International Security Negotiations in a Changed Global Security Environment

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Executive Summary

Lessons Learned from US-Russian Nuclear Arms Control Experience

From the early 1960s onward, many in the American analytic community saw modern arms control as having three basic objectives: to reduce the risk of war; to limit the damage if war occurred; and to reduce the costs of armaments. Was the effort successful?

There is a broad (but not total) consensus that the arms control agreements helped stabilize the superpower competition during the Cold War and helped cultivate the thicket of circumstances that enabled the Cold War to end peacefully. In that sense, the US-Russian nuclear arms control experience contributed to reducing the risk of war. Some who embrace this view like Emanuel Adler argue even more broadly:

We will remember the Cold War for staying cold and ending cold. Its major crises, such as Cuba and Berlin, will slowly fade from our historical consciousness, as will the nightmares of Soviet tanks overrunning Western Europe and the memories of all those resources wasted on an arms race fueled by overblown suspicion and exaggerated threats. In retrospect, however, the most important legacy of the Cold War—its enduring contribution to international institutions and order—is the practice of arms control.1

Others disagree. Malcolm Wallop and Angelo Codivilla, for example, argued as the Cold War was ending that arms control with Russia had detracted from American security.2 This view is consistent with the effort to quickly get out of the ABM treaty and with the implicit policy to defer discussions with the Russians on whether START will be extended.

There is little evidence that for all of the efforts made, arms control rendered the nuclear forces of the two sides significantly less lethal in the event of war. Both sides still have large nuclear arsenals capable of destroying one another. The role of nuclear weapons has been reduced in American defense planning given America’s unmatched non-nuclear power, but nuclear weapons have become even more important in Russian defense planning, given Russia’s conventional weaknesses.

Has US-Russian arms control saved money? Attempting to answer this question analytically would involve an almost impossible array of sub-analyses examining tradeoff costs. Many feel that in the round it did not.

Were the specific goals of the various arms control negotiations achieved? The Baruch plan sought to take nuclear weapons out of national hands. That did not happen. Atmospheric nuclear testing has ended and a plausible argument can be made that even if nuclear testing resumes, there will be enormous pressure not to test in the open. So, one might conclude that the

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2 Senator Malcolm Wallop and Angelo Codivilla, The Arms Control Delusion: How Twenty-Five Years of Arms Control Has Made the World Less Safe (San Francisco, 1987).
LTBT was successful over time. The NPT regime is under challenge from countries like North Korea and Iran but, arguably, it remains the norm. The strategic arms control process, at least from the American perspective, set out to eliminate first and foremost the most destabilizing and threatening ballistic missiles, heavy and highly-MIRVed Russian ICBMs. With the demise of START II, that goal was not achieved. As for INF, it eliminated an entire class of missiles for the U.S. and Russia, but not for other countries like China.

There are other ways to view the matter. In the mid-1980s, for example, Albert Carnesale led a research project at the Kennedy School, sponsored by ACDA, to review the results of superpower arms control. He and his colleagues concluded:

> What emerges above all is the modesty of what arms control has wrought. Expectations, for better or worse, for the most part have not been realized. The stridency of the debate, however, provides little clue to this modest reality; proponents and critics, liberals and conservatives, hawks and doves—all seem to exaggerate the potential and actual impact of arms control. If the history reveals anything, it is that arms control has proved neither as promising as some had hoped nor as dangerous as others had feared.3

This study, which was well received at the time by the director of ACDA, Kenneth L. Adelman, did not incorporate the lessons of START. But it did examine a number of hypotheses and reached conclusions that arguably stand the test of time. The study concluded, for instance:

> The historical record tends to support the contention that arms control negotiations and outcomes serve to reduce uncertainties in the estimates and projections that each participant makes about the other’s forces. It is somewhat surprising that this aspect receives little attention in public debates about specific negotiations and accords. Indeed, reduction of uncertainty and enhancement of predictability may well be the principal contribution of the arms control experience.4

One of the things that arms control did during the Cold War for US-Russian relations, especially from the 1960s onward, was provide a structure and process for continued engagement and negotiation between the two superpowers. Bob Gates, for many years a CIA analyst and NSC staffer, later Director of Central Intelligence, writes in his memoirs:

> From the date of signature, SALT was controversial and it would become more so over time as the Soviets continued to expand their strategic capabilities . . . Even so, I believe SALT and the SALT process were important and made a genuine contribution to keeping the superpower competition under control. The process itself was probably the most useful part. For the first time, the two sides sat down and began a dialogue about their nuclear weapons and, implicitly, their nuclear strategies. Military and civilian leaders on both sides were able to take the measure of one another and, at the same time, engage their political leaders in an unprecedented way in learning about the balance of terror.5

However, as others have pointed out, there is a danger in stressing process if it leads to ignoring undesired results. In January 1988, the commission on integrated long-term strategy, co-chaired

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4 Ibid., pp. 344-45.
by Fred Iklé and Albert Wohlstetter, published its report. While stressing that US military strategy should include an arms control component, the report cautioned:

The link between national security and arms control might seem obvious and non-controversial: good arms control agreements will give us more security, possibly at a lower cost. But many people prefer to think of arms control as somehow taking place on a different plane from that of defense planning. A great deal of political rhetoric encourages them to believe that the ultimate point of arms control is not so much military as political. For many Americans and Europeans, the lure of these agreements is that they enable us to engage Soviet leaders in a “process,” expected to develop a “momentum” of its own, that will lead to understanding about other contentious matters and serve broadly to reduce international tensions. This perspective could be a recipe for disaster. 7

In fact, as Andrew Kohut, one of the deans of polling the public on attitudes toward major policy issues, concluded for the Aspen Strategy Group in their 1987 study, based on a study of over 40 years of polling data on the American public’s attitudes toward arms control and nuclear weapons:

The public is receptive to any and all nuclear arms [control] proposals except those which imply a loss of military advantage or a reliance on the goodwill or trustworthiness of the Soviet Union. The public’s appetite for arms reduction is greatest when the balance of power is perceived to be in the U.S.’s favor or when there is parity between the superpowers. 8

This is consistent with the conclusion that Carnesale and his colleagues reached when testing the hypothesis that the arms control process and arms control agreements lull the United States into spending less than it should on defense. “There is little evidence,” they found, “to suggest that either of the agreements limiting strategic offensive arms [SALT I and II] produced a direct lulling effect in the United States.” 9

**Broader Lessons**

What can be said about the experience of negotiating arms control agreements with the Russians from 1945 through 2002 that is relevant to today’s world? Obviously much has changed. During the Cold War, the United States was dealing with a closed society where a small group of men controlled Soviet policy, and the policy and decision process was heavily veiled. There was considerable debate in the West about what Soviet objectives actually were for much of the Cold War.

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6 Other members of the commission were Anne L. Armstrong, Zbigniew Brzezinski, William P. Clark, W. Graham Claytor, Jr., Andrew J. Goodpaster, James L. Holloway, III, Samuel P. Huntington, Henry A. Kissinger, Joshua Lederberg, Bernard A. Schriever, and John W. Vessey.


The United States also was involved in a military confrontation that threatened its most vital national interests, where nuclear weapons were at the center of the confrontation, where the opponent was perceived to have superior conventional military power in the most important theater (central Europe), and where the threat of civilization-ending nuclear holocaust hung over the entire endeavor.

The environment for American policymaking also was different in important respects, e.g., much of the Cold War was not conducted under the glare of today’s 24/7 media extravaganzas, enabled by modern information technology.

Finally, the arms control priorities of the American government focused for good reasons more on its bilateral relationship with Russia and less on the more diffuse multilateral regimes involving a number of centers of power. Multilateral negotiations took place and were treated seriously, but they did not ascend to the importance of the US-Russian bilateral talks.

The list of differences could go on. Enough has been noted, however, to suggest that even with all the differences from the Cold War to today, some macroscopic lessons are in order for a world in which arms control continues to be important but has less emphasis in national strategy, in which the threats are significantly different, and in which multilateral regimes are more important than ever, especially for addressing terrorism and the proliferation of weapons of mass destruction.

- **Keep priorities straight when engaging in arms control.** Arms control is an element of national strategy, not an activity to be pursued for its own sake or valued more highly than other tools. The major question is whether national security is protected and the national interest served, not whether arms control ‘succeeds’ at any particular point in time.

- **Arms control can reduce uncertainty and enhance predictability.** This arguably was the most important contribution of the US-Russian Cold War arms control experience for the United States. Today, the Russians appear to value bilateral nuclear arms control more than the United States for exactly this reason.

- **Expect surprises during arms control negotiations.** Arms control negotiations cannot be insulated from external events in global politics.

- **After detection, what?** The arms control experience suggests that diplomacy to build the international consensus needed to enforce compliance is likely to be harder than the arms control negotiation itself.

- **Good people and good practices are more important than good organization, for devising arms control policy and for conducting negotiations.** The quality of negotiators and skill in conducting and supporting negotiation and the willingness to see arms control as a team effort are more important to success than how the U.S. organizes itself internally to address arms control policy.
Lessons DOD Should Draw from its Arms Control Experience

Outside the national security community, few people understand or acknowledge the role of the Department of Defense in international security negotiations. The Department does not lead the U.S. policy development process nor lead delegations of negotiators. It is a full partner in the interagency process for developing policy, supplying guidance to delegations, and conducting arms control negotiations. It supports and manages the development of arms control monitoring and verification technologies. It is the lead executive department for implementing arms control agreements. When arms control agreements have concrete effects, most occur in the Department of Defense among the armed services. Within the U.S. negotiations community, the role of the Department is rightly regarded as indispensable.

Arms control constrains the portfolio of equities for which the Department has primary and often exclusive responsibility. If U.S. arms control efforts are to succeed at any level, the Department of Defense must be a committed participant. Resources of time, personnel and money are required. In interviews associated with this study, officials from other agencies expressed the opinion that the Department’s reduction in arms control staff over the years had reached a level that concerns other agencies.

The Department has been extraordinarily successful in managing the consequences of arms control agreements on the force. The Department arguably has been the most successful agency in achieving its objectives. The Department spends $250 million per year on arms control-related activities, or 0.06 per cent of the Defense Budget. After more than 20 years of arms control compliance and implementation, none of the Armed Services has ever lost a training day due to arms control. No American combat unit has ever had its combat readiness status downgraded due to implementation and compliance. None of the Armed Services keeps a list of grievances from implementation and compliance activity.

The Department has developed a treaty compliance review process that is remarkable for its thoroughness, sophistication, and commitment to the principle of faithful adherence. The Department’s execution of compliance review is generally admired within the interagency although it has a few detractors. To a few, the Department is a compliance overachiever having created a review process far more complicated and strenuous than most of our treaty partners are willing to duplicate.

Institutionally, the Department gains almost nothing from arms control. From the perspective of Defense professionals, arms control has many risks and few benefits. Many outside the Department disagree with that statement. Some believe that arms control allows the Department to wage warfare according to its most deeply cherished preferences. Some believe that adversary arms reductions reduce the burden the combatant commands face should conflict occur. Some believe that American service personnel face a reduced chance of superfluous injury and unnecessary suffering due to arms control agreements. Each of these has an element of truth, but the reality is more complex. Most of the conflicts the United States has fought over the last 30 years have fallen outside the Department’s preferred planning arena and involved states which considered themselves unrestricted by arms control agreements or the law of war. The United

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States is able to conduct warfare according to its preferences, because it spends $400 billion per year on military power.

Thanks to changes in the global strategic environment, the Department will be obliged to work within a transformed security negotiations arena. That arena will include many legacy topics from the Cold War period; however, it will include many other issues that also have the ability to affect U.S. military plans, programs and operations. In its approach to the new negotiating challenge, the Department should remember:

- **The international security negotiations enterprise is far larger than traditional arms control.** Under the rubric of international security negotiations should be included the entire range of legacy arms control functions and non-proliferation activities. The latter must include control regimes for technology and dangerous materials, ad hoc arrangements to interdict the illegal flow of controlled technology and materials, ad hoc arrangements to share products of national methods of verification, general talks aimed at improving regional and global stability, international prosecution of companies and individuals involved in proliferation, coordination with international organizations which monitor compliance with proliferation agreements, and enforcement regimes designed to compel non-compliant states to abide by their legal obligations. Emerging negotiating issues include potential new regimes to expand the protected status for civilians endangered during traditional or irregular conflicts, environmental remediation following conflicts, and control of infectious disease.

- **Executive leadership in the Department must unify around core interests.** When executive authority in the Department commits its political capital to negotiations issues, good things happen. The example of the Department’s unified leadership in the final days of the ABM Treaty demonstrates what executive leadership can accomplish.

- **U.S. national security interests are served poorly when the U.S. imposes severe compliance consequences on the Department of Defense and fails to impose any non-compliance consequences on non-compliant treaty partners.** The serial failure of presidential administrations to deal with non-compliance effectively has undermined U.S. policy objectives and tarnished the entire security negotiations enterprise. Failure in the present security environment will cause the United States to face the perils it wishes most to avoid. Our treaty partners must face adverse consequences when they fail to meet their compliance obligations.

- **The Department’s negotiations cadre and expertise has shrunk by two-thirds since the end of the Cold War while arms control activity has remained relatively constant.** Human capital is the Department’s most important security negotiations policy, implementation, and compliance resource. If the Department is not staffed to meet the requirements of the President’s national security strategy for non-proliferation, then it needs to be.

- **The structure of international security agreements is important to the Department.** The value of treaties of indefinite duration is a matter of debate. However, the risk associated
with indefinite duration (resistance to change after obsolescence) appears to outweigh the
benefit (predictability). Treaties with sunset clauses are good arms control policy in a
security environment characterized by rapid technological advance and political change.
From the perspective of non-compliance, it makes no difference today whether arms
control agreements are formal or informal.\textsuperscript{10} From the perspective of flexibility and
rapidity of action, informal agreements are good arms control policy. Future arms
control treaties, if any, should contain provisions establishing obligations among
signatories for responding to treaty non-compliance. The Department has achieved great
success in reducing the operational impact of arms control compliance. The Department
should use the measures it has employed so successfully in the past.

- \textit{The strength and effectiveness of the interagency system is important to the Department.} If criticisms of the effectiveness of the interagency process are accurate, the
Department of Defense has an obligation to support solutions that will strengthen
interagency decision-making and resulting national security policy.

\textbf{The Impact of Technology on International Security Negotiations}

Emerging technologies are revolutionizing traditional weapon concepts and warfare. Developments in nanotechnology, biotechnology, information technology, and advanced energy
sources have enormous potential to yield new kinds of weapons equal to or surpassing the
destructive potential of existing weapons of mass destruction. The diffusion of technology has
contributed to the likelihood of emerging technologies of mass destruction reaching the hands of
our adversaries.

In order to deal with the spread of new, potentially dangerous weapons technologies, several
international security negotiation initiatives should be considered:

- Educate executive national leadership on the potential dangers of emerging WMD
technologies and seek their support for early dialogue among like-minded states;
- Establish early dialogue among the advanced industrialized states on issues of emerging
WMD technologies; early dialogue can help identify technologies of concern, keep
existing regimes relevant, and identify the technological innovations others are pursuing;
- Establish both formal and informal regimes for sharing information about technologies of
concern;
- Establish programs for domestic control, detection, defense, and environmental
remediation for new kinds of weapons of mass destruction; and
- Work with friends and partner states to coordinate domestic and international technology
control regimes.

In the past, international security negotiations have formed a vital component of national security
strategies for controlling proliferation and denying technological advantage to adversaries.

\footnotesize{\textsuperscript{10} If the U.S. were to develop a principled policy of graduated response to non-compliance, then formal agreements
might be preferred over informal.}
However, negotiations to date have focused narrowly on traditional WMD programs, particularly nuclear programs. Advances in science and technology promise to present a variety of new proliferation challenges to the Department of Defense.


In this study, we characterize international security negotiations as a form of risk management dealing with defined perils. We compare risk management approaches used in business and found parallels in the U.S. approach to international security risk reduction negotiations. We have found the structures of risk management in the U.S. arms control community to be roughly analogous to those in industry with dissimilarities that are important and understandable. We applied an ordinary risk discovery process to an actual international security negotiations problem and concluded that high risk can be tolerable given the prospect of multiple rewards.

Can the United States expand its use of business-based risk management principles and practices? Potentially, it can. There is strong interest in both communities in managing risk. Both communities share an interest in good agreements and faithful performance of obligations. Both take great care with the creation of their agreements. And both communities must monitor performance carefully.

There are also important differences in the ability of the two communities to manage risk, and the business community appears to have the advantage. Performance measurement is easy in business, because there is usually an open transfer of goods, services, and funds. Business organizations also have disinterested third parties to assist them in carrying out, and hence monitoring, business performance (banks, brokers, transfer agents, government agencies). Most of the information exchanged in the course of conducting business can be revealed publicly. Most of the information about international security negotiations and compliance is classified. In international security negotiations informal agreements have grown in importance while in business arrangements formal contracts remain the norm and strong preference.

Applying stronger risk management approaches in international security negotiations has potential benefits. By raising thresholds for entering negotiations, the United States could exercise greater selectivity over its negotiating partners and negotiating issues. Although this could mean fewer efforts to negotiate hard cases, it might also mean that the negotiations we do enter are more satisfying from a compliance perspective. In instances where the United States negotiates agreements with adversaries, stronger responses to non-compliance might become more acceptable within the interagency and internationally.

Stronger risk management approaches might also lead to potential downsides. Although unlikely, high-risk negotiations can lead to decent agreements. Higher thresholds for entry into negotiations might mean lost opportunity.
Guidelines for Future Negotiations

In the past, the United States has engaged in a wide-ranging set of international negotiations as a means to enhance national security. Drawing on the experience of those negotiations (as partly reflected in the judgments of senior U.S. negotiators), guidelines for assessing proposals for future international negotiations can be derived. Those guidelines are usefully divided into “red lines” and “yellow lines.” The former comprise tests or standards which must be met by a particular proposed negotiation—or otherwise, a particular negotiations option is unlikely to serve U.S. interests. The latter entail tests or standards that need to be weighed both in the design of a U.S. negotiation posture and in making a final determination on whether a negotiated solution would serve U.S. security interests.

The “Red Lines”

For certain negotiations “tests,” if it is not possible to provide a “yes” answer, past experience strongly suggests not proceeding further. In these cases, negotiations are likely to prove not in U.S. national security interests.

Relevance – Negotiations Fit the Problem. Relevance is the first red line. There needs to be a negotiated solution to a real national security problem at hand.

Ripeness for Negotiations. In some instances, there may be a potential negotiated solution to a security problem but the military or political conditions may not be ripe for successful negotiation. Sometimes, the time is not ripe because potential negotiating partners are not yet prepared to engage seriously.

A Credible Negotiating Partner or Partners. Whether or not there is a credible partner or partners with whom to negotiate is another yes-no red line for negotiations. At one level, credibility depends simply on the existence of a leadership in other countries that is willing and able to negotiate a solution to a problem.

White House/NSC Backing. Experienced U.S. negotiators repeatedly stress the importance of backing by the President and the senior National Security Council staff. Such support is critical to break deadlocks and provide political momentum behind pursuit of a negotiated solution for a given national security problem. Absent White House and NSC backing, stalemate is too likely to be the outcome.

The “Yellow Lines”

Past negotiating experience also suggests a considerable number of other tests or guidelines for assessing future international security negotiations. These “yellow lines” are less definitive. Frequently, they entail judgments of more or less, enough or not enough. Quite often, moreover, the ultimate answers are very much subject to the negotiations themselves – and how well U.S. negotiators are able to shape the ultimate outcome. Taken together, the answers will feed into an overall net assessment of whether or not a particular negotiation would be likely to serve U.S. national security interests.
**Sufficient Defense Flexibility.** Whether a negotiated solution provides sufficient flexibility to protect future U.S. defense posture choices is one such consideration. By definition, negotiated solutions entail some loss of U.S. flexibility of action in return for restraints on other negotiating parties. In that process, U.S. negotiators can seek to build in sufficient flexibility to protect important future defense options—from shaping the technical terms of the negotiations to arguing for a limited duration of any agreement. At the same time, evolving and even unexpected military, political, and technological requirements and developments can change the initial judgment about whether too much flexibility has been lost.

**Timeliness of Results.** Whether or not—but perhaps even more so, how—to pursue a negotiated solution to a security problem depends partly on whether negotiations can produce a timely result.

**Acceptable Balance of Obligations.** A negotiation needs to entail a balance of obligations—on the part of the United States and that of other parties—that is acceptable to U.S. officials in the executive branch and ultimately in the U.S. Senate. Sometimes, an acceptable balance of obligations will entail equal or comparable obligations, e.g., as in the commitment of all of the parties to the Chemical Weapons Convention not to possess such weapons. In other instances, an acceptable balance of obligations could place different obligations on the United States and on other countries. This is so, for example, in the Nuclear Non-Proliferation Treaty with its differentiation between nuclear and non-nuclear weapon states.

**Technical Feasibility of Negotiations.** Though related to several of the other guidelines, the technical feasibility of a negotiated solution warrants treatment as a guideline in its own right. Pursuit of a Verification Protocol to the Biological and Toxin Weapons Convention (BWC) provides an apt example. In principle, the lack of effective means of verification of the BWC is a significant gap in that treaty’s effectiveness. Growing concerns about biological weapons proliferation as well as continuing evidence of BWC violations make this issue ripe for consideration. Nonetheless, technical considerations related to the production of biological weapons provide a compelling argument to oppose a formal set of verification measures for the BWC.

**Identifiable “Fixes” to Manage Risks.** Negotiated solutions may entail possible risks deriving, for instance, from the specific substantive obligations of the agreement, the compliance of other parties, the possibility of unexpected technological or political developments, or quite often in recent agreements, from the very process of on-site inspection for verification. The ability to identify ways to manage if not fully eliminate any such risks is another test for negotiations. Sometimes such fixes may be readily identifiable, e.g., by excluding certain items from being covered by a treaty or for some treaties, placing clear limits on the modalities of on-site inspections. Prospects for other parties’ agreement to those fixes also may be high. In other cases, it may be more difficult to identify acceptable, clear fixes to such risks.

**No Dangerous Military Disadvantage – if Non-Compliance by Others.** Particularly within the U.S. defense community, another important test has been whether non-compliance by another party or parties with a negotiated agreement would put the United States at a dangerous military
disadvantage. The core of this judgment would be an assessment of the impact of different potential cheating scenarios as well as availability to the U.S. Department of Defense of timely actions to neutralize or counter that impact. In turn, such actions could entail direct steps to match an adversary or indirect steps to negate the benefits of non-compliance.

Acceptable Clarity-Ambiguity Balance. An acceptable balance of clarity and ambiguity in any negotiation comprises another guideline, even though one that may be difficult to apply prior to the start of negotiations. On balance, a strong case can be made for seeking as much clarity as possible in order to solidify commitments, avoid later misunderstandings, and in effect, to test whether sufficient commonality of purpose exists for a successful negotiation. Sometimes, however, ambiguity may be useful as a means of deferring a difficult but secondary issue, solidifying a political consensus while leaving technical questions for experts, taking a problem off the table, or otherwise facilitating overall agreement.

Acceptable Verifiability. Whether or not to pursue a negotiated solution – or to accept a negotiated outcome – depends also on whether acceptable verifiability can be attained. In that regard, acceptable verifiability has been defined quite differently by U.S. officials at different times, in different negotiating contexts. Reliance on National Technical Means to verify Soviet compliance with the LTBT gave way in the late 1980s and 1990s to very intrusive on-site inspections, declarations, and other means to verify Soviet (then Russian) compliance with multiple arms control treaties. Almost at the same time, the exigencies of action under the 1991 Presidential Nuclear Initiatives made little if any verification of Russian compliance with President Yeltsin’s undertakings to withdraw and eliminate Russian ground-launched tactical nuclear weapons. In the SORT agreement, a desire to break with Cold War tradition and put the US-Russian relationship on a different footing equally led to a very different definition of acceptable verifiability. At the same time, U.S. officials have already signaled that the United States and its close allies will press for quite intrusive verification of North Korea’s agreement to eliminate its nuclear weapons program under the Six Power Agreement.

Positive Spillover Effects. Still another test to include in an overall assessment of whether or not to pursue negotiations is whether or not there would be any positive spillover effects for other U.S. national security interests.

Acceptable Implementation Costs. The costs of implementing the outcome of a negotiated solution also need to be acceptable. In part, this entails an assessment of the direct and indirect costs of compliance with an agreement, for example, in preparing for and hosting on-site inspections under START I. But the costs of safeguards to hedge against non-compliance, as in the case of the LTBT, the costs of developing alternative capabilities or workarounds, and any possible operational adjustments also would come under implementation costs. Depending on the negotiating area, as in the case of the Chemical Weapons Convention, there also could be implementation costs that would need to borne by U.S. industry.
Concluding Observations

Key Themes

Ten broad themes emerged over the course of this study:

I. **International security negotiations have served an important norm-setting function which contributed to global security, stability, and predictability.** Arms control and non-proliferation agreements helped stabilize military competition during the Cold War and created conditions in which it became possible for the Cold War to end peacefully. From the 1960s onward, international security negotiations provided a structure and process for peaceful engagement and negotiation between the two superpowers. Although there is always danger that policy-makers will stress process over results, American policy-makers have been results-oriented practitioners. For future negotiations, the norm-setting function has direct relevance for emerging security relationships with China, Iran, North Korea, and perhaps others.

II. **United States international security negotiations policy has had to reinvent itself repeatedly to meet the challenges presented by changes in the global security environment.** Viewed from a broad historical perspective, United States international security negotiations policy has changed methods and approaches relentlessly as required to achieve national security policy objectives. When negotiating conditions changed, were better understood or approaches failed, United States negotiations policy showed great flexibility and responsiveness.

III. **The Department of Defense has irreplaceable expertise in advancing United States international security negotiations policy.** The Department of Defense has made indispensable contributions to the success of United States international security negotiations policy. The expertise of the uniformed elements of the Department was vital. In recent years, the Department’s cadre of arms control experts has shrunk significantly even though the negotiations agenda remains very active. The trend in personnel reduction continues and is worrisome.

IV. **The international security negotiations enterprise is much larger than traditional arms control.** The international security negotiations enterprise rightly includes arms control and non-proliferation and other activities that have similar effects on the Department’s plans, programs and operations.

V. **The Department of Defense has been extraordinarily successful, perhaps more successful than any other interagency player, in influencing the direction and content of United States international security negotiations policy.** The most successful interagency players in the Department with respect to arms control have been the uniformed departments and commands. The key measure of their success is the low impact of arms control implementation and compliance on the force. Complaints about the cost and operational impact of arms control on the force are greatly exaggerated.
VI. The Department of Defense is an arms control compliance overachiever. The Department’s compliance review process is scrupulously attentive to the letter and spirit of United States international agreements. The process is so strict that it is unlikely ever to be an example our treaty partners will follow voluntarily. And on occasion, the judgments of the process have been confounding. The Department’s exactitude in compliance process and judgment contrast sharply with the persistent inability of the United States Government to respond effectively to our treaty partners’ failure to comply with their legal obligations. The Department would be justified in concluding that two standards of compliance operate simultaneously.

VII. The rapid progress of worldwide science and technology poses a great security challenge to the United States. The Department and interagency focus attention and resources on the weapon technologies our grandfathers developed. State-of-the-art technologies, many with effects comparable to existing weapons of mass destruction, are overlooked. There is an urgent requirement to manage emerging technologies and their applications.

VIII. The value of international security negotiations has more dimensions than simply a finished agreement. Negotiations can transfer responsibility for international security risk reduction to other states, weaken our detractors, reinforce our friends, demonstrate the rogues of our international adversaries, and make clear what behavior the United States will not tolerate. In short, negotiations—even without tangible agreement—can show the United States to be patient, reasonable, responsible, and deadly serious.

