURKETT & STEPHEN F. BURGESS, *SOUTH AFRICA'S WEAPONS OF MASS DESTRUCTION* (2005).

109. Michael R. Gordon, *Washington Welcomes de Klerk Disclosure, but Wants More Details*, N.Y. TIMES, Mar. 23, 1993, at A12.

110. *Id.*

111. Treaty of Pelindaba, *supra* note 100.

inspections are slow and not always adequate, national intelligence organizations continue to monitor nuclear programs around the world. Because the IAEA and the Security Council are unable to decisively address nuclear non-proliferation due to lack of authority and lack of political will, groups of nations and individual nations have taken a role in more informal and *ad hoc* efforts to prevent the spread of nuclear weapons.

1. Bilateral and multilateral negotiations

Not every nuclear state is an IAEA member or a signatory to the NPT. Although states fall outside these mechanisms, other states often engage them with negotiations and bilateral treaties under which they may become responsible for their nuclear behavior. Some of these negotiations and treaties include India's bilateral negotiations with the U.S., a global partnership to combat proliferation, and talks with North Korea.¹¹²

a. India and bilateral negotiations. When India became a nuclear power in 1975, the nation was in a middle ground because it refused to choose sides in the Cold War and had not signed the NPT. It has remained in the middle ground to a certain extent, still refusing to sign the NPT but becoming an IAEA member.¹¹³ In 1997, India voted against a provision in a U.N. General Assembly resolution calling for all non-signatories to the NPT to accede to the treaty.¹¹⁴ Instead of treating India in the same manner as North Korea, however, many nations of the world are beginning to accept India as

112. This list is by no means exhaustive. Other examples of bilateral negotiations include Libya's twenty-year "negotiation" over nuclear and chemical weapons with the United States, *see, e.g.*, Steven R. Weisman, *U.S. Lifts Trade Embargo on Libya in Return for Promise on Arms*, N.Y. TIMES, Sept. 21, 2004, at A7, and French involvement in nuclear programs with Algeria (suspected of having a nuclear weapons program) and the United Arab Emirates (not suspected of having a nuclear weapons program), *see, e.g.*, Elaine Sciolino, *A New France in the New Middle East: Forget Glory*, N.Y. TIMES, Jan. 27, 2008, at 3.

113. Pakistan and Israel are the other nations in the middle ground with India. They have not signed the NPT but possess nuclear weapons. *See* FAS.org, Signatories and Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, *available at* <http://www.fas.org/nuke/control/npt/text/npt3.htm> (last visited Sept. 14, 2009).

114. U.N. GAOR, 52nd Sess., 67th plen. mtg. at 15, U.N. Doc. A/52/PV.67 (Dec. 9, 1997). Israel and Pakistan were the only nations that joined India in voting against the provision, which was part of General Assembly Resolution 52-38. G.A. Res. 52/38, § K, U.N. Doc. A/RES/52/38, at 14-16 (Dec. 9, 1997). India and several other nations, including Iran, Israel, North Korea, and Pakistan then abstained from voting on the Resolution. U.N. GAOR, 52d Sess., 67th plen. mtg. at 16, U.N. Doc. A/52/PV.67 (Dec. 9, 1997).

part of the nuclear weapons club—even though the NPT limits the nuclear weapons club to the five permanent members of the Security Council.¹¹⁵ So, while India continues to refuse to sign the NPT, which would require it to destroy its military nuclear capability, efforts to formalize India's place in the non-proliferation context, outside the formal NPT rules, are underway.

Beginning in 2005, the United States stepped outside the NPT and engaged India bilaterally as a strategic partner in non-proliferation. Taking up President Bush's call to move beyond old non-proliferation frameworks that prevent the U.S. from addressing today's threats¹¹⁶ and reacting to his 2005 joint statement with Indian Prime Minister Manmohan Singh,¹¹⁷ in 2006 the U.S. Congress passed legislation allowing for a civil nuclear partnership deal.¹¹⁸ In July 2007, President Bush and Prime Minister Singh developed a "123 Agreement" that created a civil nuclear partnership.¹¹⁹ The deal reverses the U.S. ban on shipping nuclear-related technology to India, a ban that was in place due to India's position outside the NPT and IAEA regimes. India's parliament approved the deal in a tight vote in July 2008.¹²⁰

To enforce the deal internationally, India needed to establish a new safeguards agreement with the IAEA that would expand IAEA inspections and incorporate the language of the Additional Protocol to allow for IAEA snap inspections. India formally submitted the

115. NPT, *supra* note 3, at art. IX, ¶ 3.

116. George W. Bush, President of the U.S., Remarks by the President to Students and Faculty at National Defense University (May 1, 2001), *available at* <http://merln.ndu.edu/archivepdf/russia/WH/20010501-10.pdf>. As he outlined how bi-lateral action would not violate current non-proliferation treaties, President Bush told the students: "Today's world requires a new policy, a broad strategy of active nonproliferation, counterproliferation and defenses. We must work together with other like-minded nations to deny weapons of terror from those seeking to acquire them. We must work with allies and friends who wish to join with us to defend against the harm they can inflict. And together we must deter anyone who would contemplate their use." *Id.*

117. Press Release, U.S. Department of State, Joint Statement Between President George W. Bush and Prime Minister Manmohan Singh (July 18, 2005), *available at* <http://merln.ndu.edu/archivepdf/india/WH/20050718-6.pdf> (announcing the intention of President Bush to normalize U.S. nuclear relations with India).

118. 22 U.S.C. §§ 8001–8008 (2006); 42 U.S.C. § 2153(d) (2000).

119. Office of the Spokesman, *Fact Sheet: U.S.-India Civil Nuclear Cooperation Initiative – Bilateral Agreement on Peaceful Nuclear Cooperation*, July 27, 2007, *available at* <http://merln.ndu.edu/archivepdf/india/State/89552.pdf>.

120. Rama Lakshmi & Emily Wax, *India's Government Wins Parliament Confidence Vote*, WASH. POST., July 23, 2008, at A12.

new safeguards agreement to the IAEA in July 2008, and the Board of Governors controversially approved the agreement on August 1, 2008.¹²¹ The U.S. then guided a waiver through the Nuclear Suppliers Group, which controls the civilian trade of nuclear materials around the world, and obtained a waiver for India on September 6, 2008.¹²² With the international hurdles cleared, the U.S. Congress gave final approval to the deal on October 1, 2008,¹²³ and President Bush signed the United States-India Nuclear Cooperation Approval and Nonproliferation Enhancement Act a week later on October 8, 2008.¹²⁴ Two days later, Indian External Affairs Minister Pranab Mukherjee and U.S. Secretary of State Condoleezza Rice signed the 123 Agreement.¹²⁵

The deal generated political waves and interest around the world. With the U.S. having laid the groundwork, France and India signed a bilateral civilian nuclear policy deal¹²⁶ and the U.K. lifted a ban on

121. Press Release, IAEA Press Report, IAEA Board Approves India-Safeguards Agreement: Agreement Would Widen IAEA Access to Civil Nuclear Facilities (Aug. 1, 2008), available at <http://www.iaea.org/NewsCenter/News/2008/board010808.html> (noting that the agreement would expand IAEA inspections from the current number to six reactors to fourteen by 2014).

