

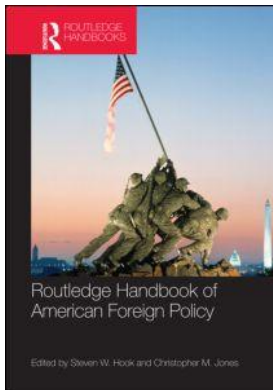
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Part VI

Transnational Challenges

Weapons Proliferation and Arms Control

Dan Caldwell

For much of the twentieth century, the use of military force and intervention characterized American foreign policy; however, during the last several decades of the century, many political scientists turned their primary attention away from military security to the analysis of political economy. With the fall of communism in Eastern Europe and the Soviet Union, Francis Fukuyama (2006) wrote of the “end of history”—the victory of capitalism over fascism and communism. Despite the increasing importance of economic issues and globalization in U.S. foreign policy, military threats continued to concern American policy makers. And these threats assumed even greater importance as more states developed and tested nuclear weapons, the most destructive weapons ever invented.

In 1994, the Clinton administration came close to preemptively attacking North Korean nuclear sites. These attacks were cancelled at the eleventh hour when North Korea, South Korea, Japan, and the United States signed the Agreed Framework calling for the dismantling of several North Korea nuclear reactors capable of producing fissile materials for nuclear weapons in exchange for assistance to build new reactors that could not produce weapon-grade fissile material (Wit, Poneman, and Gallucci 2004; Clemens 2010). For several years, it appeared that diplomacy had trumped military intervention.

Iraq’s invasion and occupation of Kuwait and the 1990–1991 Gulf War, the attacks on the United States of September 11, 2001, and the ensuing American attacks on Afghanistan and Iraq have resulted in greater interest and relevance of the study of security, proliferation and arms control in American foreign policy. Indeed, President George W. Bush repeatedly called attention to the threat posed by “the world’s most dangerous terrorists ... with the world’s most dangerous weapons” (U.S. White House 2002). The possibility that Saddam Hussein was developing nuclear weapons, which he could then sell or give to terrorists such as Osama bin Laden, was the principal stated reason for the U.S. preventive war attack on Iraq in March 2003. More recently, the Bush and Obama administrations have worried about the stability of the North Korean regime, which is now controls ten nuclear warheads, and Iran, which appears to be making steady progress on the components necessary for the development of a nuclear weapons program.

This chapter will (1) review scholarly research concerning this topic, (2) examine enduring policy debates, (3) summarize the major achievements in security, proliferation and arms control, and (4) suggest topics for future research.

Review of Scholarly Research

Issues of security are as old and as enduring as key issues of international relations dating back, at least, to Thucydides who first addressed what political scientists now call the “security dilemma” (Jervis 1978). In his seminal work, *The History of the Peloponnesian War*, Thucydides (1972: 49) explained: “What made war inevitable was the growth of Athenian power and the fear which this caused in Sparta.” During the Cold War, the democratic city-state Athens was often compared to the United States, and the militaristic Sparta was compared to the Soviet Union. The increase in the number of hoplites deployed by Athens and Sparta was compared to the number of missiles and nuclear weapons deployed by the two superpowers of the Cold War.

War has been a part of most of human history, and technology introduced changes in the efficiency, magnitude, fatality and destructiveness of war, a fact made devastatingly clear by the first and only uses of nuclear weapons in conflict on Hiroshima and Nagasaki, Japan, by the United States in August 1945. In a remarkably prescient collection of essays edited by Bernard Brodie and published in 1946, the authors noted the principal implications of nuclear weapons for American foreign policy: any city in the world could be destroyed by several nuclear bombs; there was no adequate defense against nuclear attack; superiority in non-nuclear military forces would no longer guarantee security; superiority in the number of weapons held by a country would no longer be decisive; and, it would only be a matter of time until countries other than the United States would develop and deploy nuclear weapons. In short, Brodie (1946: 4) and his fellow contributors concluded, “To speak of a [nuclear weapon] as just another weapon was highly misleading. It was a revolutionary development which altered the basic character of war itself.” If these weapons could not be eliminated—if the “genie could not be put back into the bottle”—then their use should be deterred by persuading “one’s opponent that the cost and/or risks of a given course of action he might take outweigh its benefits” (George and Smoke 1974: 11).

Deterrence, a concept as old as humanity, took on a new, awesome meaning in the nuclear age. After all, nuclear arms enabled their possessor to kill more people and to wrought more destruction in a shorter amount of time than any previous weapons in human history. A whole new subfield of the discipline of international relations developed focusing on the theory, requirements, and operation of deterrence. Brodie (1959) believed that nuclear weapons were so destructive that they were revolutionary. Turning the classical military strategist Karl von Clausewitz’s canonical recommended three-to-one ratio of attacking to defending forces on its head, Brodie contended that in the nuclear age, given the power of nuclear weapons, an attacking state could wage an effective attack with a one-to-three ratio. Other strategists such as Herman Kahn (1960) argued that, while more powerful than previous weapons, nuclear weapons were not revolutionary and could be employed in order to achieve the military objectives of states. Broadly speaking, those who followed Brodie and Kahn could be divided into two camps: those who believed nuclear weapons were revolutionary and should not be used and those who believed that they were like other weapons and could be used in pursuit of a state’s objectives.

Deterrence became more fragile and even precarious with the development and deployment of inter-continental ballistic missiles (ICBMs) that could travel from the United States to the Soviet Union or vice versa in 30 minutes. A RAND Corporation strategist like Brodie and Kahn, Albert Wohlstetter (1959) contended that American bomber bases were vulnerable to a preemptive Soviet strike and that the United States should adopt measures to make them less vulnerable. In part due to the traumatic memories of the Japanese attack on Pearl Harbor on December 7, 1941, American analysts and policy makers were fixated on the possibility of another surprise attack on the United States throughout the 1950s; the development and deployment of ICBMs increased this concern greatly.

Concerned about the possibility that deterrence might breakdown and result in a nuclear war, Donald G. Brennan (1961), Hedley Bull (1961), and Thomas Schelling and Morton Halperin (1961) published books that focused on a new approach for dealing with nuclear weapons: arms control and disarmament. According to Schelling and Halperin, there were three objectives in arms control: to lessen the probability of war occurring, to lessen the destructiveness should war occur, and to reduce the economic costs of preparing for war. These three objectives guided arms control efforts throughout the 1960s and 1970s.

