

**Russian and American Nonproliferation Policy:  
Success, Failure, and the Role of Cooperation**

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# **Russian and American Nonproliferation Policy: Success, Failure, and the Role of Cooperation<sup>1</sup>**

## **I. Explaining Nonproliferation Success and Failure**

After the United States, the U.S.S.R., and Britain all successfully built nuclear weapons, attention increasingly turned to what was called the “n<sup>th</sup> country problem.”<sup>2</sup> What would happen, government officials wondered, as nuclear weapons spread beyond the “big three” to other countries, and what, if anything, could be done to prevent it?

This paper looks at how two countries—the United States and the U.S.S.R./Russia—responded to the challenge of nuclear proliferation. It begins with a brief historical review, starting in the 1950s and following the evolution of Russian and American nonproliferation policy, including more recent concerns over Iran, North Korea, and nuclear terrorism. Following the historical review, the essay examines individual cases. Nonproliferation outcomes in 30 countries are analyzed and categorized as successes, failures, or mixed results.

The objective is to identify the reasons for success and failure, and in particular, to assess the role of nonproliferation cooperation.<sup>3</sup> Did U.S.-Russian cooperation affect

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<sup>1</sup> I am indebted to several people whose efforts improved this paper with their thoughtful comments, including Graham Allison, John Park, Bonnie Jenkins, and Alex Montgomery. I am particularly grateful to Dr. Alexander Saveliev for his interesting and very helpful observations. His comments on the Chinese and Ukrainian cases are especially noteworthy. I would also like to thank Annaliis Abrego, Sarah Rice, Kathleen Thompson, and Joe Pace for their research and editorial support.

<sup>2</sup> See, for example, Fred Charles Ikle, “Nth Countries and Disarmament,” *Bulletin of the Atomic Scientists*, December, 1960, p. 391. More generally, see Richard Rosecrance, “International Stability and Nuclear Diffusion,” in Richard Rosecrance, ed., *The Dispersion of Nuclear Weapons*, (New York: Columbia Press, 1964). Sir John Cockcroft, “The Perils of Nuclear Proliferation,” in *Unless Peace Comes*, Nigel Calder, ed., (New York: Viking Press, 1968). See also Lincoln P. Bloomfield, “Nuclear Proliferation - A Current Appraisal,” Speech delivered September 28, 1967, (Cambridge: Center for International Studies, MIT), 1967; Robert Rothstein, *On Nuclear Proliferation*, (New York: Columbia University), 1966.

<sup>3</sup> On U.S.-Soviet nonproliferation cooperation, see Joseph Nye, “Nuclear Learning and U.S.-Soviet Security Regimes,” *International Organization*, Vol. 41, No. 3, 1987, pp. 371-402; Joseph S. Nye, “U.S.-

nonproliferation outcomes? If so, what lessons can be learned as both nations confront new proliferation challenges?

## **II. Nonproliferation Policy: A Historical Perspective**

### **A. The 1950s: Sorting Out the Meaning of Nuclear Weapons**

By 1950, both the U.S. and the U.S.S.R. were nuclear powers, but for both countries the precise implications of that status were unclear. In the United States, two competing schools of thought emerged. One school, the “monopolists,” viewed nuclear weapons as a national asset, an advantage over other nations that should not be shared, even with the closest of allies. This view found support in the U.S. Congress and was epitomized by the McMahon Act, which severely restricted the executive’s ability to share nuclear information and technology with other countries—even with countries like Canada and Britain that helped the U.S. build the bomb in the first place.

Another group, the “managers,” believed that it was shortsighted to think that two or three nations could maintain a monopoly over nuclear weapons. They believed that nuclear weapons—like gunpowder, airplanes, and most every other armament in history—would spread to other countries. Given that inevitability, the wiser policy would be to work with America’s allies, helping them with the transition to nuclear

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Soviet Cooperation in a Nonproliferation Regime,” in *U.S.-Soviet Security Cooperation: Achievements, Failures, Lessons*, Alexander L. George, Philip J. Farley, Alexander Dallin, eds. (New York: Oxford Press, 1988), pp. 336-352; William Potter, “Nuclear Proliferation: U.S.-Soviet Cooperation,” *Washington Quarterly*, (Winter 1985); Andrea Gabbitas, “Prospects for U.S.-Russian Nonproliferation Cooperation Under Bush and Putin,” ISP Discussion Paper 2002-16, (Cambridge, MA: Belfer Center for Science and International Affairs, January 2003); William C. Potter, “U.S. and Russian Perspectives on WMD Proliferation,” (Monterey, CA: Center for Nonproliferation Studies, Monterey Institute for International Studies, 2000); <http://www.regionalanalysis.org/briefings/latest/en/2003/05/potter-pres.pdf> (Accessed May 26, 2004), Serguei Batsanov, “Russia and Nonproliferation in the New Century,” in *Proliferation Challenges and Nonproliferation Opportunities for New Administrations*, Michael Barletta, ed., Occasional Paper No. 4, (Monterey, CA: Center for Nonproliferation Studies, Monterey Institute for International Studies, 2000), pp. 22-24.

weapons. Managing nuclear proliferation, advocates argued, would strengthen the alliance and maximize American influence.

This second view was espoused by President Eisenhower and to a lesser extent by some of his successors. Eisenhower believed that nuclear weapons were like other instruments of foreign policy and could be used politically as well as militarily to bolster alliance relations. He went on to endorse the notion of “nuclear sharing,” the transfer of nuclear weapons to selected NATO countries.<sup>4</sup> On the civilian side, this philosophy gave rise to Eisenhower’s “Atoms for Peace” concept. Rather than fight a losing battle against the diffusion of nuclear technology, the U.S. would get ahead of the curve by providing non-NATO nations access to nuclear technology and materials if they pledged to refrain from acquiring nuclear weapons.<sup>5</sup>

For much of the 1950s, American nonproliferation policy reflected both the “monopolists” and the “managers” views simultaneously, albeit not comfortably. NATO’s dual key arrangement for nuclear weapons in Europe—American-controlled warheads on allied-controlled delivery platforms— was one example of this balancing act. Eisenhower considered the dual key arrangement to be a charade, but one that was necessary until Congressional restrictions were repealed.<sup>6</sup>

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<sup>4</sup> Steve Weber, “Multilateralism in NATO: Shaping the Postwar Balance of Power, 1945-1961,” (Berkeley: International and Area Studies, University of California, 1992); *Foreign Relations of the United States, 1958-1960*, Volume VII, Part I, Western European Integration and Security; Canada, (Washington, D.C.: GPO, 1993), pp. 600-610; Marc Trachtenberg, *A Constructed Peace*, (Princeton: Princeton University Press, 1999), pp. 146-200.

<sup>5</sup> President Eisenhower announced that Atoms for Peace would work to ensure that “all of the world’s scientists and engineers had adequate amounts of fissionable material.” DOS Publication no. 5314 (Washington, D.C.: GPO, 1953), in *The Nuclear Age Reader*, Jeffrey Porro, Carl Kaysen, Jack Ruina, and Paul Doty, eds., (New York: Alfred A. Knopf, 1989), p. 268.

<sup>6</sup> *Foreign Relations of the United States, 1958-1960*, Volume VII, Part I, Western European Integration and Security; Canada, (Washington, D.C.: GPO, 1993), p. 462.

Meanwhile, the Soviet Union was trying to work out its own nuclear policy. While Soviet officials never advocated nuclear sharing with their Warsaw Pact comrades, they nevertheless struggled with the question of nuclear technology and alliance relations. The most famous example is Soviet nuclear assistance to the People's Republic of China (PRC) during the early 1950s, in the years preceding the Sino-Soviet split.

Today, there is still widespread disagreement over the nature and extent of Soviet technology transfers to China during this period, but many view the episode as emblematic of the core policy question.<sup>7</sup> Should states use nuclear technology to win friends and influence governments or instead try to limit the number of nations who get the bomb?

In the civilian arena, the U.S.S.R. sought to match the United States as a supplier of "peaceful atoms." Moscow gave away research reactors and basic nuclear assistance to a variety of countries, but following the China fiasco, it refrained from providing anything but lab-scale transfers of potential bomb-related technologies.<sup>8</sup>

In the 1950s, the U.S. and the U.S.S.R. pursued their nonproliferation policies separately, but on occasion there was also cooperation. One success was the establishment of the International Atomic Energy Agency (IAEA). The IAEA was associated with Eisenhower's Atoms for Peace initiative, but it could only function as an

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<sup>7</sup> John Wilson Lewis and Xue Litai, *China Builds the Bomb*, (Stanford, Stanford University Press, 1988); Evan Feigenbaum, "The Military Transforms China: The Politics of Strategic Technology from the Nuclear Age to the Information Age," Unpublished Ph.D. Dissertation, Stanford University, 1997, UMI Dissertation Service.

<sup>8</sup> For example, one recipient of Soviet nuclear assistance was Egypt. Egypt received a small research reactor and other assistance, but wanted reprocessing technology as well. Nasser was able to play the U.S.S.R. against the PRC in trying to acquire hot cells, but in the end the Soviets never provided more than laboratory-scale technology. "United Arab Republic (Egypt), Problem 4, Summaries of Energy Programs Abroad," Committee on Nonproliferation, August, 1964; NSF, Committee File; Committee on Nonproliferation; Boxes 1-2, LBJPL; Interview with Ibrahim Hilmy Abdel Rahman, February 16, 1995; *Middle East Journal Chronology*, June 16, 1961-September 15, 1961, p. 441.

international agency if it received the backing of both superpowers. Despite an intense rivalry and bilateral difficulties, the U.S. and the U.S.S.R. found a way to cooperate. The result was the formation of the world's most important international nuclear organization. Other cooperative ventures were less successful, however. The "three-power" talks on a proposed Test Ban Treaty, for example, were motivated by a desire to retard the spread of nuclear weapons, but negotiations collapsed in 1958, and both sides resumed their nuclear testing.

In sum, the 1950s was a decade in which both countries struggled to define a nonproliferation policy, and did so for similar reasons. In the end, neither country transferred nuclear weapons outright to a third party, though both countries—for reasons of alliance politics—came close to doing so.

#### B. The 1960s and 1970s: Building a Nonproliferation Regime

The 1960s began with many of the policy questions of the 1950s still unresolved. In just a few years, however, events would force the issue. In 1960, France joined the nuclear club. Not long after, the Cuban missile crisis brought home the cataclysmic potential of the nuclear age. In October of 1964, China tested a nuclear device. The People's Republic thus became the first developing country and the first country not aligned with a superpower to break into the nuclear club. For many in the U.S. and the U.S.S.R., these events pointed to the dangers of a proliferating world. The result was an increasing commitment to national nonproliferation policies by each country.