122. Kim Barker, *U.S. Pact Transforms India's Role in Nuclear Club: Proposed Deal with the U.S. Paves Way for the Transformation*, CHI. TRIB., Sept. 29, 2008, available at http://www.chicagotribune.com/business/chi-india-nukes_barkersep29,0,6813807.story; Thaindian News, *NSG Passes India Waiver by Consensus*, available at http://www.thaindian.com/newsportal/uncategorized/nsg-passes-india-waiver-by-consensus-lead_10092949.html (last visited Sept. 14, 2009).

123. On September 27, 2008, H.R. 7081 and its implementing legislation were passed in the House by a vote of 298-117-1. The Senate passed S. 3548, the text of which is identical to H.R. 7081, on October 1, 2008. See Library of Congress, Bills, Resolutions, H.R. 7081, available at <http://www.thomas.gov/cgi-bin/bdquery/z?d110:HR07081:@@L&summ2=m&> (last visited Feb. 11, 2009); Library of Congress, Bills, Resolutions, S. 3548, available at <http://www.thomas.gov/cgi-bin/bdquery/z?d110:SN03548:@@L&summ2=m&>; see also United States-India Nuclear Cooperation Approval and Nonproliferation Enhancement Act of 2008, Pub. L. No. 110-369 (2008), available at http://firwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_public_laws&docid=f:publ369.110.pdf.

124. Press Release, White House Office of the Press Secretary, President Bush Signs H.R. 7081, the United States-India Nuclear Cooperation Approval and Nonproliferation Enhancement Act (Oct. 8, 2008), available at <http://merln.ndu.edu/archivepdf/india/WH/20081008-4.pdf>.

125. Signing of U.S.-India Nuclear Deal, *supra* note 15, at 1. Secretary Rice hailed the agreement between the world's largest democracy and the world's oldest democracy as a first step in continued nuclear and strategic partnership. *Id.*

126. *India, France Ink Nuclear Deal*, ECON. TIMES, Oct. 1, 2008, available at http://economictimes.indiatimes.com/PoliticsNation/India_France_ink_nuclear_deal/article

exporting civilian nuclear technology to India.¹²⁷ Pakistan's Prime Minister Yousuf Raza Gilani stated that his country wants a deal with the U.S. similar to India's.¹²⁸ Israel could also follow. Other countries may also put civilian nuclear deals into place outside the NPT.¹²⁹

Critics are appalled at this new development in non-proliferation, which they argue will gut the NPT. They point to the lack of IAEA oversight of India's nuclear weapons program and argue that India will now be able to obtain the latest in nuclear technology and transfer that expertise to their weapons program.¹³⁰ Additionally, the precedent being set—that a country can partly legitimize prior “illegitimate” acquisition of nuclear weapons through bilateral actions with states already in the nuclear club—flies in the face of the NPT. This is politically sensitive, because while the U.S., France, and the U.K. are comfortable with India as an ally, China is not. The same is true of other nations that could try to follow India's lead, such as Israel. These are legitimate concerns.

Proponents counter that these concerns are too idealistic, and that the realistic view is that India already has sophisticated nuclear weapons and the means to deliver those weapons, so the arbitrary NPT cut-off date of January 1, 1967, should not be overly influential.¹³¹ Proponents therefore argue that the U.S. approach under President Bush is an improvement on the old NPT method because it seeks to bring India into the official nuclear club as a regulated and law-abiding citizen of the world. The IAEA and Nuclear Suppliers Group supported the deal based on this reasoning,

show/3546835.cms. France actually signed its deal with India before the U.S. *Id.*

127. *Britain Lifts India Nuclear Ban*, BBC NEWS, Nov. 10, 2008, available at http://news.bbc.co.uk/2/hi/south_asia/7720397.stm.

128. *Pakistan Demands US Nuclear Deal*, BBC NEWS, Oct. 2, 2008, available at http://news.bbc.co.uk/2/hi/south_asia/7648435.stm. India, Pakistan's chief rival, has stated that it does not object to a Pakistan-U.S. nuclear deal. *India Not Against US-Pakistan N-Deal: Pranab*, TIMES OF INDIA, Oct. 11, 2008, available at <http://timesofindia.indiatimes.com/articleshow/3583688.cms>. But with the A.Q. Khan stain on Pakistan's proliferation record, a deal may not be likely for a while. See Kate Heinzelman, *Towards Common Interests and Responsibilities: The U.S.-India Civil Nuclear Deal and the International Nonproliferation Regime*, 33 YALE J. INT'L L. 447, 469-70 (2008).

129. See Heinzelman, *supra* note 128, at 468-69.

130. Esther Pan & Jayshree Bajoria, *The U.S.-India Nuclear Deal*, COUNCIL ON FOREIGN REL., Oct. 2, 2008, available at <http://www.cfr.org/publication/9663/> (summarizing the criticisms of William C. Potter and other nuclear non-proliferation experts).

131. NPT, *supra* note 3, art. IX, ¶ 3.

and given this precedent, Israel and Pakistan will seek to follow India's path. This effort on their part would require them to make positive developments from the non-proliferation standpoint, such as Pakistan tightening its security measures to prevent another A.Q. Khan debacle¹³² and Israel normalizing its nuclear weapon status with its neighbors and the formal members of the NPT nuclear club.

b. The Global Partnership Against the Spread of Weapons and Materials of Mass Destruction. Following the collapse of the Soviet Union, warnings abounded that a terrorist or other third party could obtain a nuclear weapon from a former Soviet Republic. This concern, known as the problem of "loose nukes,"¹³³ has received attention in the press and from politicians.

In response, the leaders of the G8 nations—Canada, France, Germany, Italy, Japan, Russia, the United Kingdom, and the United States, as well as a European Union representative—formed a partnership in June 2002 to support specific cooperation projects, initially in Russia, to address non-proliferation, disarmament, counter-terrorism, and nuclear safety issues.¹³⁴ The members fund the projects.¹³⁵ During its first two years, the partnership worked in Russia to dismantle decommissioned nuclear submarines, to secure and dispose of fissile materials, and to find new employment for scientists formerly employed in the Soviet nuclear industry.¹³⁶

The dismantling of submarines continues at a slow pace,¹³⁷ but

132. Abdul Qadeer Khan is a popular Pakistani scientist who in January 2004 admitted to having passed sensitive nuclear-weapons technology to Libya, Iran, and North Korea. Pakistani President Pervez Musharraf later pardoned him. William J. Broad, David E. Sanger, & Raymond Bonner, *A Tale of Nuclear Proliferation: How Pakistani Built His Network*, N. Y. TIMES, Feb. 12, 2004, at A1. Khan now asserts that he was made into a scapegoat for a larger Pakistani proliferation ring. *World News With Charles Gibson: Pakistani Bomb Scientist Breaks Silence* (ABC television broadcast May 30, 2008), available at <http://abcnews.go.com/Blotter/Story?id=4964884&page=1>.

133. See, e.g., Graham T. Allison, *Russia's "Loose Nukes": The Continuing Threat to American Security*, HARV. MAG., Sept.–Oct. 2000, at 34 (examining the problem of loose nukes and suggesting solutions).

134. Kananaskis Summit, Statement by G8 Leaders: The G8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction, available at http://www.mofa.go.jp/policy/economy/summit/2002/state_g8.html.