Although some believed that deterrence and its associated theories and corollaries were simply elaborate creations of strategists at the RAND Corporation and other think tanks, the tense 13 days of the Cuban missile crisis of October 1962 when the two superpowers were “eyeball to eyeball” proved otherwise (Fursenko and Naftali 1997; Allison and Zelikow 1999). At the end of the crisis, President John F. Kennedy estimated that the probability of the United States and Soviet Union going to war had been between one out of three and even. Nuclear war was not simply a hypothetical possibility; it was a very real possibility, and the two superpowers had come close to going to war over the missiles in Cuba.

The disintegration of the Soviet Union created a distinctive opportunity for scholars to convince the governments of Russia, the United States, and Cuba to open their archives and to allow the policy makers who had participated in the crisis to share their views and perceptions on what had happened. James Blight and his colleagues organized a remarkable series of conferences that resulted in new and startling disclosures about the crisis (Blight and Welch 1989, 1998). For example, at a conference that included former Soviet, American, and Cuban officials, General Anatoly Gribkov revealed that the Soviet Union had deployed tactical nuclear weapons in Cuba. The organizers of the conference noted former Secretary of Defense Robert McNamara’s reaction: “During Gribkov’s presentation, McNamara grimaces in astonishment ... McNamara realizes that if the United States had invaded Cuba, as many felt would be necessary had Khrushchev not agreed to remove the missiles, thousands of American soldiers might have been killed on Cuban beaches by Soviet tactical nuclear missiles” (Blight, Allyn, and Welch 1993: 55).

In the aftermath of the Cuban missile crisis, President Kennedy and Premier Nikita Khrushchev heeded the recommendations of those who had advocated various arms control measures, including the need for rapid, secret, reliable communications. During the crisis, there was no such capability, and to communicate with his government in Moscow, the Soviet ambassador in Washington, Anatoly Dobrynin had to rely on a Western Union messenger who rode his bicycle between the Soviet embassy and the Western Union office, a process that was time consuming, inefficient, and uncertain. As Dobrynin (1995: 96) recalled in his memoirs, after the messenger “... pedaled away with my urgent cable, we at the embassy could only pray that he would take it to the Western Union office without delay and not stop to chat on the way with some girl!” In the aftermath of the crisis, the United States and Soviet Union quickly concluded the so-called “Hot Line” Agreement that resulted in a direct communication link—originally a transatlantic cable, later satellite channels—between Moscow and Washington, D.C. Within several months of the end of the Cuban missile crisis, the two Cold War adversaries and the United Kingdom negotiated a ban on testing nuclear weapons in the atmosphere, which was, at a minimum, a good “clean air act” that reduced the amount of radioactive fallout.

For much of the Cold War, the inability to verify the terms of prospective arms control agreements precluded them from being negotiated and implemented. In 1960, however, both the United States and the Soviet Union began launching satellites that could take photographs and monitor events in other countries. This development provided the capability that U.S. and Soviet policy makers needed in order to gain the acceptance of arms control agreements in their respective countries. In addition, in 1968 West Germany signed the Non-Proliferation

Treaty (NPT) pledging not to develop its own nuclear weapons. With these two developments, the Soviet Union agreed to open negotiations with the United States focusing on the limitation of offensive and defensive strategic nuclear arms. Following two and a half years of negotiations, the United States and USSR signed the Anti-Ballistic Missile (ABM) Treaty that limited each side to 200 ABM launchers at a maximum of two sites. In addition, they signed a five-year interim agreement limiting offensive forces. Together, these two agreements were referred to as the Strategic Arms Limitation Talks (SALT I) agreements, and following their approval and implementation, in 1979 a follow-on “SALT II” agreement was signed but never ratified (Caldwell 1991). Although he had been critical of arms control throughout his political career, once in office, Ronald Reagan and Mikhail Gorbachev negotiated and signed several significant arms control agreements. The 1987 Intermediate Nuclear Forces (INF) Treaty, prohibited the stockpiling and deployment of an entire class of weapons: intermediate-range ballistic and cruise missiles. In 1991, Reagan and Gorbachev also signed the Strategic Arms Reduction Treaty (START I), which called for the number of long-range bombers, land-based intercontinental ballistic missiles (ICBM) and submarine-launch ballistic missiles (SLBM) to be reduced to 1,600 and 6,000 total warheads. Reagan’s successor, George H. W. Bush, signed a follow-on START II agreement that pledged further reductions; however, this agreement was never implemented because Russia withdrew from it after the George W. Bush administration abrogated the ABM Treaty in order to pursue missile defense programs.

In policy terms, George W. Bush’s policies more closely resembled those of Ronald Reagan than his father, George H. W. Bush. Like Reagan, George W. Bush entered the presidency critical of arms control. Bush was very interested in pursuing research, development, and possibly the deployment of a national missile defense system, and he consequently ordered the U.S. abrogation of the ABM Treaty. Although complete protection of the United States via national missile defense was not possible, a limited defense against attacks from states with limited delivery capabilities such as North Korea were seen by the Bush administration as a prudent response to the threat posed by these states. Like Reagan, Bush negotiated an agreement with Russia called the Strategic Offensive Reductions Treaty (SORT) or Moscow Treaty, which limited the two countries to 1,700–2,200 operationally deployed nuclear warheads until 2012.

Far friendlier to arms control, Barack Obama campaigned on a promise to try and eliminate nuclear weapons and approvingly cited the calls to do just this by George Shultz, Sam Nunn, William Perry, and Henry Kissinger (2007, 2008, 2010). Once in office, the Obama administration actively negotiated a follow-on to the START I Treaty which expired in December 2009. In March 2010, the American and Russian governments announced that they had reached an agreement calling for a reduction of bombers, ICBMs, and SLBMs from 1,600 to 800 and total warheads from 2,200 to 1,550 within seven years.

Policy makers and scholars alike viewed nuclear deterrence and arms control between the United States and the Soviet Union as the foundation of peace and stability during the Cold War. Bracken (1999, 2000) and Krepon (2009) have identified the period from the first use of nuclear weapons (1945) to the disintegration of the Soviet Union in 1991 as the “first nuclear age.” The “second nuclear age” began with the end of the Cold War and continues to the present. The characteristics of the two periods are depicted in Table 26.1.