The heightened sense of danger also contributed to increased cooperation between the superpowers, at least on the subject of nonproliferation. Starting in the 1960s, Soviet



and American officials at the highest levels began exchanging information and intelligence on nonproliferation risks. Consider, for example, this memorandum of conversation between Secretary of State Dean Rusk and Foreign Minister Andrei Gromyko in 1965:

The Secretary said it might be useful to exchange impressions on...[nuclear proliferation] with each other. He was prepared to do so in some detail. As to Egypt, at present that country did not have the scientific, technical and industrial capability of producing nuclear weapons. He thought that Israel did have such capability in view of the advanced state of science and technology in that country...As the Secretary had mentioned in his last conversation with the Foreign Minister, he thought Israel was “three months pregnant.”...We do observe their activities closely. Sweden has the capability of producing nuclear weapons...We do not believe, however, that they are producing today. They could move rather quickly, however. India probably had the necessary scientific and industrial base for nuclear capability...He did not believe Indonesia had any nuclear capability; if an explosion did occur in that area, we must conclude that it was of Chinese origin. The Secretary was not fully informed on what had happened in Djakarta today, but he did think it possible that the Chinese would detonate a nuclear bomb in Indonesia.<sup>9</sup>

Even though both countries agreed on the value of nonproliferation and the need for cooperation, there remained the question of tactics. What was the best way to reduce the proliferation threat? In the United States, the debate over nonproliferation policy echoed earlier debates from the 1950s. The nuclear sharing concept of the Eisenhower years found expression, though in a modified form, in the proposal for a Multi-Lateral Force (MLF). Advocates of the MLF saw it as a nonproliferation strategy. The MLF would give NATO countries access to their own nuclear weapons but in a NATO context. The hope was that providing nuclear weapons in a NATO structure would stave off a decision by individual NATO members to pursue their own national nuclear weapons programs.

The prospect of a nuclear test by China also led American officials to consider other nonproliferation strategies, including sharing nuclear weapons with China’s most prominent adversaries—Japan and India. Again, this idea was motivated, in part, by the

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<sup>9</sup> *Foreign Relations of the United States, 1964-68*, Volume XI: Arms Control and Disarmament, (Washington, D.C.: GPO, 1997), p. 250.

belief that if Japan and India's acquisition of nuclear weapons was inevitable, it was better that it be done in concert with the U.S. More provocatively, some officials argued for a pre-emptive strike against Chinese nuclear facilities, preferably in concert with the U.S.S.R. Neither proposal went very far, though there appears to have been discussions between the U.S. and the U.S.S.R. on the topic of pre-emption. These discussions ended when the Soviet Union reportedly rejected the idea.<sup>10</sup>

The Chinese test put new pressure on President Johnson to try to stop the spread of nuclear weapons. After the test, Johnson sought to reassure countries that they did not have to develop their own nuclear weapons and could rely on the United States for protection. These pronouncements included vague public statements as well as specific pledges to key countries such as Japan. Meanwhile, inside the administration, policy deliberations focused on two mutually exclusive proposals: the MLF and a treaty prohibiting the transfer and spread of nuclear weapons.

The events of the early 1960s and their implications were not lost on the U.S.S.R. By this point, the Soviet Union had abandoned any idea of sharing nuclear weapons or weapons-related technology, though there continued to be reports that the U.S.S.R. had cut deals with individual countries.<sup>11</sup> Rather, the Soviet Union's main priorities were constraining China's nuclear advantages and preventing one country in particular from

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<sup>10</sup> George Perkovich, *India's Nuclear Bomb*, (Berkeley: University of California Press, 1999), pp. 52-53.

<sup>11</sup> Hedrick Smith, "Soviet Said to Offer Cairo Atom Defense," *New York Times*, February 4, 1966, p. 1. See also, Pierre Lellouche, "The Garrison States", in William Kincade and Christopher Bertram, eds., *Nuclear Proliferation in the 1980s: Perspectives and Proposals* (New York: St. Martin's Press, 1982), p. 77, footnote 60; Marianne van Leeuwen and Ben Soetendorp, "Israel," in *A European Non-Proliferation Policy*, Harald Muller, ed. (Oxford: Clarendon Press, 1987), p. 242.

getting the bomb. That country was West Germany.<sup>12</sup> Towards that end, the Soviet Union proposed its own version of a nuclear nonproliferation treaty, one that would prohibit the kind of transfers imagined under the MLF.

Any nonproliferation treaty would require support from both the U.S. and the U.S.S.R., and so the two countries entered into intense negotiations. The U.S.S.R. vehemently opposed the MLF, because it was seen as a German route to the bomb. In the end, the U.S. had to make a choice: either the MLF or the Nonproliferation Treaty (NPT), and it chose the treaty. In 1968, the treaty was completed and opened for signature. It marked a turning point in the nuclear age, and an important milestone in U.S. and Soviet nonproliferation cooperation. With the NPT, both countries signaled that the core debate over nonproliferation policy had been settled, and that each country was committed to the same goal: preventing the further proliferation of nuclear weapons.

The treaty came into force in 1970, the beginning of a new decade, but it was to be one not unlike the previous decade. In 1964, a Chinese nuclear test helped spur the construction of a new nuclear nonproliferation regime. A decade later, India's test of an atomic device likewise pushed the U.S. and the U.S.S.R. to cooperate on further strengthening the new regime.<sup>13</sup>

In the U.S., the Indian test led to a Congressional review of nonproliferation policy and the passage of the Nuclear Nonproliferation Act. More broadly, the test motivated the U.S. and the U.S.S.R. to extend their cooperation in the field of nonproliferation, first with the Nuclear Suppliers Group (NSG) and later with the U.S.-

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<sup>12</sup> On Germany, see Catherine Kelleher, *Germany and the Politics of Nuclear Weapons*, (New York: Columbia University Press), 1975 and Jefferey Boutwell, *The German Nuclear Dilemma*, (Ithaca: Cornell University Press), 1990.

<sup>13</sup> Technically speaking, the 1974 test was a peaceful nuclear explosion (PNE). India disavowed any military ambitions, but that claim was treated skeptically by most governments.

sponsored International Nuclear Fuel Cycle Evaluation (INFCE). As with earlier nonproliferation measures like the IAEA and the NPT, U.S.-Soviet cooperation was a prerequisite.

### C. The 1980s: Retrenchment and Drift

The 1960s and 1970s witnessed an unprecedented level of nonproliferation cooperation between the U.S. and the Soviet Union. This was not true for the 1980s, however. During the 1980s, the U.S. and the U.S.S.R. entered a period of renewed hostility. Moreover, in both countries, the problem of proliferation commanded less attention and priority. In the U.S.S.R., the focus was on the war in Afghanistan (following the Soviet Union's 1979 military invasion) and on an economy that was increasingly headed towards collapse. In the U.S., interest in making the Soviet adventure in Afghanistan as painful as possible led Washington to collaborate with Pakistan, an aspiring nuclear weapons state. The U.S. could not work with Pakistan to aid the Afghan rebels and at the same time pressure Pakistan to abandon its nuclear ambitions. In this policy battle, nonproliferation came out the loser.

Nonproliferation policy also took a beating in the Middle East, where both the U.S. and the U.S.S.R. supported Iraq in its long and bloody war against Iran. Both nations looked to Iraq to counter a potential Iranian threat. Iran's taking of American hostages after the fall of the Shah effectively severed U.S.-Iranian relations, while the U.S.S.R. sought to preserve the valued Soviet-Iraqi bilateral relationship and combat the potential spread of Islamist revolution to its Central Asian republics. Consequently, both countries turned a blind eye to Iraq's suspicious procurement activities.

#### D. The 1990s and Beyond: New Challenges, Missed Opportunities

The 1990s brought a series of dramatic events that changed the nonproliferation landscape. The dissolution of the Soviet Union, the 1991 Gulf War and subsequent revelations about Iraqi nuclear activities, the North Korea imbroglio, and South Asian nuclear tests all forced the issue of nuclear proliferation into renewed prominence.

The collapse of the Soviet Union had cross-cutting effects on U.S. nonproliferation policy. On the one hand, the end of the U.S.S.R. meant that the U.S. could focus on other national security problems and do so with a greater degree of latitude. On the other hand, the absence of a single compelling threat meant that U.S. nonproliferation policy increasingly fractionalized. The traditional emphasis on the nonproliferation regime gave way to new policy initiatives, from counterproliferation to missile defense to cooperative threat reduction. As a practical matter, however, U.S. nonproliferation policy became increasingly focused on a handful of states, most notably Iraq and North Korea.

Iraq's nuclear program led U.S. officials to support a variety of new mechanisms including: 1) the use of military force to destroy suspected nuclear assets and to compel adherence to UN resolutions, 2) the development of new mechanisms, such as the United Nations Special Commission (UNSCOM), for dismantling nuclear installations, and 3) reform of the IAEA and its procedures. Under the Clinton administration, North Korea's program was subjected to the threatened use of force as well as the incentive-based approach of the Framework Agreement. As in past decades, these actions required the cooperation and support of the Russian government, particularly with regard to Iraq.

For the Soviet Union, the most important event in this period was its own demise. The break-up of the U.S.S.R. naturally affected nonproliferation policy in the new Russia, which lacked the resources and infrastructure to address the issue. In general, nonproliferation was a less important policy concern, as Russian leaders grappled with more immediate political and financial problems.

The end of U.S.-Soviet rivalry presented new opportunities for nonproliferation cooperation, and the 1990s did witness the two countries working towards the same goals on issues such as Iraq and the nonproliferation regime.<sup>14</sup> There was also U.S.-Russian cooperation on the problem of fissile material and weapons security, but joint efforts between the two countries were hobbled by inefficiency, an absence of an authentic partnership, and the failure to assign nuclear cooperation the political priority it required.<sup>15</sup> In short, there was cooperation and success, but there was also frustration, resentment and lost opportunities.

#### E. American and Soviet/Russian Nonproliferation Policy Compared

Despite the fact that the U.S. and the U.S.S.R./Russia found themselves in very different situations, the trajectory of their nonproliferation policy is remarkably similar. Both countries struggled in the 1950s to define the meaning of nuclear weapons and their relation to alliance politics. In each country, nonproliferation competed—sometimes

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<sup>14</sup> Iraq and North Korea are discussed in greater detail below. Regarding the regime, the U.S. and Russia worked together, for example, in bringing a successful conclusion to the 2000 NPT Review Conference. See Vladimir Orlov, “Russian Nonproliferation Policy,” in *Proliferation Challenges and Nonproliferation Opportunities for New Administrations*, Michael Barletta, ed., Occasional Paper No. 4, (Monterey, CA: Center for Nonproliferation Studies, Monterey Institute for International Studies, 2000), pp. 25-28.