135. See *id.*

136. Department of State, Bureau of Nonproliferation, *Fact Sheet: The G-8 Global Partnership Against the Spread of Weapons and Materials of Mass Destruction*, Aug. 24, 2004, available at <http://www.state.gov/t/isn/rls/fs/34967.htm>.

137. For analysis and a progress report, see Christina Hansell Chuen, *Russian Nuclear-Powered Submarine Dismantlement and Related Activities: A Critique*, JAMES MARTIN

the rest of the program as it relates to nuclear nonproliferation has stalled. The group's intentions have met up with fiscal problems.¹³⁸ With the current downturn in the global economy, even the richest nations in the world are less concerned about nuclear nonproliferation. This is a political choice; for the partnership to succeed to the point that it fulfills all its goals, the G8 leaders will need to reinvigorate it.

c. North Korea six-party talks. North Korea has caused problems for the international community from the time of the Korean War, but dealing with North Korea's nuclear weapons program has bested many world leaders of the last decade. When North Korea withdrew from the NPT in 2003, China, Japan, North Korea, Russia, South Korea, and the United States agreed to participate in a six-party negotiation. The talks began in August 2003, but they produced no real results during their first four years, as apparent results were set back by adverse actions, such as North Korea's various missile tests and nuclear weapons test in 2006.¹³⁹

Following the nuclear weapon test, however, several changes took place that allowed for progress among the negotiating parties. The Security Council, as mentioned, imposed arms importation restrictions, nuclear focused economic sanctions, and travel restrictions on nuclear program personnel.¹⁴⁰ More importantly, however, the U.S. shifted some major negotiation positions and became amenable to (1) allowing North Korea to retain civilian nuclear technology within the parameters of the NPT and IAEA inspections; (2) agreeing to discuss making the 1953 cease fire agreement into a permanent peace treaty; and (3) releasing North Korean funds frozen at a bank in Macau.¹⁴¹ The negotiators were then able to make more progress, and in February 2007, North Korea agreed to shut down its reactors in exchange for fuel, food, and progress on normalizing its relations with Japan and the U.S.¹⁴²

CENTER FOR NONPROLIFERATION STUD., May 24, 2007, available at <http://cns.miiis.edu/stories/070524.htm> (arguing that there is not a well-defined plan for dealing with the solid radioactive waste and spent nuclear fuel in the submarines).

138. *Id.*

139. David E. Sanger & Jim Yardly, *U.S. Warns North Koreans About Nuclear-Weapon Test*, N.Y. TIMES, Oct. 5, 2006, at A3.

140. S.C. Res. 1718, *supra* note 81, at ¶¶ 8, 12.

141. Helene Cooper, *North Korea Talks: Back to the Table, Some Reluctantly*, N.Y. TIMES, Nov. 2, 2006, at A8.

142. Edward Cody, *N. Korea Demands May Delay Reactor Shutdown*, WASH. POST, Mar.

North Korea continues to present difficult problems, however, because the government uses nuclear technology as a chip in a larger game of international relations. The nation's compliance has again stalled, most recently over an inspections issue. As a result, on October 12, 2008, the Bush Administration removed North Korea from the U.S.'s terror watch list. North Korea then resumed demolition of its primary nuclear weapons complex and allowed monitors access to the site.¹⁴³ The pattern of negotiation involves North Korea trading compliance with non-proliferation standards for strategic objectives, and then breaking some of its agreements so that it can begin the cycle again. The difficulties of the North Korean problem illustrate that sometimes patience is a necessary virtue in non-proliferation efforts—perhaps an ironic fact given the danger of nuclear proliferation: once a nation willing to use a nuclear bomb acquires one, non-proliferation is useless. Preventing this problem may require the use of force.

2. *Unilateral and preemptive strikes*

In dealing with non-proliferation, some nations have shown a willingness to act unilaterally and preemptively. The doctrine of preemption is ancient, and has been used throughout history as justification for war.¹⁴⁴ Recently it has been popularized in a variant known as the “Bush Doctrine,” which refers to the policy of President George W. Bush to act with force, unilaterally and preemptively, to secure the interests of the United States.¹⁴⁵

14. 2007, available at <http://www.washingtonpost.com/wp-dyn/content/article/2007/03/14/AR2007031401030.html>.

143. Choe Sang-Hun & Helene Cooper, *North Korea to Resume Disabling Nuclear Plant*, N.Y. TIMES, Oct. 13, 2008, at A6.

144. See, e.g., ELLERY CORY STOWELL & HENRY FRASER MUNRO, INTERNATIONAL CASES: ARBITRATIONS AND INCIDENTS ILLUSTRATIVE OF INTERNATIONAL LAW AS PRACTISED BY INDEPENDENT STATES VOLUME II: WAR AND NEUTRALITY 556 (1916) (discussing the doctrine of preemptive attacks); Hew Strachan, *Preemption and Prevention in Historical Perspective*, in PREEMPTION: MILITARY ACTION AND MORAL JUSTIFICATION 23–39 (Henry Shue & David Rodin eds., 2007) (outlining how preemptive strikes have played a role in military history from the beginning of the western world until modern history).

145. President Bush announced his foreign policy doctrine at the West Point Commencement address on June 1, 2002. For a transcript of President Bush's address, see Press Release, The White House Office of the Press Secretary, President Bush Delivers Graduation Speech at West Point, June 1, 2002, available at http://www.nti.org/e_research/official_docs/pres/bush_wp_prestrike.pdf. There is no real broad agreement on what the “Bush Doctrine” is, but as a minimum standard it certainly must include preemptive acts of

According to the 2006 National Security Strategy of the United States,

It is an enduring American principle that [protecting Americans and American interests] obligates the government to anticipate and counter threats, using all elements of national power, before the threats can do grave damage. The greater the threat, the greater is the risk of inaction—and the more compelling the case for taking anticipatory action to defend ourselves, even if uncertainty remains as to the time and place of the enemy’s attack. There are few greater threats than a terrorist attack with WMD.

To forestall or prevent such hostile acts by our adversaries, the United States will, if necessary, act preemptively in exercising our inherent right of self-defense.¹⁴⁶

This statement speaks of “anticipatory action,” acting “preemptively” and the greater risk of inaction as compared to action. In the language of contract law, it is anticipatory breach: acting before another party has the opportunity to cause real harm. Despite the criticisms of the Bush Doctrine,¹⁴⁷ with all its associated policy implications, preemptive attack remains a valid—though controversial—international legal doctrine.¹⁴⁸

force, which is the basic definition here used. Others have used the term to also include the idea of Democratic regime change. See Discussion by Ben Wattenberg, Max Boot, Adam Garfinkle, & Samantha Power, *Think Tank with Ben Wattenberg* (PBS television broadcast July 11, 2002), available at <http://www.pbs.org/thinktank/transcript1000.html>. See also ROBERT G. KAUFMAN, IN DEFENSE OF THE BUSH DOCTRINE (2007) (arguing that swift, preemptive actions are desirable traits for foreign policy in the Middle East). Even the “Bush Doctrine” version of preemption is not new. Alberto Gentili, an Italian that served as a professor at Oxford, wrote in 1588 that “no one ought to wait to expose himself to danger. No one ought to wait to be struck unless he is a fool. . . . Force must be repelled and kept aloof by force.” ALBERTO GENTILI, DE JURE BELLI (1588), cited in Stratchan, *supra* note 144, at 24.