The emphases of scholars reflect the characteristics of these two periods. For example, during the Cold War, analysts and policy makers were primarily focused on “vertical proliferation” between the two superpowers; that is, the increasing number of technological sophistication of their nuclear weapons. During the second nuclear age, attention was focused on the possibility of horizontal proliferation or the spread of nuclear weapons to additional countries and possibly even non-state actors such as terrorist groups. In 1963, President Kennedy expressed his fear, “Personally, I am haunted by the feeling that by 1970, unless we

Table 26.1 Characteristics of the First and Second Nuclear Ages

<i>First Nuclear Age</i> (1942–1991)	<i>Second Nuclear Age</i> (1992–present)
1. About arms races	About power imbalances and asymmetric warfare
2. US-USSR-PRC triangle	China-India-Pakistan triangle
3. US-Soviet clash	Not a clash of civilizations, but a clash between the West and Islam
4. Vertical proliferation	Horizontal proliferation
5. States controlled nuclear weapons	Fear that non-state actors could get nuclear weapons
6. Fear of a “bolt from the blue” surprise attack	Fear of nuclear terrorism
7. State-to-state deterrence prevents interstate war	Concern that deterrence will not work against non-state actors

are successful, there may be 10 nuclear powers instead of four, and by 1975, 15 or 20” (Bunn and Chyba 2006: 24).

Waltz (1983) first raised a theoretical question related to proliferation and international stability. He argued that from a theoretical standpoint, the spread of nuclear weapons to additional countries was stabilizing and based his conclusion on the finding that multipolar balance of power systems are more stable than bipolar systems. The predominant view as presented by Sagan (see Sagan and Waltz 2003), however, is that “more is not better” and that the world is safer with fewer states armed with nuclear weapons. This perspective constituted the foundation on which efforts to prevent the spread of nuclear weapons was built.

The most important agreement to result from these efforts was the Non-Proliferation Treaty (NPT), which was signed in 1968 and entered into force in 1970. As of 2010, 189 states have signed the Non-Proliferation Treaty, but nine states now possess nuclear weapons as Table 26.2 indicates.

Table 26.2 shows that there are currently approximately 27,000 nuclear weapons in the world; this is down substantially from the 65,000 nuclear weapons that existed in 1986. In addition, four states have given up the nuclear weapons that they possessed including the former Soviet republics Ukraine, Belarus, and Kazakhstan as well as South Africa. Experts (Cirincione 2007; Rhodes 2007) estimate that 44 countries now possess the capacity to develop nuclear weapons including Argentina, Brazil, South Korea, Taiwan, and Japan. In fact, experts believe that Japan could develop a nuclear weapon within several weeks if it made the decision to do so.

Table 26.2 Nuclear Weapons States and Their Arsenals as of March 2010

<i>Country (Year developed)</i>	<i>Number of Nuclear Weapons</i>
1. United States (1945)	10,000 (2,400 deployed)
2. Russia (1949)	16,000 (3,000 deployed)
3. United Kingdom (1952)	192 (on 4 Trident subs)
4. France (1960)	350 (on 84 aircraft and 48 SLBMs)
5. China (1964)	400 (on short and MRBM, 20 ICBM)
6. India (1974)	75–100
7. Pakistan (1998)	60–100 (has MRBM)
8. Israel (?)	100–170 (short./MRBM, bombers, subs?)
9. North Korea (2006)	10

The disintegration of the Soviet Union in December 1991 marked the end of the first nuclear age, and the attacks on the United States on September 11, 2001, dramatically called attention to new and dangerous aspects of the second nuclear age. As the final report of the 9/11 Commission (2004: 380) put it, “The greatest danger of another catastrophic attack in the United States will materialize if the world’s most dangerous terrorists acquire the world’s most dangerous weapons ... Al Qaeda has tried to acquire or make nuclear weapons for at least ten years.” In an interview with *Al-Jazeera* in 1998, Osama bin Laden said, “We supported and congratulated the Pakistani people when God blessed them with possession of a nuclear weapon because we consider it the Muslims’ right to have it ... There is a duty on Muslims to acquire them” (Lawrence 2005: 72). Former CIA Director George Tenet (2007: 272) has noted, “From the end of 2002 to the spring of 2003, we received a stream of reliable reporting that the senior al-Qa’ida leadership was negotiating for the purchase of three Russian nuclear devices.” Tenet (2007: 279) has also indicated that Osama bin Laden would desperately like to obtain nuclear weapons and that just two weeks before the September 11 attacks, two Pakistani nuclear scientists met with Osama bin Laden and his deputy Ayman al-Zawahiri for three days (Cirincione 2007: 93). In addition, the Taliban and al Qaeda contacted at least 10 Pakistani nuclear scientists to enlist their assistance in building a nuclear weapon.

Another aspect of contemporary proliferation aspect that illustrates the complex linkages, issues, and problems of the second nuclear age is the activity of Dr. A. Q. Khan of Pakistan, who was educated in Europe and after earning his graduate degree went to work for URENCO, a Dutch-British-German consortium that enriches uranium. While working at this organization, Khan stole plans for centrifuges that are used to enrich uranium. Returning to Pakistan, Khan assisted the government in developing nuclear weapons and, in the process, became known as the “father of the Pakistani bomb” and a national hero. Khan, however, did not work alone; he enlisted the cooperation of German, South African, Swiss, Turkish, and British citizens in his far-flung enterprise. Former CIA Director Tenet (2007: 286) notes that Osama bin Laden sent emissaries to Khan and that in February of 2004 Khan signed a confession admitting that he had assisted Iraq, Iran, Libya, and North Korea with designs and equipment for their nuclear weapons programs. In August 2005, Pakistani President Pervez Musharraf confirmed that Khan had provided North Korea with uranium centrifuges and placed him under house arrest (Bunn and Chyba 2006: 23).

Enduring Policy Debates

The most enduring policy questions for both the first and second nuclear ages concerned the motivations for states and during the second nuclear age, non-state actors’ motivations for developing nuclear weapons and how best to assure international stability and the non-use of nuclear weapons. During the first nuclear age, deterrence, containment, military strength, and diplomatic engagement were used to accomplish these objectives (Krepon, 2009: 34). During the second nuclear age, preventing proliferation of nuclear weapons to state and non-state actors in international relations became the central objective of security and arms control, and there were three principal means for achieving this objective: non-proliferation, counterproliferation, and the use of military means.