<sup>15</sup> Matthew Bunn, Anthony Wier, and John P. Holdren, “*Controlling Nuclear Warheads and Materials: A Report Card and Action Plan*,” (Washington, D.C.: Nuclear Threat Initiative and the Project on Managing the Atom, Harvard University, March 2003); *Protecting Against the Spread of Nuclear, Biological, and Chemical Weapons, Volume 4. Russian Perspectives and Priorities*, Robert J. Einhorn and Michele A. Flournoy, eds., (Washington, D.C.: CSIS, January 2003).

successfully, sometimes not—with other foreign policy issues, and both countries can point to examples where they shared nuclear technology only to regret it later. Both nations also followed a path that, over time, resulted in an increased commitment to the concept of nonproliferation. The two states came to agree on the value of international instruments and institutions as a way to restrain the spread of nuclear weapons. Finally, each country discovered the value of nonproliferation cooperation, even if it required working with an arch-enemy.

### **III. Cases of Nonproliferation Failure**

Having outlined the general development of U.S. and U.S.S.R./Russian nonproliferation policy, the focus now shifts to specific cases of nonproliferation success and failure. To what extent, if any, did the efforts of both countries retard the spread of nuclear weapons? Did U.S.-Soviet cooperation play a role? We begin with the failures.

There are many ways to define failure, but certainly one measure is whether a potential proliferator acquires nuclear weapons. By this criterion, one can point to at least six cases that would be considered nonproliferation failures—at least from American and Soviet perspectives.

**Table 1. Cases of Nonproliferation Failure<sup>16</sup>**

Britain
France
China
Israel
India
Pakistan

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<sup>16</sup> Four additional cases — South Africa, Iraq, North Korea, and Iran — combine elements of both success and failure and are treated separately.

These six countries acquired nuclear weapons despite the opposition of both the U.S. and the U.S.S.R., though the intensity of opposition varied depending on the case. U.S. opposition to the British and French nuclear arsenals, for example, was not particularly strong. In all these cases, U.S.-Soviet nonproliferation cooperation was absent; each superpower pursued its own policy without regard to the other.

This lack of cooperation may have contributed to a lack of success, but it has to be conceded that in most of these cases, there was probably little that either country could have done to change the outcome. China and Pakistan, for example, were determined to acquire nuclear weapons and had a strong security motivation for doing so. China had been subjected to repeated nuclear threats by the U.S.; it shared a long border with an unfriendly nuclear neighbor (the U.S.S.R.) and had international political ambitions. Pakistan had been dismembered by India, which itself had crossed the nuclear threshold.<sup>17</sup> Britain and France did not face these same kinds of pressures, and it is conceivable that a different American policy might have altered the outcome, but the counterfactual reasoning is difficult. Britain decided early on to develop the bomb, and like France, Britain viewed nuclear weapons as essential to its status following the end of the second World War.

In two of the cases, however, it is not clear that a decision to acquire nuclear weapons was inevitable. Many people believe that it was axiomatic that Israel would

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<sup>17</sup> Regarding Pakistan, recent events suggest another kind of nonproliferation failure. A.Q. Khan ran a clandestine nuclear export business for two decades, offering centrifuge parts and even weapons designs to Iran, Libya, and other countries. The U.S. failed to put an end to Khan's activities or to prevent the transfers of sensitive equipment despite the fact that Khan's endeavors were known by U.S. intelligence for some time. On Khan's network, see David Sanger and William Broad, "From Rogue Nuclear Programs, Web of Trails Leads to Pakistan," *New York Times*, January 4, 2004, p.1; Kamran Khan, "Pakistanis Exploited Nuclear Network; Iran, Libya Aided Via Black Market, Investigation Finds," *Washington Post*, January 28, 2004, p. A01; Mubashir Zaidi, "Scientist Claimed Nuclear Equipment Was Old, Official Says," *Los Angeles Times*, February 10, 2004, p. A3.



acquire nuclear weapons for security reasons, but a close reading of the history reveals that there was no broad-based political consensus favoring the nuclear option.<sup>18</sup> Rather, it was the contingent conjunction of a particular leader hell-bent on having nuclear weapons (Ben-Gurion) and the willingness of France to secretly supply the requisite nuclear technology that enabled the Israeli bomb. Here again, however, it is not clear that either the U.S. or the U.S.S.R. could have affected the outcome.<sup>19</sup> Nevertheless, the U.S. strongly and repeatedly objected to Israel's nuclear activities in the early 1960s.<sup>20</sup> In short, an Israeli bomb was not inevitable, but preventing that outcome may have required changes in the internal or domestic environment, not actions by the superpowers.

India, by contrast, provides an example of a case where the U.S. and Soviet Union had numerous opportunities to act, but failed to do so. The security rationale for the Indian program was very weak, and the program evolved over many, many years—thus giving the superpowers ample time to address India's nuclear ambitions. For both countries, however, India was not a priority. The resulting policy of benign neglect

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<sup>18</sup> Avner Cohen, *Israel and the Bomb*, (New York: Columbia University Press, 1998).

<sup>19</sup> It is worth noting, however, that classified documents reveal that the Kennedy administration seriously considered, but then abandoned, a plan for Soviet-American coordination of conventional arms transfers to the Middle East. Kennedy was worried that uncoordinated transfers to Israel, Egypt and other countries in the region were accelerating an arms race that would ultimately result in Israel developing nuclear weapons. The administration discussed a secret approach with the Soviet Union but never followed through. The Israeli bomb program had begun in the late 1950s, and arguably, Israel would have pursued nuclear weapons regardless of Soviet and American policymaking. Still, a new opportunity to restrain Israel's nuclear ambitions presented itself when Ben-Gurion suddenly resigned from office in 1963. At that time, a nonproliferation compromise might have been possible, but the ever-growing conventional arms race strengthened the hand of bomb advocates within the Israeli government, and made a rejection of the bomb option politically untenable.

<sup>20</sup> See, for example, Telegram from Dean Rusk to US Embassy, Tel Aviv, "US Mission Geneva for Goldberg," June 28, 1966, p. 1, [Exdis], NAI, General Records of the Department of State, Central Decimal File, 1964-1966, Political and Defense, Def-Defense Affairs Israel 12 Armaments 1/1/65, Box 1643.

allowed bomb advocates in India to eventually win out. Had the Indian bomb been prevented, there is a chance that Pakistan's program might also have been halted.<sup>21</sup>

In sum, most cases of nonproliferation failure involve programs that both the U.S. and the U.S.S.R. opposed, but did not cooperate in trying to stop. The majority of these countries would probably have pursued nuclear weapons regardless, but there were also missed opportunities, particularly in the case of India, which influenced the outcome in Pakistan.

#### **IV. Nonproliferation Successes**

This section examines nonproliferation successes, i.e., countries that showed an interest in nuclear weapons but that did not join the nuclear club. As with the nonproliferation failures, the outcomes in these cases are influenced by a variety of factors, both internal and external.<sup>22</sup> Nevertheless, it is worth asking what role U.S. and Soviet nonproliferation policy and nonproliferation cooperation might have had in helping bring about these successes.

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<sup>21</sup> The Pakistani bomb program began in the early 1970s, but it was during the 1980s that Pakistan made serious strides toward nuclear weapons capability. Unfortunately, the 1980s represented one of the low points in U.S.-Soviet cooperation. On U.S.-Soviet divisions regarding the Pakistani nuclear effort, see for example, "Soviet Warns Pakistan on Bomb," *New York Times*, July 15, 1986, p. 3. On the Indian and Pakistani programs, see Samina Ahmed, "Pakistan's Nuclear Weapons Program: Turning Points and Nuclear Choices," *International Security*, Vol. 23, No. 4 (Spring 1999); Sumit Ganguly, "India's Pathway to Pokhran II: The Prospects and Sources of New Delhi's Nuclear Weapons Program," *International Security*, Vol. 23, No. 4 (Spring 1999), pp. 150-151; Stephen M. Meyer, "Nuclear Decision Making in India," (Cambridge: Center for International Studies, MIT, 1981), pp. 5, 9. For a different view of Nehru, see George Perkovich, *India's Nuclear Bomb*, (Berkeley: University of California Press, 1999). In the 1990s, relations improved, but both the U.S. and Russia were preoccupied with other issues.

<sup>22</sup> See Jim Walsh, *Bombs Unbuilt: Power, Ideas and Institutions in International Politics*, Doctoral dissertation (Cambridge, MA: MIT, 2000).

**Table 2. Cases of Nonproliferation Success<sup>23</sup>**

No U.S.-U.S.S.R./Russian Cooperation		U.S.-U.S.S.R./Russian Cooperation
Argentina	Japan	Cuba
Australia	Romania	Germany
Brazil	South Korea	Ukraine
Canada	Sweden	Belarus
Egypt	Switzerland	Kazakhstan
Greece	Taiwan	
Indonesia	Turkey	
Italy	Yugoslavia	

Sixteen of the cases of nonproliferation success involve little or no U.S.-Soviet cooperation. Among these countries, there are instances in which American or Soviet nonproliferation policy was a factor as well as examples where the outcome was driven by other, usually local or regional, dynamics. The decisions to forgo nuclear weapons by Sweden, Egypt,<sup>24</sup> Indonesia, Argentina, and Brazil, for example, were not particularly influenced by either the U.S. or the U.S.S.R.<sup>25</sup>

In other cases, U.S. or Soviet nonproliferation policy may have been critical to the outcome. U.S. policy vis-à-vis Japan,<sup>26</sup> for example, or Soviet policy towards Romania

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<sup>23</sup> Libya and Algeria represent two other cases of success, but very little is known about these countries' nuclear efforts.

<sup>24</sup> On Egypt, see Walsh, *Bombs Unbuilt: Power, Ideas and Institutions in International Politics*.

<sup>25</sup> On Argentina and Brazil, see Michael Barletta, "Nuclear Security and Diversionary Peace: Nuclear Confidence-Building in Argentina and Brazil," *National Security Studies Quarterly*, Vol. 5, No. 3 (Summer 1999), pp. 19-38; John R. Redick, "Factors in the Decisions by Argentina and Brazil to Accept the Nonproliferation Regime," in *Pulling Back from the Nuclear Brink: Reducing and Countering Nuclear Threats*, Barry R Schneider and William Dowdy, eds., (London: Frank Cass, 1998), pp. 67-79.

<sup>26</sup> On Japan, see Peter J. Katzenstein and Nobui Okawara, *Japan's National Security: Structures, Norms, and Policy Responses in a Changing World*, (Ithaca: East Asia Program, Cornell University, 1993); Selig S. Harrison, "Japan and Nuclear Weapons," in *Japan's Nuclear Future*, Selig S. Harrison, ed., (Washington: Carnegie Endowment for International Peace, 1996).

and Yugoslavia,<sup>27</sup> illustrates the different ways in which the superpowers were able to exercise influence on the nuclear ambitions of allies.