IX. The interagency system for policy development and coordination is a key to success within the international security negotiations enterprise. The United States has been most successful in its international security negotiations policy when political support at the highest executive level was apparent and a strong, balanced interagency process was at work. This study uncovered great dissatisfaction with the interagency process among practitioners. If the criticisms are accurate, the Department of Defense bears an obligation to support remedies that will strengthen decision-making.

X. International security agreements should be of definite duration and should contain provisions requiring responses to non-compliance. Given the speed with which the international political-military environment can change, the risk associated with treaties of indefinite duration seems to outweigh the benefit. Treaties with sunset clauses are good policy. Future international security negotiations should contain provisions setting obligations for dealing with non-compliance.

The Central Question

When American national security officials considered international security negotiations over the last two centuries, they repeatedly faced the same question, when are negotiations in the national interest? In general, American officials have answered, when negotiations sustain or improve United States national security they are in our interest. However, Americans have been elastic
about their definition of national security and hence the role of international security negotiations.

National security can mean freedom from threats or danger, confidence in one’s ability to deter or defend against attack, or protection of the world from potentially catastrophic threats. National security is a political judgment based in the context of a particular international security environment:

> Among the many objects to which a wise and free people find it necessary to direct their attention, that of providing for their safety seems to be first. The safety of the people doubtless has relation to a great variety of circumstances and considerations, and consequently affords great latitude to those who wish to define it precisely and comprehensively. (John Jay, *The Federalist Papers*, No.3)

American attitudes toward diplomatic negotiation as a means to deal with national security threats have varied over time. Protected by two great oceans in the 19th Century, the United States avoided entangling alliances and refused to become a part of the security problems of largely undemocratic Europe. Americans’ doubts about diplomacy and international security negotiations persisted well into the 20th Century. Will Rogers used to get a reliable laugh from American audiences with this observation, “America never lost a war and never won a conference.”

In the mid-20th Century, official American attitudes toward international security negotiations changed dramatically. The United States was instrumental in creating and maintaining an anti-Axis alliance during World War II. It proposed and secured the creation of the United Nations with its Security Council and commitment to collective security. It proposed and pursued limitations on nuclear weapons, attempted to negotiate a more stable balance of military power in Central Europe, and negotiated agreements to introduce greater strategic stability with the Soviet Union. None of this was easy, but the most difficult negotiations were those in which the United States had to deal with states opposed to the international order Washington and its allies were trying to create. The Soviet Union and Eastern Bloc were unreliable, untrustworthy negotiating partners in many ways. This report observes more than once that the United States succeeded in achieving its negotiating objectives in spite of frequent setbacks and disappointments. In the end, the steady growth in American power (economic, scientific, military, and cultural) and international security negotiations succeeded in establishing an ordered international system from which the United States and its allies derive great benefit. Tangible benefits are now available to any state willing to integrate with, rather than oppose, that system.

**The Straightforward Answer**

Today, American officials ask the same question their predecessors asked two centuries ago, when are international security negotiations in the national interest? At one level, the answer is straightforward.

If national security negotiations can help the United States secure its vital and important interests—the survival, safety and well-being of the nation—then negotiations should be
considered. The guidelines set out above offer an initial framework for answering the question—or at least beginning an internal dialogue.

Why Negotiations Succeed

Thirty years ago, in his seminal work on the SALT negotiations, Thomas Wolfe (RAND) concluded that arms control negotiations succeed when two parallel activities converge. Arms control is about qualitative and quantitative limitations on particular weapons, but these negotiations succeed only when the general relationship of power between states has been settled. Wolfe pointed to the unsatisfactory conclusion of SALT II as evidence that the broader power relationship between the United States and Soviet Union was unresolved. Subsequently, the relationship was settled with finality. The Soviet Union collapsed peacefully and the United States emerged as the most powerful nation in history by every measure. Many attribute the peaceful quality of the Soviet collapse to the long history of US-Soviet negotiation in arms control, economics and trade, science and technology, and cultural exchange.

Over the next 20 years, the United States likely will resolve unsettled relationships of power with Western Europe, China, India, Iran, North Korea, and the states of the Middle East. It would be imprudent to give short shrift to international security negotiations given its contribution in the past. Such negotiations almost certainly will be painful and difficult. The international order the United States hopes to maintain and advance offends many of our potential negotiating partners. Some will be unreliable, untrustworthy, and non-compliant if they choose to negotiate. However, past experience, including the insights gleaned from Department of Defense negotiators, suggests not only that the Department has an indispensable role to play in any future negotiation, but also that such negotiations can serve national interests.
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Contract Tasking

Methodology & Approach

In support of the Defense Threat Reduction Agency’s Rapid Response Tasking (RR 3-04-6, International Security Negotiations in a Changed Global Security Environment), SAIC Strategies conducted a ten-month study identifying critical lessons learned from the history of United States international arms control and non-proliferation negotiations and agreements. The study focused on three elements of negotiations and agreements: a) the metrics for determining whether a negotiation or agreement serves United States national interests, b) the factors that impact the success of a negotiation or agreement, and c) the metrics for thinking about arms control’s place in the process of securing United States interests. The study applies the lessons learned to the practical task of ensuring that future negotiations and agreements protect United States national security equities. It examines how change in the international security environment and the advance of science and technology affect requirements associated with a wide range of international agreements, negotiation settings and arms control topics. SAIC built on its earlier work in arms control treaty support across multiple agencies and drew upon the deep experience of its senior arms control staff to perform the study. The study had three concurrent technical phases:

• **Phase I: Identify Interim Lessons Learned.** SAIC conducted a broad literature review to glean lessons learned from published reports, papers, and testimony. The literature review covered multiple negotiating venues and time periods. SAIC interviewed approximately two dozen arms control negotiators, implementers, and experts for their views and opinions. In particular, interviewers sought metrics for measuring the success of negotiations and agreements, factors impacting success, and metrics for understanding the role of arms control in the broader effort to secure United States interest. SAIC produced two research reports. The first focused on macroscopic lessons learned from United States international security negotiations during and after the Cold War. The second report focused on lessons learned from the Department of Defense’s experience with arms control.

• **Phase II: Review Seminars.** In consultation with DTRA/ASCO, SAIC organized two small expert seminars (10-15 participants) composed of former and serving officials, academics, and technical experts experienced with many negotiating venues and agreements, including non-traditional ones. The first seminar concentrated on the two reports produced in Phase I. The second seminar focused on lessons learned about the impact of science and technology and what government might learn from industry about managing risks some perceive connected to arms control.

• **Phase III: Development of Strategies, Principles & Objectives.** SAIC produced a brief report assembling the most recent thinking with regard to the principal security challenges the United States is likely to face in the first few decades of the 21st Century.

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11 In Phase I, SAIC will perform Task 3.1 and accomplish it within 4 months of the project start.
12 In Phase II, SAIC will accomplish Task 3.2 and do it within 6 months of the project start.
13 In Phase III, SAIC will accomplish Tasks 3.3-3.5 and complete it within 10 months of project start.
The report examines the potential role of international security negotiations as a component of United States national security strategy and it identifies guidelines and redlines for future international security negotiations and agreements. The report pays careful attention to the relative advantages (or disadvantages) found in the nature of agreements (e.g., legal or political; indefinite duration or sunset clause; technological, humanitarian, or environmental); the structure of negotiations (e.g., allies or adversaries; bilateral or multilateral; states only or states-NGOs); the finished product (e.g., evaluating completed agreements according to a national interest-based model measuring merit) and the underlying conditions in which one approach to arms control is preferable to another.

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14 Task 3.3.
15 Task 3.4.
Foreward

Traditional International Security Negotiations

Classical arms control theory gives five reasons for negotiating arms control treaties: 1) to reduce the risk of war, 2) to reduce the destruction war causes, 3) to reduce defense expenditure, 4) to make the threat more predictable, and 5) to improve relations between rival states. During the Cold War, many American national security specialists came to doubt these justifications. Arms control negotiations achieved conspicuous successes in the 1960s and 1970s, but some believed with good reason that the agreements had fallen considerably short of achieving all the predicted effects. Nevertheless, arms control remained a pillar of United States security strategy throughout the Cold War period and for years thereafter. The United States entered into over thirty arms control, and arms control-like, agreements between 1980 and 2000. So viewed, the record of the United States in arms control treaty negotiation, implementation and compliance has been one of the most distinguished diplomatic histories of modern times.

Over the last eight years, the United States Government and many outside experts have shown greater skepticism about the contribution arms control can make to national security and international stability. There are a number of reasons for this development:

- Changes in the international security environment—the reunification of Germany, the dissolution of the Soviet Union, the collapse of the Warsaw Pact, the expansion of NATO, political and economic reform in Russia, the collapse of Russian international influence and military power, and American military superiority—relieved the concern Western political leaders had about global confrontation and conflict with Moscow;
- Verification regimes based on frequent on-site inspection, or rights to conduct aerial reconnaissance, caused some to object to the amount of resources devoted to arms control verification and compliance;
- Some compared favorably the accomplishments of alternatives to traditional arms control, such as the Presidential Nuclear Initiatives and Cooperative Threat Reduction Program, to the results of protracted treaty negotiations;

17 Between 1959 and 1979, the United States and Russia signed eighteen arms control agreements without substantially altering either’s definition of the other as the “main enemy,” reducing defense expenditure, or lessening concerns about the unpredictability of the arms race. Nor was there any doubt that the eruption of warfare between the two had the potential to be catastrophic for the societies involved.
• A few persons concluded after long experience that arms control negotiations are likely to strain relations between negotiating partners and encourage counterproductive behavior. That is, states may retain obsolete weapons for quid pro quo trades during negotiations rather than eliminate them unilaterally at the end of service life; and
• Finally, many officials and experts came to consider arms control negotiations irrelevant in a security environment troubled by emerging threats from failed and rogue states—states that cannot or will not respect international covenants.

As a consequence, the United States scaled back its arms control agenda and has resisted new arms control initiatives unless the security benefits are substantial, reliable, and immediate.19

As the United States interest and participation in arms control initiatives has waned, other states and non-state actors have attempted to fill the void. The European Union and states of Western Europe have argued impatiently for more progress on the international arms control agenda. The Non-Aligned Movement, divided and ineffective for decades, has new leadership and growing political assertiveness. Non-governmental organizations operate in many negotiating venues associated with global security and stability. Their influence on negotiating agendas is increasing. As a result, foreign negotiators are seeking to set a broad agenda for global security negotiations and setting new international norms of behavior, increasingly without United States participation. And United States non-participation has become a source of international resentment, even among our allies.20

Consistent with these changing and conflicting perspectives, some of the operational and programmatic objectives associated with arms control have shifted to other negotiating fora. International humanitarian and environmental negotiations are venues of growing importance for arms control specialists, because agreements in these fora promise to have effects similar to arms control, particularly with respect to limiting military operations. Humanitarian organizations have pressed to expand the legal protections afforded non-combatants affected by inter-state warfare.21 Recent initiatives in international humanitarian negotiations have focused on limiting weapons considered indiscriminate or inhumane under increasingly sensitive tests of civil

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19 Since 2000, the United States has entered into four arms control, or arms control-like, agreements. The average for any four-year period in the preceding three decades was about eight. The United States also has abrogated the ABM Treaty, withdrawn from the BWC Protocol after negotiations were complete, rejected articles of ratification for the CTBT, and blocked all progress on a treaty banning weapons in space.


21 Non-governmental humanitarian organizations often claim that over the last century armed conflict’s casualty statistics have been turned upside down. A century ago, it is alleged, 90 per cent of the casualties in armed conflict were military personnel and 10 per cent were civilians. Today, it is alleged, 90 per cent of the casualties are civilian. Whether accurate or not, provable or not, international humanitarian organizations have been energized by the perceived risk to persons protected in armed conflict under international law.
Environmentalists have complained about the lasting environmental damage of military operations and the effect of modern warfare on slowing the recovery of protected civilian activity. International environmental treaties whose topics appear to have no relevance at all to defense may contain provisions that create operational and programmatic burdens for defense organizations.

The rapid advance of science and technology presents a unique challenge. Advances in the sciences underpinning information technology, biotechnology, nanotechnology, and advanced energy systems and materials have been accelerating and converging. They promise unprecedented change to nearly every aspect of global society, including to the security environment. Recognizing and coping with the security challenges caused by new technologies will become a major United States and international objective.

It is in this complex and evolving international security environment that the value of identifying fundamental principles, objectives and measures of merit to guide United States decisions about international security negotiations becomes clear. Negotiations involving international security matters are likely to be continuous. They are likely to take many forms, from bilateral political agreements resting on the good faith of the leaders making them to worldwide legally binding conventions supported by specially-created international organizations. They are likely to force the United States to make painful choices. Thus, the decision to join, or ratify the results of, future negotiations must be guided by principles, objectives, and measures of merit most likely to protect national security interests.

Change in the Global Strategic Environment

Much has been written recently about sources of change in the international system and the impact of change on global security. The need to understand the causes of recent shocks to the international system prompted much of the literature; however, there is a companion corpus of writing which identifies powerful underlying economic, technological, and social forces that promise to alter profoundly our notions of security and, perhaps, perceptions of the utility of international security negotiations. The Department of Defense has contributed significantly to the literature. In 2001, a Department of Defense commission led by former Senators Gary Hart and Warren Rudman published a final report on the national security challenges the 21st Century will pose for the United States. The Hart-Rudman Commission Report is perhaps the finest work of its kind, and the most successful, useful commission report published in many years. Hart-Rudman describes how globalization is affecting the global security environment and recommends strategic change in United States defense institutions. In 2004, a Navy defense analyst published a book focusing on the direct impact of globalization on the operational

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22 Among the weapons recommended for limitation or prohibition for their alleged impact on protected civilian life, property, and activity are precision-guided munitions, cluster munitions, and electromagnetic weapons.
23 Among the weapons alleged have the greatest impact on the environment, and thus receive strong recommendation for limitation or prohibition, are depleted uranium rounds and sub-munitions from cluster weapons.
24 Kyoto Protocol contains rules regarding military emissions of greenhouse gases and gives implied authority for an international test to determine whether military emissions count against national limits.
military challenges facing the United States. The book, *The Pentagon’s New Map*, has become a primer for many who wish to see the Department transform to meet modern security challenges. A third corpus of literature, and a controversial one, is domestic and international public opinion about the global security environment. In an international system increasingly composed of well-informed publics blessed with democratic systems of government, public perceptions have descriptive and policy value for United States national security. In the paragraphs which follow, we address the global security issues raised by systemic shock, Hart-Rudman, *The Pentagon’s New Map*, and recent public opinion polls. And we connect these with potential requirements for future international security negotiations.

**Systemic Shock**

Twice in the last 15 years, major shocks have reverberated throughout the international system and altered fundamentally the international security environment in which the United States operates. The first, the collapse of the Soviet Union and Warsaw Pact, changed the entire Cold War international security landscape. The dissolution of the Soviet Union occurred a few months after the Moscow Summit of July 1991 at which Presidents Bush (41) and Gorbachev signed the Strategic Arms Reduction Treaty (START). The Soviet collapse was regarded rightly as a triumph of the West under United States leadership and proof that democracy and capitalism were the most successful models for national development. The United States was nearly universally admired. This admiration found expression in the political and economic reforms that took place in Russia, Ukraine, and former Soviet satellites in Eastern Europe. One sometimes forgets that new national leaderships in the former Soviet client states (and in Russia, too) invited American academics to their capitals to help reorganize economies, government agencies and political systems along Western lines. The United States abandoned its strategy of containing communist expansion and replaced it with one designed to enlarge the sphere of peaceful engagement with the states of the former Soviet Union. Within one year of the Soviet Union’s demise, Presidents Bush and Yeltsin had signed a second START Treaty, the first post-Cold War arms control agreement, calling for significantly deeper reductions in strategic offensive arms.

Ten years after the collapse of the Soviet Union, the international system staggered again under the coordinated Al Qaeda terrorist attacks in New York City, Washington DC, and Pennsylvania. The outpouring of international sympathy for the United States was nearly universal. In retrospect, the attacks themselves probably did not affect the international system as greatly as the United States reaction to the attacks did. President Bush (43) and his national security team declared war on Al Qaeda and reoriented United States national security strategy to deal with the underlying causes and immediate symptoms of international terrorism. Within months of the attack, the United States negotiated a complex web of relationships with like-minded states to share intelligence, confiscate terrorist financial resources, arrest and extradite terrorists, execute extraterritorial renditions, conduct counter-terrorism operations, and interrupt terrorist attempts to gain expertise and materials for building weapons of mass destruction. Staunching the proliferation of weapons of mass destruction became a major objective and organizing principle for United States national security strategy. In 2002, the year following the terrorist attacks, Presidents Bush and Putin signed yet another arms control treaty reducing strategic offensive arms.
Despite expert skepticism, neither of the major shocks to the global security environment has eliminated the perceived utility of traditional arms control. Concerns about the stability of the US-Russian nuclear balance no longer occupy center stage in US-Russian diplomatic relations following the end of the Cold War. START II and the Moscow Treaty required less than one year each to negotiate compared to nine years of negotiation to reach agreement on START I. Each was simpler and shorter than START I, and each added minimal obligations to the complex of implementation and compliance burdens already in existence. US-Russian nuclear arms control has become a maintenance function contributing to positive change in relations between Washington and Moscow. A few predict that eventually US-Russian relations will improve to the point where formal arms control may be replaced by informal coordinated policies and executive understandings, just as United States relations with its closest allies are coordinated today.

Abroad, America’s friends and allies still regard progress in US-Russian nuclear arms control as important contributions to their own security, particularly in “new Europe” with its deep suspicion of Russian political-military objectives toward the west. Non-aligned states regard progress in US-Russian nuclear arms control as an obligation for their forbearance in developing nuclear weapons. And the United States itself recognizes the importance of traditional arms control approaches when dealing with dangerous proliferators, like North Korea and Iran. It is difficult to imagine that the negotiated denuclearization of either could be accomplished to Washington’s satisfaction without a detailed, legally-binding formal agreement.

In short, the oft-repeated assertion that traditional arms control is dead is not supported by recent and on-going events. Traditional arms control negotiation still has a place in securing American and allied interests.

Hart-Rudman

In 1999, Secretary of Defense Cohen created a Department of Defense commission to examine security challenges in the 21st Century. Led by former Senators Gary Hart and Warren B. Rudman, the Hart-Rudman Commission systematically examined the principle forces driving change in the international system and identified the need for broad policy and organizational change to cope with those challenges.

“The U.S. Commission on National Security/21st Century was born … out of the conviction that the entire range of U.S. national security policies and processes required reexamination in light of new circumstances. Those circumstances encompass not only the changed geopolitical reality after the Cold War, but also the significant technological, social, and intellectual changes that are occurring.”

27 Non-aligned states believe the five nuclear powers agreed to achieve nuclear disarmament in the Nuclear Non-Proliferation Treaty (1970). The United States believes the so-called Article VI obligation is largely hortatory.
The Commission’s final report, published on 15 March 2001 identified four factors whose influence drove international systemic change. These included the information revolution and the accelerating discontinuities in a range of scientific and technological areas, the integration of global finance and commerce (globalization), the rise and spread of democratic governments with free-market economies, and the increasing importance of multinational and non-governmental actors on the international stage. The Commission took a broad view of national security, softening traditional distinctions between foreign and domestic activities of the United States Government, and called for an integrated U.S. strategy to deal with the challenges expected in the first quarter of the 21st Century. The challenges the Commission identified included:

- Security of the U.S. homeland from mass casualty terrorism;
- Deterioration of national strengths in science and education;
- Ineffective federal institutions;
- Outdated personnel systems serving the U.S. Government; and
- Ineffective organization of the U.S. Congress to fulfill its Constitutional responsibilities in national security.

The Hart-Rudman Commission emphasized the importance of strategy in dealing with the international challenges it identified. In the opinion of the Commission, American national security strategy for the 21st Century was obliged to balance two objectives: reaping the benefits of globalization (greater freedom, security, and prosperity for the United States and the world) and dampening the forces of global instability that potentially might disrupt a more integrated international system. It goes beyond the scope of this study to summarize further the objectives and recommendations of the Hart-Rudman report except to underscore the place given to international security negotiations as a tool to achieve American strategic interests. The Commission points to U.S. diplomacy as an important instrument of national power for preventing attacks on the homeland.

U.S. foreign policy should strive to shape an international system in which just grievances can be addressed without violence. Diplomatic efforts to develop friendly and trusting relations with foreign governments and their people can significantly multiply America’s chances of gaining early warning about potential attack and of doing something about impending threats. Meanwhile, verifiable arms control and nonproliferation efforts must remain a top priority. These policies can help persuade states and terrorists to abjure weapons of mass destruction and to prevent the export of fissile materials and dangerous dual-use technologies. But such measures cannot by themselves prevent proliferation. So other measures are needed, including the possibility of punitive measures and defenses.

**The Pentagon’s New Map**

As improbable as it may seem, a book on national military strategy has become a national award winner and best seller. Entitled *The Pentagon’s New Map*, the author, Thomas P.M. Barnett, is a professor at the Naval War College. He describes how globalization has changed United States military requirements over the last three decades, including the requirement for international security negotiations.
According to Barnett, globalization is a process in which national elites consciously decide to connect their national economies with the global economy and create the domestic mechanisms to handle the transactions required by such integration (new laws for business, educational change, and new appreciation for human capital). His book criticizes conventional DOD planning oriented toward high-intensity conflict with peer or near-peer opponents. He accounts for the crisis-response days of all four armed services from the 1970s through the 1990s and maps where those responses occurred. Long before the Cold War ended, Barnett shows, it was clear that the United States armed forces were responding almost exclusively to security challenges in a region circling the earth near the equator. Our opponents were not peer or near-peer competitors: far from it. And U.S. military operations frequently had the objective of stabilizing vulnerable societies and failed states during natural or man-made catastrophes. For Defense planners, these operations were surprises since they were not part of the grand plan for high-intensity conflict. However, Barnett concludes that after 30 years Defense planners should have stopped being surprised. Such military operations were permanently part of the global security environment and should have entered the operational requirements of the unified commands.

*The Pentagon’s New Map* also draws conclusions about the requirement for international security negotiations. The Armed Forces of the United States do not have crisis-response days in North America, Europe (including Russia), China, Japan, Argentina, Brazil, and Chile (the states that might produce a peer or near-peer rival) because these states are fully committed to globalization. They are so aligned with one another in pursuing the common objectives of prosperity, stability, and societal advance that the likelihood of conflict between them is very remote.

The states disconnected from globalization are another story. They are traditional societies whose elites have recoiled at the idea of opening their societies to foreign influence. The disconnected states cannot or will not handle the social transactions associated with globalization. They are disproportionately Muslim societies, wretchedly poor, badly governed or failing. They are a source of international terrorism, international organized crime (narcotics trafficking, slavery, and piracy), disease epidemics, and environmental degradation. They are sources of conflict that spill across international borders and affect the core countries connected to globalization. They also are often sources of the WMD proliferation problem.

Barnett makes the point that among the states connected to globalization a particular kind of international security negotiation takes place. It is less in the traditional mode of bilateral arms control and more in the nature of ad hoc, potentially short-term arrangements negotiated for specific objectives. Increasingly, the control of nuclear, biological and chemical weapon technology and materials is a purpose of these negotiations. The Proliferation Security Initiative is a recent, important example. Barnett may go too far to suggest that traditional arms control is absent among the connected core. The United States and Russia have negotiated four such agreements in the last 15 years. However, he is correct in recognizing that traditional arms control agreements among the connected core are well off the pace of agreements struck in the 1990s.
Perception of the Global Strategic Environment—American Power

From the American perspective, there have been two shocks to the international system in the last 15 years, but from everyone else’s perspective there has been only one: the rise of the United States as the world’s unrivaled superpower. American power is measurable. Although the United States accounts for only 4.7 per cent of global population, the United States is responsible for 31.2 per cent of global Gross Domestic Product, 40.6 per cent of global research and development spending, more than 50 per cent of global defense expenditure, and 83.1 per cent of global revenues in cinemas. No other society on earth matches the United States for economic influence, scientific and technological prowess, military power, or cultural influence.

The rise of American power has unsettled many relationships, including those with traditional allies. This may explain why allies and former adversaries were eager to persuade the United States to enter into international security agreements (broadly defined) like the International Criminal Court, remain faithful to old agreements like the ABM Treaty, or extend current agreements like START I. From the European perspective, agreements creating secure, stable, predictable relationships with the strongest, most dynamic, most influential society on earth can only be a positive. From the perspective of the United States, American power comes with a social price tag. It is only common sense that the United States would wish to preserve and exercise its power on its own behalf. That may explain why the United States is so reluctant to agree to constraints on its hard-earned power in return for the seemingly paltry inducement of European good opinion.

On the other hand, foreign public opinion is not irrelevant to United States security. As recent experience in the Middle East has demonstrated, the United States does not need the help of others to intervene abroad powerfully, but it does require others’ help to ensure that the broader objective of international stability is achieved. In recent public opinion polls, large majorities in many countries question United States foreign policy motives, express skepticism about United States commitment to international law, criticize the United States for ignoring allies’ interests, and generally express distrust for the United States Government. Global perception of the Peoples Republic of China is more positive than global perception of the United States. In Europe, only a handful of publics have positive opinions of the United States. Outside Europe strong majorities believe the United States must have a military peer to balance American influence. In a recent Defense Science Board report on strategic communication, the

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28 “Present at the Creation,” American Survey, The Economist, 27 June 2002. The Survey reported that the United States was responsible for 36.3 per cent of global defense expenditure in 2002 ($294B). Over the next two years, U.S. defense expenditures rose to $419B while collective defense spending fell. The United States now spends more than the rest of the world combined on defense.

29 16-Nation Survey 2005, Pew Research Center for the People and the Press. The 15 foreign publics all held higher opinions of China than of the United States. This was true for all traditional U.S. allies. In the United States a large plurality of opinion (49 per cent) held positive views of China.

30 2005 16-Nation Survey, Pew Research Center for the People and the Press. The five publics that continue to have positive opinions about the United States are the United Kingdom, Canada, Russia, Poland and India.

31 16-Nation Survey 2005, Pew Research Center for the People and the Press. Fifteen of the surveyed national publics in Europe, Asia and the Middle East believed a military rival would be important to balancing American power. Only Americans disagreed.
contributors to the report agreed that the negative image of the United States abroad was a national security problem in its own right.

In characterizing the emerging global security environment, it would be a mistake not to consider public opinion in the most powerful nation on earth. American public opinion about the international role of the United States gives mixed marks to American foreign and national security policies. Large majorities of Americans believe the United States is succeeding in carrying out international humanitarian relief operations, improving intelligence capabilities, strengthening the military, and hunting down terrorists. Large majorities of Americans also express concern about the negative image of the United States abroad (particularly in the Muslim world), worry that the United States is too quick to use military force to solve problems, and want greater emphasis on diplomacy abroad. Solid majorities also support arms control negotiation and believe the United States has done more arms control than is actually the case. The United States Government should not conduct its foreign policy based on opinion poll results. Traditionally, the American public defers to its foreign policy and national security experts on matters of policy. However, no group of policy experts can afford to ignore the expectations of the American people for long, lest they lose the people’s confidence. For the first time since the late 1960s-early 1970s, foreign and national security policy concerns the American public more than any other public issue. 32

Transformational Change

Since the end of the Cold War, United States international security negotiations policy (non-proliferation and arms control) have transformed. United States policy approaches have embraced traditional, formalized arms control less often and with great skepticism. United States policy has favored more proactive approaches to securing national security objectives, rather than engaging in bilateral or multilateral negotiations.