But what motivates states to develop nuclear weapons? It is clear why terrorist groups would want to obtain nuclear weapons, but what about countries. Cirincione (2007) concludes that countries want to obtain nuclear weapons for the following reasons: to obtain greater security or prestige, to further domestic political agendas, to follow technological imperatives, or for economic purposes. For example, both China and Israel sought greater security by developing

nuclear weapons. Both Britain and France sought prestige—to be considered as great powers in the post-World War II era.

As Cirincione (2007) points out, ironically, states refrain from developing nuclear weapons for the same general reasons that motivate them to develop nuclear weapons. Argentina and Brazil both gave up their nuclear weapons development programs for security reasons; their leaders realized that if they developed nuclear weapons that they would be less secure. Both Libya and South Africa abandoned nuclear weapons programs and consequently gained international prestige by doing so.

Like the other factors that contribute to the development or rejection of nuclear weapons programs, the economic motivation cuts both ways. For example, President Dwight Eisenhower was very concerned about the economic health of the United States and the cost of defense. Consequently, he adopted a “New Look” defense policy that placed greater reliance on nuclear weapons in providing for the defense of the New Look’s policy of “massive retaliation,” meaning that the United States would possibly respond with nuclear weapons to international provocations, a policy of “more bang for the buck,” that is, greater reliance on nuclear weapons to save money.

The cost of developing nuclear weapons is, of course, enormous. In its three-decade attempt to develop or buy nuclear weapons, Libya spent more than one hundred million dollars. In 2002, a deputy North Korean foreign minister made the startling admission that life expectancy in his country had dropped more than six years in the 1990s and that per capita gross domestic income had dropped from almost a thousand dollars to less than five hundred dollars in the same decade. In addition, more than a million North Koreans died of starvation during the time that North Korea was developing nuclear weapons (Litwak 2007: 275).

The second enduring policy question was how to prevent the spread of nuclear weapons. The first means of preventing proliferation was the establishment of the non-proliferation regime founded on the Non-Proliferation Treaty (NPT) first signed in 1968. This was primarily a diplomatic approach spearheaded by the U.S. Department of State does. The NPT established three inter-locking bargains. Non-nuclear weapons states agreed to forgo the development of nuclear weapons: (1) in return for assistance in developing nuclear energy for peaceful purposes; (2) as long as nuclear weapons states worked to achieve disarmament; and (3) as long as other non-nuclear states did not develop nuclear weapons (Bunn and Chyba 2006: 45–46). As part of their responsibilities to fulfill the first of these pledges, the nuclear weapons states provided assistance to non-nuclear weapons states including assistance and advice concerning nuclear research reactors and power plants. Today, there are approximately 130 nuclear research reactors throughout the world, many of which do not have adequate security and safety measures (Bunn 2008: v). The second part of the NPT bargain called for nuclear weapons states to “pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament ...” (NPT, Article VI). Although the nuclear signatories of the NPT have publicly affirmed this pledge many times, there is evidence that support was rhetorical rather than real. For example, in a secret analysis of the NPT written by an National Security Council (NSC) Staff member, characterized Article VI as “an essentially hortatory statement and presents no problems [concerning U.S. implementation of the provisions of the treaty]” (Keeny 1969: 5). The implementation of this article has been an enduring policy issue at the various NPT review conferences that have been held since the treaty was signed and entered into force. At these conferences, non-nuclear weapons states have pointed to the continued development of increasingly sophisticated nuclear weapons and delivery systems as what they view as continued vertical proliferation and a failure to abide by Article VI. Despite criticisms of the NPT, as of 2010, it had been in force for more than four decades and stood as the bulwark of non-proliferation efforts.

Although the Non-Proliferation Treaty as of 2010 had 189 signatories and is, therefore, one of the most strongly supported treaties in the world, there are several significant non-signatory states including India, Israel, North Korea, and Pakistan. In addition, non-state actors such as terrorist groups are not signatories of the NPT. These omissions have resulted in two other approaches for dealing with proliferation: counterproliferation, and the use of military means to prevent proliferation.

Counterproliferation is essentially what the U.S. Department of Defense does. In May 2003, President George W. Bush announced the establishment of the Proliferation Security Initiative, initially a group of eleven states that agreed to intercept components that could be used to develop nuclear weapons or delivery systems (Winner, 2005). Since its establishment, more than 90 states have agreed to participate in the initiative and more than 30 interdictions have been made. In April of 2004, the United Nations (UN) adopted Resolution 1540 that criminalizes the proliferation of nuclear weapons or materials used to produce such weapons. This resolution requires states to adopt criminal laws and physical security measures and was also the UN's attempt to extend non-proliferation norms to include non-state actors.

Another aspect of the counterproliferation approach is the Cooperative Threat Reduction (CTR) Program, which was started as a result of legislation first introduced in November of 1991, sponsored by now retired Senator Sam Nunn (D-Ga.) and Senator Richard Lugar (R-Ind.). The program provided for U.S. funds to assist Russia and other former Soviet republics and allies to dismantle nuclear sites and to increase the security and safety of such sites. According to the Defense Threat Reduction Agency, as of November 2009, this program resulted in the deactivation of 7,514 nuclear warheads; the destruction of 767 inter-continental ballistic missiles (ICBM), 143 ICBM mobile launchers, 906 nuclear air-to-surface missiles, 32 ballistic missile submarines, 843 metric tons of chemical warfare agents; the elimination of 498 ICBM silos, 155 bombers capable of carrying nuclear weapons, 476 submarine-launched ballistic missile (SLBM) launchers, 651 SLBMs; the sealing of 194 nuclear testing tunnels or holes; the shipment of 463 nuclear weapons transport trains; the security upgrading of 24 nuclear weapons storage sites; and the building and equipping of 18 biological monitoring stations. Significantly, this program addressed the threat from chemical and biological, as well as nuclear, weapons. A total of 20,000 Russian scientists were employed with CTR funds. In addition, these funds were used to finance programs such as Project Sapphire, a secret operation to remove 600 kilograms of highly enriched uranium (enough to make 24 nuclear bombs) from Kazakhstan to the United States (Carter and Perry 1999: 65–68).