Finally, there are cases where U.S. or Soviet policy was not necessarily decisive, but where nonproliferation policy was a contributing factor.<sup>28</sup> Australia and Italy are examples of countries in this group.<sup>29</sup>

Now consider a second group of nonproliferation success stories: cases where cooperation between the U.S. and the U.S.S.R./Russia helped produce a positive result. The codings for this category include some surprises, not least of which is Cuba. It is certainly open to question whether Castro himself had nuclear ambitions or would have developed an ambition given the opportunity to do so, but what is unquestionable is that the Cuban missile crisis produced a negotiated settlement in which the U.S.S.R. made assurances that Cuba would not acquire nuclear weapons. Cuba did not immediately join the NPT, but U.S.-Soviet agreement on a non-nuclear Cuba helped ensure a non-nuclear outcome.

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<sup>27</sup> On Romania and Yugoslavia, see Rodney W. Jones and Mark G. McDonough, *Tracking Nuclear Proliferation*, (Washington: Carnegie Endowment for Peace, 1998), pp. 103-108; Andrew Koch, "Yugoslavia's Nuclear Legacy: Should We Worry?," *The Nonproliferation Review*, Vol. 4, No. 3 (Spring/Summer 1997), pp. 123-128; William C. Potter and Jonathan B. Tucker, "Well-Armed and Very Dangerous," *Los Angeles Times*, April 4, 1999, <http://cns.miiis.edu/pubs/reports/potttuck.htm> (Accessed May 26, 2004).

<sup>28</sup> Indeed, this class of countries includes cases where U.S.-Soviet cooperation may have had an indirect impact, e.g., the U.S. and U.S.S.R. cooperate in the construction of the NPT, which in turn, influences policy within some of these countries.

<sup>29</sup> On Australia, see Jim Walsh, "Surprise Down Under: The Secret History of Australia's Nuclear Ambitions," *Nonproliferation Review*, Vol. 5, No. 1 (Fall 1997), pp. 1-20; Alice Cawte, *Atomic Australia: 1944-1990*, (Kensington: New South Wales University Press), 1992; Wayne Reynolds, *Australia's Bid for the Atomic Bomb*, (Melbourne: Melbourne University Press), 2000. On Italy, see Cesare Merlini, "A Concise History of Nuclear Italy," *The International Spectator*, (Journal of the Istituto Affari Internazionali, Rome) Vol. 23, No. 3 (July-September), 1988; Leopoldo Nuti, "Italy and the Nuclear Choices of the Atlantic Alliance, 1955-63," in *Securing Peace in Europe, 1945-62*, edited by Beatrice Heuser and Robert O'Neill, (London: Macmillan Press), 1992; Steven J. Baker, *Italy and the Nuclear Option*, (Santa Monica: California Arms Control and Foreign Policy Seminar, 1974).

A somewhat similar argument could be made regarding the fate of West Germany, which was at the heart of U.S.-Soviet negotiations over the NPT. Unlike the Cuban case, American officials did not promise that Germany would remain non-nuclear, but U.S.-Soviet cooperation in constructing the NPT (and the rejection of the MLF) implicitly recognized the centrality of the German nuclear question and Soviet concerns.

Less subtle cases of U.S.-Russian cooperation involve the three countries that inherited nuclear assets following the collapse of the Soviet Union—Ukraine, Belarus, and Kazakhstan. Here, Russian and American officials worked together to insure that none of the countries would become nuclear weapons states.

## V. Mixed Cases: Success and Failure

Four countries fall into their own special category. They represent cases of both nonproliferation success and nonproliferation failure.<sup>30</sup>

**Table 3. Mixed Cases**

Iraq
South Africa
North Korea
Iran

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<sup>30</sup> Given recent revelations, Libya may also qualify as a mixed case. On the one hand, it appears that Libya did engage in clandestine and prohibited nuclear activities such as the undeclared import of centrifuge parts and weapons designs. On the other hand, Britain and the U.S. struck a deal with the Libyan government that has resulted in its abandonment of those activities. At this point, it is probably too early to try to classify the Libyan case. While some facts are out, much remains secret, and there is substantial controversy regarding American claims that Libya had a serious nuclear program. On Libya, see “Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran,” Report by the Director General, GOV/2003/40, June 6, 2003, (Vienna: IAEA, 2003); Testimony of Paula A. DeSutter, Assistant Secretary of State for Verification and Compliance Senate Foreign Relations Committee, February 26, 2004, (Washington: GPO, 2004); William J. Broad, “Arms-Control Group Says U.S. Inflated Libya’s Nuclear Bid,” *New York Times*, March 25, 2004, p. A 8; David Crawford, “Libya Was Far from Building Nuclear Bomb,” *Wall Street Journal*, February 23, 2004, p. A 14; David Albright and Corey Hinderstein, “Libya’s Gas Centrifuge Procurement: Much Remains Undiscovered,” (Washington: ISIS, March 1, 2004).

Iraq is certainly a nonproliferation failure insofar as the country violated its NPT commitments. It was able to do so, in part, because both the U.S. and the U.S.S.R. turned a blind eye to Iraqi nuclear ambitions during the Iran-Iraq war and the years that preceded it. Yet Iraq also represents a nonproliferation success, given the actions and events that followed the 1991 revelations about the Iraqi program. Though American officials often complained that the Russians and the French were “soft on Iraq,” the U.S. could never have established UNSCOM, the sanctions regime, or UN Resolution 1441 and its innovative policy mechanisms without the support of Russia. Indeed, the Iraqi case led to an overall strengthening of the nonproliferation regime (e.g., the Additional Protocol), little of which could have been accomplished without Russian-American cooperation.

Of course, the latest developments in the Iraq story offer a different lesson: the costs of non-cooperation. Russia’s opposition to a second UN resolution authorizing American military action and Washington’s decision to press forward with war has hurt both countries. Russian and other opposition to the war weakened the legitimacy of U.S. intervention, which was perceived as imperial unilateralism in many parts of the globe, particularly in the Muslim world. Lack of a Russian-American partnership has also been costly in the post-war phase, as the U.S. grapples with problems of reconstruction. The lack of Russian participation has meant that Moscow has put at risk its sizeable financial interests in Iraq. In sum, the Iraqi case exhibits both elements of nonproliferation success and failure as well as nonproliferation cooperation and non-cooperation.

In the South African case, the obvious failure was South Africa’s acquisition of the bomb; the obvious success was its later renunciation of nuclear weapons. The dynamics driving both decisions were local and regional in nature, but there is another

element in the South African story, one that highlights the potential for U.S.-Russian cooperation. In the 1970s, the Soviet government shared satellite intelligence on South Africa's plans to conduct a peaceful nuclear explosion (PNE)—a test that was averted after American officials used the Soviet intelligence to pressure the South African government to abandon its planned test.<sup>31</sup>

North Korea, like Iraq, provides a twisting and turning story of nonproliferation success and failure: failure (the 1993 North Korean announcement of its intention to withdraw from the NPT), followed by success (the 1994 Agreed Framework), followed by failure (the 2003 North Korean statement that it had constructed nuclear weapons).<sup>32</sup> The North Korean case also differs from the Iraqi case in several important ways. For most of the 1990s, Russia was on the sidelines as events unfolded, i.e., there was no close U.S.-Russian cooperation in dealing with North Korea.<sup>33</sup> More importantly, unlike Iraq, the nonproliferation outcome in North Korea remains undetermined, and as is discussed below, Russia could play an important role in a successful resolution of this issue.

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<sup>31</sup> On the South African program see Mitchell Reiss, *Bridled Ambition*, (Washington: Woodrow Wilson Center Press, 1995); J. W. de Villars, Roger Jargine, Mitchell Reiss, "Why South Africa Gave Up the Bomb," *Foreign Affairs*, November/December, 1993, pp. 98-109; Robert E. Kelley, "Two Substantially Different Approaches to Proliferation: The Cases of South Africa and Iraq," paper presented for the Conference on Non-Proliferation, IGC, University of California, held at Limassol, Cyprus, August 18, 1995; Frank Pabian, "South Africa's Nuclear Weapons Program: Lessons for U.S. Nonproliferation Policy," *Nonproliferation Review*, Vol. 3, No. 1 (Fall, 1995), pp. 1-19.

<sup>32</sup> On the early history of Soviet involvement in the North Korean program, see Georgiy Kaurov, "A Technical History of Soviet-North Korean Nuclear Relations," in *The North Korean Nuclear Program: Security, Strategy, and New Perspectives from Russia*, James Clay Moltz and Alexandre Y. Mansourov, eds., (New York: Routledge, 2000), pp. 15-20; Alexander Zhebin, "A Political History of Soviet-North Korean Nuclear Cooperation," in *The North Korean Nuclear Program: Security, Strategy, and New Perspectives from Russia*, James Clay Moltz and Alexandre Y. Mansourov, eds., (New York: Routledge, 2000), pp. 27-37; Larisa V. Zabrovskaya, "The Korean Peninsula and the Security of Russia's Primorskiy Kray," in *The North Korean Nuclear Program: Security, Strategy, and New Perspectives from Russia*, James Clay Moltz and Alexandre Y. Mansourov, eds., (New York: Routledge, 2000), pp. 179-196. On more recent Russian-Korean relations, see Christina Chuen, "The Changing Security Picture in the Russian Far East," in *The United States and Asian Security*, Matthew Evangelista and Judith Reppy, eds., Occasional Papers #26, (Ithaca, N.Y.: Peace Studies Program, Cornell University, May 2002), pp. 199-204. [www.ciaonet.org/wps/evm01/chc01.pdf](http://www.ciaonet.org/wps/evm01/chc01.pdf) (Accessed May 26, 2004).

<sup>33</sup> Sergei Blagov, "Russia's Lost Korean Opportunity," *Asia Times*, June 25, 2003 <http://www.cdi.org/russia/263-7.cfm>. (Accessed May 26, 2004).

Iran's nuclear program presents a somewhat different set of challenges and outcomes. Unlike South Africa or North Korea, Iran has not yet reached a point in its nuclear development where it can build or claim to have built a nuclear weapon. As with Iraq, there has been some level of cooperation between the U.S. and Russia, but more at the level of declaratory policy than implementation, and like Iraq, the importance of Russia's bilateral relations with its Caspian neighbor has affected its perceptions and calculations.<sup>34</sup> Unlike Iraq, however, there is no set of UN resolutions or international sanctions to legitimize claims of Iranian noncompliance.<sup>35</sup> Indeed, Iran is not yet a nonproliferation failure, but neither is it a success. With respect to U.S.-Russian cooperation, one cannot say that cooperation has been wholly absent, nor has it been robust.<sup>36</sup> However, one can say that given recent revelations about Iranian enrichment and heavy water facilities, Russia is taking the Iranian program much more seriously.<sup>37</sup>

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<sup>34</sup> On Russian-Iranian relations in general, see Robert O. Freedman, "Putin and the Middle East," *Middle East Review of International Affairs* 6:2 (June 2002), pp. 1-5; Oksana Antonenko, "Russia's Military Involvement in the Middle East," *Middle East Review of International Affairs* 5:1 (March 2001), pp. 1-13. [http://www.ciaonet.org/olj/meria/meria01\\_ano01.html](http://www.ciaonet.org/olj/meria/meria01_ano01.html) (Accessed May 26, 2004); Brenda Shaffer, *Partners in Need: The Strategic Relationship of Russia and Iran*, (Washington, D.C.: Washington Institute for Near East Policy, 2001).