In the past, enemies of America required massed armies, and great navies, powerful air forces to put our nation, our people, our friends and allies at risk. In the Cold War, Americans lived under the threat of weapons of mass destruction, but believed that deterrents made those weapons a last resort. What has changed in the 21st century is that, in the hands of terrorists, weapons of mass destruction would be a first resort—the preferred means to further their ideology of suicide and random murder. These terrible weapons are becoming easier to acquire, build, hide, and transport…America, and the entire civilized world, will face this threat for decades to come. We must confront the danger with open eyes, and unbending purpose. I have made clear to all the policy of this nation: America will not permit terrorists and dangerous regimes to threaten us with the world’s most deadly weapons.

Meeting this duty has required changes in thinking and strategy. Doctrines designed to contain empires, deter aggressive states, and defeat massed armies cannot fully protect us from this new threat…We’re determined to confront those threats at the source. We will stop these weapons from being acquired or built. We’ll block them from being transferred. We’ll prevent them from ever being used. (Remarks by the President on

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32 Policy Confidence Index (June 2005), Public Agenda Corporation (in conjunction with the Council on Foreign Relations and Ford Foundation).
To respond to this national imperative, the United States has pursued new approaches to combating proliferation of dangerous weapons, including preemption and interdiction. In this context, there has frequently been considerable skepticism about the potential utility of traditional bilateral or multilateral security negotiations. In the minds of some policy analysts, traditional international security negotiations have often placed unwanted restrictions on our freedom of action. To others, arms control simply offers too little leverage in dealing with the challenges the United States now faces. For a few, the arms control experience can and should inform current policy and strategy, but only after innovations incorporating greater flexibility, adaptability, and organizational change. This study wrestles with these important changes in the global security environment with the objective of understanding their impact on international security negotiations from the perspective of the Department of Defense.

**Report Organization**

The report is organized into six sections: macroscopic lessons learned from United States negotiations with the Russians; DOD lessons learned from international security negotiations; the impact of scientific and technological advance on requirements for international security negotiations; risk management principles applied to international security negotiations; guidelines for future international security negotiations; and concluding observations. This study has drawn on the expertise of the SAIC study team, outside experts, and both former and serving U.S. government officials. However, the SAIC study team is alone responsible for the analysis and propositions that follow.
Section I: Lessons Learned from Negotiating with the Russians on Nuclear Arms

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The views herein are those of the author not necessarily those of SAIC or any of its sponsoring organizations.
Introduction

This paper will examine arms control and non-proliferation negotiations during and after the Cold War. To make the analysis of this vast topic manageable, the discussion concentrates on negotiating with the Russians (recognizing that the USSR was more than Russia) and, primarily, on negotiations to eliminate or control nuclear arms. American Cold War policy was focused largely through the lens of how to contain and deter Soviet expansion and aggression. The intense military competition was at the heart of this struggle and the nuclear balance was at the heart of the military strategies on both sides.

Why did the United States enter into nuclear arms control negotiations? What did the U.S. government expect to achieve? How did the negotiations evolve over time? How were they related? What made for a successful negotiation and, indeed, what were the criteria of success? Were they shared by the executive and legislative branches and did the criteria shift with whomever was in the White House? What variables played the most significant roles in successful negotiations? Style and tactics? Strategy and substance? Mood? Setting and negotiating venue? Knowledge of the opponent and his objectives? Interagency discipline? Public diplomacy? Factors external to the negotiations? Most importantly, what lessons are relevant to today’s security environment?

The paper will address these sorts of questions by first briefly examining the early negotiating experience with Russia from 1933 to the final days of World War II (where the focus was not on arms control), then turning to the experience after the war (where arms control slowly became the focus), then turning to the post-Cold War experience (where arms control moved away from the center of the U.S. security agenda). To further make the topic manageable, the arms control topics that will be analyzed most extensively include:

- The Baruch Plan.
- Nuclear testing (LTBT, TTBT, PNET, CTBT).
- The Nuclear Non-proliferation Treaty (NPT).
- Strategic and theater nuclear arms (SALT, ABMT, START, INF, SORT).

The point of the discussion is not analysis for analysis’ sake but to search for lessons that might be of value to American policy today and in the future.

Background

The United States began its existence wary of foreign treaties, especially treaties involving national security arrangements. After a brief security treaty relationship with France that helped obtain American independence (but from which the U.S. soon disengaged itself after the French revolution), and after negotiation of various peace settlements with Britain following the war of
independence and not concluding until after the War of 1812, the United States managed to avoid entering into serious international security negotiations for more than a century. If one excludes the conventions, covenants, and practices addressing commerce and trade, American foreign policy for most of its early history was thoroughly and satisfactorily isolationist. The republic relied for its security on the protective expanse of two vast oceans, on a relatively benign Western hemisphere where U.S. dominance was increasingly assured, and on the broader *Pax Britannia* that prevailed into the early 20th Century.33

The sentiment to remain free from entangling commitments and institutions lasted longer than many remember. As the Cold War was ending, for instance, the late Eugene V. Rostow after a long and distinguished career in international law, American diplomacy, and arms control, wrote of the continuing fascination of many Americans with a collectively remembered past in which international security negotiations played little or no role:

> The common American perception of our nineteenth-century experience in foreign affairs is still an immensely powerful part of the national outlook. The popular understanding of Washington’s Farewell Address and the Monroe Doctrine has the force of a commandment. That this perception is largely mythical does not weaken its influence. In their hearts, nearly all Americans believe that the natural and rightful role of the United States in world politics is one of isolation and neutrality, living at peace in a Western Hemisphere carefully insulated from the wickedness and corruption of Europe and Asia. The power of this belief is so great that the principal problem of American foreign policy, in my experience, is a conflict between our collective unconscious and the realities of life in the late twentieth century.34

Indeed, in the early years after the Cold War, many of America’s traditional allies feared that the United States again would choose to withdraw from world political affairs to concentrate on its traditional commercial agendas.

As for arms control, one can date the modern era of arms control as beginning with the Hague Conferences of 1899 and 1907 and the conventions they produced.35 The United States played a modest but constructive role at those conferences, with modest being the operative word. It is fair to say that prior to World War II the American national security negotiating experience was episodic, on the margins of national security policy, and often fell short of achieving a domestic consensus for the results. This was especially true for collective security and arms control efforts after the First World War.

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33 The fact that American foreign policy was isolationist for so many years does not mean that American diplomacy was anemic or unsuccessful. A number of excellent works have addressed this theme. See, for instance, Eugene V. Rostow, *Toward Managed Peace: The National Security Interests of the United States, 1759 to the Present* (New Haven, 1993); Walter A. McDougall, *Promised Land, Crusader State: The American Encounter with the World Since 1776* (Boston, 1997); Fareed Zakaria, *From Wealth to Power: The Unusual Origins of America’s World Role* (Princeton, 1998); and Walter Russell Mead, *Special Providence: American Foreign Policy and How It Changed the World* (New York, 2001).

34 Rostow, *Toward Managed Peace*, pp. 16-17.

President Wilson’s vision for a League of Nations was rejected by the U.S. Senate in 1920. The 1925 Geneva Convention—formally, The Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare—was signed by the United States but faced strong congressional opposition and was not brought to a vote at the time on the Senate floor. The various naval limitation treaties of the interwar years did not prevent major arms races nor did the international disarmament conference of the 1930s. Germany circumvented the disarmament clauses of the 1919 peace settlement and, when it served Hitler’s purposes, abruptly withdrew from the League.

For many in the generation of Americans that had come to maturity in World War I, that uneasily watched the interwar years, that fought or served in U.S. government positions in War II, and that now found the United States thrust into a role of global leadership in the postwar world, the lesson was clear. Isolation no longer was an option for securing America’s vital interests. Technology and geopolitics had changed the threat equation. National security negotiations moved to the center of American foreign policy as American officials took a leading role in creating and launching the United Nations system, securing base rights and status of forces agreements around the globe, entering into treaties establishing alliances, arranging the details of military assistance programs, and conducting a host of other such endeavors that helped define American national security policy after 1945. This also was the world in which the United States began to grapple with the lethal challenges posed by nuclear weapons. One kind of international security negotiation in particular—arms control—assumed an especially important role in the new nuclear age and is the subject of this paper.

Arms control is an enormous subject. The most widely accepted definition of arms control is the one used by Thomas Schelling and Morton Halperin in the early 1960s namely, “all the forms of military cooperation between potential enemies in the interest of reducing the likelihood of war, its scope and violence if it occurs, and the political and economic costs of being prepared for it.” Even this definition is not broad enough to delineate the range of arms control and disarmament activities the United States has engaged in since 1945—formal treaties, informal protocols, confidence and security building measures, unilateral initiatives, declaratory policies, and the like. Arms control agreements are negotiated in bilateral or multilateral forums and with allies and non-aligned states as well as with adversaries. There also is a domestic component. Sometimes the hardest negotiations are in the interagency and with the Congress.

Anatoly Dobrynin, Moscow’s ambassador to six American Cold War presidents, asserted in his memoirs that “arms control…during the whole of postwar history represented the core of Soviet-American relations.” That rings true. Arms control came to dominate U.S.-Russian foreign ministers meetings and summits. In May 1989, on his first visit to Moscow, the new secretary of state, James Baker, recalled later that while his overriding mission was to reassure Gorbachev and Shevardnadze that the U.S. supported their reform agenda, the U.S. also wanted “to move away from what…was an overemphasis on arms control, to strengthen…relations by focusing on...”}

36 This is the definition quoted and adopted in the essay on “Arms Control” in The Oxford Companion to Politics of the World (Oxford, 1993).
37 Anatoly Dobrynin, In Confidence: Moscow’s Ambassador to America’s Six Cold War Presidents, 1962-1986 (New York, 1995).
more on regional and transnational issues, and to redefine...[the] dialogue on human rights into discussions about ‘institutionalizing democracy.’”

Condoleezza ‘Condi’ Rice, then a member of the NSC staff with the Soviet portfolio, accompanied Baker on many of his negotiating visits. Later as a senior campaign adviser to Governor George W. Bush of Texas, then as his national security adviser in his first term as president and as his secretary of state in the second term, Condi Rice has helped shape policies to shift the U.S.-Russian relationship to a point that it should not need to rest on arms control. Whether that will remain the case is an open question.

What has been the U.S.-Russian negotiating experience? One could answer this question by going as far back as the period when John Quincy Adams was the American ambassador to the court of the tsar or to the Hague conferences that were held at the behest of the Russians. However, for the purposes of this paper, the story will begin in 1933, with the recognition of the Soviet government by Washington.

Negotiating with Russia, 1933-1945

In early 1933 in anticipation of upcoming negotiations with the Soviets on the conditions under which the United States would extend diplomatic recognition (broken since the Bolshevik Revolution) to the Soviet government in Moscow, George Kennan, then a junior consular official in Riga, spent several weeks analyzing the commercial treaties the Russians had concluded with other governments. His goal was to see which treaties if any had protected the interests of the other parties. Kennan sent his findings to Washington in a report in April 1933, drawing attention to examples of treaty language that experience showed should be avoided. His advice was ignored. When the Soviet foreign minister (then called commissar of foreign affairs) Maxim Litvinov came to Washington in November 1933 to negotiate the terms of recognition, the type of language that Kennan had highlighted was included in the recognition agreement without challenge.

Kennan recalls in his memoirs that “the episode has remained in my mind as the first of many lessons I was destined to receive, in the course of a diplomatic career...” Kennan suspected that his advice was ignored because the Roosevelt administration wanted a diplomatic recognition package that minimized the chances of domestic opposition and thus glossed over the possibility that the Soviets might violate certain aspects of the agreement. Charles E. ‘Chip’ Bohlen, one of Kennan’s contemporaries and close associates, talks of early U.S.-Russian negotiations as reflecting the American tendency to neglect detail in the conduct of its diplomacy, the difficulties of negotiating with a regime whose roots lay in rejecting traditional diplomacy, and the centralized, thoroughly bureaucratic nature of the Soviet system on all matters ranging from the trivial to the important. Bohlen recalls in his memoirs that in 1934, as

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the new American representatives in Moscow sought to obtain a lease for an American embassy compound on the banks of the Moscow River, “. . . negotiations foundered almost from the beginning.”41 The American negotiating experience with the Russians thus was difficult and unpromising from the start.

During World War II, when Russia was considered an ally from the summer of 1941 through the end of the war, prickly negotiations took place on the details of lend-lease assistance, on the American attempt (largely unsuccessful) to obtain bases on Soviet territory for shuttle-bombing raids, on seeking information on Soviet military operations against Germany, and—largely at the Teheran, Yalta, and Potsdam summits—on the preliminary details of the peace settlements and the political organization for the postwar world. A good sense of the level of American frustration in these talks is conveyed in the memoirs of George Kennan and Chip Bohlen, already cited, and in the memoirs of Roosevelt’s special envoy and then ambassador to Moscow, W. Averell Harriman. As the end of the war approached, a passage from Harriman’s wartime account nicely captures one aspect of Franklin D. Roosevelt’s attitude toward the Russians. At a private luncheon on March 23, 1945, less than a month before his death, Roosevelt reportedly told a luncheon companion:

“Averell is right. We can’t do business with Stalin. He has broken every one of the promises he made at Yalta.” Anna O’Hara McCormick, who had seen the President the day he left Washington for Warm Springs [where he would die], later shared with Harriman her recollection of that final talk. The President told her that he had fully believed what he said in his report to the Congress on the Yalta Conference decisions. But he had found that Stalin was not a man of his word; either that or Stalin was not in control of the Soviet government.42

President Roosevelt’s jaundiced opinion on negotiating with Stalin may have been even gloomier if he had realized how Stalin relied on espionage to shape his negotiating strategy. At Yalta, for instance, Stalin had access to confidential information passed on to the Soviets by at least one senior member of the American delegation on what and how the Americans intended to negotiate.43

Despite the difficulties that Stalin posed, other sources such as Roosevelt’s final correspondence with Churchill suggest that Roosevelt remained convinced to the end that there was no other reasonable alternative in postwar security to trying to work out a negotiated political settlement with the Soviet government.44 Roosevelt and his contemporaries had seen how power politics

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43 Alger Hiss, at Yalta as a member of the State Department, appears to have met every afternoon with Major General Mikhail Abramovich Milhtsein, a Soviet intelligence officer under cover to the Soviet delegation as a military adviser, to pass on what the Americans were prepared to offer and what their fall-back positions were. This would only be revealed in later years through the successful decryption of the VENONA files. See Jerrold and Leona Schecter, Sacred Secrets: How Soviet Intelligence Operations Changed American History (Washington DC, 2002), pp. 129-33. Also see John Earl Haynes & Harvey Klehr, VENONA: Decoding Soviet Espionage in America (Yale University, 1999), pp. 167-73.
44 On April 11, 1945—the day before he died—Roosevelt responded to a cable from Churchill concerning dealing with the Russians. Roosevelt wrote: “I would minimize the Soviet problem as much as possible because these
failed to prevent the carnage of two world wars. Another world war, even without the reality (soon to be realized) of the atomic bomb, could in their estimation threaten the survival of Western civilization. Negotiating with the Russians had to be pursued out of lack of attractive alternatives, not as a policy of choice.

Harry S. Truman had been vice president for less than three months when President Roosevelt died of a massive cerebral hemorrhage on April 12, 1945. Roosevelt had not taken Truman into his confidence in managing the war or in preparing for the postwar world, leaving Truman heavily dependent in his early days in office on the advice and opinions of senior American officials who had dealt with those issues. None of them could speak authoritatively for Roosevelt who was an extremely secretive man. Truman sought to retain as much continuity as possible with the Roosevelt policies which he tried to better understand. Truman presided over the end of the war in Europe, attended the Potsdam summit, and used the atomic bomb to force a Japanese surrender, with no better formed attitude toward the possibility of cooperating with the Soviets than Roosevelt had possessed and with much less personal experience on which to base his instincts. There is considerable evidence, however, that Truman soon came to a conclusion similar to that of Roosevelt: the Soviets would circumvent or violate agreements when expedient and could not be trusted in the ordinary sense of the term, but there was no good alternative to not continuing as robust an effort as possible to secure Soviet cooperation in security arrangements for the postwar world. This required communication and negotiations. It is with this in mind that we can begin considering the arms control negotiations in the postwar world.

The Baruch Plan

It has become conventional wisdom since the early 1960s to accept the view first advanced by Schelling and Halperin “that arms control is a promising, but still only dimly perceived, enlargement of the scope of our military strategy.”45 In fact, a good argument can be made when reviewing the genesis of the Baruch Plan that the link between military strategy and arms control was recognized by American officials in practice if not in theory, from the start of postwar arms control.

The United States emerged from World War II with two principal institutional arrangements for global security: the Council of Foreign Ministers which was supposed to be the forum for the postwar peace settlements, and the newly formed United Nations. When the first meeting of the Council of Foreign Ministers in London from September to October 1945 ended in deadlock, President Truman soon reached the conclusion (shared by the British government) that unless and until the status of the atomic bomb could be resolved satisfactorily with Russian authorities, there was little prospect for progress on postwar security arrangements.

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The United States, assisted by the British and Canadians, had secretly developed the atomic bomb during the war. The confidential Quebec Agreement of August 1943 specified *inter alia* that none of these three would share information on nuclear matters with a third party absent agreement by all, and that all must concur in the bomb’s use. Thus, in the aftermath of the deadlocked London Council of Foreign Ministers meeting in 1946, a tripartite summit took place in Washington DC to discuss how to proceed in dealing with the Russians on nuclear matters. Out of that meeting came the three-party agreement, made public in a communiqué on November 15, 1945, to take the question to the United Nations.

The UN was still an idea, not a reality. It had not come into being officially until October 24, 1945, when a representative of the Soviet Embassy in Washington deposited the Soviet government’s instrument of ratification with the Department of State and when Secretary of State James Byrnes then signed the required protocol of deposit for the twenty-nine ratifications needed to bring the organization into existence. President Truman had signed the American instrument of ratification for the UN on August 8, 1945—two days after Hiroshima, one day before Nagasaki, and before the Japanese surrender. Expectations in official Washington for the UN were high, arguably driven as much by realism as by idealism. It was acknowledged in the highest circles of the American government that success of the UN depended on postwar cooperation of the major allies, especially Russia. A good faith effort was launched to see whether this was possible. Initially the Americans thought that the UN in its first session in early 1946 would address purely organizational and procedural matters, deferring substantive matters until the questions of organization and process were resolved. But the compelling imperative of how to deal with the atomic bomb trumped those expectations.

Why go straight to the United Nations with the question of nuclear control? Truman’s outgoing Secretary of War, Henry Stimson, who had overseen the wartime Manhattan Project and chaired the Interim Committee created to advise Truman on the bomb’s use and on postwar controls, had argued shortly after Nagasaki that the United States should approach the Russians directly on the atomic bomb, securing Russian agreement to the political arrangements before raising the issue in the wider international community. As recently as Truman’s message to Congress on atomic energy (October 3, 1945), the Truman administration had not specified what venue would be used to seek political controls on nuclear activities, simply that they were a matter of vital interest. “The difficulties in working out such [international] arrangements,” Truman told Congress, “are great. The alternative to overcoming these difficulties, however, may be a desperate arms race which might well end in disaster.”

Truman had stated publicly as early as August 9, 1945, in his report to the nation on the Potsdam Conference, that “The atomic bomb is too dangerous to be loose in a lawless world.” But how should the issue be approached? Should the United States seek to retain its monopoly on the bomb and use it to force its views on the international community? Should the United States...

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46 A Message From the President of the United States to Congress Transmitting a Request for the Enactment of Legislation To Fix a Policy Covering the Use and Development of the Atomic Bomb, October 3, 1945, reprinted as Appendix No. 4 in Department of State Publication 2702, *The International Control of Atomic Energy: Growth of a Policy* (Washington, March 31, 1947), p. 112.

47 President Truman’s Address to the Nation on the Berlin Conference, August 9, 1945 (Excerpts), reprinted as Appendix No. 3 in Department of State, *The International Control of Atomic Energy*, p. 107.
propose to ban the bomb? Were effectively safeguarded political control arrangements possible? The Joint Chiefs of Staff, when asked by Truman before the tripartite Western summit to advise him on how to proceed, cautioned against unilateral nuclear disarmament but also advised that the bomb was not a clear blessing. Others could and would develop the bomb over time, a massive and dangerous nuclear arms race could develop in the absence of political arrangements to the contrary, there was no foreseeable defense against the bomb, and the United States was particularly vulnerable to attack by atomic weapons. The JCS rendered their written judgment on October 23, 1945, that the United States should, as a matter of high urgency, seek political arrangements to control the bomb and further suggested that the matter should be associated with efforts in the United Nations to establish mechanisms for enforcing collective security.48

The UN Charter had been signed at the San Francisco conference on June 26, 1945, prior to the first secret test of an atomic bomb and with all the delegates (including the American representatives) unaware of the Manhattan Project. The Charter prohibited the use or threat of use of force in international relations (Article 2, Paragraph 4), provided for the peaceful settlement of international disputes (Chapter VI), and elaborated the concept of a mechanism for actions regarding threats or breaches of the peace and acts of aggression (Chapter VII). The General Assembly was empowered to consider “principles governing disarmament and the regulation of armaments” and to make “recommendations with regard to such principles to the Members or to the Security Council or both” (Article 11), while the Security Council was responsible for formulating, with the assistance of the Military Staff Committee (Article 47), “plans to be submitted to the Members of the United Nations for the establishment of a system for the reduction of armaments” (Article 26).49

It is difficult to establish from the declassified archives and from memoirs and oral histories of the period, the specific reasons why Truman chose to go directly to the United Nations before first obtaining Russian agreement on specifics of a control arrangement as advised by Secretary Stimson. After the U.S.-Anglo-Canadian summit communiqué of November 15, 1945, called for creation of a UN commission to deal with the international control of atomic energy, Secretary of State Byrnes arranged a hasty, meeting of the Council of Foreign Ministers (minus France and China) in Moscow in December to seek Russian agreement to the overall approach. Stalin surprisingly was receptive to the Anglo-American plan, especially after he obtained commitments that the negotiators would report to the Security Council (where the Soviets had a veto), not to the General Assembly. The joint communiqué issued by the Big Three foreign ministers in Moscow on December 27, 1945, expressed the intention of recommending to the General Assembly when it met for the first time in early 1946 that it establish a commission, reporting to the Security Council, to discuss the issues relating to atomic energy. This set the stage for the development of the American proposal for international control of atomic energy.

Before turning to the details of the American proposal (popularly known as the Baruch Plan) and to the negotiations, it is useful to review the question of why the United States wanted to enter

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48 Admiral William D. Leahy, Memorandum for the President from the Joint Chiefs of Staff, 23 October 1945, Top Secret, declassified August 29, 1975. Harry S. Truman Library, Papers of Harry S. Truman, President’s Secretary’s Files, Box 199.
into these arms control negotiations. The proximate objective was to seek political arrangements for controlling dangerous nuclear activities while allowing peaceful nuclear activities to proceed. This was associated, however, with a number of other objectives, e.g.: obtaining Soviet cooperation in postwar security arrangements; avoiding a dangerous nuclear arms race; nurturing the gestation of the newly formed collective security system under the United Nations; retaining cooperation among the wartime nuclear allies (the U.S., the UK, and Canada); and setting the stage for future arms control actions extending more comprehensively to all military forces. It is important when analyzing this era not to use the 20-20 hindsight we have today. Rather, it is more appropriate to recall the going-in assumptions that the Truman administration held in the autumn of 1945:

- “No nation can long maintain a monopoly of atomic weapons.
- “No nation could maintain or morally defend a monopoly of the peaceful benefits of atomic energy.
- “For the foreseeable future, there can be no adequate military defense against atomic weapons.
- “All the initial processes in the production of fissionable materials and certain subsequent processes are identical whether their intended use or purpose is peaceful or military.
- “The nuclear chain reaction for the release of atomic energy is now based upon uranium and thorium as the only suitable raw materials occurring in nature. Ores containing these materials are only relatively rare. Although rich deposits are not numerous, the lower concentration of the ores have a wide geographical distribution.”

When Byrnes departed for the first meeting of the UN General Assembly in early January 1946 (to be held at a temporary location in London), he left his deputy, Dean Acheson, with the task of chairing an interagency task force to develop the specifics of the American proposal (recall that this is before the creation in 1947 of the National Security Council). Acheson's colleagues on the interagency task force were former Assistant Secretary of War John McCloy and the three men who had supervised and directed the wartime development of atomic energy—Vannevar Bush, James B. Conant, and Major General Leslie R. Groves. Acheson convened his task force for the first time on January 13, 1946. They soon agreed to appoint a board of consultants chaired by David E. Lilienthal, chairman of the Tennessee Valley Authority (later to be nominated by Truman to be the first chairman of the U.S. Atomic Energy Commission).

Perhaps the individual most responsible for developing the specifics of the Acheson-Lilienthal proposal was J. Robert Oppenheimer, wartime scientific director of Los Alamos, a key adviser to the Interim Committee during the final stages of the war and a member of Lilienthal’s team of consultants. The Acheson-Lilienthal task force held its first plenary session on March 7, 1946, at Dumbarton Oaks in Washington DC. By March 16, it had agreed upon and delivered a plan to

50 These five assumptions, described as the core of official consensus in Washington at the time of the Baruch Plan, are outlined in Department of State The International Control of Atomic Energy, pp. 1-2.
51 Dean Acheson discusses preparation of the Acheson-Lilienthal report in chapter 17 of his memoirs, Present at the Creation: My Years in the State Department (New York, 1969), pp. 149-56.
Secretary Byrnes. The essence of the plan was to take dangerous nuclear activities (to be so decided by international consensus) out of national hands and place them under an international agency responsible to the United Nations. The Acheson-Lilienthal study arrived at six criteria (quoted below in their entirety) for the effective control of atomic energy:

- “Such a plan must reduce to manageable proportions the problem of enforcement of an international policy against atomic warfare.

- “It must be a plan that provides unambiguous and reliable danger signals if a nation takes steps that do or may indicate the beginning of atomic warfare. Those danger signals must flash early enough to leave time adequate to permit other nations—alone or in concert—to take appropriate action.

- “The plan must be one that if carried out will provide security; but such that if it fails or the whole international situation collapses, any nation such as the United States will still be in a relatively secure position, compared to any other nation.

- “To be genuinely effective for security, the plan must be one that is not wholly negative, suppressive, and police-like. We are not dealing simply with a military or scientific problem but with a problem in statecraft and the ways of the human spirit. Therefore the plan must be one that will tend to develop the beneficial possibilities of atomic energy and encourage the growth of fundamental knowledge, stirring the constructive and imaginative impulses of men rather than merely concentrating on the defensive and negative. It should, in short, be a plan that looks to the promise of man’s future well-being as well as to his security.

- “The plan must be able to cope with new dangers that may appear in the further development of this relatively new field. In an organizational sense therefore the plan must have flexibility and be readily capable of extension or contraction.

- “The plan must involve international action and minimize rivalry between nations in the dangerous aspects of atomic development.”

On March 18, 1946, two days after Byrnes received the Acheson-Lilienthal report, President Truman nominated Bernard M. Baruch to serve as U.S. representative to the UN Atomic Energy Commission (UNAEC). Acheson and others have criticized this appointment, and there is no denying that Baruch was a self-promoting individual with an enormous ego. Still, Baruch was widely respected in Congress and there is strong circumstantial evidence that Truman appointed Baruch with an eye to paving the way for Senate advice and consent to ratification if an agreement was achieved. One week after the Baruch nomination, Dean Acheson testified in executive session to the Senate-House Joint Committee on Atomic Energy, discussing his report on control of atomic energy. Elements of the testimony were leaked to the press and appeared in afternoon newspapers that same day. Three days later, on March 28, the State Department released to the public the full Acheson-Lilienthal report.