The third principal means that states used to halt the proliferation of nuclear weapons was the use of military force. On June 7, 1981, eight Israeli F-16s and eight F-15s attacked and destroyed a nuclear reactor at Osirak, Iraq, just outside of Baghdad. At the time, many considered the attack a success because it had destroyed the fledgling Iraqi nuclear program. At the time of the attack, Iraq had four hundred scientists working at the Osirak reactor and devoted approximately four hundred million dollars to nuclear research (Litwak 2007: 67). Following the attack, Iraq increased the number of scientists working on its nuclear program to 7,000 and increased the budget to \$10 billion. Dr. Robert Litwak, the director of the security studies program at the Woodrow Wilson International Center for Scholars in Washington, D.C., and the author of a well-received 2007 book on rogue regimes, concluded that the Israeli military attack on Osirak was “a tactical success, but a strategic failure” because it resulted in the Iraqis’ redoubled effort to build nuclear weapons, an effort that was as close as six months away from developing an operational nuclear weapon at the time of the first Gulf War, according to the UN inspection team.

Respected expert on proliferation Joseph Cirnicione (2007: 117) has called the United States’ 2003 war with Iraq “the world’s first nonproliferation war.” According to President George W. Bush and members of his administration, the principal reason that the United

States attacked Iraq was to find and destroy Iraq's weapons of mass destruction (WMD). On August 26, 2002, Vice President Dick Cheney confidently announced, "Simply stated, there is no doubt that Saddam Hussein now has weapons of mass destruction ... There is no doubt that he is amassing them to use against our friends, against our allies and against us" (Bumiller and Dao 2002: A8). In January 2003, Deputy Secretary of Defense Paul Wolfowitz stated, "There is incontrovertible evidence that the Iraqi regime still possesses such [nuclear] weapons" (quoted in Bowden 2005). Once the United States invaded and occupied Iraq and searched, the "incontrovertible evidence" indicated that Iraq had not possessed WMD; Saddam Hussein had claimed that Iraq had nuclear weapons, and the United States called his bluff and proved that his claims were false. We now know that the nuclear weapons development programs of both North Korea and Iran were more advanced than those of Iraq, and that, in fact, the U.S. invasion of Iraq may very well have stimulated the nuclear weapons development programs of both countries. North Korea tested its first nuclear weapon in October 2006, and the United States did not invade. Iranian leaders may very well have concluded that the possession of nuclear weapons, à la North Korea, deterred an American invasion and that the lack of weapons could invite an invasion. Like the Israeli 1981 attack on Osirak, the U.S. invasion of Iraq may have been a tactical success and a strategic failure from the standpoint of proliferation. As political scientist and former NSC adviser, Zbigniew Brzezinski (2005), put it, "America's ability to cope with nuclear non-proliferation has also suffered [from the Iraq War]. The contrast between the attack on the military weak Iraq and America's forbearance of the nuclear-armed North Korea has strengthened the conviction of the Iranians that their security can only be enhanced by nuclear weapons" (quoted in Cirincione 2007: 118).

In the case of Iraq, the United States chose to change the regime in order to stop proliferation. As Cirincione (2007: 115) notes, "With Libya, the United States changed a regime's behavior, not the regime." For decades, Libya had attempted to obtain nuclear weapons and went to the extreme of publicly offering to buy a nuclear weapon on the open market. A former renegade CIA agent, Edwin Wilson, offered to sell Libya the design for a nuclear weapon in 1980, but the design was flawed. Later, Libya paid A. Q. Khan, the Pakistani nuclear scientist one hundred million dollars for nuclear weapons information and equipment. When the United States invaded Iraq, many believe that Libya's leader Muammar Qaddafi concluded that Libya would be invaded next unless he renounced nuclear weapons, which he did in December 2003, less than a year following the U.S. invasion of Iraq.

A third example of the use of force in order to prevent the spread of nuclear technology occurred in September 2007 when Israel attacked a site in Syria that reportedly had received shipments from North Korea for improving Syrian ballistic missiles and producing fissile material for the fabrication of nuclear weapons. A possible reason that Israel chose to attack Syria was to send a message to Iran; namely, if Iran persisted in developing nuclear weapons, it would do so at its peril.

The possible development of nuclear weapons by Iran is a significant, enduring issue of security, proliferation, and arms control. If Iran develops, tests, and deploys nuclear weapons, it would have significant implications for regional and international security. If Shi'a Iran goes nuclear, then Sunni Saudi Arabia and Egypt are likely to obtain nuclear material, expertise, and weapons technology from Sunni Pakistan, something that would spell the end of the non-proliferation regime and the emergence of a dangerously unstable Middle East, unless, of course, one accepts the argument of Kenneth Waltz (1983) that more nuclear weapons states are stabilizing. But as previously discussed this is a minority view among security strategists.

How could the Iranian development of nuclear weapons be stopped? Some argue that military force employed by the United States and Israel is the only way to halt the Iranian program, but such a view is shortsighted. Were the United States or Israel to attack Iran, the repercussions would be substantial and long lasting. In addition, there is little probability that

the Iranian nuclear program would be destroyed since the Iranians learned from the Israeli attack on Osirak in 1981 and the U.S. invasion of Iraq in 2003. Iran has placed much of its nuclear program underground relatively invulnerable to attack. What then is the alternative to military attack? U.S. diplomat Dennis Ross, who served as a special adviser for the Persian Gulf and Southwest Asia to Secretary of State Hillary Clinton, has noted that Europeans currently provide approximately \$18 billion in loan guarantees for companies doing business in Iran and that the United States should pressure the Saudis to push the Europeans to pressure Iran not to develop nuclear weapons (Ross 2007).

An emerging and likely enduring issue in contemporary efforts to limit proliferation is to prevent terrorists from obtaining nuclear materials. Harvard political scientist Graham Allison (2004: 140–175, 2006) has focused on this issue and has concluded that this needs to be “an absolute national and international priority.” In Allison’s view, there should be no “loose nukes,” that is, nuclear weapons that are not under the firm control of states; that there should be no “new nascent nuclear powers;” and that there should be no new nuclear powers. In order to accomplish these “three no’s,” there should be a multilateral effort rather than unilateral, and there is a need to secure fissile materials (highly enriched uranium and plutonium) that could be used to make nuclear weapons.