<sup>35</sup> To date, the UN Security Council has not intervened in the Iranian matter. Instead, the issue has thus far been confined to the IAEA and its Board of Governors. The Board has passed resolutions regarding Iran, insisting that Tehran cooperate with the IAEA in settling all outstanding issues pertaining to its IAEA declarations. See, for example, "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran," Report by the Director General, GOV/2003/40, June 6, 2003, (Vienna: IAEA, 2003); "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran," Report by the Director General, GOV/2003/63, August 26, 2003, (Vienna: IAEA, 2003); "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran," Resolution Adopted by Board on 12 September 2003, GOV/2003/69, September 12, 2003, (Vienna: IAEA, 2003); "Implementation of the NPT Safeguards Agreement in the Islamic Republic of Iran," Resolution Adopted by Board on 12 September 2003, GOV/2004/119, February 24, 2004, (Vienna: IAEA, 2004).

<sup>36</sup> On Russia and Iran's weapons programs, see Michael Jasinski, "Russia's Nuclear and Missile Technology Assistance to Iran," (Monterey, CA: Center for Nonproliferation Studies, Monterey Institute for International Studies, June 26, 2003), <http://cns.miis.edu/research/iran/rusnuc.htm> (Accessed May 26, 2004); Cristina Chuen, "Russian Nuclear Exports to Iran: U.S. Policy Change Needed," (Monterey, CA: Center for Nonproliferation Studies, Monterey Institute for International Studies, March 27, 2003), <http://cns.miis.edu/pubs/week/030327.htm> (Accessed May 26, 2004).

<sup>37</sup> Vladimir Putin, "Press Conference by Russian President Vladimir Putin with Russian and Foreign Journalists," June 21, 2003, (Washington, D.C.: Acronym Institute for Disarmament Diplomacy), 2003;



## VI. Success, Failure, and Cooperation: The Big Picture

Having reviewed the individual cases, it makes sense to step back and attempt a more general assessment. The analysis suggests that although U.S.-Soviet nonproliferation policy is only one factor that can influence nonproliferation outcomes, it can be an important one. It also indicates that while U.S.-Soviet/Russian cooperation has not been consistent, its effect has been consistently positive.

**Table 4. Effects of Cooperation on Nonproliferation Outcomes**

Outcome	Number of Cases	Cases Involving Cooperation
Failure	6	0
Success	22	6
Mixed	4	2

Table 4 provides some support for the notion that cooperation is positively associated with nonproliferation success. In every instance of failure, there was an absence of cooperation, while in many of the cases of success, cooperation mattered. The chart actually underestimates the value of cooperation, because it only includes cooperation vis-à-vis a particular country and not more general forms of cooperation.

Indeed, it is worth taking a moment to consider the many ways in which the two states have cooperated beyond dealing with a particular proliferator. As was noted earlier, U.S.-Soviet nonproliferation cooperation was largely responsible for the current nonproliferation regime. The creation of the IAEA, the Partial Test Ban Treaty, the NPT, and the INFCE process were all the result of decisions by the leadership in each country

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Brenda Shaffer, "Iran's Nuclear Program: The Russians May Be Ready To Help," *International Herald Tribune*, June 12, 2003; Alexander Vershbow, "The NPT Regime is Not Working," Speech before the Institute of Scientific Information on Social Sciences of the Russian Academy of Sciences (INION RAN), Moscow, May 26, 2003, (Washington, D.C.: Acronym Institute for Disarmament Diplomacy), 2003.

to jointly pursue nonproliferation objectives.<sup>38</sup> In addition, in the 1990s and the post-2000 period, the U.S. and Russia collaborated on a series of initiatives aimed at improving the safety and security of fissile material, nuclear warheads, and radiological material.

## **VII. Success and Cooperation: Lessons Learned**

This paper has examined the historical evolution of U.S.-Soviet/Russian nonproliferation policy and a largely forgotten history of Russian-American nonproliferation partnership. That history includes numerous successes, but also missed opportunities. It suggests that failure is more likely in the absence of cooperation, and that the opportunities for constructive partnership—on country-country policies, information sharing, cooperative threat reduction, and the strengthening of the nonproliferation regime—are numerous.

Perhaps the biggest lesson is a simple one: both countries have to make a deliberate effort to cooperate. It will not happen on its own. The neglect of South Asia and the studied avoidance of Iraqi behavior clearly demonstrate that cooperation has to be constructed. The countries' leaders must first decide to cooperate and they have to make it a political priority. In the absence of leadership, it will not occur, resulting in more missed opportunities.

Additionally, cooperation has to be based on a real partnership characterized by respect and reciprocity. That was evident in early efforts at nonproliferation cooperation, but has been lacking in more recent initiatives. Future success will require better

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<sup>38</sup> Glenn Seaborg, *Stemming the Tide: Arms Control in the Johnson Years*, (Lexington, MA: Lexington Books, 1987).

coordination, a greater sense of “partnership among equals,” and a stronger political commitment by both sides.

Benefits of cooperation come from *sustained* engagement. It takes time to build trust among players, and it takes time to build the skills for effective cooperation.<sup>39</sup> Creating cooperation on the fly, in the midst of a crisis, is difficult and less likely to succeed. What is required is a structured, ongoing dialogue that can deepen and expand cooperation.

Today, there is both a tremendous potential and a tremendous need for Russian-American nonproliferation cooperation. The hard cases of Iran and North Korea will likely require action of one kind or another in the next twelve to eighteen months. Russia can play an important role with both countries. It has significant leverage with Iran and a firm commitment to ensuring that Iran lives up to its NPT obligations. Russia’s contribution to the North Korean problem is perhaps less pivotal than that of China or South Korea, but it has made important contributions in the past, e.g., inducing North Korea to join the NPT and more recently, employing a special envoy and high profile diplomatic initiatives intended to draw North Korea into the international community.<sup>40</sup> Some Russian officials feel burned by their experience with the Korean Peninsula Energy Development Organization (KEDO). Moreover, after the 2003 war in Iraq, these same analysts are ready to let North Korea be America’s problem, but President Putin appears

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<sup>39</sup> Consider the observations of one firsthand witness about meetings between the U.S. Ambassador at Large for Nonproliferation and his Soviet counterpart: “Our early discussions were somewhat rigid regarding the hard cases, but after seven or eight meetings, they have become more frank. They now give us detailed information, and when they bring up our hard cases, it is not in the old rhetorical way. The talks definitely improved with time.” Cited in Nye, “U.S.-Soviet Cooperation in a Nonproliferation Regime,” p. 347.

<sup>40</sup> Georgii Toloraia, “Korean Peninsula and Russia,” *International Affairs: A Russian Journal of World Politics, Diplomacy & International Relations*, 49:1 (2003), pp. 24-35.  
[http://www.ciaonet.org/olj/iarj/iarj\\_03\\_01a.html](http://www.ciaonet.org/olj/iarj/iarj_03_01a.html) (Accessed May 26, 2004).

ready to engage the issue and help find a resolution.<sup>41</sup> Russian-Korean initiatives, such as a proposed rail link and a gas pipeline, offer the possibility that Russia could be a key player in opening up the North and creating the kind of economic growth that might facilitate political change.<sup>42</sup> In any case, it appears that North Korea wants Russian participation in any multi-lateral process, and so U.S.-Russian cooperation will be important to any successful outcome.

There are also opportunities in South Asia. The cause of nonproliferation in South Asia is not yet beyond resuscitation, but a ratcheting down of the nuclear competition will enjoy a better chance of success if the U.S. and Russia work together and do so *before* South Asian nuclear weapons are fully deployed and integrated into India and Pakistan's force structure.

The potential for U.S.-Russian nonproliferation cooperation extends beyond specific cases or regions, however. Securing nuclear materials in Russia, the U.S., and other countries will also require strong cooperation—the value of which is even more

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<sup>41</sup> Andrei Kokoshin, "Russia's Role in Nonproliferation: Obstacles and Opportunities," *The National Interest*, 2:18 (May 7, 2003), <http://www.inthenationalinterest.com/Articles/Vol2Issue18/vol2issue18Kokoshin.html> (Accessed May 26, 2004); James Clay Moltz, "Russian Policy on the North Korean Nuclear Crisis," Paper prepared for the 13<sup>th</sup> Annual International Security Conference of Sandia National Laboratories on International Security Challenges and Strategies in the New Era, April 23-25, 2003, Albuquerque, New Mexico, <http://cns.miis.edu/research/korea/ruspol.htm> (Accessed May 26, 2004); Cristina Chuen, "Is This Russia's Chance to Return to Centre Stage?," *South China Morning Post*, February 15, 2003, <http://cns.miis.edu/pubs/other/russtage.htm> (Accessed May 26, 2004). For a different view, see Jeremy Bransten, "Russia: Moscow Lowers Expectations On North Korea Role," Radio Free Europe, January 17, 2003, <http://www.rferl.org/nca/features/2003/01/17012003161814.asp> (Accessed May 26, 2004); "Russia Left in the Dark Over N. Korean Crisis: Analysts," *AFP*, January 9, 2003, <http://www.cdi.org/russia/239-10.cfm> (Accessed May 26, 2004).

<sup>42</sup> David Wolff, "A Role for Russia in Korean Settlement," Paper for the Task Force on U.S. Korea Policy, (Berkeley, CA: Nautilus of America, 2003), [http://www.nautilus.org/fora/security/0329\\_Wolff.html](http://www.nautilus.org/fora/security/0329_Wolff.html) (Accessed May 26, 2004); Markku Heiskanen, "Eurasian Railways – Key to the Korean Deadlock?," January 22, 2003, (Berkeley, CA: Nautilus of America, 2003), <http://www.nautilus.org/fora/security/0232a%5Fheiskanen.html> (Accessed May 26, 2004).

obvious following the events of 9/11.<sup>43</sup> Similarly, in the area of nuclear terrorism, there are numerous opportunities for the two nations to work together.<sup>44</sup> There is also the issue of vertical proliferation. If the U.S. and Russia can build on the progress of the START and Moscow treaties and further reduce their nuclear stockpiles, they will be in a stronger political position when arguing for Indian and Pakistani restraint or when trying to win the support of non-nuclear countries who question the commitment of the nuclear weapons states' to their NPT obligations.<sup>45</sup> More generally, Russia and the U.S. can work to strengthen the nonproliferation regime that they worked so hard to build over the decades, e.g., bolstering the IAEA and encouraging adoption of the Additional Protocol.