On April 5, the Senate overwhelmingly approved Baruch as the American representative to the UNAEC. Baruch had Truman’s authorization to consult widely in preparing an American

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proposal based on the Acheson-Lilienthal report. While accepting all the essential features of the report, Baruch and his associates focused on the largely political question of what should be done if nations agreed to, then cheated on, the plan. It was in this context that the Baruch proposal, presented at the first meeting of the UNAEC on June 14, 1946, called for enforcement by the Security Council with the veto not permitted for alleged violations of the plan.53

The Baruch Plan envisioned the creation of an international atomic development authority to which would be entrusted all phases of the development and use of atomic energy, commencing with raw material. Some of the responsibilities would be exercised directly by the international agency (e.g., managerial control or ownership of all atomic-energy activities potentially dangerous to world security), while some would be exercised indirectly (e.g., national authorities could conduct all other atomic activities under international license, with the international authority having the authority to control and inspect the activities). The international authority would conduct the research and development needed to place it in the forefront of atomic knowledge—something that would enable it to understand and detect misuse of atomic energy.

Once an adequate system for control of atomic energy was in place, Baruch explained to the UNAEC, including the renunciation of the bomb as a weapon, once the system was operating effectively, and once punishments had been set up for violations of the rules of control (which were to be stigmatized as international crimes), then the United States would cease manufacture of atomic weapons and dispose of its extant stockpile pursuant to the terms of the treaty.

Five days later, on June 19, the UNAEC met for the second time. Representatives of Canada, the UK, Brazil, China, and Mexico communicated their governments’ support of the American proposal (the French, Australians, and Egyptians would add their endorsements later). The Netherlands abstained while the Soviets and Poles objected to the American plan. On behalf of the Soviet government, Andrei Gromyko advanced a counter-proposal calling for a comprehensive ban on nuclear weapons, immediate cessation of manufacture, and destruction of existing stockpiles. A political framework for international control would follow at a later phase.54

By June 25, 1946, the UNAEC had established a working committee to try to narrow the differences between the American and Soviet proposals. More working subcommittees were created and the UNAEC settled into the rhythm of negotiations. On December 30, 1946, after more than one hundred conferences, the UNAEC voted 10 to 0 (the USSR and Poland abstaining) to approve the proposal advanced by the United States. Since the UNAEC reported to the Security Council and with Moscow’s right to veto, this assured that the proposal would go nowhere.

What had begun as an attempt at serious arms control lapsed into a propaganda battle. By early 1947, with the parallel negotiations to try to establish a UN armed force under Article 45 of the

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Charter also deadlocked, the Truman administration quietly adopted a policy of continuing arms control negotiations for public diplomacy purposes but without expecting substantive results. The arms control negotiations at the United Nations became part of the political and psychological warfare of the early Cold War.

In 1947 the General Assembly created a Commission for Conventional Armaments (CCA), separate from the UNAEC. This new commission began considering proposals for addressing conventional military forces. In order to mark out its territory, the CCA on August 12, 1948, advised the Security Council

…that it considers that all armaments and armed forces except atomic weapons and weapons of mass destruction, fall within its jurisdiction and that weapons of mass destruction should be defined so as to cover atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons, and any weapons developed in the future which have characteristics comparable in destructive effect to those of the atomic bomb or other weapons mentioned above.56

American policy on arms control was registered in several key documents through the remainder of the Truman administration. For instance, NSC 68, “United States Objectives and Programs for National Security,” completed in its first version in April 1950, established at least three principles for arms control:

- An effective agreement is not possible until the Soviets are willing to negotiate in good faith—something the United States should not assume until there is concrete evidence of a decisive change in Soviet policy.
- A sound arms control negotiating position is an essential element in the ideological conflict.
- The U.S. should be prepared to live with any agreement accepted by the Soviets and thus must only negotiate proposals that are enforceable and, if violated, will not put the United States at a dangerous disadvantage.57

55 The UN Atomic Energy Commission and UN Commission for Conventional Armaments were consolidated in 1952 into a single Disarmament Commission composed of the members of the Security Council and Canada. This Disarmament Commission was enlarged in 1957 and again in 1958, to include all UN members. Such a large body was too unwieldy and in 1959, a Ten-Nation Committee on Disarmament (TNDC) was established with the East and West represented equally. In 1962 it was enlarged to become the Eighteen-Nation Committee on Disarmament (ENDC) with the addition of eight non-aligned nations. This became the Conference of the Committee on Disarmament (CCD) in 1969, with membership expanded to 26 nations, increased to 31 in 1975. The Committee on Disarmament replaced the CCD in 1979 and later was renamed the Conference on Disarmament (CD), charged with the task of carrying forward the negotiating efforts of its predecessors. The CD meets in Geneva, defines its own rules of procedure, and develops its own agenda, taking into account the recommendations of the UN General Assembly. The CD reports to the General Assembly annually or more frequently as may be appropriate.


On October 24, 1950, President Truman proposed in an address to the United Nations General Assembly that the two arms control commissions should be combined. In preparation for the discussion at the next session of the United Nations, the NSC conducted a comprehensive review of American arms control policy, resulting in NSC 112. NSC 112 is a long policy document. At the heart of its analysis of policy options was a statement of six general principles for approaching arms control:

- “The program [of arms control] must be open for adherence to all states and initially it must include at least those states whose military resources are so substantial that their absence from the program would endanger it…

- “With respect to the control and regulation of atomic energy it would be necessary to secure agreement on the U.N. plan [i.e., the Baruch plan], or some no less effective plan.

- “The limitation of armed forces and armaments must be carried out under an agreed system of regulation and inspection, and the implementation must be phased in such a manner that will protect the security of the participating states at each stage.

- “It would be essential to secure agreement on necessary safeguards which would technically be feasible and practical. Such safeguards would have to provide for the prompt detection of the occurrence of violations, while at the same time causing only the necessary degree of interference with the various aspects of the life of individual nations.

- “In the case of armed forces and non-atomic weapons, the inspection and other mechanisms required as safeguards should be conducted under an international authority vested with the necessary status, rights and powers.

- “With respect to atomic energy, the control and inspection required as safeguards would be conducted in accordance with the U.N. plan or a plan no less effective.”\(^{58}\)

After review by his senior advisers, President Truman approved NSC 112 on January 19, 1951. NSC 112 fundamentally established that the United States should remain engaged in arms control, lackluster prospects notwithstanding, and should be prepared to take the initiative and offer arms control proposals that: (1) in the unlikely event they were accepted by the USSR, would not leave the West at a military disadvantage (which meant that safeguards like inspection had to be built into the agreements), and (2) would rebound to the public diplomacy advantage of the West if the Soviets refused to accept them or failed to negotiate them seriously. In one form or another, this basic approach remained policy throughout the Cold War.

In early 1952 the United Nations agreed to a formal proposal by the United States, Britain, and France—based on the earlier American initiative—to dissolve the two standing arms control bodies—the UN Commission on Atomic Energy and the Commission on Conventional Armaments—and combine them into a single Commission on Disarmament. In preparation for resuming arms control talks in this new body, and to gain the perspective of an outside review of

American arms control policy, Secretary of State Dean Acheson in April 1952 appointed a panel of consultants on disarmament consisting of J. Robert Oppenheimer (director of the Institute for Advanced Studies, Princeton); Vannevar Bush (Carnegie Institute of Washington); Allen W. Dulles (Deputy Director of Central Intelligence); John Dickey (president of Dartmouth), and Joseph E. Johnson (Carnegie Endowment). In his initial meeting with the panel on April 28, Acheson argued that “that the disarmament work is far more than a propaganda exercise.” It could, over time, serve as part of the overall settlement envisioned in the policy of containment and deterrence, as political institutions evolved. He did not, however, suggest that arms control should not also serve public diplomacy purposes.

Acheson was a realist on the prospects of any meaningful negotiations in the short run, a position the panel also came to over the next eight months as it studied the situation. During their reviews, the panel met frequently with government officials like Paul Nitze, then director of the policy planning staff at State. The panel also secured the services of McGeorge Bundy to act as their executive secretary. Assembling at various locations around the country, the panel broadened its study to consider the problem of arms limitations not as an isolated subject to be pursued in a vacuum, but instead in the context of a general study of the political meaning of increasingly lethal modern weapons in a deeply divided world.

The panel (popularly called the Oppenheimer panel, after its chairman) concluded that while there was little chance for serious arms control negotiations in the near term, that “Modern armaments are at once urgently necessary and extraordinarily dangerous, and wise policy must constantly be aware of both the need and the danger. This means that the notion of arms regulation, however little it may have a direct present application, should not be put permanently out of mind.” Among its recommendations, the panel suggested that the United States should gradually disengage from arms control negotiations at the United Nations while seeking alternate “ways of communicating with the rulers of the Soviet Union on the range of questions posed by the arms race. Even though serious negotiation hardly seems possible at present, we think that the lesser act of genuine communication could do no harm and might have real value.”

The panel delivered a 23-page report in mid-January 1953. Two major events took place during the final phases of the panel’s deliberations. On October 31, 1952, in the MIKE test shot at the Eniwetok Atoll, the United States for the first time tested an experimental thermonuclear device, with a yield of 10.4 megatons. More powerful weapons were rapidly becoming a reality and the pace of the arms race appeared to be intensifying. And less than one week later, on November 4, 1952, Dwight D. Eisenhower defeated Adlai Stevenson for the presidency. The Republicans recaptured the White House for the first time since 1933.

Many of Eisenhower’s closest advisers were hostile to the thought of arms control. Past negotiations with the Russians had been difficult and non-productive, relations were tense, the Korean War still was underway, and the value of any negotiated agreement was suspect until the

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61 Ibid., p. 1086.
Soviet Government fundamentally changed its approach to foreign policy. Eisenhower, the incoming president who was more inclined to search for new arms control initiatives than most of his national security team, made the Oppenheimer report required reading at the senior levels of his new administration. 62 The report also was formally discussed at the NSC. While Eisenhower would not follow the Oppenheimer panel’s recommendations to disengage from arms control negotiations at the UN, he did begin searching for other means of pursuing talks with the Russians. But for all intents and purposes, it was clear by the end of the Truman administration that the approach suggested in the Baruch Plan had met a dead end.

**Nuclear Testing**

Within three months of Eisenhower’s inauguration, Stalin was dead and Moscow, in the midst of a leadership transition that largely was concealed from the West, launched a peace offensive aimed at influencing public opinion, dividing the Western alliance, and appealing to so-called non-aligned states. President Eisenhower responded in kind. Oppenheimer, in his panel’s report and in subsequent publications, had argued eloquently that the American government must find a way to better communicate the facts of the nuclear age to the American public, especially now that thermonuclear weapons were a reality. 63 Eisenhower agreed. These streams converged first into Eisenhower’s Chance for Peace speech to the American Society of Newspaper Editors in Washington on April 16, 1953, and then into the Atoms for Peace proposal that the President presented at the UN General Assembly on December 8, 1953.

In his private diary, Eisenhower recorded his conviction two days after going to the United Nations that “If we were successful in getting even the tiniest of starts, it was believed that gradually this kind of talk and negotiation might expand into something broader . . .” 64 The Atoms for Peace proposal did result in institutional changes although not in the way Eisenhower envisioned. It led to negotiations that resulted in the International Atomic Energy Agency (IAEA) treaty of 1957. 65

Meanwhile, the nuclear arms race was accelerating. In late 1949 the Soviets had conducted their first nuclear test and the British their first in October 1952. One week before Eisenhower was elected president, the United States detonated a thermonuclear device in the South Pacific. The Soviets also proceeded quickly to testing thermonuclear devices, with their first success in August 1953. By the early 1950s it appeared that the world had settled into precisely the kind of desperate nuclear arms race that the Americans had sought to avoid in 1946 with presentation of the Baruch Plan.

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On March 1, 1954, the U.S. tested a thermonuclear device at Namu Island in the Bikini Atoll in a shot codenamed BRAVO. It was the largest such device the U.S. ever tested, with a yield in the vicinity of 15 megatons. This was twice what the U.S. expected which, coupled with unexpected wind conditions, resulted in BRAVO contaminating a wide area. Over two dozen Americans and two hundred and thirty-six natives of the Marshall Islands were exposed to dangerous levels of radiation and a Japanese tuna trawler, the *Fukuryu Maru*, was caught in the radioactive debris. The crew of twenty-three on the Japanese ship developed severe radiation sickness and one died. Calls were heard worldwide to halt nuclear testing.  

On April 19, 1954, the UN Disarmament Commission, acting on the recommendations of the General Assembly, created a subcommittee consisting of the U.S., USSR, Britain, France, and Canada and gave it the task of searching for an agreement on a comprehensive and coordinated plan of disarmament. While any such plan inevitably would be utopian in the circumstances of the times, the intense public diplomacy battle between the East and West—and the public diplomacy battle internal to the Western alliance—began to focus on the work of this subcommittee of five. In June 1954, the British and French presented a proposal to the subcommittee. Responding to the Anglo-Franco proposal, the Russians (who for nine years had demanded an unconditional ban on nuclear weapons prior to any other arms control) now seemed to accept the concept of some reduction in conventional armaments prior to prohibition and elimination of nuclear weapons. A new Soviet arm control proposal presented to the General Assembly in September 1954 seized the initiative. The U.S. again found itself in a reactive position in the public diplomacy wars.

In February 1955 the NSC met to review NSC 112, the U.S. policy on control of armaments carried over from the Truman administration. It was decided to appoint a new high-level official (he would have cabinet rank) who could devote his time fully to a thorough review of American arms control policy and who would devise new proposals for consideration by the NSC and the president. Former Minnesota governor Harold Stassen, already serving in the administration, was named to this post on March 19, 1955, as special assistant to the president for disarmament. He would remain in that job until February 1958.

In April 1955, a new Anglo-French proposal was presented to the Subcommittee of Five, calling for nuclear disarmament to begin when 75 percent of the conventional arms had been reduced (this was related to the increasingly complex and utopian plans being discussed in the Subcommittee). The U.S. did not support the proposal. The American position remained that nuclear reductions could begin only after conventional reductions were completed. One month later, the Soviets presented a comprehensive proposal that appeared to accept elements of the Anglo-French proposal, then made their position public in a manifesto released on May 11. Again the U.S. was on the defensive in public diplomacy.

From July 18 to 23, the heads of government of the U.S., UK, France, and the USSR met at a summit in Geneva, the first such summit since the closing days of World War II. Recognizing that the U.S. was losing the public diplomacy battle, Nelson Rockefeller, a special assistant to the president, wrote Eisenhower one week before the meeting, arguing that “A basic U.S. aim at

Geneva must be to capture the political and psychological imagination of the world."\textsuperscript{67} Eisenhower, who had been leery about convening the summit, agreed. At the Geneva summit, Eisenhower unveiled his open skies proposal.\textsuperscript{68} The Russians rejected it as a cover for espionage, but it played well in the public relations battle. Eisenhower also used his negotiating sessions at Geneva to stress to the Soviet leaders America’s peaceful intentions, and in this cause, used dramatic language to characterize the results of a nuclear war. It appears in retrospect that this backfired. Some scholars attribute Khrushchev’s decision to use nuclear threats and bluffs over the next several years in part to his impression at Geneva that the Americans were scared of the chance of nuclear conflict.\textsuperscript{69}

For purposes of this paper, it is neither necessary nor useful to continue to review the convoluted arms control politics of the mid-1950s, or the convoluted bureaucratic politics domestically (Stassen would resign in 1958 after Secretary of State Dulles reasserted his control over arms control policy-making). What is important to the current discussion is to recognize the public milieu in which nuclear testing was becoming increasingly controversial (it was an issue during the 1956 presidential campaign) and where the Soviets appeared to be winning the public diplomacy battle by portraying themselves through their proposals to ostensibly be serious and responsible about controlling the armaments race. One such set of proposals concerned nuclear testing.

On May 11, 1957, the Soviets for the first time offered test ban proposals that included international controls. Their suggestions were quite general, calling for an international supervisory commission and for reciprocal monitoring facilities on the territories of the three nuclear powers and in the Pacific Ocean. The Soviets also proposed a nuclear test moratorium while the details of monitoring were worked out. The U.S. responded in August with a proposal for a two-year moratorium linked to the controlled cutoff of producing nuclear materials for military purposes. Moscow responded with a call for a three-year, uninspected moratorium.\textsuperscript{70}

And so it went.

As the public diplomacy battle intensified, President Eisenhower in April 1958 proposed that Moscow join the West in examining technical requirements for verifying a nuclear test ban.

\textsuperscript{68} For a good case study of the bureaucratic politics of putting together the open skies proposal, see W. W. Rostow, \textit{Open Skies: Eisenhower’s Proposal of July 21, 1955} (University of Texas, 1982).
\textsuperscript{69} The most careful American biographer of Khrushchev, William Taubman writes: “During the dinner at the American villa Eisenhower insisted passionately on the ‘futility of war in the nuclear age,’ saying that any nation that used nuclear weapons risked destroying itself since such a major conflict was likely to incinerate the Northern Hemisphere. Assistant Secretary Merchant later hailed this as [a] turning point: ‘The most important result of the summit was to remove from the minds of the Soviet leaders any fear that the United States would attack Russia. The President, by his character and sincerity, convinced them of that [thus removing ‘the genuinely dangerous risk of Soviet action based on a miscalculation of our own intentions.’ But the real effect was almost the opposite. Khrushchev left Geneva ‘encouraged, realizing now that our enemies probably feared us as much as we feared them.’ That prompted him to practice nuclear bluster and bluff so as to play on American fears.” \textit{Khrushchev: The Man and His Era} (New York, 2003), p. 352.
\textsuperscript{70} For a good discussion of the dynamics of the nuclear testing proposals and counterproposals during the Eisenhower and Kennedy years, see Glenn T. Seaborg with Benjamin S. Loeb, \textit{Kennedy, Khrushchev, and the Test Ban} (Berkeley, California, 1981).
Since the Baruch Plan was first presented, American arms control policy had focused on the importance of safeguards including inspection and other such means to verify compliance with arms control agreements or, in the case of suspected non-compliance, to raise red flags giving the United States and its allies time to respond effectively. Behind its iron curtain, Russia had strongly resisted inspections and continued to nurture a culture of secrecy for even the most mundane matters such as street maps in major cities or reporting population statistics to UN agencies.

Moscow, with Khrushchev now firmly in control (he had assumed the position of premier in March 1958, complementing his other party positions), responded affirmatively to entering into such discussions and in July 1958, the Conference of Experts to Study the Possibility of Detecting Violations of a Possible Agreement on Suspension of Nuclear Tests convened in Geneva. The Western delegation included three Americans, two British officials, a Frenchman, a Canadian, and assorted technical advisers. The Eastern delegation was augmented by various East European countries to balance the talks. The conference began on July 1 and ended on August 21. A report was issued on August 30, 1958, spelling out the initial proposals for a so-called “Geneva system” for monitoring nuclear tests—a system designed to detect nuclear explosions of up to one kiloton in the atmosphere and five kilotons underground.

With this preparatory work in hand, the United States, Britain, and the Soviet Union began negotiations for a nuclear test ban in the Conference on the Discontinuance of Nuclear Weapons Tests that convened in Geneva on October 31, 1958. The American delegation was led initially by James J. Wadsworth, America’s deputy representative to the United Nations. The British delegation was led by David Ormsby-Gore, minister of state for foreign affairs, and the Soviet delegation by Semyon K. Tsarapkin whose disarmament experience dated back to the 1946 negotiations on the Baruch Plan. The Americans and Russians rushed to complete massive test series prior to the start of the talks. The American HARDTACK II tests that began in Nevada on September 12, 1958, for instance, consisted of thirty-seven shots in less than two months, the final test occurring the day before the talks began. This nuclear test, the TITANIA shot, would be the last American nuclear test until the moratorium was abandoned after the Russians resumed nuclear testing in 1961. CIA Director Allen Dulles briefed the NSC on October 30, 1958, that the Russians had conducted sixteen nuclear tests since September 30, two involving explosions of eight to ten megatons, roughly twice the size of any previous nuclear explosion.71

What did the United States seek initially in these talks? In early 1955, when the Eisenhower NSC reviewed the basic policy toward control of armaments expressed in NSC 112, Secretary of State John Foster Dulles repeated the argument that “A decent respect for the opinions of mankind required us to try to solve the disarmament problem, as did our need to hold our allies with us.”72 Public opinion by the mid-1950s was increasingly concerned with the public health risks posed by atmospheric nuclear testing, and in the public diplomacy contest at the Subcommittee of Five, the Soviets were scoring point after point. Added to this, the argument was made in the NSC that American advantages might be secured by a halt to nuclear testing. In February and March 1955, for instance, Eisenhower was advised by officials such as AEC

commissioner Thomas Murray that the U.S. was far ahead of the Soviets in thermonuclear technology and that a moratorium on testing large thermonuclear weapons “would lengthen the time during which the United States would maintain its advantage over the U.S.S.R.” Not all agreed with this assessment, but it was in the background of the unfolding debate. Also in the background was a healthy skepticism whether the Soviets would in fact observe a test moratorium without cheating.

On May 26, 1955, shortly after his initial appointment, Stassen had sent to Eisenhower a special staff study entitled “A Progress Report on a Proposed Policy of the United States on the Question of Disarmament.” This study, conducted by an interagency task force from State, Defense, the AEC, CIA, and the Foreign Operations Administration, reiterated a set of principles for guiding U.S. arms control policy, including inter alia:

- “The security of the United States should not depend in any essential matter upon the good faith of any other country.
- “So long as the communist form of government continues, it should be assumed that the USSR and Communist China will act in bad faith at any time such action is considered by their rulers to be to their advantage.
- “It is not possible by any known scientific, or other, means to account for the total previous production of nuclear weapons material, and the margin of error is sufficient to allow for clandestine fabrication or secretion of a quantity of thermonuclear weapons of devastating power.
- “It is not possible by any known scientific or other means to be absolutely certain of the control of all future production of nuclear weapons material . . .
- “The United States should not advance or join in any proposals which it would not be willing to respect if agreed . . . [and the] United States should never cease searching for a sound agreement and should be willing at an appropriate time and place to enter serious discussions in pursuit of such an agreement.
- “The substantial majority of the people of the United States and of the Congress of both political parties must be convinced of the desirability of any arms agreement entered into by the United States . . .”

Most members of Eisenhower’s administration could assent to most of these principles, but there was considerable disagreement regarding whether the time was right to enter into serious negotiations and, if so, what those negotiations should address. As the public diplomacy contest on nuclear testing unfolded, Eisenhower said at a press conference on June 19, 1957, that he “would be perfectly delighted to make some satisfactory arrangements for a temporary suspension of tests while we could determine whether we couldn’t make some agreements that

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would allow it to be a permanent agreement.” At an NSC meeting on January 6, 1958, Stassen cited this when he made the case that a nuclear test regime, with some eight to twelve monitoring inspections stations in the Soviet Union and a like number in the United States, could adequately monitor compliance with a test ban in the opinion of American scientists like I. I. Rabi and, if accepted by the Russians, would begin to open up the Soviet Union, perhaps for other, more comprehensive arms control regimes. Lewis L. Strauss, chairman of the AEC, countered that Edward Teller and Ernest Lawrence believed that many more inspection stations would be needed (Teller had made this point in a recent article in *Foreign Affairs*).

The debate in the American technical community about the adequacy of monitoring systems for a test ban continues through today. Eisenhower took note of it in preparing for the test talks. Before committing to a moratorium and to the talks, Eisenhower also insisted that the Atomic Energy Act of 1954 must be amended so that the United States could satisfy a long-standing British request to resume the sharing of nuclear weapons information that was addressed in the Quebec Agreement of 1943 but had been terminated by the initial Atomic Energy Act of 1946 and had not been reinstated in the 1954 amendments. This was accomplished in July 1958 with the passage of P.L. 85-479, and in the agreement that Eisenhower sent congress on exchange of classified atomic information for mutual defense purposes. With the technical issues of verification left unresolved and with the alliance concern that the British not be penalized by a testing moratorium satisfied, Eisenhower was ready to enter into the test talks.

The talks in Geneva continued through the end of the Eisenhower administration, with verification and inspection issues forming the crux of disagreement. By the time Eisenhower left office, France had become a nuclear power, having tested its first device in the Sahara in February 1960 and announcing shortly thereafter that it was willing to abandon its nuclear weapons program only if the other three nuclear powers destroyed their nuclear weapons. American intelligence also pointed to the prospect that sometime in the next few years, China would become a nuclear power.

The Eisenhower era ended with the dramatic collapse of the Paris summit in 1960—a move Khrushchev orchestrated after the American pilot Francis Gary Powers and his U-2 reconnaissance aircraft were shot down by a Soviet missile over Sverdlovsk. The breakdown of the Paris summit was followed by a sharp decline in East-West relations across a broad range of crises including Berlin, Cuba, and the Congo. Glen Seaborg summarizes the circumstances surrounding the nuclear testing talks by the end of the Eisenhower era:

> In this deteriorating atmosphere, the delegates at Geneva slogged on. Having held over two hundred sessions between the start of the conference and the collapse of the summit meeting, they held sixty-eight more between May 27, when the conference reconvened, and December 5, its last meeting date in 1960. Little of significance was accomplished. Aside from some minor tidying up of administrative provisions, the conference merely marked time. Both sides seemed reluctant to take new initiatives or to risk major confrontations in the closing days of the Eisenhower administration. On December 5,

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**Notes:**

76 For the memorandum of discussion at the NSC meeting, see FRUS, 1958-1960, Vol. III, pp. 533-545.
For purposes of this paper, it is unnecessary to continue to review in detail the twists and turns of the nuclear testing talks over the next four and a half decades, but merely to highlight the main points. The tripartite test talks resumed in 1961, only to fall apart later in the year in a hostile environment where first Russia, then the United States and Britain, resumed testing. Following the Cuban missile crisis of 1962, all sides were receptive to serious negotiations and a new round of three-power meetings began in July 1963. Within ten days, a short treaty banning nuclear weapon tests in the atmosphere, in outer space, and under water—more popularly, the Limited Test Ban Treaty, or LTBT—was initialed. On September 24, 1963, after extensive hearings including almost three weeks of floor debate, the Senate consented to ratification by a vote of 80 to 19. The LTBT entered into force on October 10, 1963, when the three original signatories deposited their instruments of ratification.

Subsequently, a Threshold Test Ban Treaty (TTBT) limiting underground nuclear explosions to 150 kilotons or less, and a Peaceful Nuclear Explosions Treaty (PNET) with parallel provisions, were signed in July 1974 and in April 1976, respectively. The two agreements were submitted to the Senate for advice and consent on July 29, 1976, but ratification was not forthcoming until after detailed verification protocols had been negotiated in the late 1980s and signed in 1990. Pending entry into force, the signatories agreed to act consistent with the 150-kiloton threshold. The TTBT and PNET, along with the 1990 verification protocols, were approved by the Senate on June 28, 1990, by a vote of 98 to 0. The treaties entered into force on December 11, 1990. In 1992 Russia succeeded the former Soviet Union as the U.S. treaty partner for these two treaties.

Although the initial American position in 1958 was to achieve a Comprehensive Test Ban Treaty (CTBT), the more modest predecessors were accepted politically as steps toward an eventual CTBT. As will be discussed in the next section, when the Nuclear Non-Proliferation Treaty (NPT) was negotiated in the late 1960s, the objective of an eventual complete and universal ban on nuclear testing was explicit in the NPT bargain. During the Carter administration, an attempt to begin serious negotiations on a CTBT gradually withered as U.S.-Soviet relations worsened, and the Reagan administration concentrated its efforts on the verification protocols for the TTBT and the PNET. In 1990, Soviet President Mikhail Gorbachev announced a Soviet nuclear test moratorium and in 1992, French President François Mitterand unexpectedly announced a French moratorium. For several years, efforts in the U.S. Congress to impose test limits had failed, but in the fall of 1992, Congress passed the Hatfield-Mitchell-Exon legislation calling on the U.S. to pursue a CTBT and providing for the immediate commencement of a nine-month U.S. test moratorium. The last American nuclear test to date, the DIVIDER shot, took place in Nevada on September 23, 1992.