146. THE NATIONAL SECURITY STRATEGY OF THE UNITED STATES OF AMERICA 18 (2006).

147. For a more developed discussion of the Bush Doctrine, see, e.g., ALAN M. DERSHOWITZ, PREEMPTION: A KNIFE THAT CUTS BOTH WAYS 153–57 (2007).

148. *Id.* at 61–69, 195–224. Professor Dershowitz’s thoughtful and thorough discussion of preemption does not assert any grand conclusion, largely because none can yet be stated in all circumstances. The doctrine is very fact specific and has many facets in modern practice. As stated by Professor Dershowitz:

So long as nations are threatened by other nations or terrorist groups, preemptive or preventive military action will remain an option and will on occasion be employed. When international organizations are incapable of, or refuse to, intervene in situations where intervention is deemed necessary, nations will act unilaterally or with selected allies. That is the reality, and no jurisprudence will ever change that

The idea of preemptive attacks springs from ancient ideas of self-defense, or something like a version of the modern saying that “the best defense is a good offense.” Leaving aside ancient historical examples, preemptive action by a nation’s military is not new in this century or the last. World War I began largely as a result of a series of “preemptive” attacks.¹⁴⁹ Japanese leadership viewed its attack on Pearl Harbor as preemptive,¹⁵⁰ and Israel launched a “preemptive” strike against Arab nations in the Six Day War of 1967.¹⁵¹ Most recently the U.S. and its allies cited preemption as justifying the 2003 Iraq war.¹⁵²

While many nations will engage in preemptive attacks, Israel is the best example of a nation willing to follow the policy to prevent an enemy from acquiring nuclear weapons.¹⁵³ The first and better-known incident was the bombing of an Iraqi reactor in 1981, but Israel also attacked a Syrian site in 2007.

Iraq publicly began a civilian nuclear program in the 1970s. While the IAEA and the U.N. were convinced that Iraq’s nuclear program was peaceful, Israel was not.¹⁵⁴ France began construction of a nuclear reactor for Iraq in 1979, and Israeli intelligence reports expressed concerns that Iraq would produce plutonium at the reactor.¹⁵⁵ In 1981, while diplomats argued over the situation,

because a nation’s survival is not, and never will be, purely a matter of law.
Id. at 195.

149. JOHN H. MAURER, *THE OUTBREAK OF THE FIRST WORLD WAR: STRATEGIC PLANNING, CRISIS DECISION MAKING, AND DETERRENCE FAILURE* 101 (1995) (pointing out that a German preemptive strike precipitating a feared British preemptive strike opened hostilities between the two powers).

150. ALAN ARMSTRONG, *PREEMPTIVE STRIKE: THE SECRET PLAN THAT WOULD HAVE PREVENTED THE ATTACK ON PEARL HARBOR* 175–76, 190–91 (2006) (discussing a preemptive American plan to bomb Japan that was in turn preempted by Japan’s strike on Pearl Harbor).

151. DERSHOWITZ, *supra* note 147, at 80–82.

152. ROBERT J. PAULY & TOM LANSFORD, *STRATEGIC PREEMPTION: U.S. FOREIGN POLICY AND THE SECOND IRAQ WAR* 53–55 (2005) (explaining how the Bush Administration’s National Security Strategy justified preemption and how the doctrine of preemption justified U.S. policy leading to the 2003 Iraq war).

153. The 2003 invasion of Iraq by the “Coalition of the Willing” comes close, but in this case the weapons of mass destruction alleged to be in Iraq were chemical and biological.

154. Israel was not the only nation worried about Iraq’s nuclear reactor. Iran launched an unsuccessful air strike against the Al-Tuwaitha site nine months prior to Israel’s. HAMZA & STEIN, *supra* note 69, at 128.

155. Jed C. Snyder, *The Road to Osirac: Baghdad’s Quest for the Bomb*, *MIDDLE EAST J.*, Autumn 1983, at 567–68.

Israel's government decided that it had to bomb the Osirak reactor at Al-Tuwaitha before it became operational, in order to keep Iraq from obtaining plutonium that could be used to build a nuclear weapon.¹⁵⁶

Operation Opera was conceived, and on June 7, 1981, Israeli F-16 and F-15 jets flew through Saudi Arabian airspace to Iraq, where they executed a successful bomb run.¹⁵⁷ International reaction overwhelmingly condemned Israel's attack, but even after the bombing, Israel remained wary of Iraq's activities, especially concerning undeclared buildings at the Al-Tuwaitha site.¹⁵⁸ Following the Gulf War in 1991, IAEA inspections revealed that Israel had been right. Even after the Osirak bombing, Iraq continued its research and likely would have had a crude nuclear weapon sometime in 1993.¹⁵⁹

As can be seen by Israel's raid on a possible Syrian nuclear site in 2007,¹⁶⁰ Israel continues to believe that the formal mechanisms of nuclear non-proliferation are not adequate protection. While neither side will confirm details, sometime after midnight on September 6, 2007, Israel launched the operation.¹⁶¹ It had previously inserted a team of commandos into Syria near the site of a suspected nuclear facility.¹⁶² Israeli aircraft then bombed the target, a building suspected of housing a nuclear reactor being built with the help of North Korea.¹⁶³ Pre- and post-strike satellite photos made available to the press indicated that multiple buildings had been destroyed.¹⁶⁴

156. *Id.* at 577–78.

157. Eight Israeli F-16s dropped fourteen two-thousand-pound bombs on the complex, destroying it. DAN MCKINNON, *BULLSEYE ONE REACTOR* 172, 178–79 (1987).

158. Hamza, *supra* note 64, at 28 (explaining that the buildings were later confirmed to be used in research for weapons-grade plutonium).

159. David A. Kay, *Denial and Deception Practices of WMD Proliferators: Iraq and Beyond*, WASH. Q., Winter 1995, at 85. David Kay was a chief IAEA inspector in Iraq following the Gulf War.

160. Mark Hosenball, *A New Intelligence Failure?*, NEWSWEEK, Nov. 5, 2007, at 10 (discussing Israel's raid against a suspected nuclear reactor site in Syria on September 6, 2007).

161. Seymour M. Hersh, *A Strike in the Dark: What Did Israel Bomb in Syria?*, NEW YORKER, Feb. 11, 2008, at 58, available at http://www.newyorker.com/reporting/2008/02/11/080211fa_fact_hersh.

162. Sarah Baxter, Uzi Mahnaimi & Michael Sheridan, *Israelis 'Blew Apart Syrian Nuclear Cache': Secret Raid on Korean Shipment*, TIMES (London), Sept. 16, 2007, available at http://www.timesonline.co.uk/tol/news/world/middle_east/article2461421.ece.

163. Hersh, *supra* note 161.

164. *Id.* at 59–60.

While the details are not entirely known, it is clear that Israel once again engaged in the ultimate *ad hoc* mechanism of nuclear non-proliferation: a unilateral, preemptive strike.

Reaction from the world's non-proliferation players was predictable. Shortly after Israel bombed the site, Syria complained to the U.N., but the Security Council did nothing.¹⁶⁵ The IAEA condemned the action,¹⁶⁶ and the U.S. would not comment.¹⁶⁷ Then, several months later, the IAEA confirmed traces of synthetic uranium at the site¹⁶⁸—an almost sure sign of nuclear activity.