Additional steps could be taken to reduce the dangers from existing nuclear weapons arsenals ranging from narrow, specialized proposals to broad, comprehensive plans. On the assumption that assured government control over nuclear weapons is preferable, even for a government with which the United States disagrees or even condemns. Caldwell (1987) recommended that the United States provide information and actual rudimentary permissive action links (the electronic locks that prevent unauthorized or accidental detonation of nuclear weapons) to any state requesting them. The United States offered such information to the Soviet Union during the Cold War, and possibly offered such information to Pakistan after its detonation of its first nuclear weapons. Although the evidence is sketchy, it appears that Pakistan refused permissive action link information or equipment (Krepon 2009: 149). In addition, in January of 2002, a Pakistani general, Khalid Kidwai, said that Pakistani nuclear warheads are not equipped with permissive action links (Chyba and Sasilumar 2006: 22).

Broader scope proposals include the conclusion of various new arms control agreements, including the ratification of the Comprehensive Test Ban Treaty (CTBT), which would ban all nuclear tests. Such a treaty was signed in 1996 by more than 50 heads of states, including President Bill Clinton, but the U.S. Senate, as well as several other key countries, failed to ratify it. Thus it has not entered into force. The United States and Russia continue their negotiations to limit strategic nuclear arms. In addition, a fissile fuels cut-off treaty could be negotiated since there is an existing abundance of fissile fuel; Russia, for example, has enough fissile fuels to produce 40,000 nuclear weapons. From 1993 through 2009, the United States purchased 375 metric tons of Russian fissile fuels in a program that pundits have labeled the “megatons into megawatts” program. Approximately 20 percent of the electricity produced in the United States comes from nuclear power plants, and fissile fuels from Russia power about half of these plants, so this is a significant “swords into ploughshares” program.

In January 2007, the *Wall Street Journal* published a surprising article by four veteran, highly respected American statesmen—George Shultz, William Perry, Henry Kissinger, and Sam Nunn—two Republicans, two Democrats. The article was surprising because it called for the abolition of nuclear weapons (see Shultz et al. 2007). Of course, there had previously been such calls, after the bombings of Hiroshima and Nagasaki, following the saber rattling of Ronald Reagan, and in the wake of the disintegration of the Soviet Union. But the new call was distinctive because centrist policy makers rather than those on the periphery of American politics issued it.

Main Achievements of Security, Nonproliferation, and Arms Control

Civilian analysts such as Bernard Brodie, Thomas Schelling, Herman Kahn, and Albert Wohlstetter were the foremost thinkers in the development of the first generation theories of deterrence and arms control. Without the work of the civilian analysts, there would be no discipline of strategic studies. Their work contributed to the existence of the “long peace,” one of the longest periods of time in modern history without war among the great powers (Gaddis 1989). Surely, this is one of the most significant accomplishments of social scientists ever.

Deterrence contributed to the “long peace” of the Cold War period, and it was supplemented by efforts to limit, control, and even eliminate some weapons. Arms control and disarmament efforts resulted in a remarkable number and diversity of formal and informal, bilateral and multilateral agreements that are summarized in Table 26.3. As Table 26.3 demonstrates, these efforts established the following norms:

- Nuclear weapons should not be deployed in certain areas;
- Limits should be placed on the testing of nuclear weapons;
- Measures should be adopted to manage and, if possible, prevent crises;
- The vertical and horizontal spread of weapons of mass destruction should be controlled;
- The production and deployment of certain weapons should be eliminated;
- The detonation of certain weapons should be prohibited to protect the environment;
- Strategic nuclear weapons should be limited;

Table 26.3 Achievements of Arms Control and Disarmament Agreements

<i>Types of Agreements and Norms Established</i>	<i>Agreement</i>	<i>Signed</i>	<i>Entered into force</i>	<i>Ended</i>
1. Nuclear weapons free areas <i>Nuclear weapons should not be deployed in certain areas.</i>	1.1 Antarctica Treaty*	1959	1961	
	1.2 Outer Space Treaty*	1967	1967	
	1.3 Latin America Treaty*	1967	1968	
	1.4 Seabed Treaty*	1971	1982	
	1.5 Treaty of Rarotonga (South Pacific)	1985	1986	
	1.6 Treaty of Bangkok (Southeast Asia)	1995	1997	
	1.7 Treaty of Pelindaba (Africa)	1996	2009	
	1.8 Central Asia Treaty	2006	2009	
2. Nuclear testing limitations <i>Limits should be placed on nuclear testing.</i>	2.1 Limited Test Ban Treaty*	1963	1963	
	2.2 Threshold Test Ban Treaty*	1974	1990	
	2.3 Peaceful Nuclear Explosives Treaty*	1976	1990	
	2.4 Comprehensive Test Ban Treaty	1996	Not ratified	
3. Crisis management and crisis prevention <i>In crisis situations, leaders should communicate to reduce risks.</i>	3.1 Hot Line Agreement*	1963	1963	
	3.2 Accidents Measures Agreement*	1971	1971	
	3.3 Hot Line Modernization Agreement*	1971	1971	
	3.4 Basic Principles of Relations (US & USSR)*	1972	1972	
	3.5 Incidents at Sea Agreement*	1972	1972	
	3.6 Agreement on the Prevention of Nuclear War*	1973	1973	

(continued)