78 Seaborg, *Kennedy, Khrushchev, and the Test Ban*, p. 25.

79 In addition to the LTBT, the movement forward in arms control spurred by the sobering experience of the Cuban missile crisis included the bilateral U.S.-USSR agreement to install a hot line for crisis communication and the joint U.S.-USSR declaration to the UN that they would not base nuclear weapons in outer space (that led several years later to the Outer Space Treaty). One insider in the American arms control community at the time, Raymond Garthoff, goes further to argue that “It is not too much to describe the movement forward in arms control from June to November 1963 as a significant beginning of détente.” See Raymond L. Garthoff, *A Journey through the Cold War: A Memoir of Containment and Coexistence* (Washington, 2001), p. 167.
After an internal policy review, the Clinton administration joined with Russia in calling for CTBT talks which began in the Conference on Disarmament early in 1994. In August 1995 President Clinton announced the intent to seek a ‘true zero-yield’ test ban and also announced a package of safeguards upon which adherence to a zero-yield CTBT would be conditioned. Although India refused to support a CTBT, China indicated in 1996 that it could join a CTBT and, on September 24, 1996, the treaty was opened for signature. The United States was the first to sign. However, in October 1999, the United States Senate brought the issue to a head when, in vote of 48 in support and 51 against (with one senator voting ‘present’), it fell far short of the two-thirds majority needed to advise and consent to ratification of the CTBT. Two major concerns were voiced by opponents of the treaty: (1) the United States could not maintain a safe, secure, and reliable nuclear stockpile over time absent nuclear testing, and (2) the provisions for monitoring the CTBT could not guarantee that all cheating could be detected. Those concerns remain on the table today. 

The administration of George W. Bush has taken the position that, while it is continuing a unilateral moratorium on American nuclear testing, it has no intent to seek to revive the CTBT.

Later in the paper, we will return to the lessons from the nuclear testing talks. First, however, it is appropriate to consider the third area of negotiations, nuclear non-proliferation.

The NPT

When Kennedy took office in 1961, one of his first actions was to appoint John J. McCloy to be his adviser on disarmament and arms control. McCloy was a respected Republican member of what had become a group of American elite opinion-makers on foreign and security policy, and had been involved with arms control matters since he had served during World War II as Stimson’s assistant in the War Department. Kennedy asked McCloy to develop recommendations on American arms control plans and to help stand up a new agency to focus arms control activities in the government. McCloy would preside over creation of the Arms Control and Disarmament Agency (ACDA) before returning to private life late in 1961.

On March 8, 1961, McCloy transmitted to President Kennedy a copy of a report addressing verification of a ban on nuclear testing. In the transmittal memorandum, McCloy summarized what became for Kennedy a primary purpose for pursuing a nuclear test ban, namely, its role in a broader policy to prevent the spread of nuclear weapons. McCloy wrote inter alia:

A second reason for supporting a test ban agreement is that it could be helpful in preventing the spread of nuclear weapons capabilities among other countries. By establishing an international legal order, to which nations would be asked and expected to join, it will tend to restrain the present non-nuclear powers from obtaining nuclear capabilities. The test ban agreement is certainly not sufficient in itself to prevent this

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80 These issues were the focus of discussion of General (ret) John M. Shalikashvili with a number of senators after the vote, when Shalikashvili was appointed special adviser on the CTBT.
81 For a good discussion of McCloy and his role in American arms control, see Kai Bird, *The Chairman: John J. McCloy, the Making of the American Establishment* (New York, 1992).
spreading of nuclear capabilities. It will have to be followed by the negotiation of other measures. If the present nuclear powers are engaged in nuclear weapons testing, the possibility of effective agreements restricting the spread of nuclear weapons capabilities will have been severely limited.82

There is considerable evidence from the declassified Kennedy archives that what sustained President Kennedy in his search for a nuclear test ban in the face of substantial congressional opposition was the fear that China was well along toward acquiring a nuclear weapon and that a nuclear test ban, coupled with a united U.S.-Soviet opposition to a Chinese nuclear weapons program, might create the political conditions that could halt or at least inhibit China’s progress toward acquiring nuclear weapons.83

In 1958 Irish foreign minister Frank Aiken had first proposed at the UN General Assembly that the three nuclear powers—the U.S., the UK, and the USSR—agree not to supply other countries with nuclear weapons while the nuclear testing talks were underway. This proposal, soon known as the Irish Resolution, was supported initially by Moscow but opposed by Washington, because of implications for NATO. The Irish Resolution was modified in 1960 and 1961 to take account of the NATO sensitivities and was adopted unanimously in the UN General Assembly in 1961, calling on all states to conclude a non-proliferation agreement. However, East-West differences, especially the questions regarding nuclear sharing arrangements in NATO, blocked serious negotiations at the time.

With American concern over the PRC becoming a nuclear power mounting, Secretary of State Dean Rusk, with White House authorization, began quiet bilateral discussions with Andrei Gromyko in Geneva at the opening session of the new Eighteen Nation-Disarmament Committee (ENDC)—a body that met for the first time in March 1962 in Geneva. Five months later Rusk approached Soviet Ambassador Anatoly Dobrynin in Washington with a request that he relay to Foreign Minister Gromyko a personal message, following up on conversations that the two had begun in Geneva earlier in the year. The thrust of Rusk’s communication was to propose that the Americans and Soviets begin seriously negotiating multilateral arrangements for preventing the further spread of nuclear weapons. Rusk indicated some leeway for the Americans to relax their position on nuclear sharing in NATO (a matter of Soviet concern primarily because of Germany), in exchange for Soviet assistance relative to China’s acquiring the bomb (America’s concern) and that they both address the other programs on the horizon, especially that of Israel. Rusk expressed the hope that Washington and Moscow could reach a common position on the problem of ‘non-diffusion’ (the terminology then used for non-proliferation) that could be taken to the UN General Assembly.84

This demarche, coming shortly before the Cuban missile crisis, led nowhere. As discussed earlier in this paper, the Cuban missile crisis was a sobering experience for both sides and

83 For instance, the records of discussion of test ban policy on February 8, 1963, in the Cabinet Room of the White House show Kennedy saying: “the whole reason for having a test ban is related to the Chinese situation. Otherwise, it wouldn’t be worth the disruption and fighting with Congress…” FRUS, 1961-1963, Vol VII, p. 646.
created a new opportunity to stabilize the nuclear relationships. Kennedy’s first choice to go to Moscow to negotiate the nuclear testing treaty was John McCloy, but when McCloy declined for personal reasons, Kennedy turned to Averell Harriman.

In the lead-up to Harriman’s mission to Moscow in July 1963, the NSC reviewed American non-proliferation policy. NIE 4-63, dated June 28, 1963, reported the intelligence community’s judgment that eight countries in addition to France had the physical and financial resources to develop an operational nuclear capability (weapons and delivery means) over the next decade: China, India, Japan, Sweden, Canada, Italy, West Germany, and Israel. “However,” the NIE continued, “we believe that only Communist China has actually started a weapons program. The Chinese may be able to detonate a first nuclear device by early 1964, but a more likely date is late 1964 or beyond.”

The NSC was scheduled to meet on July 9, 1963, to discuss the draft instructions for the Harriman mission. Deputy national security adviser Carl Kaysen sent these draft instructions to President Kennedy prior to the meeting with a short forwarding memorandum:

Attached is the draft instruction for Governor Harriman. It represents the work of Harriman, Tyler, Fisher and myself. Bob McNamara has also seen it. It covers the main topics broadly, but does not go into detail. Neither China nor MLF is covered explicitly in this instruction. It seemed better to leave this matter for your [private Oval Office] talk with Harriman tomorrow morning. (emphasis added)

To appreciate the sensitivity of the subject, some background is in order. After the shock of Sputnik in 1957 and the growing perception in the Western alliance that Soviet nuclear forces were outpacing those of the United States, the Eisenhower administration sought to reassure America’s allies that the American nuclear umbrella extended to NATO as a deterrent was strong. At Eisenhower’s behest, the North Atlantic Council convened in Paris in December 1957 at the heads-of-government level. Eisenhower attended and presented several new initiatives, one of which was to create a NATO stockpile of American nuclear weapons which would remain under American control in peacetime but could be released to the Allies in wartime. This began a spirited dialogue in the alliance.

Out of this dynamic emerged the concept of a Multilateral Nuclear Force (MLF), devised by Robert Bowie at the request of Christian Herter, embraced by Eisenhower, and presented to NATO at the December 1960 meeting of the NATO Council. The MLF took on a life of its own, largely because it was a mechanism for approaching the delicate question of West German access to nuclear weapons. It also became for many American officials dealing with European affairs an institution on the road to European political unification, and for some American

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nuclear strategists, a mechanism for walking back the independent British and French nuclear weapons programs into a European nuclear force.

Not surprisingly, Moscow violently opposed any nuclear sharing arrangements with West Germany, whatever the mechanism, and by the start of the Kennedy administration this had become the greatest stumbling block to Washington and Moscow agreeing on a common approach to a negotiated non-proliferation treaty. Kennedy inherited the MLF proposal in 1961 and, by 1962, fully recognized the sensitive role it played in alliance politics where Britain was privately opposed to the proposal but where West Germany had embraced it strongly as another milestone toward restoring German sovereignty. NIE 23-62, published in July 1962, registered a consensus that had been building during Kennedy’s first eighteen months in office:

The West Germans recognized that the political, economic, and even technical obstacles to their acquisition of nuclear weapons under national control will remain insuperable for the next few years. Nor do we believe that they have decided that even eventually they will wish to have an independent national nuclear force. However, with the French move to develop a national nuclear force and the possibility that other nations of no greater stature than West Germany may do so, the Germans are very much concerned that West Germany not fall into a second-class position. . . . They are disposed therefore to support whatever arrangements can be made for a multilateral NATO nuclear force. They probably hope that the British and French can be persuaded to subordinate their nuclear forces to such an alliance system, or if necessary to a European system, in which the Germans would also have weapons and an equal share of control. Failing this, it seems likely that the West Germans will eventually decide, perhaps reluctantly, that they must seek to acquire nuclear capabilities of their own.\textsuperscript{89}

Kennedy by July 1963 thus was dealing with a delicate diplomatic equation that involved issues of alliance politics, proliferation, arms control, and the broader question of what to do about an increasingly dangerous China. As a result, on the eve of Harriman’s mission to Moscow to negotiate a nuclear testing treaty, Kennedy was faced with a major decision. Should Harriman be authorized to negotiate directly with Khrushchev, offering to give up American support for the MLF (and perhaps for any other nuclear sharing arrangement with West Germany), in return for a joint U.S.-Soviet position opposing China’s acquiring nuclear weapons? This was the underlying but unstated policy question facing the President.

Following discussion at the NSC on July 9, 1963, a revised set of instructions was issued to Harriman the next day stating inter alia:

You should continue to emphasize the relation between the nuclear test ban and our desire to control the diffusion of nuclear weapons. In pursuing this subject, you should be guided by the talks on non-dissemination of nuclear weapons between Secretary Rusk and Ambassador Dobrynin. You may indicate that the United States will endeavor to secure adherence to or observation of any non-dissemination agreement by those powers associated with it, if the Soviet Union is willing to undertake a parallel responsibility for those powers associated with it. In this connection, you should maintain our position

that the MLF proposals under discussion are not inconsistent with the goal of a non-dissemination agreement. (emphasis added)  

Notwithstanding the categorical tone of the written instructions cited above to support the MLF, there is considerable evidence that the small-group, private meeting between President Kennedy and Harriman later in the day on July 10, of which there is no written record, took up the issues of China and the MLF verbally and resulted in Harriman receiving additional instructions that he could soften if not abandon American support for the MLF (and hence for the German position), if Khrushchev was forward-leaning in the upcoming Moscow talks on willingness to help stop the Chinese nuclear weapons program.  

Once in Moscow, Harriman raised the China question with Khrushchev. Khrushchev, apparently quite sensitive to his own alliance and domestic politics at the time, refused to enter into a discussion on China, and the LTBT thus was signed in 1963 with the question of a further non-proliferation treaty unresolved.

The LTBT was signed in Moscow on August 5, 1963, by the U.S., the UK, and the USSR, with article III specifying that the treaty was open to all states for signature. One week earlier, on July 31, the PRC had rejected participation in the treaty in no uncertain terms, calling it a “sell out” by the Soviet authorities that would willingly allow the United States to gain nuclear superiority, reiterating the right of “peace-loving” countries to increase their defense capabilities, charging U.S.-Soviet collusion against China, and proposing a world summit meeting at which complete nuclear disarmament would be discussed. The Chinese statement called for an Asian nuclear-free zone that for the first time explicitly would include the USSR as well as the United States.

Following signature of the LTBT, Chinese public diplomacy continued in this vein.

China thus remained on the table for American policymakers as the nation went through the trauma of the Kennedy assassination in November 1963 and the transition to the new administration of Lyndon B. Johnson.

Some scholars have argued that the U.S. was seriously considering options in late 1963 and 1964 to militarily disrupt the Chinese nuclear program—an early form of proactive, military counter-proliferation. A more accurate description of the secret interagency deliberations at that time appears to point in the direction of military options being considered among a full range of alternatives but being eliminated fairly early as a serious choice, in favor of diplomatic approaches. On April 17, 1964, W. W. Rostow forwarded to the President a short summary of a major planning exercise conducted over the past year on an interdepartmental basis, led by

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91 The author bases this conclusion on a study of the archival record and on discussions with McGeorge Bundy and Carl Kaysen in the mid-1990s, years after the event.
92 For a description of Sino-Soviet relations at the time, see William Taubman, Khrushchev: The Man and His Era (New York, 2003), p. 605.
93 Director of Intelligence and Research, Department of State, Intelligence Note: Peiping Officially Rejects Test Ban Treaty, July 31, 1963. John F. Kennedy Library, National Security Files, Box 265.
95 Author’s discussion with Robert Johnson, Washington, May 1995. Robert Johnson was the State Department official who led the interagency task force that produced the options for responding to China’s acquisition of nuclear weapons.
Robert Johnson of the State Department policy planning council (then the name for the policy planning staff). The first question identified in the summary was: “Should the U.S. engage in pre-emptive military action against identified ChiCom nuclear facilities?” The conclusion was that military action “would be undesirable except as part of military action against the mainland in response to major ChiCom aggression.” Instead, the recommendation was to adopt a broad-based diplomatic strategy including assuring Asian states that they would not be threatened by China’s acquiring the bomb.96

The United States continued to monitor nuclear testing preparations at Lop Nur in the Xinjiang desert in remote northwest China.97 On June 16, 1964, and again on July 23, the committee of principals discussed the impending Chinese test and its implications for further proliferation. India now began to receive attention that was largely absent a year earlier, as evidenced in a draft position paper prepared by ACDA for Secretary Rusk, summarizing the principals’ main points:

The detonation of a Chinese Communist nuclear device will put great pressure on India to make a national decision to develop nuclear weapons of its own. The development of nuclear weapons by India would be a serious—perhaps irreparable—break in the political and psychological barrier which now restrains proliferation. The U.S. should make every effort to prevent such a development, including the consideration of the possibility of appropriate security arrangements.98

In fact, at the meeting of the principals on June 16, Rusk had been even more pointed in his comments. The U.S. government did not have a settled position, Rusk argued, as to whether to oppose other nations from acquiring nuclear weapons once China went nuclear, which led to the question of whether anyone had seriously looked at the possibility of giving India nuclear weapons once China had them. William Foster, head of ACDA, responded that he knew of no such detailed look but believed it would be preferable to provide India with defenses or to extend a deterrent to nuclear attack to the Indians, rather than transferring nuclear weapons into Indian hands.99 The discussion ended inconclusively.

On October 15, 1964, Washington learned that Khrushchev had been removed from power. Washington had no warning of this leadership change. One day later, October 16, the Chinese exploded a nuclear device at Lop Nur. The Chinese test had been anticipated although American officials were uncertain when it would occur. One month earlier, on September 29, Secretary Rusk had issued a public statement calling attention to the fact that the U.S. believed that the Chinese would conduct a nuclear test in the near term, deploring nuclear testing that endangered public health (the first Chinese test was expected to be atmospheric), and declaring that the

97 The best description of the early Chinese nuclear program continues to be John Wilson Lewis and Xue Litai, China Builds the Bomb (Stanford University, 1988).
United States had taken the acquisition of nuclear weapons by China “into full account in determining our military posture and our own nuclear weapons program.”

Two days after the Chinese test, President Johnson went on radio and television to address the nation and the world from the White House. He discussed two things: the change of leadership in Russia and the Chinese test. The president cautioned that China could not be considered to be simply another nuclear power. “Whatever their differences,” he stated, the other four nuclear weapons powers “are sober and serious states, with long experience as major powers in the modern world.” He contrasted this with the Chinese, adding: “The nations that do not seek national nuclear weapons can be sure that if they need our strong support against some threat of nuclear blackmail, then they will have it.”

The Chinese test coupled with change in the Soviet leadership catalyzed action within the U.S. government. An interagency group chaired by Llewellyn “Tommy” Thompson already was examining how to deal with Indian ambitions once China went nuclear, but it had been difficult to achieve within the interagency a concentrated approach to non-proliferation, in no small part due to the MLF and the different factions that viewed it as either a dispensable barrier to a non-proliferation agreement (e.g., ACDA) or as a necessary step to retain German allegiance and to continue to work toward European integration (e.g., many Europeanists in State). President Johnson now took the question out of the interagency. He asked his national security adviser, McGeorge Bundy, to arrange for a higher-level, harder look at the nuclear proliferation problem, specifically mentioning former defense secretary Roswell Gilpatric as a preferred chairman for a group of outside consultants. Gilpatric agreed to lead the group and was joined by nine other senior figures outside of government. Spurgeon Keeny, a member of McGeorge Bundy’s NSC staff, was designated staff director and the commission’s instructions were conveyed in National Security Action Memorandum (NSAM) 320, dated November 25, 1964. The committee was directed to examine the means to prevent the spread of nuclear weapons “in its broadest ramifications” and to report to the President by the end of January 1965.

The Gilpatric commission held three plenary meetings on December 1, December 13-14, and (in 1965) on January 7-8. While the commission was pursuing its work, Secretary Rusk met in early December with the Soviet foreign minister, Andrei Gromyko, in New York at the 19th Session of the UN General Assembly. Gromyko raised the subject of non-proliferation, noting that the Americans knew the Soviet position on the matter and stating that the new Soviet government attached great importance to the question. Rusk responded in general terms but was non-committal on specifics since the American position still was under review. Four days later, on

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101 Office of the White House Press Secretary, Address of the President on Nationwide Radio and Television from the President’s Office at the White House, October 18, 1964.
102 The members of the Gilpatric commission, in addition to the chairman, were Arthur Dean, Allen Dulles, General (ret) Alfred Gruenther, George Kistiakowsky, John McCloy, James Perkins, Arthur Watson, William Webster, and Herb York.
December 9, Foreign Minister Gromyko came to Washington to meet with the President. An extended discussion of non-proliferation ensued with each side expressing their concerns: Moscow’s raising issues regarding Germany and nuclear weapons, the U.S. determined to do whatever it could to prevent other countries from following the Chinese example. Neither side had fresh proposals to make and the meeting again ended inconclusively.¹⁰⁵

On January 21, 1965, the Gilpatric commission met with President Johnson to deliver their report. The commission, starting from a diversity of views, had agreed unanimously in the end that it was in the overriding national interest of the United States to seek to prevent the further spread of nuclear weapons to other nations. The commission recommended policy efforts of three kinds:

- “negotiation of formal multilateral agreements;
- “the application of influence on individual nations considering nuclear weapons acquisition, by ourselves and in conjunction with others;
- “example by our own policies and actions.”¹⁰⁶

Perhaps most importantly for what later transpired, the Gilpatric commission concluded that the German problem could be finessed and that compromises could and should be made on the MLF. With the President committing himself to achieving a multilateral non-proliferation treaty in the ongoing negotiations at the Eighteen-Nation Disarmament Committee (ENDC) in Geneva, and with his willingness to compromise on the matter most clearly at the heart of the Soviet concern—Germany—an agreement was possible in the opinion of Roswell Gilpatric and his fellow commissioners. The ramifications for Germany would be painful but manageable was their conclusion—a conclusion joined in by two commission members who were recognized by the West Germans as good friends, Alfred Gruenther (a former supreme allied commander in Europe) and John McCloy (the former high commissioner for Germany).

President Johnson took the commission’s advice under consideration. He was absorbed in early 1965 with the escalating crisis in Vietnam. He also was aware that German national elections were scheduled for September 1965, and he continued to review options for managing the problem of MLF as it impacted on German concerns. A new NIE published in April 1965 continued to stress that unless managed correctly, failure to achieve adequate nuclear sharing arrangements with Germany “may lead them eventually to consider alternative nuclear policies.”¹⁰⁷

Prime Minister Harold Wilson and Chancellor Ludwig Erhard met separately with Johnson as the year progressed. The British now were giving priority to a non-proliferation treaty. In a

briefing paper prepared by the State Department for the Erhard visit in June, Johnson was cautioned:

A number of Germans continue to be concerned that the U.S. has slid away from the MLF. In discussions with the British in January and February of this year, the Germans emphasized the importance they attach to the MLF concept but made clear that they do now wish the issue to be brought to a head before the September election because of its possible repercussions in terms of a split within the CDU.  

During Erhhard’s visit to Washington, the president and the chancellor discussed the proposal that McNamara recently had made to establish a nuclear planning group of key NATO defense ministers including the Germans. This would replace a more informal group that he had created in May 1965. The MLF issue was left unresolved. After the German elections in September, where Erhard again won, the German government continued to press for some variant of the MLF.

It is a testimony to Lyndon Johnson’s personal skills as a political leader that scholars still cannot pin down precisely when he made the decision to abandon the MLF concept. George Bunn, general counsel of ACDA at the time, who would become one of the chief American NPT negotiators, believes that the turning point came in the summer of 1966 when the Senate adopted a resolution introduced by Senator John Pastore, chair of the powerful Joint Committee on Atomic Energy, urging the president to conclude a non-proliferation treaty.

Senate hearings on the Pastore amendment made it clear that the joint committee remained opposed to transferring nuclear weapons. There still was no consensus in NATO on a collective approach to nuclear forces. The Soviets were hinting that if the Americans would abandon the MLF, they would soften their opposition to some form of bilateral arrangement under NATO auspices for American nuclear sharing and consultation with the Germans. It was in this context that Johnson appears to have decided to let the MLF concept die from inattention, to pursue dual-key arrangements and the nuclear planning group as the sharing arrangement for Germany, and to put the full force and prestige of his presidency behind achieving a non-proliferation agreement. “The first recorded indication I found of Johnson’s changed view,” Bunn writes, “was his effusive June 13, 1966 letter congratulating Pastore on the passage of his resolution.”

On August 17, 1965, the United States submitted a draft non-proliferation treaty to the ENDC. The Soviets tabled a competing draft on September 24, arguing that the greatest danger to proliferation was posed by the MLF or any such concept (to include the British variant, the Atlantic nuclear force, ANF). By the second half of 1966, however, as the Americans let the MLF concept slip away, the U.S. and Soviet positions began to converge and on August 27, 1967, the Americans and Soviets submitted separate but identical drafts, representing closure on Article I (the non-transfer clause). A joint draft incorporating the views of other parties was

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110 George Bunn, Arms Control by Committee: Managing Negotiations with the Russians (Stanford University, 1992), p. 73.
ready by March 1968 and with further minor adjustments, was submitted to the First Committee of the General Assembly on May 31, 1968. On June 12, the General Assembly approved a resolution endorsing the text and recommended that it be opened for signature. France abstained, stating that it would not sign the treaty, but promised that it would conform its behavior in the future as if it were a member of the treaty regime.\textsuperscript{111}

The NPT was signed in Washington, London, and Moscow on July 1, 1968. However the Soviet invasion of Czechoslovakia shortly thereafter delayed entry into force of the treaty until March 5, 1970, as well as commencement of the bilateral U.S.-Soviet strategic arms talks, to be discussed in the next section. The Non-Proliferation Treaty (due to a clause inserted by Italy at the urging of West Germany) was of twenty-five years duration, with a deliberate decision needed at the twenty-fifth anniversary whether it would remain in force indefinitely, would be extended for an additional fixed period or periods, or (by implication) would be allowed to expire.

Review conferences convened every five years. In the preamble to the NPT, language had been inserted to recall the determination of the parties to the 1963 LTB T to continue negotiations to achieve a “discontinuance of all test explosions of nuclear weapons for all time and to continue negotiations to this end.” The 1980 and 1990 NPT review conference failed because of lack of progress toward that end.\textsuperscript{112} It has been an issue at every other review conference. The 25\textsuperscript{th} anniversary of the NPT was in 1995, and at the review conference held that year, it was continued indefinitely. A review conference was held in 2000, and as this paper is being completed, the seventh five-year review conference for the NPT is about to convene in New York.

Since 1970, a broad regime addressing nuclear-nonproliferation has grown up, anchored by the NPT and the IAEA safeguards agreements and consequent inspections. The NPT regime was severely stressed in the early 1990s with the revelations subsequent to the First Gulf War of the covert Iraqi nuclear program, again in 1998 when India and Pakistan openly tested nuclear weapons, and today in the aftermath of revelation of the A. Q. Khan black-market network and with the challenges posed by North Korea and Iran. The NPT regime also has increased in importance to the United States because of the contemporary threat posed by global terrorists seeking nuclear weapons. Testifying to the Subcommittee on International Terrorism and Non-Proliferation of the House Committee on International Relations, Assistant Secretary of State Stephen Rademaker reaffirmed the importance of the NPT for the United States:

\begin{quote}
The President’s National Strategy to Combat Weapons of Mass Destruction lays out a comprehensive approach for countering the threat that the world’s most destructive weapons could fall into the hands of the world’s most dangerous regimes or terrorists. In doing so, the National Strategy recognizes the valuable contribution of multilateral arms control and nonproliferation regimes to international peace and security. The Nuclear Non-Proliferation Treaty (NPT) serves as a critical legal and normative barrier to nuclear proliferation.\textsuperscript{113}
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Strategic and Theater Nuclear Arms

The strategic arms talks between the United States and the Soviet Union that began in 1969 were unprecedented. They went to the heart of each nation’s defense and military strategy, addressing the military forces that arguably were most important to each state at the time. In the 1950s, leading Western defense intellectuals were highly skeptical that there ever would be meaningful nuclear arms control. Writing in 1957, Raymond Aron expressed a view common to many:

> The impossibility of disarmament springs first of all from the irreversible facts created by developments during the ten years since Hiroshima. In 1946 the question was how to avoid the clandestine manufacture of atom bombs. Today, each camp possesses a stockpile of bombs sufficient to devastate the other’s territory: the question now is, or ought to be, how to guarantee the destruction of the existing stockpiles. And to this question there is at present no answer. Neither of the two great powers will destroy its own for fear of putting itself at the mercy of its rival should the latter break its pledge. In the foreseeable future, two states at least will possess the means to lay waste to every city on the globe.\(^{114}\)

What made it possible for strategic arms control negotiations to begin in 1969, to result by 1972 in an interim agreement on offensive forces and a permanent treaty on strategic defenses, and then to transition to a negotiating process that continued through and beyond the Cold War? At least four factors appear to be at play from the American perspective: the chance that the Soviets finally were serious negotiating partners; a new attitude toward verification based in part on the technical breakthroughs associated with space-based intelligence systems; a new theory of how to address the nuclear balance, centered around the concepts of crisis and arms race stability; and the acceptance of a doctrine of military sufficiency in the United States (driven in part by the realities of domestic politics and the backlash to the war in Vietnam). Before discussing the negotiations, it is worth briefly reviewing each of these factors.