Among the *ad hoc* methods of nuclear non-proliferation, unilateral preemptive strikes are the most controversial. Israel's *ad hoc* air strikes raise questions about what level of *ad hoc* mechanisms should be tolerated in the world community, but they also show that sometimes a unilateral and preemptive strike will be tolerated and may even be part of an "emerging jurisprudence" of "proportional, reasonable, and lawful preventative action."¹⁶⁹ *Ad hoc* actions, while not formally part of the nuclear non-proliferation system, are and must continue to be part of the nuclear proliferation solution. While the formal mechanisms of non-proliferation provide the majority of the solution, "rogue state" actors may slip through system gaps if *ad hoc* methods are not utilized. These methods may therefore be an important deterrent. Israel, for example, has given indications that it would attack Iran to prevent that nation from acquiring nuclear weapons,¹⁷⁰ though Iran apparently does not give much weight to Israel's unilateral threat.¹⁷¹ Other nations might also take unilateral preemptive action if threatened with nuclear weapons development

165. *Syria Complains to U.N. over Israel*, BBC NEWS, Sept. 12, 2007, available at http://news.bbc.co.uk/2/hi/middle_east/6989961.stm.

166. Yossi Melman, *IAEA Slams Israel for Bombing Alleged Nuclear Reactor in Syria*, HAARETZ, Apr. 26, 2008, available at <http://www.haaretz.com/hasen/spages/978043.html>.

167. Hersh, *supra* note 161, at 59–60.

168. Hala Gorani, *U.N.: Uranium Traces Found in Syria*, CNN.COM, Nov. 17, 2008, available at <http://edition.cnn.com/2008/WORLD/meast/11/17/syria.uranium/index.html>.

169. DERSHOWITZ, *supra* note 147, at 220.

170. In June 2008, Israel sought U.S. support for a preemptive airstrike designed to cripple Iran's nuclear capability. See, e.g., Michael R. Gordon & Eric Schmitt, *U.S. Says Exercise by Israel Seemed Directed at Iran*, N.Y. TIMES, June 20, 2008, at A1.

171. See, e.g., David E. Sanger & William J. Broad, *Allies' Clocks Tick Differently on Iran*, N.Y. TIMES, Mar. 15, 2009, at 1 (discussing the divergent reactions of Israel and the U.S. to Iran's still-progressing nuclear program).

by neighbors.¹⁷² Limiting the use of force to the Security Council is a noble goal but could also be political and real suicide for a nation such as Israel. The option of unilateral preemptive strikes remains viable.

V. CHOOSING A MANDATORY REGIME OR ALLOWING *AD HOC* METHODS

Despite international efforts, some nations—both NPT signatories and non-signatories—have sought nuclear weapons. It would be too idealistic to assume that if clandestine programs existed in the past that none exist today.¹⁷³ In dealing with the proliferation threats of today and of the future, *ad hoc* proliferation solutions will continue to be used to the extent that the formal regime does not address all the problems. This default system of *ad hoc* action should be allowed to continue to fill the gaps, because formal mechanisms, even if they could create a mandatory regime, would never sufficiently address every nation's security concerns.

A. *The Spectrum of Non-Proliferation Mechanisms*

The non-proliferation toolbox available to deal with the problems of horizontal proliferation is larger than the formal methods of the NPT, IAEA inspections, Security Council action, and multilateral treaties. *Ad hoc* methods have developed and are part of the international system. The greater the threat, the more likely that a nation will act more unilaterally and more preemptively to prevent proliferation.

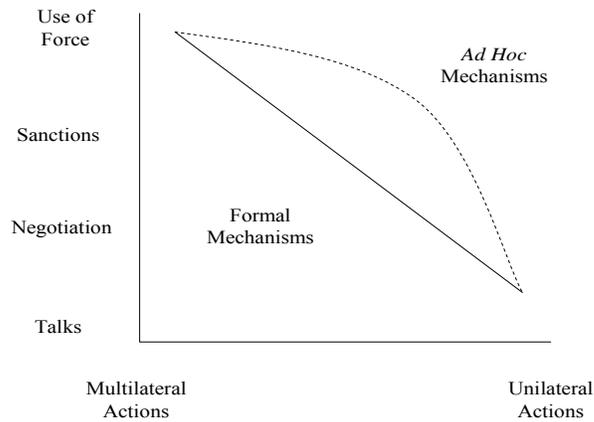
The mechanisms of non-proliferation discussed in this Comment can be organized by placing them on a continuum with two axes. On the left end of the scale, or x-axis, would be action that is

172. Consider, for example, what Russia might do if one of the Caucus nations were to seek nuclear weapons, or how China might react to a nuclear weapons program in Taiwan, Vietnam, or another neighboring nation.

173. Current suspects for secret nuclear programs include Iran, Saudi Arabia, and Syria. See, e.g., Albert Aji, *Syria Denies US Claim of a Secret Nuclear Program*, USA TODAY, Apr. 25, 2008 (reporting that the U.S. asserts and Syria denies the existence of a secret nuclear program in Syria); Douglas Jehl, *Group Says Iran Has Secret Nuclear Arms Program*, N.Y. TIMES, Nov. 17, 2004 (reporting that Iran has a secret nuclear weapons program); *Saudi Arabia Working on Secret Nuclear Program with Pakistan Help – Report*, FORBES, Mar. 28, 2006, available at <http://www.forbes.com/finance/feeds/afx/2006/03/28/afx2629000.html> (suggesting that Pakistani nuclear scientists have been working with Saudi Arabia).

multilateral, and on the right end, action that is unilateral. At the bottom of the y-axis would be action that is diplomatic, whereas the top of the y-axis scale would be the use of force. The more multilateral an effort, the more likely that methods up to and including the use of force would be lawful through formal mechanisms. The more unilateral an action, the less likely it is that actions such as bi-lateral negotiations would be viewed as within the formal mechanisms. A dividing line may then be drawn that separates formal and *ad hoc* mechanisms. This dynamic is shown in figure one.

Figure 1. Nuclear Non-Proliferation Schematic



The bold line indicates approximate limits of the current formal regime, or the area of the eighty percent solution to the problems of nuclear proliferation. The dashed line indicates an area of approval, or acceptance, of some *ad hoc* mechanisms, notably negotiation, as with India. Some aspects of the non-proliferation problem lie outside both lines, such as a nation secretly seeking nuclear weapons, as in the cases of Iraq, Romania, and North Korea. While this schematic could be charted and measured, such actions would be beyond the scope of this Comment.