Table 26.3 Continued

<i>Types of Agreements and Norms Established</i>	<i>Agreement</i>	<i>Signed</i>	<i>Entered into force</i>	<i>Ended</i>
4. Nuclear Nonproliferation <i>The spread of nuclear weapons should be controlled.</i>	4.1 Nonproliferation Treaty*	1968	1970	
	4.2 NPT Exporter Committee (Zangger Committee)*	1974		
	4.3 Nuclear Suppliers Group*	1975		
	4.4 US-IAEA Safeguards Agreement*	1977	1980	
	4.5 Convention on Physical Protection*	1980	1987	
	4.6 Missile Technology Control Regime*	1987		
	4.7 Cooperative Threat Reduction Program*	1991		
	4.8 Agreed Framework with North Korea*	1994	1994	2003
	4.9 Fissile Material Cut-Off Treaty			
5. Disarmament <i>The production and deployment of certain weapons should be prohibited.</i>	4.5 Proliferation Security Initiative*	2003		
	4.6 UN Resolution 1540*	2004	2004	
	5.1 Geneva Protocol on Chemical Weapons*	1925	1928	
5.2 Biological Weapons Convention*	5.2 Biological Weapons Convention*	1972	1975	
	5.3 Intermediate Force Treaty*	1987	1988	2001
6. Environmental protection <i>The detonation of nuclear weapons in certain areas should be prohibited to protect the environment.</i>	6.1 Antarctica Treaty*	1959	1961	
	6.2 Limited Test Ban Treaty*	1963	1963	
	6.3 Environmental Modification Agreement*	1977	1978	
7. Strategic nuclear arms limitations <i>Strategic nuclear weapons should be limited.</i>	7.1 Anti-Ballistic Missile (ABM) Treaty*	1972	1972	2001
	7.2 Interim Agreement on Offensive Forces*	1972	1972	1977
	7.3 ABM Protocol*	1974	1974	
	7.4 SALT II Treaty*	1979	Not ratified	
	7.5 START I Treaty*	1991	1994	2009
	7.6 START II Treaty*	1993		
	7.7 SORT/Moscow Treaty*	2002	2003	2012
	7.8 START III*	2010		
8. Chemical and biological weapons <i>Chemical and biological weapons should be eliminated.</i>	8.1 Geneva Protocol on Chemical Weapons*	1925	1928	
	8.2 Biological Weapons Convention*	1972	1975	
	8.3 Australia Group	1985		
	8.4 Chemical Weapons Convention*	1993	1997	
9. Conventional weapons <i>Conventional weapons (non-nuclear) weapons should be controlled.</i>	9.1 Convention on Certain Conventional Weapons	1981	1983	
	9.2 Treaty on Conventional Weapons in Europe (CFE)*	1990	1992	
	9.3 UN Register of Conventional Arms*	1992		
	9.4 Wassenaar Arrangement*	1996		
	9.5 Land Mine Treaty	1997	1999	
	9.6 Cluster Munitions Treaty	2008	2010	

* Indicates that the United States is a party to the agreement.

- Chemical and biological weapons should be eliminated; and
- Conventional (non-nuclear) weapons should be controlled.

Taken together, these norms represent significant achievements in increasing security, limiting proliferation, and controlling the destructiveness and costs of weapons.

Suggestions for Future Research

Despite the achievements in the fields of security, proliferation, and arms control, much remains to research and to be done, and the following are issues suggestive of future research.

First, for the world to eliminate nuclear weapons, incremental steps toward this comprehensive goal will have to be taken. The articles by Shultz et al. (2007, 2008, 2010) suggest steps that can be taken, but the means to achieve these steps need to be explicated. Several books have been published suggesting how a nuclear weapons-free world could be achieved, but more research on the means to achieve this goal is needed.

Second, despite the progress made and despite the lofty goal of abolishing nuclear weapons, there are some “game-changing” possibilities that could affect future international security. Krepon (2009: 137–138) has described a number of these possibilities, including the possible use of nuclear weapons in war, the failure to halt Iranian and North Korean nuclear weapons programs, the breakdown of the central government in Pakistan, the spread of enrichment and re-processing facilities, the failure to secure both nuclear weapons and fissile material, the detonation of nuclear weapons by terrorists, the demise of international arms control inspections and verification, the resumption of nuclear testing, and the continued production and stockpiling of highly enriched uranium and plutonium. Any one or more of these possibilities could radically change the current international security environment and make the world a far more dangerous place. Contingency research focusing on how the United States and the international community should respond to these possibilities would be valuable.

Third, in addition to the establishment of a global non-proliferation regime consisting of norms, organizations, and agreements, analysts should focus in greater detail on other ways that proliferation can be prevented. For example, Robert Litwak (2007: 98) has noted, “The positive outcome in South Africa and Ukraine, as well as in Brazil and Argentina, suggested a model for the post-Cold War era: nonproliferation through democratization, security assurances, and integration into the globalized economy of the liberal international order.” In this sense, the promotion of economic development and integration becomes a means of retarding proliferation. Making security guarantees to other states may also be considered as a means of limiting proliferation. Gary Samore, special assistant to the president and White House Coordinator for arms control and weapons of mass destruction, proliferation, and terrorism, has said that NATO has been an effective non-proliferation tool and security guarantees to prevent proliferation should be considered.

Fourth, more analysis is needed concerning how to respond to violations of the international arms control and non-proliferation regime. The Non-Proliferation Treaty is close to universally accepted; that is the good news. The bad news is that several important states do not accept this regime or violate non-proliferation agreements that they have signed. The international community responds to violations with rhetorical denunciations, UN resolutions and economic sanctions, but these responses are rarely effective. How can and should the United States and the international community respond to violations? These four questions and issues deserve further thought and elaboration in the years ahead.

Conclusion

Much has been done to increase international security, limit the proliferation of weapons of mass destruction, and impose quantitative and qualitative limitations on a wide variety of weapons. All but four states have signed the Non-Proliferation Treaty; significant efforts have been made to place nuclear weapons and fissile materials under tighter controls; and four states have given up nuclear weapons programs and more than 40 others have chosen not to develop nuclear weapons. Achieved in part due to American foreign policy, these are significant accomplishments, but much remains to be done.

Iran and North Korea both represent emerging nuclear threats. The greatest threat is that terrorists will obtain nuclear weapons and such a threat is, according to Graham Allison (2004), “the ultimate preventable catastrophe.” The United States and the international community must act to prevent this disaster.

The probability that nuclear weapons would be used was less during the Cold War than at present, and the probability of global cataclysm was greater during the Cold War than today. Therefore, the world at present is safer than during the Cold War, but it could be made a great deal safer for future generations.