As has already been discussed, much if not most of the arms control negotiations of the 1950s were largely conducted for purposes of political warfare and public diplomacy: to convey the message that one was serious about arms control while not expecting any substantive results. The first national intelligence estimate on Soviet attitudes toward arms control, SNIE 11-6-58, was produced in June 1958, written by Raymond Garthoff who, since December 1957, had been working in the office of national estimates, then chaired by Sherman Kent.\(^{115}\) Garthoff argued that the Soviets had incentives for arms control over and above propaganda, a judgment he recalls in his memoirs “which provoked some military opposition and a strong Air Force Intelligence dissent from the judgment that the Soviet Union would consider arms control and reduction agreements that could curb its pursuit of military superiority.”\(^{116}\)

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116 Garthoff, *A Journey through the Cold War*, p. 46.
As late as November 1969, when strategic arms talks finally began, the head of the American delegation to the talks, then ACDA director Gerard Smith, reports in his memoirs that his written guidance from President Nixon specified that his initial purpose was “to determine whether it is feasible to make arrangements with the Soviet Government that will contribute to the preservation and if possible, the improvement of this country’s security.”\(^{117}\) Henry Kissinger, Nixon’s new national security adviser, offers a slightly different slant:

The first official session of SALT was to begin in Helsinki on November 17, 1969. As we examined the various building blocks and the absence of any governmental consensus it seemed to me wisest to treat the session as exploratory. We did not want to give the Soviet Union an opportunity to score a propaganda coup, or risk failure by putting forward clearly unacceptable proposals.\(^{118}\)

The business-like way the Soviets approached the early strategic arms talks, the composure and conduct of the chief Soviet negotiator, Vladirmir S. Semeov (at the time a senior deputy foreign minister), and the stature of the Soviet officials assigned to the negotiations such as Colonel General Nikolai Ogarkov for the first three sessions (Ogarkov would go on to become chief of staff of the Soviet armed forces), were some of the evidence Smith drew upon in reporting back to Nixon his judgment that the Soviets were serious about the talks. Interestingly, Gerard Smith recalls that the Soviets also were unsure initially whether the Americans were serious. He writes:

Before the talks started Soviet Ambassador Dobrynin and I had agreed that they would be private and there would be no press back-grounding. The commitment to privacy was respected throughout the talks, with the exception of some notorious leaks out of Washington. This unprecedented ability of Americans to keep their mouths shut did much to convince the Soviets that SALT was a serious negotiation. Semenov said so several times.\(^{119}\)

The second major factor in the American decision to seriously pursue strategic arms control involved the issue of verification, an important element in American policy since the initial presentation of the Baruch Plan. As the nuclear arms race had unfolded in the early 1950s, President Eisenhower grappled with the problem of the threat of surprise nuclear attack by the Soviet Union. In March 1954 Eisenhower had asked the Science Advisory Committee of the Office of Defense Mobilization to form a panel to study U.S. technological capability to reduce the threat of surprise attack. The result was the formation of the Technological Capabilities Panel led by James R. Killian, Jr., president of MIT. The Killian panel interpreted its mandate broadly and reported back to the president in February 1955 with a broad set of recommendations addressing such things as pursuing an intercontinental ballistic missile (ICBM) as a matter of the highest national priority and arming American air defense forces with nuclear-armed interceptor missiles as their primary armament.\(^{120}\)


\(^{118}\) Henry Kissinger, *White House Years* (Boston, 1979), p. 149.

\(^{119}\) Ibid., p. 78.

More to the point on intelligence for preventing surprise attack, Eisenhower’s interaction with Killian during the panel’s deliberations had convinced the president to approve a crash, highly secret program for developing a strategic reconnaissance capability against the USSR, the initial outgrowth of which was the U-2 program begun in November 1954.\textsuperscript{121} and—subsequent to the Soviet launch of its first ICBM in 1957—the CORONA photoreconnaissance satellite program begun in February 1958.\textsuperscript{122} Eisenhower already had proposed the open-skies initiative at the 1955 Geneva summit (as discussed earlier), and in April 1958, proposed an international meeting of technical experts to explore measures that might safeguard against surprise attack. The resulting ten-nation surprise attack conference that met in Geneva from November 1958 to January 1959 ended with no agreement.\textsuperscript{123}

An American U-2 first flew over the Soviet Union on July 4, 1956, and flights continued until May 1, 1960, when (as discussed earlier) the Soviets successfully shot down the aircraft and captured its pilot, Francis Gary Powers. Manned reconnaissance deep into Soviet airspace ceased. After a long series of failures, a CORONA satellite finally returned film to earth on August 19, 1960, ironically, the same day that Powers was sentenced in Moscow to ten years in a Soviet prison. By 1961, CORONA missions routinely were producing intelligence that had dispelled the fear of a missile gap in favor of the USSR. And for the purposes of this paper, as Ernest R. May has written in his review of the contribution of CORONA to American intelligence, “CORONA, by creating certainty regarding numbers of deployed missile launchers, made it practicable for the United States to propose negotiated agreements limiting that category of strategic weapons.”\textsuperscript{124} The United States could approach arms control relying on what would come to be called ‘national technical means’ of verification, providing assurance (as had been sought since the Baruch Plan) that violation of an arms control agreement could be detected in sufficient time to take corrective action.

The third factor that made strategic arms control attractive to the United States was the growth in the early 1960s, first within academic circles and then brought into government deliberations, of a theory of arms control that viewed negotiated measures to stabilize the nuclear balance—to cap the arms race and to direct it in stabilizing directions—as a major objective for arms control, indeed, as a more important objective than actually reducing or eliminating nuclear weapons. The 1960 Cambridge summer study on arms control and the 1960-61 Harvard-MIT faculty seminar on arms control resulted in several publications that captured the thrust of the emerging theory.\textsuperscript{125} These views were brought into the Kennedy administration in 1961 and by the time

\textsuperscript{121} For a good political history of the U-2 program, see Michael R. Beschloss, \textit{Mayday: The U-2 Affair} (New York, 1986).

\textsuperscript{122} Details of the CORONA program, and the codename itself, were not declassified until 1995. On the CORONA program, see Dwayne A. Day, John M. Logsdon, and Brian Latell, eds., \textit{Eye in the Sky: The Story of the CORONA Spy Satellites} (Washington, 1998), and Philip Taubman, \textit{Secret Empire: Eisenhower, the CIA, and the Hidden Story of America’s Space Espionage} (New York, 2003).


\textsuperscript{125} The results of the 1960-61 studies are most readily available in the Winter 1960/61 special issue of \textit{Dædalus} entitled “Arms Control”; in Donald G. Brennan, ed., \textit{Arms Control, Disarmament, and National Security} (New York, 1961); and in Schelling and Halperin, \textit{Strategy and Arms Control}, op. cit.
the strategic arms talks finally began in 1969, provided a conceptual framework that would dominate the American approach to the strategic arms control process for the rest of the Cold War.

The fourth major factor was the character of the arms race itself. In 1962, at the time of the Cuban missile crisis, the United States had a pronounced advantage in strategic offensive nuclear forces relative to those of the Soviet Union. One of the effects of the Cuban missile crisis on the Soviets was to reinforce the determination in Moscow to at least match, if not exceed, America’s long-range nuclear offensive capability. Although American experts would continue to debate through the end of the Cold War whether strategic parity or superiority was the Soviet aim (a major question from the perspective of how to approach arms control negotiations), the facts on the ground were the same by the late 1960s, namely, a massive and growing Soviet offensive arms program across the board.

McNamara had capped U.S. force levels unilaterally at 1,000 Minutemen missiles, 54 Titan missiles, and 656 submarine-launched ballistic missiles (SLBMs). He also had set in motion a reduction of the American bomber force to about 400 B-52s. The rationale behind these decisions involved an assessment that the U.S. had more than enough strategic striking power to insure a robust second-strike capability, that U.S. technology, as reflected for instance in multiple independently targeted reentry vehicles (MIRVs) for its strategic missiles (a capability first flight-tested in August 1968) could preserve America’s technology lead, and that the Soviets could over time be led to accept the logic of mutual assured destruction.

In 1965, the Soviets had fewer than 200 ICBMs and 100 SLBMs. However, by 1969 their forces were growing at 200-300 launchers a year and were projected to overtake the U.S. force levels by 1971. By the time of Nixon’s inauguration, the politics of Vietnam had created a congressional environment hostile to any major military expansion. Thus strategic arms control appeared attractive as a means of avoiding what otherwise might become a pronounced Soviet offensive nuclear advantage in numbers of strategic offensive arms.

The Soviets clearly continued to respect American technology. Both countries had been pursuing ballistic missile defense programs since the late 1940s. In 1962 the Soviets began construction of its first antiballistic missile (ABM) sites around Moscow while it pursued testing of the system to be deployed initially at those sites but, potentially, nationwide. Meanwhile, the United States had an intense ABM research and development program underway. The Soviets could not be assured that over time, this program might not be deployed and that American technology and resources might not trump those of the Soviet Union.

Thus the stage had been set by the mid-1960s for strategic arms control. In 1964, when it still had a pronounced lead in deployed strategic systems, the Johnson administration proposed a freeze on strategic nuclear vehicles that would have preserved the American lead. This was summarily rejected by Moscow. At this point, the discussions on strategic arms, largely conducted at Geneva at the ENDC, remained much in the mode of many of the 1950 initiatives, 126 Pavel Podvig argues that the Soviet goal was strategic parity with the United States, begun prior to 1962 but reinforced by the outcome of a crisis where the strategic superiority of the United States was clearly demonstrated. See Pavel Podvig, ed., Russian Strategic Nuclear Forces (MIT, 2001), pp. 5-6.
i.e., offer something that either you intended to do anyway (such as the various American proposals to cut production in fissile materials) or that would preserve your advantages (the freeze proposals), and that would resound to your benefit even if rejected by the other side.

On January 27, 1966, the ENDC met in Geneva for the first of two sessions to be held during the year. This was the venue for the NPT negotiations and William Foster, then head of ACDA, led the American delegation. As the session began, Foster tabled a seven-point program for the U.S. that included a freeze on numbers and characteristics of offensive and defensive strategic nuclear delivery vehicles. The Soviets opposed the American initiatives, in Geneva and in the discussions held in Washington with Soviet ambassador Dobrynin. But on March 17, 1966, on the margins of the talks in Geneva, the Soviets indicated to Foster that they wished to discuss the question of limiting ABMs. Foster reported back to Secretary Rusk, Rusk took the matter to the White House, and the next day—with the President’s blessing—Rusk told Dobrynin in Washington that the United States would be glad to discuss the matter quietly with the Soviets on a bilateral basis. Nothing transpired and in a meeting in Washington in December 1966 between Dobrynin and ambassador-at-large Llewellyn Thompson, Dobrynin again raised the issue, this time saying that the ABM question could be considered together with the problem of offensive strategic nuclear delivery systems (SNDVs). Dobrynin said he intended to take the matter up with Brezhnev and Kosygin immediately upon his return to Moscow. Things continued to move slowly.

As bilateral U.S.-Soviet talks in Geneva on the NPT matured in late 1966 and early 1967, the U.S. began pressing the Soviets on the importance for purposes of securing global participation in an NPT regime, of the two superpowers being engaged in serious negotiations on their own nuclear forces. The Soviets were unresponsive, apparently reflecting uncertainty at the highest levels in Moscow on how to proceed. Following a strategy meeting at the LBJ ranch in Texas in November, McNamara had announced publicly that the Soviets had begun deploying the Moscow ABM system. Pressure mounted in Congress for an American response. In a meeting with the president in December 1966, his senior national security advisers were at odds on whether to begin deploying the American ABM program. The Joint Chiefs of Staff (JCS) favored a large deployment starting immediately. McNamara, who initially had favored an ABM deployment, by now was convinced that an offense-defense arms race was pointless and would not improve American security. LBJ deferred decision.

On March 16, 1967, still uncertain whether Moscow would agree to strategic arms talks, Secretary Rusk directed his under secretary of state for political affairs, Charles Bohlen, to form an interagency committee to examine ACDA proposals on controlling the strategic arms race. In his report to Rusk in April 1968, Bohlen reported that the views he was recommending had the full approval of Ambassador Thompson and the assistant secretary of defense for international security affairs. They concurred that the point of the talks should be as follows.

The main aim of the U.S. in engaging the Soviets in negotiations on strategic missiles would be to reach an agreement which would maintain a stable U.S.-Soviet strategic

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128 Ibid., p. 407.
The declassified record is unclear on what Rusk did with the memorandum. By mid-1967, the negotiations on the NPT were serious and intense. Pressure also was building on the Johnson administration to press ahead with ABM deployments, led by congressmen responsive to the JCS arguments. And the Vietnam war was raging. In June 1967, at a hastily convened summit at Glassboro, New Jersey, Johnson had McNamara present to Kosygin the American views on nuclear stability and on the merits of banning ABM systems. Kosygin, reportedly unprepared for the discussions, countered that defending one’s homeland was natural. With the presidential campaign of 1968 approaching and with ABM sure to be an issue, President Johnson in August 1967 decided to proceed with deployment of the Sentinel ABM system, using the strategic rationale that it would protect the United States from the emerging Chinese threat and from small unauthorized or accidental launches (it could not defend against a full-scale Soviet attack). Secretary McNamara announced this decision in a speech at San Francisco on September 18, 1967.

Two months later, in the annual parade in Red Square in November, the Soviets publicly displayed for the first time their SS-9 missile. This was the first of the ‘heavy’ Soviet ICBMs that would dominate many of the subsequent negotiations. In 1968, as negotiations on the NPT approached closure, the Johnson administration stepped up the pressure on Moscow to set a date for beginning strategic arms talks. Finally in late June, the Soviets agreed. When the NPT was opened for signature on July 1, 1968, Washington and Moscow announced that bilateral strategic arms talks would begin later in the year.

As mentioned earlier, the Soviet invasion of Czechoslovakia in August 1968 placed much of the arms control agenda on hold. In November, with Vietnam war protests raging domestically, Richard Nixon defeated Hubert Humphrey for the presidency. The beginning of the strategic arms negotiations thus was left to the incoming Nixon administration.

The strategic arms talks that began informally on the margins of the ENDC in January 1966 and transitioned to formal negotiations in November 1969, resulted in a number of agreements: the interim agreement on strategic offensive arms, better known as SALT I, and the Anti-Ballistic Missile Treaty (1972); SALT II (signed in 1979, never entered into force); the treaty on intermediate-range nuclear forces, or INF (signed in 1987, entered into force in 1988); the strategic arms reduction treaty, or START I (signed in 1991, entered into force in 1994); START II (signed in 1993, never entered into force); and the treaty of Moscow, also known as the treaty on strategic offensive reductions, or SORT (signed in 2002, entered into force 2003). Of these treaties, INF, START I, and SORT still are in effect. INF is a treaty of indefinite duration. START I is a 15-year treaty that will expire on December 5, 2009, unless superseded earlier by a subsequent agreement, with the caveat that the parties are required to begin discussions no later

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129 Memorandum from the Deputy Secretary of State for Political Affairs (Bohlen) to Secretary of State Rusk, Washington, April 5, 1968, FRUS, 1964-1968, Vol. XI, p. 565.
than one year before expiration to consider whether to continue the treaty. The treaty of Moscow (or SORT) remains in force until December 31, 2012, and may be extended by agreement of the parties or superseded earlier by a subsequent agreement.

The story of the strategic and theater nuclear arms negotiations is complex and the related American archival materials that document the development of American policy are massive and still largely classified. One thus depends in reconstructing the twists and turns of American policy in this area, primarily on open sources such as memoirs and oral histories, on the impressive body of secondary literature that developed for nuclear arms control, and on the public portions of congressional testimony during ratification debates. Primarily for that reason, this section will not attempt to trace the evolution of U.S. policy on strategic and theater arms control in the detail used in the preceding sections on the Baruch Plan, nuclear testing, and the NPT. Instead, it will summarize the several major agreements with the Russians from the early 1970s to today.

There are a number of good surveys of the topics addressed in this section, for instance, Forrest Waller’s chapter-length essay in a recent college text on arms control,130 David Thomson’s book first written for the Los Alamos National Laboratory staff but now available to a wider audience,131 the introductory essays for each treaty included in the Graham-LaVera compendium of treaties,132 and the treaty-specific essays in the Naval Postgraduate School-Monterrey Institute Weapons of Mass Destruction encyclopedia.133 There also are excellent analytic studies such as the 1985-1986 “Learning from Experience with Arms Control” project conducted at Harvard’s John F. Kennedy School of Government for ACDA (and later updated to include the INF treaty);134 the book by Abram and Antonia ‘Toni’ Chayes resulting in part from their examination of the workings of the Standing Consultative Commission (SCC) established by the SALT agreements;135 and the compendium of essays published in the Winter 1991 issue of Daedalus, in honor of the special issue published in late 1960 on arms control (cited earlier in this paper).136

The major agreements on strategic and theater nuclear arms reached with the Russians are the following.

- **ABM Treaty.** The first major bilateral nuclear arms control treaty between the U.S. and the Russians was the anti-ballistic missile (ABM) treaty, signed at the Moscow summit in May 1972. This turned out to be one of the most controversial national security agreements in American history. The ABM treaty and its subsequent protocols were intended to ban nationwide ballistic missile defense. The complicated provisions of the treaty addressed a range of restrictions. The treaty did not include

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132 Graham and LaVera, Cornerstones of Security: Arms Control Treaties in the Nuclear Era, op. cit.
verification measures beyond “national technical means of verification . . . [used] in a manner consistent with the generally recognized principles of international law” (article XII). In 1985, in an effort to pursue testing in the strategic defense initiative (SDI) program, the Reagan administration attempted a ‘broad interpretation’ of the treaty, arguing that no agreement existed in 1972 limiting the testing of ABM elements that use future technologies (‘other physical principles’). Congress dissented and included language in the 1988 defense authorization bill that effectively denied funding for tests inconsistent with the narrower, more traditional interpretation of what was permitted. During much of the latter part of the Cold War, there was a debate in the United States whether the Soviets was violating the ABM treaty, e.g., in its construction of a large, phased-array radar with early warning capabilities near Krasnoyarsk, Siberia. After years of disagreement, Russia finally agreed to dismantle the Krasnoyarsk radar. In 1985, as part of the umbrella talks that began with the Soviets after Gorbachev came to power, potential revisiting of the ABM treaty regime was addressed in the defense and space talks (DST) in Geneva. After the demise of the Soviet Union, the Clinton and George W. Bush administrations discussed possible amendment of the ABM treaty with the Russians. With no fundamental progress in such talks, President Bush announced in December 2001 that the U.S. was giving the required six-month notification that it would exercise its ‘supreme national interest’ clause and withdraw from the treaty. The ABM treaty expired in 2002 without the dire consequences, at least in the short run, forecast by many critics of the decision to terminate the treaty.

- **SALT I.** SALT I (the interim agreement on certain measures with respect to the limitation of strategic offensive arms) resulted from negotiations that began in November 1969 and continued through the Moscow summit in 1972. In these talks, the Russians first attempted to define ‘strategic’ to include American nuclear-capable systems that were forward deployed, chiefly at sea and in NATO Europe. When the U.S. rejected this approach, the Russians attempted to get a stand-alone ABM treaty and threw up obstacle after obstacle to negotiating on offensive strategic nuclear arms. President Nixon’s national security adviser, Henry Kissinger, shifted the offensive arms talks into his back-channel in the final phases of negotiations and made the compromises needed to get an agreement. The SALT I offensive arms agreement signed at the Moscow summit in May 1972 as a companion to the ABM Treaty was not a formal treaty but, as the name implies, an interim instrument intended to be in force for five years while a formal treaty was concluded. SALT I essentially froze the number for American strategic offensive forces at the level they were at in 1972—1054 ICBM launchers and 656 SLBM launchers (this could rise to 710 SLBM launchers if the U.S. retired its 54 Titan ICBM launchers). The Soviets were allowed to build to 1618 ICBM launchers and, if they retired older ICBMs, to build to a level of 950 SLBM launchers on SSBNs. The agreement also committed the sides not to convert land-based launchers for ‘light’ ICBMs to ones for ‘heavy’ ICBMs, but did not define what distinguished a ‘light’ from a ‘heavy’ ICBM. Although not a treaty, the interim agreement did go through extensive Senate hearings and Senator Henry Jackson led the critics in demanding that future agreements must provide for ‘equal’ levels in strategic arms. SALT I was an
extremely short agreement, consisting of eight articles on two pages—roughly the length of the Treaty of Moscow of 2002. It did not address bombers or other strategic delivery systems like cruise missiles, and did not include intrusive verification measures.

- **SALT II.** In November 1972, negotiations resumed (with a new American delegation) on a formal treaty on strategic offensive arms, to supersede SALT I. The new negotiations, which went through the summer of 1979, proved to be at least as difficult as those from 1969 to 1972. Bombers and cruise missiles now were discussed, the talks had to deal with the reality that the Soviets were pursuing a major MIRV program for their ICBMs, the heavy ICBM issues remained largely unresolved, new Soviet bomber programs such as the Backfire were challenging, and mobile ICBMs became an issue. The U.S. (with Gerald Ford now president and with Kissinger continuing as the principal architect of the American position) finally achieved Soviet consent to a framework for SALT II at the Vladivostok summit in November 1974: namely, aggregate ceilings of 2400 SNDVs (ICBMs, SLBMs, and ‘heavy’ bombers), with a subceiling of 1320 for MIRVed systems (ballistic missiles and heavy bombers armed with air-launched cruise missiles, ALCMs). The incoming Carter administration, reportedly to satisfy Senator Jackson and like-minded critics of the talks, sent the new secretary of state, Cyrus Vance, to Moscow in March 1977 to seek deep cuts from the Vladivostok numbers. The Soviets resisted and negotiations returned to the Vladivostok formula. By the time of the Vienna summit in June 1979, a treaty had been achieved that used the Vladivostok numbers, with a further sublimit of 820 MIRVed ICBMs. The two sides disagreed on issues such as mobile ICBMs and sea-launched or ground-launched cruise missiles (SLCMs or GLCMs), so these issues were relegated to a protocol of limited duration. SALT II was signed at Vienna on June 18, 1979, and submitted by President Carter to the Senate four days later. Ratification proceedings were underway when the Soviets invaded Afghanistan in December 1979. At that time, SALT II was withdrawn from the Senate. The U.S. continued to abide by SALT II until 1986 when it was terminated to accommodate the U.S. program for converting B-52s to carry ALCMs (the U.S. was approaching the 1320 sublimit on MIRVed systems). By the time SALT II expired, the strategic arms reduction talks (START) were underway.

- **INF.** In the mid-1970s, the Soviets began replacing their older, intermediate-range SS-4 and SS-5 missiles with a new missile (SS-20) that was considerably more threatening to Europe. In October 1977, Helmut Schmidt gave a widely publicized speech at the International Institute for Strategic Studies, emphasizing that NATO would face a crisis of confidence if it did not move to counter the SS-20. The issue was taken seriously within the alliance and at a special meeting of defense and foreign ministers in Brussels in December 1979, NATO adopted the two-track strategy of deploying modern American intermediate-range systems (Pershing II missiles and the Tomahawk GLCM) while simultaneously seeking an arms control agreement that might obviate the need for the new NATO deployments. Bilateral U.S.-Soviet theater nuclear force talks had just started when Carter was defeated by Ronald Reagan in November 1980, and were recessed awaiting the new
administration. A number of officials in the in-coming Reagan administration had been highly critical of the arms control approach since SALT I and there thus was a strong undercurrent to change if not halt the process. However, pressures from NATO for the arms control branch of the two-track approach convinced the White House to begin the theater talks—now called INF—in late 1981. The U.S. proposed a ‘zero’ option, i.e., elimination of all the longer-range Soviet theater missile systems (SS-4, SS-5, SS-20) in return for not deploying Pershing II or GLCM. This proposal was announced publicly by President Reagan in a speech at the National Press Club on November 18, 1981, and negotiations began shortly thereafter in Geneva with the American INF delegation now led by Paul Nitze. Negotiations were suspended by Moscow after NATO proceeded with the deployment of Pershing II and GLCM in 1983. The talks resumed in early 1985 as part of the parallel negotiations on START and on defense and space. 137 In early 1987, after the Reykjavik summit, the Soviets de-linked achieving an INF treaty from START, and after several rounds of intense negotiations, INF was signed in Washington in December 1987. INF banned all U.S. and Soviet land-based ballistic missiles and GLCMs in the 500-to-5500 kilometer range band, was of unlimited duration, and was the first such nuclear agreement to include intrusive inspection and other cooperative monitoring arrangements in its verification regime.

START I. As mentioned earlier, the Reagan administration that took office in 1981 was highly critical of the SALT process. President Reagan and his national security team moved quickly to begin an across-the-board rearmament program. The White House was not in a hurry to resume strategic nuclear negotiations. The Soviet crackdown in Poland and internal divisions in the Reagan administration contributed to the delay. In early 1982, President Reagan finally approved the beginning of a new set of negotiations—strategic arms reduction talks (START)—with the aim of forcing deep cuts in the Soviet MIRVed ballistic missile forces that were seen as threatening American ICBM survivability. President Reagan revealed his intent to resume talks in a speech at his alma mater, Eureka College, on May 9, 1982. Negotiations resumed shortly thereafter in Geneva with General (retired) Edward Rowny leading the American delegation. The START negotiations stretched over a number of years through the second Reagan term and into the George H. W. Bush administration, and produced what was one of the most complex treaties in diplomatic history. START I was signed in Moscow in July 1991. It set central limits on U.S. and Russian strategic nuclear forces of 1600 SNDVs, 6000 accountable warheads (with complicated counting rules), 4900 accountable ballistic missile warheads, 1540 accountable warheads on 154 heavy ICBMs, and 1100 accountable warheads on mobile ICBMs. START I included a number of protocols addressing exchange of information, definitions, and the like. It also had an extremely intrusive verification

137 The arms control saga in the early part of the Reagan administration concerns not merely a different official American attitude toward negotiations, but also the problems in Moscow with an aging leadership. Brezhnev, who was visibly failing in the early Reagan years, died in November 1982, to be succeeded by Yury Andropov. Andropov also was ill and died in February 1984, to be succeeded by the geriatric Konstantin Chernenko. Chernenko’s death in March 1985 finally brought Mikhail Gorbachev to power and Gorbachev moved out briskly with arms control initiatives.
Like INF, START applied to some non-nuclear systems (e.g., all ballistic missiles with ranges over 600 km were banned from surface ships). The collapse of the Soviet Union in May 1992 delayed entry into force of START I until after succession and other issues were resolved. Succession was dealt with in the Lisbon protocol of May 1992 that recognized the successors to the USSR for the purposes of START to be Russia, Ukraine, Belarus, and Kazakhstan. START I entered into force on December 5, 1994. It is a treaty of fifteen years duration and thus expires on December 5, 2009, unless superseded by another agreement or extended by mutual consent of the parties. The parties are required to address the issue of extension, meeting for that purpose no later than one year before the expiration date.

**START II.** In June 1992, at a summit with Boris Yeltsin, president of the Russian Federation that came into existence with the collapse of the USSR six months earlier, President George H. W. Bush secured agreement that the two sides would build upon START I to create a new treaty that eliminated all MIRVed ICBMs including all heavy ICBMs, limit the number of SLBM warheads to no more than 1750, and reduce the overall total of warheads for each side to between 3000 and 3500. The U.S. produced a draft treaty text the following month and on January 3, 1993, Presidents Bush and Yeltsin signed a completed treaty (START II) in Moscow. START II eventually was ratified both in the U.S. (1994) and by the Russian Duma (2000), but with conditions that kept it from ever entering into force. When the U.S. gave notice of intent to withdraw from the ABM treaty, Russia formally withdrew its ratification of START II. That, coupled with no intent by the George W. Bush administration to revive the treaty, effectively renders it dead.