In sum, history has demonstrated the value of nonproliferation cooperation, while current events continue to show the urgent need for such cooperation.<sup>46</sup> Nonproliferation

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<sup>43</sup> On the future on nuclear cooperation on in this area, see John P. Holdren, and Nikolai P. Laverov, "Letter Report from the Co-Chairs of the Joint Committee on U.S.-Russian Cooperation on Nuclear Non-Proliferation," (Washington, D.C.: The U.S. National Academies and the Russian Academy of Sciences, February 2003); Matthew Bunn, Anthony Wier, and John P. Holdren, *Controlling Nuclear Warheads and Materials: A Report Card and Action Plan*; and Siegfried S. Hecker, "Thoughts about an Integrated Strategy for Nuclear Cooperation with Russia," *Nonproliferation Review* 8:2 (Summer 2001), pp. 1-26, [http://www.ciaonet.org/olj/npr/npr\\_01hes01.html](http://www.ciaonet.org/olj/npr/npr_01hes01.html) (Accessed May 26, 2004).

<sup>44</sup> On nuclear terrorism in general, see the Committee on Science and Technology for Countering Terrorism, National Research Council, "Nuclear and Radiological Threats" in *Making the Nation Safer: The Role of Science and Technology in Countering Terrorism* (Washington DC: National Academy Press, 2002); Jessica Stern, *The Ultimate Terrorists* (Cambridge, MA: Harvard University Press, 1999); Graham Allison, "Could Worse Be Yet to Come?," *The Economist* (November 1, 2001); Matthew Bunn, "Preventing Nuclear Terrorism," Testimony before the Subcommittee on National Security, Committee on Government Reform, United States House of Representatives, September 24, 2002. As it relates to Russia, in particular, see Simon Saradzhyan, "Russia: Grasping Reality of Nuclear Terror," ISP Discussion Paper, Discussion Paper 2003-02, (Cambridge, MA: Belfer Center for Science and International Affairs, March 2003).

<sup>45</sup> On the ways to build on the Moscow Treaty, see John P. Holdren, "Beyond the Moscow Treaty," Testimony before the Committee on Foreign Relations, United States Senate, Hearings on the Treaty on Strategic Offensive Reductions, September 12, 2002, [http://bcsia.ksg.harvard.edu/BCSIA\\_content/documents/Holdren\\_Testimony\\_9\\_12\\_02.pdf](http://bcsia.ksg.harvard.edu/BCSIA_content/documents/Holdren_Testimony_9_12_02.pdf) (Accessed May 26, 2004). On the political rationale for doing so, see Nikolai Sokov, "The Dangerous Temptation of Unilateralism," in *Proliferation Challenges and Nonproliferation Opportunities for New Administrations*, Michael Barletta, ed., Occasional Paper No. 4, (Monterey, CA: Center for Nonproliferation Studies, Monterey Institute for International Studies, 2000), p. 34.

<sup>46</sup> The case for cooperation been supported by Condoleezza Rice, who suggests that Soviet-American arms control had a limited but nevertheless positive and independent effect on bilateral relations. See

cooperation will not solve every proliferation problem, but it will likely be a pre-requisite for addressing the most difficult challenges the world will face in the next chapter of the nuclear age.

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Condoleezza Rice, "SALT and the Search for a Security Regime," in Alexander L. George, Philip J. Farley, Alexander Dallin, eds., *U.S.-Soviet Security Cooperation Achievements Failures Lessons*, (New York: Oxford Press, 1988), pp. 293-306.

## **Commentary on “Russian and American Nonproliferation Policy: Success, Failure, and the Role of Cooperation”<sup>1</sup>**

After September 11, 2001 it became clear that nuclear terrorism was more than a theoretical possibility and that it has, in fact, become a likelihood.<sup>2</sup> This means that close U.S.-Russian cooperation in nonproliferation and counter-proliferation is not only desirable, but vitally important for the security of both states as well as that of the international community. Jim Walsh makes a real contribution to the deeper understanding of the roots and sources of this cooperation in his article, “Russian and American Nonproliferation Policy: Success, Failure, and the Role of Cooperation.”

Walsh’s article offers a classification of the successes and failures of nonproliferation policy and the role of U.S.-Russian cooperation in those outcomes. Importantly, the author did not limit himself to exploring a specific case of success or failure, but tried instead to introduce elements for analyzing the system as a whole.

Yet, the very exploration of classifications for cases of success and failure in nonproliferation policy should be the most comprehensive part of the analysis. The author’s analysis would be stronger if he provided full evidence for the classification of China, for example, as a “failure” of nonproliferation; South Africa, as a “mixed case;” etc.

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<sup>1</sup> *This commentary was based on an earlier draft of “Russian and American Nonproliferation Policy: Success, Failure, and the Role of Cooperation,” and provided to Dr. Walsh in advance of publication—Ed.*

<sup>2</sup> Graham Allison and Andrei Kokoshin, “The New Containment: An Alliance Against Nuclear Terrorism,” in eds. Juliette Kayyem and Robyn Pangi, *First to Arrive: State and Local Response to Terrorism*, Cambridge, MA: MIT Press, 2003, p. 9.

In this regard, several points of Walsh's article provoke a number of questions and considerations. The goal of my commentary is to provide more information on a number of the "cases" presented in the paper, in order to support or, sometimes, to express doubts on the composition of the lists of the states in each category.

Russia and the United States have come a long way toward a common understanding of nuclear proliferation. During the initial stages of the nuclear age, there were two different political approaches to nuclear weapons: 1) a growing understanding of the dangers of proliferation and 2) attempts to gain some advantages through "equipping" close allies and friends with this weapon of mass destruction. This is true, at least, for the period of close Soviet-Chinese "friendship."<sup>3</sup>

Walsh states that there still exists a widespread disagreement over the nature and extent of Soviet technology transfers to China during this period. The following information aims to provide more content to this discussion.

There were at least two stages of Soviet-Chinese cooperation. The first stage began on September 14, 1954 when Deputy Chairman Zhu De and Defense Minister Peng Dehuai were invited to military exercises at Totsk that featured a nuclear explosion and the deployment of "attacking forces" directly through the nuclear zone. At this point, Soviet leadership, namely Nikita Khrushchev, seriously considered transferring nuclear technology—possibly for military use—to China. Even before 1954, the U.S.S.R. expressed its interest in cooperation with China in this field, bearing in mind Soviet dependence on Chinese uranium ore.

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<sup>3</sup> An overview of Soviet-Chinese relations in 1950s is not intended. Rather, the discussion is limited only to the problems and questions they raised in the nuclear sphere.



As Ambassador Roland Timerbaev stressed in his book,<sup>4</sup> despite the fact that many documents evidencing Chinese-Soviet cooperation are still classified, there is no doubt that Soviet assistance to China was on a very large scale, covering the complete production cycle, as well as R&D on the atomic bomb. He refers to “many open sources, first and foremost the reminiscences of the witnesses,” such as the memoirs of Liu Qie, the Minister of the Second Machinery-Building Ministry of China, (responsible for atomic energy issues), and those of Dmitri Shepilov, former Editor-in-Chief of the newspaper *Pravda*.

On January 15, 1955 at the Secretariat of the Central Committee of the Communist Party of China, Mao Tsedung made the strategic decision to start the Chinese nuclear program, including the development of corresponding industrial segments. The project was designated “596.” In addition to its own efforts, China received step-by-step Soviet assistance and between 1958 and 1995, China signed six major agreements with the U.S.S.R. for cooperation and support in the development of atomic weapons. They included:

1. The agreement of January 20, 1955 on joint prospecting of uranium deposits, which included a Chinese agreement to sell extra supplies of uranium ore to the U.S.S.R.;
2. The agreement of April 27, 1956 on Soviet assistance in nuclear research and its use for peaceful purposes, which included the delivery of a 10-megawatt cyclotron;
3. The agreement of August 17, 1956 on assistance in building an atomic industry in China;

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<sup>4</sup> Roland Timerbaev, *Russia and Nuclear Non-Proliferation*, Moscow: Nauka, 1999, p. 127.

4. The agreement of December 19, 1956 on the transfer of joint prospecting of uranium deposits under Chinese supervision and the continuation of Soviet assistance in this field;
5. The agreement of October 15, 1957 on new military technologies, in accordance with which the Soviet Union was to deliver to China a mock-up of an atomic bomb and the corresponding technical documentation;
6. The agreement of September 29, 1958 on the time schedule of Soviet deliveries of nuclear assistance to China.<sup>5</sup>

In accordance with the above-mentioned agreements, hundreds of Soviet nuclear specialists worked in China by the end of the 1950s, including several nuclear weapons designers.<sup>6</sup> Additionally, many Chinese specialists were educated in the U.S.S.R.

In 1958 alone, 111 specialists from the Soviet Chief Directorate for Atomic Energy (Glavatom) were sent to China, as well as 43 geologists specializing in nuclear raw materials. Between 1950 and 1960 more than 10,000 Soviet specialists (from different spheres) visited China, and about 11,000 Chinese engineers, technicians and highly-skilled workers, as well as 1,000 scientists, all received education and training in the U.S.S.R.<sup>7</sup>

According to many sources, the U.S.S.R. was very close to offering China not only atomic bomb designs (including a mock-up of the bomb), but also documentation on the whole complex of equipment necessary to handle it. Yet, from the end of 1957 through the beginning of 1958, Soviet leadership, including Khrushchev himself, started

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<sup>5</sup> John Wilson Lewis and Xue Litai, *China Builds the Bomb* (Stanford, CA: Stanford University Press, 1988), p. 41.

<sup>6</sup> Timerbaev, pp. 129-130.

<sup>7</sup> Timerbaev, pp. 131, with reference to a book by an ex-Soviet foreign ministry official, M. Kapitsa, published in Russia in 1996.

to express growing doubt about whether this policy towards China could bring real benefit to the U.S.S.R.

According to Khrushchev's son Sergei, by May 1959 the leadership of the U.S.S.R. had made the final decision to end the transfer of nuclear secrets to China. On June 20, 1959, the Soviets sent the Chinese leadership a letter stating that the U.S.S.R. would not provide the mock-up of an atomic bomb—which was ready for delivery and even loaded on a special train—or technical documentation. The official explanation was the existence of negotiations between the U.S.S.R., the United States and Britain on the Partial Test Ban, which were underway in Geneva at that moment. In July 1960 the U.S.S.R. declared a withdrawal of all Soviet civilian and military specialists from China because of “unfriendly behavior” from Chinese authorities.

The reaction of Chinese leadership to the Soviet refusal to continue assistance in the nuclear field was straightforward: Mao Tsedung issued directions to make an atomic bomb in eight years. In practice, China achieved the goal in shorter time—the first test of a Chinese atomic bomb took place in October 1964. Then, on June 17, 1967, China tested its first hydrogen bomb. According to some estimates of Russian experts, Soviet assistance allowed China to create its nuclear weapons about 15 years ahead of a “normal” schedule.<sup>8</sup>

There are some statements in Walsh's article with which I tend to disagree. For example, the author states that, “during the 1980s, the U.S. and the U.S.S.R. entered a period of renewed hostility.” But this is true only for the first period of that decade, since after Mikhail Gorbachev came to power in 1985, U.S.-Soviet relations improved dramatically. There is no point in providing information on the achievements of the

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<sup>8</sup> Timerbaev, p. 134.

second half of 1980s (INF Treaty, START-1, CFE Treaty and others)—they are well known. Of course, it was not easy to work out all these agreements,<sup>9</sup> but the result was clearly weighty and positive.