B. A Mandatory Regime?

The framework for non-proliferation established by international

law is capable of transforming into a stronger, more mandatory regime that would more effectively prevent the proliferation of nuclear weapons. But this development is not probable, and even if it happened, a mandatory system could never supplant all the deterrent abilities of *ad hoc* mechanisms. A mandatory system could come about in two broad methods. First, the Security Council could pass a standing resolution instilling a formal, strong approach to nuclear non-proliferation,¹⁷⁴ which would increase deterrence incentives. This would be something of a top-down approach, which would require the permanent members of the Security Council to act collectively. A second source for change is the NPT. Future treaty rounds could create additional protocols that would strengthen inspections and require disarmament. This would be a bottom-up approach, requiring the broad support of many nations to create a momentum that would eventually persuade the current nuclear weapon states to act. However, neither approach is likely, due to politics.¹⁷⁵

1. A new Security Council standing resolution

As the only body universally recognized as able to authorize the use of force, the U.N. Security Council could act under Chapter VII to implement a new standing resolution that would apply a system of increasingly powerful targeted sanctions against violators. In general, targeted sanctions are designed to hit a nation's leaders where it will hurt them, and therefore cause them to change their leadership decisions. As such, these sanctions are targeted at individuals, typically by imposing a combination of travel restrictions, financial restrictions, and criminal responsibility.¹⁷⁶ To date, they work in a

174. Professor Jack Garvey first suggested this approach. Jack Garvey, *A New Architecture for the Non-Proliferation of Nuclear Weapons*, 12 J. CONFLICT & SECURITY L. 339, 346–50 (2007).

175. The international legal system is always prone to political limitations, and even the nations of Europe—the foremost champions for a strong, and even mandatory, international legal system—disregard international law when it is in their interest to do so. Jack Goldsmith & Eric Posner, *Does Europe Believe in International Law? Based on the Record, It Has No Grounds to Criticize the U.S.*, WALL STREET J., Nov. 25, 2008, at A15. See also JACK GOLDSMITH & ERIC POSNER, *THE LIMITS OF INTERNATIONAL LAW* (2006).

176. Michael Bothe, *Security Council's Targeted Sanctions Against Presumed Terrorists: The Need to Comply with Human Rights Standards*, 6 J. INT'L CRIM. JUST. 541, 544 (2008). Bothe notes that targeted sanctions in the form of travel restrictions have been used against leaders in Sierra Leone, Liberia, and Afghanistan (the Taliban). *Id.* at 560 n.13.

two-step process. As the first step, the Security Council identifies prohibited conduct and authorizes the targeted sanctions. As the second step, individual nations then act to enforce the sanctions by implementing visa restrictions, freezing bank accounts, or issuing warrants.

Politically, targeted sanctions are viewed well.¹⁷⁷ They are seen as a progressive step in the right direction, because rather than punishing a nation as a collective, they seek to punish and therefore alter the behavior of specific leaders.¹⁷⁸ There are some concerns that the system does not afford the “target” the ability to confront accusers,¹⁷⁹ and therefore some have called for such a forum to be created. This could be a good development for nuclear non-proliferation, as a hearing or tribunal might strengthen the effect of targeted sanctions by providing a forum in which suspect world leaders would justify their acts. In the specific area of non-proliferation, targeted sanctions have already proven effective at “countering the spread of nuclear weapons technology.”¹⁸⁰ Resolution 1540 set up a regime of targeted sanctions against the proliferation of “nuclear, chemical and biological weapons, as well as their means of delivery.”¹⁸¹ This Resolution is a step towards a stronger international response.

As a next step, the Security Council could declare that nuclear

177. This is not to say that the system does not have critics. As pointed out by Bothe, both academics and NGOs worry that the system lacks accountability. For a more detailed reading, Bothe points the reader to D. Frank, *U.N.-Sanktionen gegen Terrorismus und Europäische Menschenrechtskonvention*, in HUMAN RIGHTS, DEMOCRACY AND THE RULE OF LAW 237 (S. Breitenmoser et al. eds., 2007); C. Warbrick, *The European Response to Terrorism in an Age of Human Rights*, 15 EUR. J. INT'L L. 989–1018 (2004).

178. Bothe provides a good summary of the argument for targeted sanctions:

Traditional non-military enforcement measures pursuant to Article 41 of the Charter are value deprivations imposed upon states as collectivities. The measures expressly mentioned are the interruption of economic relations, i.e. embargoes, and of other communications (of which the interruption of air traffic has had a major significance in recent times). This type of measure has rightly been criticized as both ineffective and unjust. It is unjust because it mainly hits the innocent population. It is ineffective because it does not or only rarely reaches those who are personally responsible for a threat to the peace or a breach of the peace. In the light of this experience, a system of ‘targeted’ sanctions has been developed which is directed specifically against these persons.

Bothe, *supra* note 176, at 543.

179. *See id.* at 543–44.

180. Garvey, *supra* note 174, at 346.

181. S.C. Res. 1540, U.N. Doc. S/RES/1540 (Apr. 28, 2004).

weapons proliferation is a “threat to the peace.”¹⁸² This would put the leadership of any nation or non-state actor on notice that Chapter VII consequences are imminent for acts of proliferation. The Council could then establish technical benchmarks for uranium enrichment and the reprocessing of spent nuclear fuel—two of the main indications of a nuclear weapons program¹⁸³—and authorize the implementation of the system of targeted sanctions for their violation.¹⁸⁴ This system would be stronger than the current system because it would authorize greater deterrence measures and would not be subject to a vote once implemented. Unfortunately, it would also be a stepped system, and it could still be difficult to authorize the use of force.

It remains unlikely, however, that the Security Council could implement this solution. Furthermore, even if it was implemented, the solution would not completely address nuclear non-proliferation.¹⁸⁵ The ability of a nation with a permanent veto to forestall this development, compounded with the fact that more than one permanent member of the council would disfavor such a regime, makes this solution, for the near future, unlikely.¹⁸⁶ If such a system were adopted, this process would retain some of the weaknesses of IAEA inspections mentioned earlier that led to the IAEA’s inability to ferret out clandestine nuclear weapons programs.¹⁸⁷ Thus the added deterrence could still not reliably deal with covert actors.

2. New treaty rounds

For the community of interested nations that might feel individually impotent in the non-proliferation regime, change through the NPT remains very difficult to achieve. The NPT directs that a review conference take place every five years.¹⁸⁸ The conferences are not typically successful forums for generating great

182. U.N. Charter, art. 39.

183. Garvey, *supra* note 174, at 346.

184. *Id.*

185. See DERSHOWITZ, *supra* note 147, at 195.

186. Not only would the U.S. probably not favor this solution, but based on their histories, China and Russia would also balk at making the system more mandatory. Even the U.K. and France, proponents of a strong international legal system, might balk when it came time to vote. See Goldsmith & Posner, *supra* note 175.

187. See *supra* Part III.A.1.

188. NPT, *supra* note 3, at art. VIII, ¶ 3.

movement. The most recent conference, in May 2005, was “the biggest failure in the history of [the NPT].”¹⁸⁹ The blame was laid squarely at the feet of the U.S., which was accused of marginalizing the NPT in favor of the Bush Doctrine.¹⁹⁰ Policies change from conference to conference, but at present there seems little possibility for great change through the NPT, because the participating members have no political unity.

C. Reconciling the Ad Hoc System with International Law

As previously discussed, the “statutes” of international law establish a nuclear non-proliferation system that is functional, but not perfect.¹⁹¹ Various actors have created a system of *ad hoc* tactics and maneuvers to perfect the faulty system.¹⁹² For the spectrum of *ad hoc* actions, from negotiations to unilateral preemptive strikes, the more an act tends to the use of force and unilateralism, the more it conflicts with traditional theories.