**SORT.** On May 24, 2002, the U.S. and Russia signed the treaty on strategic offensive reductions, or SORT (also known as the treaty of Moscow), establishing a limit of 1700 to 2200 ‘operationally deployed’ warheads in each party’s strategic forces by 2012. The formal agreement, done at the urging of the Russians, codifies American reductions initially announced when Presidents George W. Bush and Vladimir Putin met in Crawford, Texas, in November and in Moscow in December 2001. The treaty of Moscow is very short—two pages—much as was SALT I. However, unlike SALT I, SORT relies in part on the START I verification regime. In transmitting the treaty to the Senate on June 20, 2002, the president wrote inter alia: “the Parties will use the comprehensive verification regime . . . of [START] to provide the foundation for confidence, transparency, and predictability in further strategic offensive reductions.”

**Transitioning from the Cold War**

In November 1988, George H. W. Bush defeated Michael Dukakis for the presidency. For ease of discussion, this paper will use the shorthand Bush-41 to distinguish the presidency of George

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H. W. Bush (the 41st president) from the later presidency of his son, George W. Bush (the 43rd president). In December 1988, Gorbachev came to New York to address the United Nations. He used the occasion to announce that the Soviet Union was changing its military doctrine to a more defensive mode, would unilaterally reduce Soviet armed forces by half a million troops over the next two years, and would withdraw several armored divisions from Eastern Europe by 1991. Gorbachev elaborated that the withdrawn units would be disbanded.

Although the transition was from one Republican administration to another, the START talks were recessed in early 1989 while the incoming administration conducted its own security reviews. In early 1989, nobody in a position of authority anticipated the revolutionary events of the next two years: the fall of the Berlin Wall and the collapse of communist regimes in Eastern Europe, the Soviet willingness to withdraw from its external empire without a struggle, a reunified Germany that remained within NATO, and the demise of the USSR.

The Bush-41 administration proceeded cautiously in the first few months of 1989. Gorbachev’s dramatic announcements the preceding December had created a minor crisis within NATO, focused largely on the question of modernizing NATO’s short-range nuclear forces (SNF). In May 1989, NATO heads of state and government met in Brussels to celebrate NATO’s 40th anniversary. At that meeting, they adopted a document called the comprehensive concept of arms control and disarmament, calling for a serious attempt to accelerate the recently started talks on conventional forces in Europe (CFE) and agreeing to defer negotiations on SNF (which the Russians were calling for) until after CFE was completed and implemented. The United States reaffirmed its commitment to complete START. Over the next few months, the politics of SNF modernization, START, CFE, and German unification would be drawn together in a shifting mosaic of talks. So would U.S. preliminary talks with the Soviets on the missile technology control regime (MTCR). Those talks began in Washington in early 1989, then shifted to Moscow in December.

The torrent of change accelerated when, on November 10, 1989, the Berlin Wall fell peacefully. The following month, NATO leaders met again at a summit where the question of German unification dominated the discussions. In the spring of 1990, the Bush-41 administration adopted a fast-paced plan to address European security, drawing NATO’s nuclear forces and strategy into the mix. The ‘two-plus-four’ talks for German unification began in May 1990, shortly before Gorbachev came to Washington for a U.S.-Soviet summit. An important element of the talks was a renewed pledge by the Germans not to develop a national nuclear weapons program. The Washington summit concluded with disagreement on the question of whether a unified Germany would remain in NATO.

As the two-plus-four discussions continued, the Bush-41 administration prepared an initiative for a NATO summit to be held in London in July 1991. The aim was to seek ways to reassure the Russians that a unified Germany in NATO would not threaten their interests—a formidable task. Out of this dynamic came American proposals to radically and unilaterally reduce nuclear forces in Europe if the Soviets would reciprocate, and to soften the tone of NATO’s nuclear declaratory doctrine. At the NATO summit in Rome in November 1991, the allies—with Britain and France reluctantly acquiescing—adopted a new formulation of NATO doctrine that stated that nuclear weapons had, for NATO, become ‘truly weapons of last resort.’
It was in this context that the START I treaty, described in the preceding section, came to closure. START I was signed in Moscow in July 1991. By that time, Russia was in a serious crisis with Soviet authority eroding daily. From January 1991 onward, Soviet domestic politics was overhung with the threat of a military crackdown to arrest the erosion of authority. One month after signature of START, a coup attempt against Gorbachev narrowly failed. Gorbachev never regained momentum. He resigned at the end of the year, the Soviet Union was dissolved, and the Russian Federation was born with Boris Yeltsin as its first president.

The U.S. watched the growing chaos in Russia uneasily. A major question was the security of the large Soviet nuclear archipelago—forces, stockpiles of weapons, research and production facilities, scientists, and the like. In September 1991 and again in January 1992, the president announced initiatives that would reassure the Russians and hopefully would be reciprocated where appropriate. American strategic bombers were taken off nuclear alert, the SRAM II program was cancelled, development of a small ICBM was terminated, and so forth. At theater level, the presidential nuclear initiatives (PNIs) included withdrawing 2400 non-strategic American nuclear weapons from overseas, eliminated all short-range nuclear forces, and withdrawing nuclear weapons from surface ships and attack submarines. At the behest of Senators Nunn and Lugar, the U.S. also launched the cooperative threat reduction (CTR) program to try to help secure and make safe the nuclear stockpiles and facilities of the former Soviet Union. Another major effort was launched to bring Ukraine, Belarus, and Kazakhstan—three states in addition to the Russian Federation that were nuclear successor states for purposes of START—into the NPT as non-nuclear weapon states.

As described in the preceding section, START II was under negotiation while the above was unfolding. It was signed in January 1993, shortly before President George H. W. Bush left office. Although START II achieved a long-standing American arms control objective—eliminating heavy and MIRVed ICBMs—the conditions now had changed dramatically from the Russian perspective. Nevertheless, Boris Yeltsin, president of post-Soviet Russia, agreed to the treaty.

Bill Clinton took office in January 1993 as the first post-Cold War president. American security policy was shifting dramatically to address the circumstances of the new world order. The first Gulf War in the winter of 1990-1991 had renewed emphasis on the threats posed by proliferation of weapons of mass destruction to regional states. During 1993, the Clinton administration began developing a concept of counter-proliferation to supplement the diplomatic agenda of non-proliferation. In a speech to the National Academy of Sciences in December 1993, Defense Secretary Les Aspin announced the counter-proliferation initiative. Strobe Talbott, the Clinton administration’s new ambassador at large in the State Department for the new independent states of the former Soviet Union, and a long-time friend of President Clinton (dating to their days as fellow Rhodes scholars in England), writes in his memoirs that from the beginning of 1993, “Clinton saw strategic arms control as old business—unfinished, worthwhile and necessary, to be sure, but nonetheless not high on his agenda.”

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At the first Clinton-Yeltsin summit in April 1993, at Vancouver, the sharpest U.S.-Russian exchanges reportedly came on Russia’s intent to build a nuclear reactor for Iran—a high-level exchange that Talbott recalls “augured years of trouble ahead.” This was part of the refocusing of the U.S.-Russian arms control relationship. On December 15, 1993, President Clinton named John Holum to head ACDA. Clinton writes in his memoirs:

[I] used the occasion to emphasize my non-proliferation agenda: ratification of the convention controlling chemical weapons, achieving a comprehensive nuclear test ban treaty, achieving permanent extension of the Nuclear Non-Proliferation Treaty (NPT), which expired in 1995, and fully funding the Nunn-Lugar program to secure and destroy Russian nuclear weapons and material.

Another issue that again came to the fore was missile defense. In 1989, prior to the first Gulf War, the U.S. already had refocused its strategic defense programs to emphasize kinetic-kill vehicles and, in February 1990, almost a year prior to the first Gulf War, the president in comments at Lawrence Livermore National Laboratory expressed concern that new missile threats to American interests, beyond those of the Soviet Union and China, were emerging. Iraq’s Scud campaign during the First Gulf War validated these concerns. Increasing chaos in the Soviet Union also raised the concern of unauthorized or accidental launch of a missile. In January 1991, Senators Nunn and Warner cosponsored the Missile Defense Act of 1991 which called for a global protection against launch system (GPALS), a system of 100 ground-based interceptors to be deployed within five years.

In 1993, the incoming Clinton administration emphasized a major theater missile defense (TMD) program while shifting national missile defense (NMD) to a slower track. The 1994 mid-term elections gave the Republicans control of both chambers of Congress and a debate on national missile defense resumed. In 1995, Congress passed a measure for deploying a multi-site, ground-based national missile defense system by 2003. President Clinton vetoed this measure but signed an appropriation bill increasing NMD funding. With missile defense an issue in the 1996 presidential campaign, the Clinton administration announced that it would pursue an NMD readiness program that could deploy defenses within three years once a threat was identified.

In March 1997 at a summit in Helsinki, the U.S. and Russia signed protocols that extended the START II elimination dates, established succession to the ABM treaty, and defined a formula for distinguishing testing of TMD from NMD interceptors. The package came under intense criticism in Congress. By 1998, Congress had established a commission to examine the ballistic missile threat, headed by Donald Rumsfeld. The commission delivered its report in July 1998, contradicting CIA estimates of how rapidly a ballistic missile threat to the continental United States could develop from nations such as North Korea, Iran, or Iraq. One month later, the North Koreans underscored this conclusion by unexpectedly launching a three-stage missile. By January 1999, President Clinton had increased funding for NMD and pledged to make a decision in 2000 for deployment of the first phase of a national missile defense. That would require either withdrawal from or amendment of the ABM treaty. In ongoing talks, the Russians resisted change to the ABMT. At the Helsinki summit, Clinton and Yeltsin also had agreed to START

140 Ibid., p. 66.
force reduction goals of 2000-2500. The ongoing talks began to address whether even deeper cuts might be in order.

North Korea had triggered a crisis in March 1993 when it announced its intention to withdraw from the NPT. This crisis was ongoing when Kim Il Sung, who had ruled North Korea for 49 years, died in July 1994 and a transition began for his son, Kim Jong Il, to take power. The negotiations with the North Koreans resulted in October 1994 in an Agreed Framework arrangement which froze the North Korean nuclear program. That framework later would unravel. Russia would be one party among many (and, indeed, not the most important party) in the multilateral talks that Washington would orchestrate to try to deal with the North Korean nuclear program.

As described earlier, the NPT was extended indefinitely at the 1995 review and extension conference and a CTBT was opened for signature in 1996. Negotiations with Russia were not central to those activities. In May 1997, NATO and Russia signed a ‘founding act’ that sought to engage Russia politically in an ongoing dialogue with NATO. This suffered a serious drawback in 1999 with the conflict in Kosovo.

At the Washington summit in April 1999 to celebrate NATO’s 50th anniversary, NATO adopted a new strategic concept that left basically unchanged the NATO position on nuclear weapons. Coupled with NATO expansion, this triggered new criticism from Russia. Russia at the same time was becoming more reliant on nuclear weapons in its own national security concept. In the Russian bill of ratification for START II finally adopted by the Duma in April 2000, one of the conditions singled out as grounds for Russian withdrawal from the treaty was deployment of nuclear weapons on the territory of the states having joined NATO after the date of signature of START II.

Also in 1999, after 38 years in existence, ACDA was absorbed back into the State Department, under the new position of an under secretary of state for arms control and international security.

In November 2000, George W. Bush defeated Al Gore for the presidency, and the Bush-43 administration took office the following January with the announced goals of reducing nuclear weapons to the lowest level appropriate for a new strategy (to be determined by a new nuclear posture review) and of deploying ballistic missile defenses. As already described in the preceding section, this resulted in withdrawal in 2002 from the ABM treaty and in the treaty of Moscow or SORT.

The defining event for post-Cold War American national security was the terrorist attacks on September 11, 2001, triggering the United States to proclaim a global war on terror. This initially led to closer U.S.-Russian relations but the relations were severely strained by the Iraq war. They also have been strained by the continued dispute over the Iranian nuclear programs and by the threatening signs that Russia under Putin is becoming an increasingly authoritarian state.

The nexus of proliferation of weapons of mass destruction and terrorism has become a defining feature of the Bush-43 approach to proliferation problems and to arms control. While backing
away from the formal arms control agenda that characterized U.S.-Russian relations for much of
the Cold War and for the early post-Cold War era, the Bush-43 policies seek to reinforce and
strengthen the nuclear non-proliferation regime and to extend counter-proliferation efforts. In all
these areas, national security negotiations with the Russians have been submerged into the
broader multilateral agenda.

Assessing the U.S.-Russian Nuclear Arms Control Experience

From the early 1960s onward, many in the American analytic community saw modern arms
control as having three basic objectives: to reduce the risk of war; to limit the damage if war
occurred; and to reduce the costs of armaments. Was the effort successful?

There is a broad (but not total) consensus that the arms control agreements helped stabilize the
superpower competition during the Cold War and helped cultivate the thicket of circumstances
that enabled the Cold War to end peacefully. In that sense, the U.S.-Russian nuclear arms
control experience contributed to reducing the risk of war. Some who embrace this view like
Emanuel Adler argue even more broadly:

We will remember the Cold War for staying cold and ending cold. Its major crises, such as
Cuba and Berlin, will slowly fade from our historical consciousness, as will the
nightmares of Soviet tanks overrunning Western Europe and the memories of all those
resources wasted on an arms race fueled by overblown suspicion and exaggerated threats.
In retrospect, however, the most important legacy of the Cold War—its enduring
contribution to international institutions and order—is the practice of arms control.142

Others disagree. Malcolm Wallop and Angelo Codevilla, for example, argued as the Cold War
was ending that arms control with Russia had detracted from American security.143 This view is
consistent with the effort to quickly get out of the ABM treaty and with the implicit policy to
defer discussions with the Russians on whether START will be extended.

There is little evidence that for all of the efforts made, arms control rendered the nuclear forces
of the two sides significantly less lethal in the event of war. Both sides still have large nuclear
 arsenals capable of destroying one another. The role of nuclear weapons has been reduced in
American defense planning, given America’s unmatched non-nuclear power, but nuclear
 weapons have become even more important in Russian defense planning, given Russia’s
conventional weaknesses.

Has U.S.-Russian arms control saved money? Attempting to answer this question analytically
would involve an almost impossible array of sub-analyses examining tradeoff costs. Many feel
that in the round it did not. Arms control shut off certain avenues but opened others.
Underground nuclear testing, for instance, was more complicated and expensive than open-air

142 Emanuel Adler, “Arms Control, Disarmament, and National Security: A Thirty Year Retrospective and a New
143 Senator Malcolm Wallop and Angelo Codevilla, The Arms Control Delusion: How Twenty-Five Years of Arms
Control Has Made the World Less Safe (San Francisco, 1987).
testing, and even in the absence of nuclear testing, the U.S. remains determined to retain a safe and reliable nuclear stockpile, which means investment in the technical capabilities to certify the nuclear stockpile absent explosive testing. Proponents of the CTBT, like General (ret) John M. Shalikashvili, recognize this reality.\textsuperscript{144}

Were the specific goals of the various arms control negotiations achieved? The Baruch Plan sought to take nuclear weapons out of national hands. That did not happen. Atmospheric nuclear testing has ended and a plausible argument can be made that even if nuclear testing resumes, there will be enormous pressure not to test in the open. So one might conclude that the LTBT was successful over time, although not as a step toward an implemented CTBT since that does not appear likely, at least in the foreseeable future. The NPT regime is under challenge from countries like North Korea and Iran but, arguably, remains the norm. The strategic arms control process, at least from the American perspective, set out to eliminate first and foremost the most destabilizing and threatening ballistic missiles, heavy and highly-MIRVed Russian ICBMs. With the demise of START II, that goal was not achieved. As for INF, it eliminated an entire class of missiles for the U.S. and Russia, but not for other countries like China.

In a broader sense, assessing the success of arms control needs to go beyond the narrow perspective of matching negotiating objectives against outcomes. There are other ways to view the matter.

In the mid-1980s, for example, Albert Carnesale led a research project at the Kennedy School, sponsored by ACDA, to review the results of superpower arms control. He and his colleagues concluded:

\begin{quotation}
What emerges above all is the modesty of what arms control has wrought. Expectations, for better or worse, for the most part have not been realized. The stridency of the debate, however, provides little clue to this modest reality; proponents and critics, liberals and conservatives, hawks and doves—all seem to exaggerate the potential and actual impact of arms control. If the history reveals anything, it is that arms control has proved neither as promising as some had hoped nor as dangerous as others had feared.\textsuperscript{145}
\end{quotation}

This study, which was well received at the time by the director of ACDA, Kenneth L. Adelman, did not of course incorporate the lessons of START. But it did examine a number of hypotheses and reached conclusions that arguably stand the test of time. The study concluded, for instance:

\begin{quotation}
The historical record tends to support the contention that arms control negotiations and outcomes serve to reduce uncertainties in the estimates and projections that each participant makes about the other’s forces. It is somewhat surprising that this aspect receives little attention in public debates about specific negotiations and accords. \textbf{Indeed, reduction of uncertainty and enhancement of predictability may well be the principal contribution of the arms control experience.}\textsuperscript{146}
\end{quotation}

\textsuperscript{144} See General John M. Shalikashvili (USA, Ret.), Special Advisor to the President and the Secretary of State, Findings and Recommendations Concerning the Comprehensive Nuclear Test Ban Treaty, January 2001.

\textsuperscript{145} Carnesale and Haass, \textit{Superpower Arms Control}, 1987, p. 355.

\textsuperscript{146} Ibid., pp. 344-45.
This aspect of enhancing predictability was one of the major reasons that the American Joint Chiefs of Staff, for much of the arms control process from SALT onward, supported the negotiations as producing modest but useful results.

Another of the major reasons the JCS could reach such a conclusion was that the United States sought agreements, to use the arms control lexicon of the 1980s, that were ‘militarily sufficient,’ i.e., that allowed the United States to deploy military forces that could be expected to execute U.S. military strategy at an acceptable level of risk if called upon to do so. Or as Carnesale and his colleagues concluded, the arms control arrangements codified circumstances for the superpowers that were “consistent with existing military force structures—that is, none required substantial changes in the nature or size of those forces.”147 That was a judgment reached before the end of the Cold War. Several years later, many Russians would be questioning whether START II indeed was in their interest since it would require a major reshaping of their nuclear forces at a time when those forces were (in their eyes) more important to their security and when they had fewer resources to spend for alternative systems.

From the late 1940s onward, a core principle of U.S. arms control policy has been to enter into arms control arrangements only if the results did not damage American security. The bitter domestic debates over the years tended not to be about this principle (although some critics seemed to argue that all arms control agreements would work to the U.S. disadvantage), but about the subjective assessments of what military strategy was appropriate at the time, what forces were needed to execute it with acceptable risk, and how arms control intersected those questions. The domestic debates also addressed how defense requirements should change over time, what risks were appropriate, and whether rigid treaty structures placed the nation at a significant disadvantage by prohibiting changes in force structure, posture, or capability (this was especially pronounced in the ABM debate).

The United States also sought agreements that were ‘effectively’ verifiable, with much debate over what ‘effective’ verification amounted to. Verification is a political process, not reducible to objective algorithms.148 The factors that go into making verification judgments invariably conclude incomplete and uncertain information. As described from NSC 112 onward, effective verification appeared to involve a reasonable prospect that militarily significant cheating could be discovered in time to allow appropriate and successful offsetting countermeasures. Obviously, the judgments on what cheating is militarily significant and whether the countermeasures are timely and likely to be successful, leave much room for honest disagreement. And any verification concern has a downside. As Carnesale and his colleagues concluded, “The act of noncompliance, regardless of military significance, has taken on major political implications. Noncompliance has eroded confidence in and support for the arms control process.”149

147 Ibid., p. 344.
149 Carnesale and Haass, Superpower Arms Control, p. 348.
One of the things that arms control did during the Cold War for U.S.-Russian relations, especially from the 1960s onward, was provide a structure and process for continued engagement and negotiation between the two superpowers. Bob Gates, for many years a CIA analyst and NSC staffer, later director of central intelligence, writes in his memoirs:

> From the date of signature, SALT was controversial and it would become more so over time as the Soviets continued to expand their strategic capabilities . . . Even so, I believe SALT and the SALT process were important and made a genuine contribution to keeping the superpower competition under control. The process itself was probably the most useful part. For the first time, the two sides sat down and began a dialogue about their nuclear weapons and, implicitly, their nuclear strategies. Military and civilian leaders on both sides were able to take the measure of one another and, at the same time, engage their political leaders in an unprecedented way in learning about the balance of terror.\textsuperscript{150}

However, as others have pointed out, there is a danger in stressing process if it leads to ignoring undesired results. In January 1988, the commission on integrated long-term strategy,\textsuperscript{151} co-chaired by Fred Iklé and Albert Wohlstetter, published its report. While stressing that U.S. military strategy should include an arms control component, the report cautioned:

> The link between national security and arms control might seem obvious and noncontroversial: good arms control agreements will give us more security, possibly at a lower cost. But many people prefer to think of arms control as somehow taking place on a different plane from that of defense planning. A great deal of political rhetoric encourages them to believe that the ultimate point of arms control is not so much military as political. For many Americans and Europeans, the lure of these agreements is that they enable us to engage Soviet leaders in a “process,” expected to develop a “momentum” of its own, that will lead to understanding about other contentious matters and serve broadly to reduce international tensions.

This perspective could be a recipe for disaster. When arms control agreements are valued mainly for the international good they are expected to generate, and only secondarily for their effects on arms, then our political leaders will always be under pressure to reach agreements by making concessions on arms. Moreover, if an existing agreement is valued primarily as an expression of good will toward the Soviet Union, then it is much more difficult for American leaders to express concern about cheating by the Soviets, since these expressions will inevitably be translated on the political stage as a lack of interest in furthering the new relationship\textsuperscript{152}

In fact, as Andrew Kohut, one of the deans of polling the public on attitudes toward major policy issues, concluded for the Aspen Strategy Group in their 1987 study, based on a study of over 40 years of polling data on the American public’s attitudes toward arms control and nuclear weapons:

\textsuperscript{151} Other members of the commission were Anne L. Armstrong, Zbigniew Brzezinski, William P. Clark, W. Graham Claytor, Jr., Andrew J. Goodpaster, James L. Holloway, III, Samuel P. Huntington, Henry A. Kissinger, Joshua Lederberg, Bernard A. Schriever, and John W. Vessey.
The public is receptive to any and all nuclear arms [control] proposals except those which imply a loss of military advantage or a reliance on the goodwill or trustworthiness of the Soviet Union.

and

The public’s appetite for arms reduction is greatest when the balance of power is perceived [sp] to be in the U.S.’s favor or when there is parity between the superpowers.153

This is consistent with the conclusion that Carnesale and his colleagues reached when testing the hypothesis that the arms control process and arms control agreements lull the United States into spending less than it should on defense. “There is little evidence,” they found, “to suggest that either of the agreements limiting strategic offensive arms [SALT I and II] produced a direct lulling effect in the United States.”154

Joe Nye, who coined the term “soft power,” also has written about the institutional effects of the Cold War arms control experience, that is to say, creating norms that shape expectations and constrain behavior. “Thirty years,” Nye observed in 1991, “has left a large residue of arms control institutions,” a situation where

…the institutional effects of arms control helped to shape expectations in ways that limit worst-case analyses, reassure allies as well as adversaries, and preserve areas of cooperation from the short-run vicissitudes of political change. They also provide opportunities for contacts which may contribute to learning. They do this by providing information that alters the way key participants understand their interests or see new cause and effect relationships. Included in this information are procedures for transparency and timely warning through inspection or verification which tend to discourage worst-case assumptions. From the perspective of learning and institutions, arms control may have played a more significant role in the changes of the past thirty years than one would give it credit for from the perspective of counting weapons or by the assumptions of traditional approaches to international politics.155

In 2003, former arms control negotiator and assistant secretary of state for arms control, Avis Bohlen, wrote in a similar vein:

The principal contribution of arms control today lies in the normative framework it helps to maintain. Defining rules about what is broadly acceptable to the international community remains essential to defining the kind of international order we wish to maintain. Even if the rules on their own are insufficient to maintain that order, they remain an important tool for combating proliferation.156

154 Carnesale and Haass, Setting the Record Straight, p. 350.
Finally, it is worth recalling that one of the major uses of the American proposal that Bernard Baruch presented to the United Nations in 1946 was to help assess the political willingness of other nations to step up to the first-order question that Fred Iklé raised in his classic article: “After Detection, What?” Iklé wrote in 1961:

The current debate on arms control and disarmament puts great stress on the problem of how to detect violations of whatever agreements may be reached. . . . Yet detecting violations is not enough. What counts are the political and military consequences of a violation once it has been detected, since these alone determine whether or not the violator stands to gain in the end. In entering into an arms-control agreement, we must know not only that we are technically capable of detecting a violation but also that we or the rest of the world will be politically, legally and militarily in a position to react effectively if a violation is discovered.¹⁵⁷

What did we learn from the negotiating experience with the Russians? A number of micro-lessons emerge from reviewing the memoirs of presidents, national security advisers, secretaries of state and defense, chief negotiators, and the like.¹⁵⁸ The following is a distillation of such lessons, ranging from the obvious to the counterintuitive and from the trivial to the serious. The list is divided into three categories: general observations on negotiations; observations on American negotiating behavior; and observations on Soviet negotiating behavior.

General Observations

- A key to success in arms control negotiations is preparation, hard work, and understanding the opponent’s position (how they see the issues, what constraints they face, where they are going, how far they are ready to go, what they are after).

- Seek to persuasively make the case that your proposals are reasonable, not hostile to the opponent’s purposes nor contrary to the opponent’s interests.

- Never waste a meeting, even when without instructions.

- Human relations are an integral part of diplomacy. A great deal of successful negotiation depends on the comfort level people have with one another. A good negotiator must be prepared to decide at what point marginal gains are outweighed by the loss of confidence caused by trivial haggling.

- Pay attention to detail. This is especially important in highly technical negotiations.

- Keep a careful and complete record of what is said.

- Seek a common understanding of complicated technical concepts.

- It is difficult to anticipate the twists and turns that future technologies may take, that will impact on the specifics of the arms control agreement.

- Reach-back to national Washington is an essential part of arms control negotiations.

- Don’t be afraid of tabling maximalist objectives at the start of a negotiation, but be prepared to pursue them over what may be a long period of time to achieve results.

- Negotiation often involves attempts to bridge real differences. When difficult issues are involved, agreement may not be possible in the short run, although circumstances may change that can lead to agreement; it is important in such cases to clearly communicate existing concerns and firm goals.

- Agreement comes when both nations’ interests appear to be served and/or not harmed.

- Negotiations involve a learning process for both sides—and sometimes serve the purpose of bridging different degrees of understanding and knowledge on the opponent’s delegation.

- Plenary sessions, although formal and repetitious, serve an important purpose in allowing complex positions to be delivered in formal statements.
• Informal sessions are important for finding new directions for the negotiation. The right to probe—to discuss and explore without binding the nation—is an important element of arms control negotiations.

• Repetition is important. If an issue is vital, it should be raised over and over again—patiently, persistently, consistently, persuasively.

• Negotiations can be intense without being angry and confrontational.

• Negotiations in the interagency and with Congress are at least as demanding as arms control negotiations with the Russians.

• In dealing with the Russians bilaterally on the margins of multilateral negotiations, make sure to retain the confidence of your allies—keep them informed, solicit their ideas, understand their interests and concerns.

• Different agencies in the NSC system represent different institutional points of view on the substance, strategy, and tactics of arms control negotiations.

• Ambiguity may allow closure on a treaty, but also tends to invite activities that raise compliance concerns.

• Multiple channels for negotiations are useful if used skillfully with good coordination and integration. Negotiations by delegations at the ambassadorial level can refine options and polish conclusions, to turn over to ministers for reconciliation of differences, with summits reserved primarily to finalize agreements and to build consensus for ratification.

• Back channel negotiations can be useful: fewer people are involved, sensitive information can be protected more easily, exchanges can be informal and candid, barriers can be overcome. But back channels also are a mixed blessing: they can lead to confusion in negotiations and can produce compromises that, when reviewed more fully with more people involved, are seen to be counterproductive.