During the 1990s, the nonproliferation policy of the United States—and to some extent, of Russia—was clearly divided in two directions: traditional nonproliferation and counter-proliferation, a new trend in international relations. In spite of the fact that U.S. counter-proliferation ideas were met rather skeptically in Russia, it was Russia who was the first to implement them in practice, i.e., Russian withdrawal of tactical nuclear weapons from the territories of the newly-established states of the former Soviet Union. We still have very little information on the details of this operation, but it is known that Russia moved quickly, effectively, and—most probably—without warning the political and military leadership of these new states.

The question of removing strategic weapons required the political and financial efforts of traditional nonproliferation, rather than secret counter-proliferation operations.<sup>10</sup> A large number of nuclear weapons were left on the territories of four former Soviet republics: Russia, Ukraine, Kazakhstan and Belarus. Russia claimed to be the only successor of the U.S.S.R., and the United States supported that position. From a legal point of view, it was not quite clear to whom the weapons really belonged.

Thus, Ukraine “inherited” 220 strategic delivery vehicles with 2,416 nuclear warheads, including 176 ICBMs with 1,828 warheads (130 SS-19s and 24 silo-based SS-24s) and 44 heavy bombers (including 19 Tu-160 “Blackjacks”), capable of carrying up

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<sup>9</sup> Aleksandr Savel'yev and Nikolay Detinov, *The Big Five: Arms Control Decision Making in the Soviet Union* (Westport, Connecticut: Praeger Publishers, 1995) p. 224.

<sup>10</sup> Of course, this definition of non- and counter-proliferation is rather simplistic, but it aims to give one more food for thought on the subject.

to 588 long-range nuclear ALCMs. Belarus had on its territory 54 mobile single-warhead SS-25 ICBMs. Kazakhstan had 104 heavy SS-18 ICBMs with 1040 warheads and 27 Tu-95MC “Bear” heavy bombers capable of carrying up to 370 long-range nuclear ALCMs.<sup>11</sup>

Each of these three states had its own posture toward the ownership of these strategic weapons. The year 1992 was one of uncertainty about the prospect of expanding the “nuclear club.” The most dangerous moment arose when the Ukrainian leadership attempted to install its own independent control over the “nuclear button.” The Russian side found these attempts very serious and technically attainable. It demanded intensive cooperative work with the U.S. to convince Ukraine to give up its plan.<sup>12</sup>

At that time, the statements by the leaders of Ukraine and Kazakhstan clearly showed that they claimed to be the owners of the nuclear weapons deployed on their territories. Ukrainian leader Leonid Kravchuk openly stated that it was up to Ukraine to decide whether to transfer part of these weapons to a joint command. President Nursultan Nazarbaev of Kazakhstan declared that his republic was ready to eliminate all nuclear weapons deployed on its territory, but only “together with other nuclear states.” The leader of Belarus, Aleksandr Lukashenko, adopted a more flexible position, although after the crisis was over, he openly expressed his regret on the complete withdrawal of nuclear weapons from Belarus, and he proposed to re-acquire them as a counter-measure against NATO expansion.

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<sup>11</sup> Carnegie Endowment for International Peace, “Nuclear Inheritors of the Soviet Union”, #5, June 1998, p. 10.

<sup>12</sup> For more details see Andrei Kokoshin, *Nuclear Conflicts in the XXI Century* (Media-Press: Moscow, 2003) p. 15.

Only after intensive Russian-U.S. joint efforts, including financial compensation for the withdrawal of nuclear weapons from the territories of the three states, was the problem solved. Ukraine, Kazakhstan, and Belarus signed the Lisbon Protocol to the START-1 Treaty, signing on as non-nuclear states. By May 1995, all the nuclear weapons were withdrawn from Kazakhstan; by June 1996, from Ukraine; and by November 1996, Belarus was free from nuclear weapons. I think that these three examples could bring Walsh to a less pessimistic conclusion on the successes of U.S.-Russian cooperation.

Additionally, the Nunn-Lugar program began at that time, and it expanded U.S.-Russian nonproliferation cooperation in many directions. In spite of the difficulties it encountered during the first stages of implementation, one cannot deny its importance and positive influence on the problems of nonproliferation, as well as broader international cooperation in this sphere and U.S.-Russian relations in general, which found its reflection in the Cooperative Threat Reduction (CTR) program.

One of the most interesting and, to some extent, surprising parts of Walsh's article is the proposed classification of "nonproliferation failure." It is probably the first time the cases of Britain, France, and China have been called failures of the superpowers' nonproliferation policy.

Since the paper focuses on U.S.-U.S.S.R./Russian nonproliferation policy, to consider every nuclear weapon state except the U.S. and Russia as "nonproliferation failures" is understandable. But following the logic of the given definition, it is surprising that states which are official nuclear weapons states under the NPT, such as Britain, France, and China, are mentioned here, because at least in terms of international law their

military nuclear programs are legal. The question could be raised as to why the Soviet Union is not included on the “failure” list for its military nuclear cooperation with China, which was mentioned above.

There was little that the U.S. and U.S.S.R. could have done to prevent China, France, and Britain from acquiring nuclear weapons. And the list of states whose possession of nuclear weapons was “inevitable” coincides perfectly with the list of UN Security Council permanent members. One could speculate on the post-World War II international system and the incentives this system presented to the U.S.S.R., Britain, France, and China to become nuclear weapons states. This point is important in the context of the definition of “nonproliferation failure.”

In this context, one can question Britain’s role in the U.S. nuclear program. It is not exactly accurate to regard the U.S. as the state that deterred Britain from pursuing its nuclear weapons option, or to assume that Britain contributed nothing to the American nuclear program. It was Britain that first recognized the military applications of nuclear energy through the memorandum sent to the British government in March 1940 by Otto Frisch and Rudolf Peierls citing the possibility of harnessing nuclear energy for a bomb. It produced an immediate reaction and resulted in the creation of the special MAUD Committee, which was to explore the feasibility of producing such a bomb. As Margaret Gowing, the official historian of the British atomic project stated, the work on this preliminary stage was “much more effective than American work,”<sup>13</sup> and it remained more effective for some time.

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<sup>13</sup> Fred Roberts, *60 Years of Nuclear History: Britain’s Hidden Agenda* (Charlbury, UK: Jon Carpenter Publishing, 1999) pp. 12-14.

U.S. Secretary of State Dean Acheson also acknowledged that at the time the U.S. entered World War II, British nuclear science was superior to American technology.<sup>14</sup> Only Nazi bombardments of Britain's territory forced the transfer of its nuclear project to the U.S., and even then British government would have preferred to transfer the project to Canada.<sup>15</sup> It is Britain who has the historical distinction of being the first to recognize the military utility of nuclear energy, and thus, one can theoretically consider Britain as the proliferator to the U.S.

Walsh's assertion that Israel's choice to acquire nuclear weapons was not inevitable is interesting and well grounded. It is worth noting that the real military importance of nuclear weapons is not fundamental or vital for Israel. Due to the small size of its territory and adjacent hostile areas, any nuclear strike made by Israel against its enemies would affect Israel itself. Therefore, Israel's nuclear weapons are a safeguarding tool against a crushing military defeat and occupation. Hence, the possible application of nuclear weapons is limited for Israel, and is often aptly referred to as the "Samson option."<sup>16</sup> As Avner Cohen explains, "The idea that Israel should acquire a nuclear weapon capability is as old as the state itself."<sup>17</sup>

Walsh maintains that the U.S. strongly and repeatedly objected to Israel's nuclear activities in the early 1960s. Indeed, the Kennedy administration put serious pressure on Israel concerning covert nuclear activities and their verification. Yet, during that period,

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<sup>14</sup> Roland Timerbayev, *Rossiia i yadernoe nerasprostraneniye (Russia and Nuclear Nonproliferation)*. Moscow, 1999, p.12. Timerbayev refers to Dean Acheson, *Present at the Creation* (New York: W.W. Norton & Co., 1969) p. 164.

<sup>15</sup> McGeorge Bundy, *Danger and Survival: Choices about the Bomb in the First Fifty Years* (New York: Random House, 1988) pp. 23-29.

<sup>16</sup> Seymour M. Hersh, *The Samson Option: Israel Nuclear Arsenal and American Foreign Policy* (New York: Random House, 1991).

<sup>17</sup> Avner Cohen, *Israel and the Bomb* (New York: Columbia University Press, 1998) p. 9.



the U.S. continued its nuclear cooperation with Israel. The U.S. built a small reactor at Nahal Soreq (IRR-1), which reached its first criticality in 1960. During the next six years the U.S. supplied Israel with 50 kilograms of HEU (90% enriched uranium-235).<sup>18</sup> Interestingly, it was initially agreed that Washington would supply nuclear fuel for IRR-1 enriched to only 20% of uranium-235, but when the construction of the reactor was finished, it “turned out” that weapons-grade uranium was needed for this reactor to operate in a standard mode.<sup>19</sup> U.S.-Israeli nuclear cooperation efforts like these continued despite Kennedy’s unsuccessful efforts to persuade Israeli Prime Minister Ben-Gurion and his successor to open up the large French-supplied Dimona reactor for nuclear inspections.

In examining the Cuban case, Cuba has been a member of the NPT since November 4, 2002, when it submitted its instruments of ratification to Russian Deputy Foreign Minister Yuri Fedotov in Moscow. Fedotov praised Cuba’s decision to join the Treaty, describing it as an act of essential importance. He additionally noted that this decision indicated Cuba’s willingness to cooperate in international affairs.<sup>20</sup> Cuba also joined the Treaty of Tlatelolco on a Nuclear Weapon Free Zone (NWFZ) on October 23, 2002.<sup>21</sup> Furthermore, Cuba signed the NPT-related comprehensive safeguards agreement with the IAEA on September 18, 2003 and signed the Additional Protocol that grants the

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<sup>18</sup> Fuad Jabber, *Israel and Nuclear Weapons: Present Options and Future Strategies* (London: Chatto & Windus, 1971) pp. 29, 31; US Department of State, “United States Treaties and Other International Agreements,” Vol. 6, Pt. 2, Washington, DC: GPO, 1956, pp. 2641-2646.

<sup>19</sup> See Vladimir Novikov, “Sostoyanie i perspektivy razvitiya raketno-yadernogo potentsiala Izrailiya (Current Status and Perspectives of Development of Nuclear and Missile Potential of Israel),” *Yadernoye Rasprostraneniye (Nuclear Non-Proliferation Journal)*, Carnegie Moscow Center, Special Appendix to the Journal, Issue 1, 2002. p. 14.