1. Extra-NPT negotiations

Negotiations independent of the NPT regime seem to be allowable under international law, although some argue that they weaken the NPT. The U.S. negotiation with India, for example, was by some accounts a betrayal of the NPT that would foster the Treaty’s demise.¹⁹³ This argument may overstate the point, but it is true that negotiations outside the NPT make the NPT optional in that India has succeeded in gaining some official status as a nuclear power without complying with the NPT. The panic caused by this happening should be tempered with the reality that India is a stable democracy with a history of peace, and that it took over forty years to develop its program.¹⁹⁴ This negotiation also opened a door for

189. HARALD MÜLLER, THE 2005 NPT REVIEW CONFERENCE: REASONS AND CONSEQUENCES OF FAILURE AND OPTIONS FOR REPAIR 1 (2005), *available at* <http://www.wmdcommission.org/files/No31.pdf>.

190. *Id.* at 2–6.

191. *See supra* Part III.A.

192. *See supra* Part III.B.

193. *See* Peter van Ham & Olivia Bosch, *Global Non-Proliferation and Counter-Terrorism: The Role of Resolution 1540 and Its Implications*, in GLOBAL NON-PROLIFERATION AND COUNTER-TERRORISM: THE IMPACT OF UNSCR 1540 at 16 (Peter van Ham & Olivia Bosch eds., 2007).

194. *See supra* Part III.B.2.a.

other nations to normalize their relationships with India, and possibly for Pakistan and Israel to sign international agreements governing their nuclear status.

2. *Unilateral actions*

Theories justifying the unilateral use of force have changed in the last few decades; notably the doctrine of humanitarian intervention would seem to justify unilateral *ad hoc* action outside the formal sanction of the Security Council.¹⁹⁵ The doctrine of humanitarian intervention is born from the moral imperative that we, as people, should not let other people die.¹⁹⁶ The rules of humanitarian intervention derive from events of the last few decades.¹⁹⁷ While the rules are ambiguous,¹⁹⁸ the doctrine roughly holds that when there is international recognition of an impending humanitarian disaster likely to be accompanied with violations of international law, intervention by a coalition or single nation is appropriate if the Security Council takes no action, as long as it complies with the law of war.¹⁹⁹

NATO's actions in Kosovo in 1999 illustrate that the use of force justified by the doctrine of humanitarian intervention does not

195. This doctrine is summarized in its most forward form in THE RESPONSIBILITY TO PROTECT: REPORT OF THE INTERNATIONAL COMMISSION ON INTERVENTION AND STATE SOVEREIGNTY (2001), available at <http://www.iciss.ca/pdf/Commission-Report.pdf>. The report argues for fundamental changes in the international law of state sovereignty, positing that in a better legal system, states would have an affirmative duty to intervene in states that fail to guarantee their own citizens' human rights. *Id.* at 11–12.

196. Universal Declaration of Human Rights art. 28.

197. Intervention often takes place with an explicit U.N. mandate, such as the actions of the Australian-led INTERFET in East Timor in 1990, but this is not a requirement, as can be seen with France's intervention in Cote d'Ivoire where the U.N. later approved the action. Other examples are ECOMOG's intervention in Liberia in 1990, Operations Provide Comfort and Provide Comfort II in Iraq in 1991, ECOMOG's deployment to Sierra Leone in 1997 to stop the RUF rebellion, the NATO bombing of Yugoslavia in 1999, the ECOMOG action in Guinea-Bissau in 1999, and ECOMOG's deployment to Liberia again in 2003. The two patterns that emerge, intervention without explicit U.N. approval and intervention with subsequent explicit U.N. approval, both point to the acceptance of Humanitarian Intervention as customary international law.

198. Daphne Richmond, *Normativity in International Law: The Case of Unilateral Humanitarian Intervention*, 6 YALE HUM. RTS. & DEV. L.J. 45, 46 (2003).

199. See generally Julie Mertus, *Reconsidering the Legality of Humanitarian Intervention: Lessons from Kosovo*, 41 WM. & MARY L. REV. 1743 (2000) (arguing that humanitarian intervention is justified under the U.N. Charter).

require explicit U.N. approval.²⁰⁰ In 1999, the international community feared that Serbia was ethnically cleansing Albanians from Kosovo.²⁰¹ The United Nations failed to react, due to Russia and China's exercise of their veto power in the Security Council.²⁰² As a result, NATO, acting under its own charter, initiated a military campaign that succeeded in driving the Serbian military from Kosovo, establishing peace in the region and allowing the refugees to return.²⁰³

Russia and China introduced a resolution in the Security Council condemning NATO's actions as a breach of international law on the ground that it was a use of force that lacked Security Council approval. Only Russia, China, and Namibia voted in favor, with Argentina, Bahrain, Brazil, Britain, Canada, France, Gabon, Gambia, Malaysia, the Netherlands, Slovenia, and the U.S. voting against.²⁰⁴ Additionally, the U.N. Human Rights Committee voted to condemn Serbian ethnic cleansing in Kosovo by forty-four to one (Russia being the lone dissenter). Kofi Annan, then the Secretary General of the United Nations, stated as the campaign began that "there are times when the use of force may be legitimate in the pursuit of peace."²⁰⁵ Mr. Annan still would have preferred that NATO act through the U.N.,²⁰⁶ but his comment demonstrates his understanding of the political realities limiting the Security Council.

Whether or not the pursuit of nuclear weapons fits the definition of a humanitarian crisis obscures the applicability of the doctrine in regards to unilateral strikes against nuclear proliferation targets. To the extent that an act is unilateral, the doctrine requires that the crisis be increasingly large and immediate. Unilateral attacks against

200. *Id.* (justifying NATO's actions in Kosovo under the doctrine of Humanitarian Intervention).

201. *See, e.g.*, Human Rights Watch, *Will We Fail Kosovo's Refugees?*, Mar. 30, 1999, <http://www.hrw.org/en/news/1999/03/30/will-we-fail-kosovos-refugees> (citing the masses of ethnic Albanian refugees fleeing Kosovo as Serbian troops cracked down).

202. *See* Press Release, Security Council, Security Council Rejects Demand for Cessation of Use of Force Against Federal Republic of Yugoslavia, U.N. Doc. SC/6659 (Mar. 26, 1999) [hereinafter Security Council Rejects Russian Demand].

203. *None Dare Call It Victory*, N.Y. POST, June 10, 1999, at 34 (explaining that NATO forced Milosevic to sign an agreement allowing for a resolution of the Kosovo crisis).

204. Security Council Rejects Russian Demand, *supra* note 202, at 1.

205. Martin Kettle, *U.N. Head Voices Deep Rage: U.N. Sidelined on Politics but Leads Aid Effort*, GUARDIAN, Apr. 1, 1999, available at <http://www.guardian.co.uk/world/1999/apr/01/martinkettle>.

206. *Id.*

bomb-ingredient reactors are conducted before the creation of a bomb and certainly before its imminent use due to military reasons and intelligence limitations. But once a country has a nuclear weapon and the means to deliver it, a military air strike may be too late to prevent the bomb from being used. The definition of a humanitarian crisis would certainly include the detonation of a nuclear weapon, however, so this concern is more appropriately one of preemptive action.