References

- Allison, Graham. 2004. *Nuclear Terrorism: The Ultimate Preventable Catastrophe*. New York: Times Books.
- Allison, Graham, ed. 2006. “Confronting the Specter of Nuclear Terrorism.” *The Annals of the American Academy of Political and Social Science*. 607(1): 1-202.
- Allison, Graham, and Philip Zelikow. 1999. *Essence of Decision: Explaining the Cuban Missile Crisis*, 2nd ed. New York: Longman.
- Blight, James G., and David A. Welch. 1989. *On the Brink: Americans and Soviets Reexamine the Cuban Missile Crisis*, 2nd ed. New York: Noonday Press.
- , eds. 1998. *Intelligence and the Cuban Missile Crisis*. London: Frank Cass.
- Blight, James G., Bruce J. Allyn, and David A. Welch. 1993. *Cuba on the Brink: Castro, the Missile Crisis, and the Soviet Collapse*. New York: Pantheon Books.
- Bowden, Mark. 2005. “Wolfowitz: The Exit Interviews.” *The Atlantic* (July/August), <http://www.theatlantic.com/magazine/archive/2005/07/wolfowitz-the-exit-interviews/4078/>.
- Bracken, Paul. 1999. *Fire in the East: The Rise of Asian Military Power and the Second Nuclear Age*. New York: HarperCollins.
- . 2000. “The Second Nuclear Age.” *Foreign Affairs* (January/February): 146–156..
- Brennan, Donald G., ed. 1961. *Arms Control, Disarmament, and National Security*. New York: George Braziller.
- Brodie, Bernard, ed. 1946. *The Absolute Weapon: Atomic Power and World Order*. New York: Harcourt, Brace and Company.
- . 1959. *Strategy in the Missile Age*. Princeton, N.J.: Princeton University Press.
- Bull, Hedley. 1961. *The Control of the Arms Race*. New York: Praeger.
- Bumiller, Elizabeth, and James Dao. 2002. “Cheney Says Peril of a Nuclear Iraq Justified Attack.” *New York Times*. August 27, A8.
- Bunn, George, and Christopher F. Chyba, eds. 2006. *U.S. Nuclear Weapons Policy*. Washington, D.C.: Brookings Institution Press.
- Bunn, Matthew. 2008. *Securing the Bomb 2008*. Cambridge, MA: Project on Managing the Atom; available at <http://www.nti.org/securingthebomb>.
- Caldwell, Dan. 1987. “Permissive Action Links: A Description and Proposal.” *Survival* 29(3): 224–238.
- . 1991. *The Dynamics of Domestic Politics and Arms Control: The SALT II Ratification Debate*. Columbia, SC: University of South Carolina Press.
- Carter, Ashton B., and William J. Perry. 1999. *Preventive Defense: A New Security Strategy for America*. Washington, D.C.: Brookings Institution Press.

- Chyba, Christopher F. and Karthika Sasilumar. 2006. A World of Risk: The Current Environment for U.S. Nuclear Weapons Policy." In *U.S. Nuclear Weapons Policy: Confronting Today's Threats*, George Bunn and Christopher F. Chyba, eds., 1–33 Washington D.C.: Brookings Institution Press.
- Cirincione, Joseph. 2007. *Bomb Scare: The History and Future of Nuclear Weapons*. New York: Columbia University Press.
- Clemens, Walter C., Jr. 2010. *Getting to Yes in Korea*. Boulder, CO: Paradigm Publishers.
- Dobrynin, Anatoly. 1995. In *Confidence: Moscow's Ambassador to America's Six Cold War Presidents (1962–1986)*. New York: Times Books.
- Fursenko, Aleksandr, and Timothy Naftali. 1997. "One Hell of a Gamble": *Khrushchev, Castro, and Kennedy, 1958–1964*. New York: W.W. Norton.
- Gaddis, John Lewis. 1989. *The Long Peace: Inquiries into the History of the Cold War*. New York: Oxford University Press.
- George, Alexander L., and Richard Smoke. 1974. *Deterrence in American Foreign Policy: Theory and Practice*. New York: Columbia University Press.
- International Institute for Strategic Studies. 2002. *Iraq's Weapons of Mass Destruction: A Net Assessment*, September 9.
- Jervis, Robert. 1978. "Cooperation Under the Security Dilemma." *World Politics* 30(2): 167–214.
- Kahn, Herman. 1960. *On Thermonuclear War*. Princeton, NJ: Princeton University Press.
- Keeny, Spurgeon. 1969. Memorandum (Secret) from Spurgeon Keeny to Dr. Henry Kissinger, January 24, 1969. NPMS, NSC Files, Subject Files, Box 366. Near-Real-Time Satellite Reconnaissance System to Non-Proliferation Treaty, File Non-Proliferation Treaty through March 1969, National Archives.
- Krepon, Michael. 2009. *Better Safe than Sorry: The Ironies of Living with the Bomb*. Stanford, CA: Stanford University Press.
- Lawrence, Bruce, ed. 2005. *Messages to the World: The Statements of Osama Bin Laden*. New York: Verso.
- Litwak, Robert S. 2007. *Regime Change: U.S. Strategy Through the Prism of 9/11*. Washington, D.C. and Baltimore, MD: Woodrow Wilson Center Press and the Johns Hopkins University Press.
- The 9/11 Commission Report. 2004. *Final Report of the National Commission on Terrorist Attacks upon the United States*. New York: W.W. Norton.
- Rhodes, Richard. 2007. *Arsenals of Folly: The Making of the Nuclear Arms Race*. New York: Alfred A. Knopf.
- Ross, Dennis B. 2007. *Statecraft: And How to Restore America's Standing in the World*. New York: Farrar, Straus, and Giroux.
- Sagan, Scott D., and Kenneth N. Waltz. 2003. *The Spread of Nuclear Weapons: A Debate Renewed*, 2nd ed. New York: W.W. Norton.
- Schelling, Thomas, and Morton Halperin. 1961. *Strategy and Arms Control*. New York: Twentieth Century Fund.
- Shultz, George P., William Perry, Henry Kissinger, and Sam Nunn. 2007. "A World Free of Nuclear Weapons." *Wall Street Journal*. January 4, http://www.2020visioncampaign.org/pages/113/Kissinger_Shultz_Perry__Nunn_call_for_A_World_Free_of_Nuclear_Weapons.
- . 2008. "Toward a Nuclear-Free World." *Wall Street Journal*. January 15, A15.
- . 2010. "How to Protect our Nuclear Deterrent." *Wall Street Journal*. January 20, A17.
- Thucydides. 1972. *History of the Peloponnesian War*. New York: Penguin Books.
- U.S. White House. 2002. *National Security Strategy of the United States*. <http://www.whitehouse.gov/nsc/nss.html>.
- Waltz, Kenneth N. 1983. *The Spread of Nuclear Weapons: More May Be Better*. Adelphi Paper 171. London: International Institute for Strategic Studies.
- Winner, Andrew C. 2005. "The Proliferation Security Initiative: The New Face of Interdiction." *Washington Quarterly* (Spring): 129–141.
- Wit, Joel, Daniel B. Poneman, and Robert L. Gallucci. 2004. *Going Critical: The First North Korean Nuclear Crisis*. Washington, D.C.: Brookings Institution Press.