<sup>20</sup> “Cuba: Havana Ratifies Nuclear Nonproliferation Treaty,” *Global Security Newswire*, November 5, 2002. [http://www.nti.org/d\\_newswire/issues/2002/11/5/3s.html](http://www.nti.org/d_newswire/issues/2002/11/5/3s.html) (Accessed June 10, 2004).

<sup>21</sup> “Cuba Accedes to NPT, Joins Tlatelolco,” *Arms Control Today*, December 2002. [http://www.armscontrol.org/act/2002\\_12/briefs\\_dec02.asp#cuba](http://www.armscontrol.org/act/2002_12/briefs_dec02.asp#cuba) (Accessed June 10, 2004).

IAEA inspection rights beyond those in the safeguards agreement alone.<sup>22</sup> Nevertheless, it is indeed U.S.S.R./Russia-U.S. interaction that has prevented Cuba from becoming a nuclear weapon state.

Among the other states listed by Walsh, Sweden is included on the list of countries whose decision to abandon a nuclear weapons program was not particularly influenced by the superpowers. Sweden began to develop nuclear weapons in 1952.<sup>23</sup> Yet, the Swedish military's attitude towards nuclear weapons was formulated in 1946. Military officials decided then that Sweden should have extensive information on nuclear weapon development, its military use options, consequences of explosions, etc. Some sources assert that research on the military use of nuclear energy in Sweden began in the mid-1940s.<sup>24</sup> In January 1957, it was officially stated that Sweden had the capabilities and resources to build nuclear weapons, and it was possible to build these weapons in 6-7 years.<sup>25</sup> A final decision to produce nuclear weapons, however, was not made. The Swedish government "decided not to decide."<sup>26</sup>

This ambiguity in the Swedish position lasted for eleven years. Finally, in 1968, the Swedish Parliament decided not to build nuclear weapons. Alva Myrdal, Swedish

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<sup>22</sup> "Cuba Signs IAEA Safeguards Agreement, Additional Protocol," *Global Security Newswire*. September 19, 2003. [http://www.nti.org/d\\_newswire/issues/2003/9/19/6s.html](http://www.nti.org/d_newswire/issues/2003/9/19/6s.html) (Accessed June 10, 2004).

<sup>23</sup> Eric Arnett, "Norms and Nuclear Proliferation: Sweden's Lessons for Assessing Iran," *Nonproliferation Review*, Vol. 5, No. 2, Winter 1998, p. 36. <http://cns.miis.edu/pubs/npr/vol05/52/arnett52.pdf> (Accessed June 10, 2004).

<sup>24</sup> Paul M. Cole, *Atomic Bombast: Nuclear Weapon Decisionmaking in Sweden 1945-1972*, Washington, DC: Henry L. Stimson Center, Occasional paper, No. 26, April 1996, p. 6.

<sup>25</sup> Timerbayev, p.142. See also, Jan Prawitz, "From Nuclear Option to Nuclear Promotion: The Sweden Case," Swedish Institute of International Affairs, Research Report 20, Stockholm, 1995.

<sup>26</sup> In Swedish, "handlingsfrihet linie."

minister of both disarmament and church affairs, played an important role in this decision.<sup>27</sup> Sweden signed the NPT in 1968 and ratified the Treaty in 1970.

The decision not to build the bomb was based primarily on internal factors, but there is at least one external factor to be mentioned, based on the famous Swedish stance of “neutrality.” When Swedish nuclear capabilities became known, the Soviet Union made it clear that there was no such a thing as “the neutral nuclear weapon,” and that the state which pursues a nuclear option can not be “neutral.” It is understood that this Soviet point of view seriously affected public opinion in Sweden, changing its attitude about nuclear weapons.<sup>28</sup>

Similar to Walsh’s “nonproliferation failures,” his list of “nonproliferation successes” could also be improved. For example, Belgium, the Netherlands, Norway, and Czechoslovakia (the Czech Republic), which are not included on the list, all provoked substantial nonproliferation concern at one time or another. For example, the Soviet Ministry of Foreign Affairs warned its leaders in 1966 that “very soon India, Canada, Italy, Japan, Belgium, Sweden, the Netherlands, Israel, Czechoslovakia and, what is most dangerous, West Germany may begin to produce nuclear weapons.”<sup>29</sup> Information also exists about Poland and its nuclear ambitions.

Walsh did not include Norway on this list, but Norwegian nuclear capabilities contributed substantially to the nuclear weapons programs of Nazi Germany, France, and

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<sup>27</sup> Alva Myrdal, *The Game of Disarmament. How the United States and Russia Run the Arms Race* (Nottingham, UK: Spokesman, 1980) p. 172.

<sup>28</sup> Timerbayev, p. 143.

<sup>29</sup> Timerbayev, p. 254. On the US perception of states that were preparing to cross “the nuclear threshold” in the early 1960s see: National Security Archive, Nuclear History Collection, Memorandum of February 12, 1963, from Secretary of Defense McNamara to President Kennedy; see also: George Bunn, *Arms Control by Committee: Managing Negotiations with Russians*, Stanford University Press, 1992, p. 68. US officials were ready to include also Poland and East Germany in this list of “threshold” states, but were not really concerned with them, because they were certain that the USSR would never allow them to acquire nuclear weapons.

Israel. Norway developed its heavy water production facility before World War II, although its capabilities were not of an industrial scale: the Norsk-Hydro plant at Rjukan had been producing about only 10 kilograms of heavy water per month by the time of the Nazi invasion in April 1940.<sup>30</sup> Germany introduced new production methods to the plant, and throughout 1941, production of heavy water gradually climbed toward 100 kilograms per month.<sup>31</sup> The Allies made a dramatic effort to prevent Norsk-Hydro from contributing to the Nazi nuclear program.<sup>32</sup> Quite possibly, these efforts were the first counterproliferation operations in history.

Norway contributed to the French nuclear program, as well as to the Israeli one, with heavy water supplies. Shortly after World War II ended, about 100 tons of heavy water were sold to France. In 1959 about 20 tons of heavy water were supplied to Israel with harsh verification conditions, which Israel, in effect, did not meet.

In 1946, after World War II, Norway began to study nuclear energy.<sup>33</sup> In 1951, it became the sixth state in the world to build a nuclear reactor. This demonstrated that Norway was capable of producing plutonium. The reactor (named Jeep, built in Kjeller near Oslo) used seven metric tons of heavy water as the moderator.<sup>34</sup> Another reactor (utilizing heavy water as a moderator and boiling water as a coolant) was built in Kjeller and named Halden.

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<sup>30</sup> Thomas Powers, *Heisenberg's War: The Secret History of the German Bomb* (Da Capo Press, 2000, p. 155.

<sup>31</sup> Powers, p. 156.

<sup>32</sup> See, for example: Thomas Gallagher, *Assault in Norway: Sabotaging the Nazi Nuclear Program* (Guilford, CT: Lyons Press, 2002).

<sup>33</sup> Astrid Forland, "Norway's Nuclear Odyssey: From Optimistic Proponent to Nonproliferator," *Nonproliferation Review*, Vol. 4, No. 2, Winter 1997, p. 1-16.  
<http://cns.miiis.edu/pubs/npr/vol04/42/forlan42.pdf> (Accessed June 10, 2004).

<sup>34</sup> Timerbayev, *Rossiia i yadernoe nerasprostraneniye (Russia and Nuclear Nonproliferation)*, Moscow, 1999, p.145. The following material is cited in the book: Congress of the United States, "Background Material for the Review of the International Atomic Policies and Programs of the United States," Report to the Joint Committee on Atomic Energy, Washington, DC, 1960, Vol. 3, p. 620.

In the late 1950s, a serious public debate unraveled in Norway on acquiring nuclear weapons. Finally, the decision was made to not pursue nuclear weapons. As a NATO member, Norway exercised its right to be under NATO's "nuclear umbrella." But at a NATO summit in Paris in December 1957, prime minister of Norway Einar Gerhardsen stated that Norway refused to deploy nuclear weapons or to store nuclear warheads on its territory in times of peace. This decision was called the "No Nukes in Peacetime Declaration."<sup>35</sup>

In my view, of the four "mixed cases," (Iraq, South Africa, North Korea, and Iran) Iraq is the most disputable example. On the one hand, since Iraq violated its NPT commitments, the case can be considered a "nonproliferation failure." On the other hand, Iraq violated NPT commitments for reasons other than the development of its own nuclear program and nuclear weapons.

It is not clear which criteria Walsh chose for the four states that were classified as "nonproliferation failures." If the criterion is the violation of NPT obligations, it can be applied only to Iraq. If the criteria are a mixed success and failure of U.S.-U.S.S.R./Russian cooperation, it can be applied to many more than four cases. For example, a strong case can be made for the inclusion of Libya as a "mixed case." Of the four states that Walsh includes in this category, only North Korea and Iran are actually states with an unclear nuclear future. Iraq and South Africa are undoubtedly non-nuclear states and should not be considered "mixed cases." Libya gives ground to add this country to the list of "mixed cases."

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<sup>35</sup> Timerbayev, *Rossiia i yadernoe nerasprostraneniye (Russia and Nuclear Nonproliferation)*, Moscow, 1999, p.146.

The cases with North Korea and Iran also, in my view, deserve more detailed explanations. There were obvious efforts by the U.S. and Russia to influence North Korea's nuclear program and to prevent it from withdrawing from the NPT. Walsh is correct in stating that, "there has not been close U.S.-Russian cooperation in dealing with North Korea." Yet, at the same time, each of the states made its own strong efforts to solve the problem. The author's views on why the leaders of the U.S. and Russia tried to solve the problem with North Korea separately presents an interesting issue.

The most recent development to working with the situation is the idea of a 5+1 formula, which provides a cooperative approach to North Korea, with the joint efforts of the United States, Russia, China, Japan and South Korea. Andrei Kokoshin put forward this idea in his interview to the Interfax agency on July 28, 2003.

The same can be applied to the Iranian case, which is also a rather sophisticated problem for U.S.-Russian nonproliferation dialogue, as well as for Russian nuclear cooperation with Iran. Here we can refer to another Kokoshin interview with Interfax on November 11, 2003, in which he discusses a statement made by Secretary Hasan Rouhani of the Supreme National Security Council of Iran during his visit to Moscow where Rouhani stated that Iran was ready to halt its uranium enrichment process and to sign the Additional Protocol on IAEA guarantees. Kokoshin describes this event as a "great achievement of Russian diplomacy and the diplomacy of President Vladimir Putin."

All these points demonstrate that it is practically impossible to solve the proliferation problem without Russia and without active Russian involvement in nonproliferation activities. In this sense, I completely agree with the author's vision of

the importance of U.S.-Russian (and international) cooperation in nonproliferation and counter-proliferation for the benefit of international security.

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*Edited by Sarah Dorland with assistance from Danielle Lussier and Annaliis Abrego*

*Canty.*