3. Preemptive actions

The legality of preemptive strikes is unsettled; while it is essentially agreed that there is—and must be—room for a country to strike preemptively,²⁰⁷ the terms and conditions of when a preemptive strike is lawful are not universally accepted.²⁰⁸ Article 2 of the U.N. Charter requires that nations “refrain in their international relations from the threat or use of force against the territorial integrity . . . of any state.”²⁰⁹ The use of force can only be authorized by a vote of the Security Council.²¹⁰ Thus, at one end of the spectrum it may be argued that preemptive attacks without the sanction of the Security Council are manifestly violations of international law.

On the other end of the spectrum, the foundational argument for preemptive attacks is the nation that must attack preemptively in self-defense. The U.N. Charter affirms that states have an “inherent right of individual or collective self-defense if an armed attack occurs.”²¹¹ On its face, this language limits self-defense to reaction against armed attacks. What exactly constitutes an armed attack is debatable, however. Armies massed at a nation’s border, naval blockades, and attacks against allies would seem to satisfy the requirement.²¹² In the modern world, however, with dangers from

207. DERSHOWITZ, *supra* note 147, at 223 (“Certainly preemption is widely, if not universally, regarded as a proper action for a nation operating under the rule of law . . .”).

208. JANE E. STROMSETH, DAVID WIPPMAN & ROSA BROOKS, CAN MIGHT MAKE RIGHTS?: BUILDING THE RULE OF LAW AFTER MILITARY INTERVENTIONS 43 (2006) (stating that the Bush Doctrine’s version of preemption is a “lightning rod for controversy” and “has the potential to be destabilizing” to the international community).

209. U.N. Charter art. 2, para. 4.

210. *Id.* at art. 39.

211. *Id.* at art. 51.

212. See Stratchan, *supra* note 144, at 27–30 (explaining the strategic considerations the

cyber attacks and weapons of mass destruction, firm lines regarding self-defense in this area are problematic. Armed with a nuclear weapon first strike, waiting for “your turn” at self-defense may not ensure national survival if “your turn” never comes. Professor Dershowitz has posited that “when a threat is catastrophic and relatively certain, though non-imminent, and when the window of opportunity for effective prevention is quickly closing,” that preemption would be appropriate and lawful.²¹³ But there is no agreed upon standard; nations and authorities continue to disagree in both political circles and the academy.

For example, history’s proof that Israel was correct about Iraq’s nuclear weapons intentions has not ended the debate of the Osirak attack’s validity under international law. Israel argued that it acted in self-defense, as provided for in Article 51 of the U.N. Charter. From Israel’s perspective, it was unwillingly in a permanent state of war with Iraq,²¹⁴ and Operation Opera was part of that conflict. Additionally, Israel argued that the raid was law enforcing, and that “[i]n the absence of a centralized enforcement body, international law relies on the willingness of individual states to act on the behalf of the entire global community.”²¹⁵ This is the argument for unilateral action as well as preemption.

In the immediate aftermath of the attack, the international community—including the United States—felt that Israel acted in violation of international law. The U.N. Security Council adopted Resolution 487 less than two weeks after the attack. In the Resolution, the Security Council referenced the U.N. Charter’s article 2 requirement that nations refrain from the use of force and then “strongly condemn[ed] the military attack by Israel in clear violation of the Charter of the United Nations and the norms of international conduct.”²¹⁶ The General Assembly, in a 1986 Resolution, called on Israel to honor Resolution 487’s requirement for reparations to Iraq and Israel’s allowing IAEA inspectors, and then put further discussion on its annual agenda until 2005, when it

classical powers of Europe considered as justifying preemption).

213. DERSHOWITZ, *supra* note 147, at 223.

214. Louis Rene Beres & Col. Yoash Tsiddon-Chatto, *Reconsidering Israel’s Destruction of Iraq’s Osirak Nuclear Reactor*, 9 TEMP. INT’L & COMP. L.J. 437, 439 (1995).

215. *Id.*

216. Security Council Resolution 487, intro., ¶ 9, U.N. Doc. S/RES/487 (June 19, 1981).

dropped the matter.

Just as the General Assembly has moved on, so too some academics and governments now accept that preemptive strikes and the use of force without Security Council approval are allowable under international law.²¹⁷ There is a practical component for acceptance as well. Narcissistic dictators with nuclear weapons rightly inspire fear. As Professor Beres characterized, “Israel’s citizens, together with Jews and Arabs, American, and other coalition soldiers who fought in the [1991] Gulf War may owe their lives to Israel’s courage, skill, and foresight in June 1981.”²¹⁸ The U.S. currently ascribes to this doctrine, although this may change under succeeding Presidents. Although academics have suggested clarifying rules for when a preemptive strike may properly take place, the debate continues.²¹⁹

VI. CONCLUSION

Those who believe that the NPT and other formal mechanisms of non-proliferation are failing are mistaken—while formal mechanisms do not address the entire nuclear weapons problem, they serve as an eighty percent solution to nuclear non-proliferation. The *ad hoc* mechanisms of extra-NPT negotiations and unilateral preemptive strikes address the remaining twenty percent of the problem. These methods are more than just pragmatic, they are justifiable under international law. The logic of Justice Jackson of the U.S. Supreme Court, writing in a free speech case, applies with equal force to the nuclear nonproliferation debate: “The choice is not between order and liberty. It is between liberty with order and anarchy without either. There is danger that, if the Court does not temper its doctrinaire logic with a little practical wisdom, it will

217. Anthony D’Amato, *Israel’s Air Strike Against the Osiraq Reactor: A Retrospective*, 10 TEMP. INT’L & COMP. L.J. 261 (1996).

218. Beres & Tsiddon-Chatto, *supra* note 214, at 439.

219. *See, e.g.*, DERSHOWITZ, *supra* note 147, at 223 (suggesting that “when a threat is catastrophic and relatively certain, though nonimminent, and when the window of opportunity for effective prevention is quickly closing,” preemption would be appropriate and lawful); Abraham D. Sofaer, *On the Necessity of Pre-emption*, 14 EUR. J. INT’L L. 220 (2003) (suggesting that the rule would require examination of 1) the nature and magnitude of the threat involved; 2) the likelihood that the threat will be realized unless preemptive action is taken; 3) the availability and exhaustion of alternatives to using force; and 4) whether using preemptive force is consistent with the terms and purposes of the U.N. Charter and other applicable international agreements).

convert the [law] into a suicide pact.”²²⁰ This truth must apply any time that doctrinaire logic confronts reality, to include interpreting international law. *Ad hoc* actions, while somewhat destabilizing to the U.N. and the NPT, are part of “liberty with order”—they will not destroy the U.N. or the NPT, but they provide the unpredictable and necessary avenues to deal with the most politically difficult nuclear proliferation scenarios. Formal mechanisms are good, but they have weaknesses and often lead to inaction. The current system of formal mechanisms supplemented by *ad hoc* actions is a more complete solution. Even in those areas of the world with multilateral treaties establishing non-nuclear zones, security agreements with nuclear powers ensure a greater degree of safety. Leaders of nations are right to pursue a nuclear strategy that is in the best interest of their nation. Improving the current system will require aligning those national interests with international mechanisms. Some nations simply perceive nuclear weapons as too dangerous to chance the fate of horrors that could otherwise occur.

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220. *Terminiello v. Chicago*, 337 U.S. 1, 37 (1949) (Jackson, J., dissenting).

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