• Negotiations at summits also are a mixed blessing: decisions may be reached more quickly but it is difficult to extract the country from a bad negotiating position taken at a summit.

• Negotiations can be for propaganda purposes over and above any hope of substantive agreement. Media attention can be intense. A good public diplomacy strategy must be a part of any successful arms control negotiation.

• Democratic debate can complicate negotiations by exaggerating and dramatizing issues, sometimes to the point of distortion.

• Beware of negotiations at the eleventh hour.
• Don’t confuse form with substance.

**American Negotiating Behavior**

• Extensive use of backchannels gave the Russians a tactical advantage, allowing them to manipulate negotiations with the delegations when they see that the delegation’s proposals are not backed at the top.

• Lack of continuity in delegation and backstopping expertise can be exploited by the Russians to tactical advantage.

• Patience is a virtue in negotiations but also may be hard for the U.S. to attain, especially since negotiations frequently must match the cycles and rhythms of presidential politics. America’s opponents understand this and will try to wait for the pressure of democratic processes to produce U.S. concessions.

**Russian Negotiating Behavior**¹⁵⁹

• When the opponent stalls, take it in stride. Russian negotiators like Dobrynin, when instructed to stall, could do it masterly.

• For negotiators like Gromyko, it often appeared that there were no trivial issues. Every point was argued with tenacity.

• Negotiators like Gromyko mastered their briefs, knew the issue histories, and were sensitive to nuances.

• Negotiators like Gromyko could link every detail of a negotiation to every other detail, offering concessions conditionally, depending on movement on other issues.

• The Russians often began negotiations by demanding concessions as a price for sitting down at the bargaining table.

• The Russians would seek to wear their opponents down by haggling over general principles. Once those were agreed, haggling over implementation could be used to

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¹⁵⁹ This study has not attempted to describe the arms control negotiations from the Russian point of view; however several works were consulted to gain an overall impression of some representative Russian comments. The works consulted include: Andrei Gromyko, *Memoirs*, trans. by Harold Shukman (New York, 1989); Michael Mandelbaum, ed., *The Other Side of the Table: The Soviet Approach to Arms Control* (New York, 1990); Albert Resis, ed, *Molotov Remembers: Inside Kremlin Politics, Conversations with Felix Chuev* (Chicago, 1993); Anatoly Dobrynin, *In Confidence: Moscow’s Ambassador to America’s Six Cold War Presidents, 1962-1986* (New York, 1995); Aleksandr’ G. Savel’yev and Nikolay N. Detinov, *The Big Five: Arms Control Decision-Making in the Soviet Union*, trans. by Dmitriy Trenin (*Westport, Connecticut, 1995*).
erode the opponent’s positions on an issue. Be wary of how Russians use agreement in principle.

**Broader Lessons**

What can be said about the experience of negotiating arms control agreements with the Russians from 1945 through 2002 that is relevant to today’s world? Obviously much has changed. During the Cold War, the United States was dealing with a closed society where a small group of men controlled Soviet policy and the Soviet policy and decision process was heavily veiled. There was considerable debate in the West about what Soviet objectives actually were for much of the Cold War.

The United States also was involved in a military confrontation that threatened its most vital national interests, where nuclear weapons were at the center of the confrontation, where the opponent was perceived to have superior conventional military power in the most important theater (central Europe), and where the threat of civilization-ending nuclear holocaust hung over the entire endeavor.

The environment for American policymaking also was different in important respects, e.g., much of the Cold War was not conducted under the glare of today’s 24/7 media extravaganzas, enabled by modern information technology.

Finally, the arms control priorities of the American government focused for good reasons more on its bilateral relationship with Russia and less on the more diffuse multilateral regimes involving a number of centers of power. Multilateral negotiations took place and were treated seriously, but they did not ascend to the importance then of the U.S.-Russian bilateral talks.

The list of differences could go on. Enough has been noted, however, to suggest that even with all the differences from the Cold War to today, some macroscopic lessons are in order for a world in which arm control continues to be important but has less emphasis in national strategy, in which the threats are significantly different, and in which multilateral regimes are more important than ever, especially for addressing terrorism and the proliferation of weapons of mass destruction.

**Lesson 1: Keep priorities straight when engaging in arms control.**
Arms control is an element of national strategy, not as an activity to be pursued for its own sake or valued more highly than other tools. The major question is whether national security is protected and the national interest served, not whether arms control ‘succeeds’ at any particular point in time.

**Lesson 2: Arms control can reduce uncertainty and enhance predictability.**
This arguably was the most important contribution of the U.S.-Russian Cold War arms control experience for the United States. Today, the Russians appear to value bilateral nuclear arms control more than the United States for exactly this reason.
Lesson 3: Expect surprises during arms control negotiations.
Arms control negotiations cannot be insulated from external events in global politics. The gardening analogy that George Kennan and many others have used to describe foreign policy is also true for arms control. An unexpected hail storm can upset months of carefully laid plans. Be prepared to recover and persevere.

Lesson 4: After detection, what?
From the Baruch Plan onward, the premier question about verification was not whether cheating had happened, but what should be done about it. The arms control experience suggests that diplomacy to build the international consensus needed to enforce compliance is likely to be harder than the arms control negotiation itself.

Lesson 5: Good people and good practices are more important than good organization, for devising arms control policy and for conducting negotiations.
The quality of negotiators and skill in conducting and supporting negotiation and the willingness to see arms control as a team effort are more important to success than how the U.S. organizes itself internally to address arms control policy.
Section II: DOD Lessons Learned from International Security Negotiations

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The views herein are those of the authors not necessarily those of SAIC or any of its sponsoring organizations.
Introduction

The modern era in American arms control arguably began in 1957 with the Gaither Committee report. The Gaither Committee examined United States nuclear retaliatory forces, their number, deployment and opposing threat, and concluded that they were unacceptably vulnerable to surprise attack. In those days, the U.S. retaliatory force consisted entirely of long-range bombers. The Air Force concentrated the aircraft in a few main operating bases in the United States and abroad. And although Soviet capability to attack these bases was not great, their bomber force was small, the Committee found that the United States must take steps to improve the survivability of the retaliatory force since its vulnerability would only get worse as Soviet capabilities improved. One of the steps taken to address the survivability problem was political. President Eisenhower and Premier Krushchev agreed to East-West talks on measures to safeguard against surprise attack. They scheduled the talks for the fall of 1958 in Geneva.

The surprise attack negotiations involved five parties from East and West. Representatives from Canada, France, Great Britain, and Germany met in Washington to prepare for Geneva and left with the conviction that surprise attack was the defining problem associated with nuclear war. The talks themselves achieved nothing except to reinforce their conviction. The strategic arms limitation talks and the strategic arms reduction talks trace their lineage directly to the Gaither Committee, the surprise attack conference, and the form of analytic reasoning that came to be associated with deterrence forces. Nuclear non-proliferation negotiations, export control regimes, non-nuclear armed forces agreements, and stability talks are separate branches of the same genealogical tree. All branches lead eventually to the same root concern, avoiding nuclear first strike.

Much has been accomplished over the past forty-five years through American arms control efforts. The United States has signed nearly fifty arms control, or arms control-like, agreements between 1959 and 2000. It signed thirty agreements after 1979. There have been deep reductions in nuclear arms, and more are in the offing. There have been stabilizing limitations

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160 As a result of concern about retaliatory force survivability, the Department of Defense eventually closed medium range bomber bases abroad, dispersed bomber bases in the central U.S., put bombers on airborne alert, and introduced missile retaliatory systems (cruise missiles and ballistic missiles) in hardened silos and aboard submarines.

161 Technological developments began to make worse the problem of strategic force vulnerability. In 1957, the Soviets tested a prototype long-range ballistic missile. In the 1960s, antiballistic missile technology and multiple independently targeted reentry vehicle technology emerged. These technologies disrupted retaliatory force survivability by creating options and scenarios in which striking first might lead to political-military advantage. The reason and logic supporting strategic force design conjured the image of a future driven by serial expansion of offensive and defensive strategic forces and ever-growing defense expenditure.

placed on conventional armed forces in Europe. There is wide, although imperfect, adherence to non-proliferation norms. The record of American accomplishment in arms control is a distinguished one. Yet, it is undeniable that the international security environment has changed greatly since the foundation of U.S. arms control policy in the late 1950s.

In the last two decades, we have witnessed the reunification of Germany, the collapse of the Warsaw Pact, the dissolution of the Soviet Union, and the rise of China as a world power. We have seen progress in the political integration of Europe and the growth of the North Atlantic Alliance. The United States has emerged as the most powerful state on earth militarily, economically, in science and technology, and in cultural influence. The United States also is a nation at war with the forces of global terrorism. It has fought consecutive wars in Afghanistan and Iraq. We have seen American power and international stature diminish and its detractors grow more numerous. It is appropriate at this strategic inflection point in U.S. national security affairs to ask what contribution arms control can make in the evolving global strategic environment. A useful first step is to learn the lessons past arms control efforts have to teach.

The Department of Defense has been deeply engaged in U.S. arms control policy development and execution since its inception. This paper, a companion to Michael Wheeler’s analysis of U.S. arms control’s diplomatic history, examines the literature of arms control, particularly critical literature, for the lessons scholars and practitioners have offered. The Department of Defense’s role in arms control affairs, while not a secret, is scarcely known outside the arms control community. Arms control literature does not examine the Department’s role or experience in arms control. To help fill this gap, this paper produces and examines three vignettes involving the Department’s contribution to arms control policy formulation, treaty negotiation, treaty compliance, and the impact of compliance operations on military units. Finally, it provides consensus views of many former and serving arms control practitioners derived from interviews conducted for this study.

**Literature Review**

There are two schools of thought in the American arms control community, but it is too simple to say that one advocates, and the other opposes, arms control. Each does both.

The Traditional School. The traditional arms control school appeared in the early 1960s and is associated with the creation of a systematic analytical approach to nuclear deterrence issues. Traditionalists are rationalists who apply the tools of reason and logic to the problems of national security. As a school of thought, traditionalism owes much to economics and theories of rational behavior and self-interest. Traditionalists are responsible for the guiding theory and principle behind modern U.S. arms control efforts.

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In 1961, three books on arms control theory and strategy were published in the United States and Great Britain. Each book was a group effort. One of them, *Strategy and Arms Control*, by Thomas C. Schelling and Morton H. Halperin, sprang from a Harvard-MIT Faculty Seminar on Arms Control formed in 1960 to examine U.S. retaliatory force vulnerability and the potential of arms control to play an important part in solving the problem. Schelling had been an analyst with the RAND Corporation before joining the Harvard faculty. He had supported the U.S. high-level group’s preparation for the 1958 surprise attack conference. *Strategy and Arms Control* became an American classic. Its principles, reasoning, and logic had deep impact among national security specialists and among the American political elite. Its approach to arms control was non-partisan. Six presidential administrations, three Democrat and three Republican, adopted it. A quarter-century after the publication of *Strategy*, Schelling wrote the following about the intellectual foundation of the arms control period between 1957-72:

Together those efforts were an intellectual achievement; a number of participants in the Harvard-MIT seminar took positions in the Kennedy White House, Department of State and Department of Defense; others from RAND and elsewhere, who had been part of this intellectual movement, moved into government as well. So it is not completely surprising that those ideas became the basis for U.S. policy and were ultimately implemented in the ABM Treaty. I consider that culmination of 15 years of progress not merely the high point but the end point of successful arms control.165

Traditionalists supported arms control, because they reasoned that the superpowers shared a compelling vital interest in avoiding consequences of nuclear war. They believed the logic of that interest trumped the logic of superpower rivalry. Acknowledging that states do not always act in accordance with their interests, traditionalists focused on controlling the characteristics of nuclear forces that might contribute to irrational conduct. If these characteristics could be successfully controlled through negotiation, then arms control could make an important contribution to security in the nuclear age. Traditionalists were not naïve about the Soviet Union’s political system or Moscow’s hostility to western values. However, they believed that the effort to negotiate arms control agreements could, and would, improve political relations between the superpowers. They believed that U.S. precepts about nuclear stability eventually would resonate with the East and be adopted as their own.

The Empirical School. The “end point of successful arms control,” from Schelling’s perspective, was occasioned by the rise of a body of practical and scholarly criticism demanding that the value of arms control be tested, not just against reason and logic, but also against empirical experience. By the mid-1970s, American officials had had prolonged exposure to Soviet negotiating methods, negotiating objectives, and compliance faithfulness. Empiricists were dismissive of U.S. arms control policy’s accomplishments. Their critique focused on the nature, process, products and outcomes of arms control.

The Nature of Arms Control. Empiricists dismantled much of the traditionalist reasoning supporting arms control. They believed the history of arms control had a mediocre record of

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accomplishment. Some dismissed arms control because “having so faint a past connection to international security, it [was] unlikely to have a substantial one in the future.” Empiricists doubted that the region of mutual interest between the superpowers on nuclear issues was strong enough to ensure stability given the depth of ideological hostility. Arms control regimes failed, some argued, because they “cannot function when they are needed, and they fail for the same reasons that they are needed.” Empiricists doubted that negotiations improved political relations. Many believed just the opposite. Arms control had become an independent source of friction and hostility. They scoffed at the notion that arms control negotiations stimulated convergence between rival strategic cultures. Some empiricists were prepared to abandon arms control in favor of pursuing superior defense capabilities, but not all were.

The empiricists who were prepared to continue arms control efforts demanded a new vision of the entire enterprise. That vision was tough minded, prepared for hard bargaining, and viewed arms control as an adjunct to U.S. defense programs, not a substitute for them. They insisted that the United States recognize the Soviet Union for what it was, an enduring and dangerous foe, and judge arms control by its contribution to concrete national security objectives. The latter perspective rose to prominence during the Reagan/Bush administrations and guided U.S. arms control policy during the Nuclear and Space Talks. It led to a fruitful period of arms control at the end of the Cold War period.

Other empiricists believed the traditional theory of arms control was sound, but traditionalists had underestimated the difficulty of the task, particularly when arms control interest spread from the nuclear arena to non-nuclear arms. First, the variety of weapon systems to be controlled was as great as the variety of countries building them. Objective standards of comparison, essential for arms control to succeed, worked poorly when presented with such diversity. Geography and demographic differences compounded the difficulty of comparison. Second, open societies were at a disadvantage when negotiating arms control arrangements with strategically closed societies. Closed societies were secretive, suspicious, non-compliant, and prone to regard arms control as an opportunity to extend their power and influence, not stabilize a balance of power they abhorred. Empiricists argued that open societies were at an even greater disadvantage, because traditionalists misused arms control as a means to dampen strategic competition internally.

**Arms Control Process.** The empiricist critique of traditional U.S. arms control efforts identified two major problems with the interagency policy process. The first problem was the failure to integrate arms control and defense programs in a coherent national security strategy. Until the late 1980s, there was no requirement for the United States government to publish a national security strategy publicly. To the degree that one can be said to have existed prior to the legal requirement, national security strategy was inferred from other sources. Presidential decision documents, budget documents, foreign aid programs, diplomatic initiatives, guidance to defense

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167 Gray.
168 Gray.
171 Van Cleave.
programs and official speeches defined U.S. national security strategy in rough outline. Many empiricists believed that arms control policy actually dominated national security strategy, becoming an end in itself.\footnote{That criticism lives today and is widely held among the Department of Defense personnel (former and serving) interviewed for this study.} The criticism is greatly overblown. Arms control was rarely the equal of defense as a tool of national security. It never dominated U.S. national security efforts. On paper, arms control was coequal with defense. In reality, arms control never received the energy, resources or senior attention reserved for defense. Arms control obligations only occasionally interfered with defense programs, and arms control frequently justified increased defense spending, including in the areas where the United States sought arms limitations.\footnote{The Soviet invasion of Afghanistan in 1979 abruptly ended Senate consideration of the SALT II Treaty. The only body to testify in favor of the treaty was the Joint Chiefs of Staff, who characterized the treaty as a modest but useful step in adding to the security of the United States. The only chief to depart from that script was the Chief of Staff of the Air Force, General Lew Allen, who endorsed the treaty with enthusiasm, because the Air Force had been promised programs to modernize the ICBM and bomber forces.}

The appearance of national strategy documents beginning in the late 1980s arguably clarified the role of arms control, but it is unclear whether they actually improved the coordination of arms control and defense policies. It goes beyond the scope of this paper to write the history of U.S. efforts to develop and deploy a national missile defense system, but it is useful to recall the effort required nearly two decades to achieve a clearly stated national security policy objective solemnized in law and supported by regular appropriations. United States national security strategy documents and their derivatives are serious efforts, used internally, and often based on classified presidential national security decisions. However, strong executive leadership is required to turn aspiration into accomplishment. Absent that leadership, institutional interest and conflict interfere with arms control and defense policy integration.

The second problem with the interagency process was the difficulty of responding to our treaty partners’ non-compliance with arms control obligations.\footnote{Van Cleave.} Moscow’s non-compliance was a persistent problem during the Cold War and a source of mutual hostility. A number of arms control non-compliance issues from the Soviet era remain unresolved today, particularly in START and the Biological and Toxin Weapons Convention.\footnote{Adherence to and Compliance with Arms Control and Nonproliferation Agreements and Commitments (2001), \url{www.state.gov/documents/organization/22466.pdf}.} The general standard of compliance among signatories to non-proliferation treaties is low even though only a handful are suspected of developing weapons of mass destruction. Part of the non-compliance problem can be laid at the feet of U.S. executive authorities for accepting treaties with ambiguities and then applying to them strict legal standards of compliance.\footnote{Van Cleave.} Much of the problem must be attributed to treaty partners who simply fail to fulfill their treaty obligations. And a portion of the problem can be assigned to honest disagreement about the terms parties have agreed to.\footnote{Luttwak.} Bureaucratic, domestic, and international political considerations more often than not have worked against strong, consistent U.S. responses to non-compliance. And U.S. executive authority has rarely found the political will to overcome such obstacles.
The failure to find effective responses to non-compliance has had unfortunate consequences. First, it has tarnished arms control’s reputation. Non-compliance has contributed to the perception that arms control is a partially failed policy, that supporters of arms control are interested only in signing treaties and not the effect of treaties, and that arms control has undermined U.S. security. Second, the failure to create strong non-compliance responses may have caused states to opt for nuclear weapons programs. When the United States failed to lead the international community in a strong reaction against Iraq’s use of chemical weapons during the Iran-Iraq War, Iranian leaders concluded that non-proliferation treaties were worthless. In reaction, Tehran’s mullahs reversed a principled policy based on Islamic law against the development of weapons of mass destruction. The repercussions created by that reversal reverberate still. Third, the failure to develop an effective policy to deal with foreign non-compliance led the United States Government to do the one thing it could do, impose on itself (the Department of Defense) the strictest compliance standards in the world. Interagency compliance lawyers have demanded stringent proofs of Department compliance with arms control treaties before they would certify that new programs or new technologies were compliant. The standards of proof have been onerous, and often it has taken years to satisfy them.

The Product of Arms Control. The literature that is most critical of arms control concentrates on the agreements produced during the period of the strategic arms limitation talks. With the perspective granted by 30 years of hindsight, it is possible to look at the SALT period and conclude that it was only one phase in a long, complex interaction, and all is well that ends well. However, each of the agreements negotiated in the strategic arms limitation talks became bitterly controversial.

In the early 1970s, there were fewer supporters of national missile defense than there are today. The technology and concepts of operation for ballistic missile defense were crude and ineffective. So the ABM Treaty was not immediately a controversy, but became so with time. Suspected and actual Soviet non-compliance with the treaty, technological advances in active defense, and the spread of ballistic missile technology in the third world undermined support for the ABM Treaty in the United States. In the mid-1980s, the Reagan Administration made a long-term commitment to ballistic missile defense development. Reagan’s Strategic Defense Initiative put a major defense program on a collision course with the ABM Treaty.

From the perspective of traditional arms control theory, ABM systems were a disruptive military capability. They undermined nuclear deterrence, prompted deployment of more retaliatory nuclear weapons, and led to defense spending without productive result. Supported by scenario-based studies and classic strategic analysis, traditionalist arguments were powerful. A

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181 The Safeguard ABM system used nuclear-armed missiles to protect the ICBM wing at Grand Forks AFB, North Dakota. However, the ABM command site never coordinated operations with the wing. It was unaware of the wing’s missions or retaliatory plans. The only communications link between the Army site and Air Force site was commercial telephone lines.
countervailing argument did not arise until the 1990s. Relying on historical experience accumulated over many centuries in many cultures, empiricists asserted that nations often tried deterrence strategies, they routinely failed, and the likelihood of deterrence failure in the nuclear era required strategies of defense and their tools.  \(^{182}\)

The other accomplishments of the strategic arms limitation talks, the Interim Agreement on Strategic Arms and the SALT II Treaty, were controversial from the start. Soviet non-compliance with the Interim Agreement was a bitter issue within the United States government and with the Soviet government. As a result, critics questioned the ability of the U.S. to verify a technically complex agreement relying solely on national technical means of verification. Critics on the left attacked SALT II, because they were disappointed that the treaty did not require deeper reductions. Critics on the right attacked it, because they were incensed that the treaty did not deal with the growing vulnerability of U.S. ICBMs. It was probably unreasonable to expect arms control agreements to heal force structure problems that Washington was unwilling to solve on its own. At least, that was the position of empiricists who disliked SALT II, but had not abandoned arms control entirely. They recommended a dual track approach in which the United States undertook unilateral steps to solve its force structure problems while negotiating adjunct arms control arrangements. Critics of SALT II also objected to the inequality of the treaty. SALT II granted the Soviets a unilateral right to heavy ICBMs. The Department of Defense did not want to build a heavy ICBM, but as a matter of principle unequal rights and capabilities were unacceptable.  \(^{183}\)

The empirical critique found expression in the strategic offensive arms control proposals of the Reagan Administration. The objective of the strategic arms reduction talks was to negotiate deep, stabilizing reductions to equal levels of strategic arms in an effectively verifiable treaty. Simultaneously, Reagan undertook force modernization efforts to fill perceived gaps in U.S. nuclear offensive capability. Given the image created of traditionalists as reflexive advocates of arms control, one would think that they heartily endorsed the Reagan arms control objectives. One would be wrong. From the dean of the traditional school of arms control, Thomas Schelling:

> The main difference between pre-1971 and post-1972 arms negotiations has been the shift of interest from the character of weapons to their numbers. The proposals of the Carter and Reagan administrations have been for reduced numbers of offensive weapons. Simultaneously, the programs of the Carter and Reagan Administrations have been to match numbers. The last two administrations have been intent on matching hard-target capabilities, number for number, almost without regard to whether denying strategic-weapon targets to the enemy—such as deploying untargetable weapons—was a superior alternative to matching hard-target capability.

> On the “arms control” interest in reducing numbers nobody ever offers a convincing reason for preferring smaller numbers. For the most part, people simply think that smaller numbers are better than bigger ones.

> One development since 1972 has been a hardening of the belief among diplomats and the public that arms control has to be embedded in treaties. In the 1960s, I used to believe that a tacit

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\(^{182}\) Keith Payne.  
\(^{183}\) Today, there is less concern about unequal force levels or special privileges.
understanding might be arrived at regarding ballistic missile defenses. I saw no advantage in a treaty. Reciprocated restraint may often be as good as formal negotiations and treaties, sometimes better.\textsuperscript{184}

Lessons Learned

Our arms control treaty partners must comply with their legal obligations, and when they do not the United States must be willing to impose adverse consequences. Non-compliance is an important source of the hostility that arises from the arms control enterprise. Non-compliance has the potential to undermine the security of treaty partners who are faithful to their legal obligations. It devalues the arms control enterprise. The repercussions of inaction in the face of non-compliance may have broad adverse consequences for the international security environment. The inability to develop appropriate, graduated responses to treaty non-compliance is the most significant failure of the U.S. arms control policy process, and the failure is continuous over many presidential administrations.

The United States arms control portfolio has grown large over the last 25 years, and in a greatly changed global security environment it is logical to ask whether all of them still add value to U.S. security interests or if new agreements are required. In 2009, the Strategic Arms Reduction Treaty will come up for review. The political reconciliation between Washington and Moscow is one of the most important developments in the global strategic environment. If the relationship has progressed to the point that START no longer serves its original purpose, perhaps it can be allowed to lapse. Similarly, the political-military alignment in Europe has changed dramatically since the Conventional Armed Forces in Europe agreement was negotiated. The adaptation agreement updating the treaty may never enter into force. Perhaps the Treaty should be abandoned.

The political will of executive leadership is a major component in the success of arms control. Leadership appears at many levels of the U.S. arms control enterprise, but it is most needed, and frequently absent, at the highest level. If the investment of executive political capital is the true measure of arms control’s value as a tool of national security, then the United States government would be right to de-emphasize arms control.

Little is known about the Department of Defense’s roles and experience with arms control outside the arms control interagency. Traditionalists and empiricists operate at a high level of policy abstraction and focus almost exclusively on the interagency system, not departmental processes for implementing and complying with arms control agreements. As a consequence, schools of arms control address only part of the U.S. arms control experience.

\textsuperscript{184} Schelling.
Vignettes

The Department of Defense does not lead U.S. arms control policy development or arms control negotiations. It is a full partner in the interagency process for developing arms control policy, supplying guidance to delegations, and conducting arms control negotiations. It supports and manages the development of arms control monitoring and verification technologies. It is the lead executive department for implementing arms control agreements. When arms control agreements have concrete effects, most occur in the Department of Defense among the armed services. In general, western arms control literature overlooks the Department’s experience across the scope of arms control effort. In the paragraphs that follow are a few vignettes that provide a glimpse into several of the Department’s arms control roles.

Heavy Bomber Ceilings in START. President Reagan took office in 1981 having made arms control a national security issue during the presidential campaign of the preceding year. Reagan accepted the critique of the SALT II Treaty.\(^{185}\) He believed the treaty sacrificed important American security interests and gave the Soviet Union unilateral advantages. First, SALT II did not address the most pressing strategic nuclear issue facing both sides—the potential growth in deployed nuclear weapons. SALT II capped deployed delivery systems, but it did not limit growth in deployed warheads. The United States and Soviet Union had begun to deploy multiple independently targeted reentry vehicles (MIRV) aboard strategic ballistic missiles in the mid-to-late 1970s. MIRV technology caused deployed warhead numbers to grow geometrically. The United States deployed MIRVs first and enjoyed a brief advantage. However, the Soviet Union had made a larger social investment in ballistic missile forces than the United States, and Soviet missiles carried larger payloads. The combination of more missiles and greater payload meant that the Soviet Union had the ability to deploy significantly more nuclear weapons than the United States unless Washington chose to expand its retaliatory force. An expansion of the force did not promise to contribute to U.S. security, and in the Reagan administration’s view, neither did an arms control treaty that failed to reduce warhead numbers.

Second, Reagan believed that SALT II failed to contribute to nuclear stability. The treaty allowed only the Soviet Union to have heavy ICBMs. Soviet heavy ICBMs armed with MIRVs had the combination of warhead yield, warhead numbers, and missile accuracy to carry out a devastating first strike on American land-based nuclear forces and their command and control systems. Many technical intelligence analysts feared that Soviet heavy ICBMs had inherent combat characteristics that would lead to early use of nuclear weapons in a crisis, precisely the situation that all believed should be avoided. The administration did not want an equal right to deploy heavy ICBMs. It wanted an arms control agreement that preferentially reduced destabilizing systems, particularly heavy ICBMs.

Third, Reagan agreed with many other American political figures (e.g., Senator Henry “Scoop” Jackson, D-Washington) that bilateral arms control agreements should be equal treaties. Arms control agreements must not grant special privileges or advantages to one side or the other. SALT II violated this principle when it granted Moscow the unilateral right to possess heavy ICBMs.

\(^{185}\) Reagan adopted both traditional and empirical critiques of the SALT II Treaty. He argued that the treaty was destabilizing from every perspective.
Last, Reagan believed, as a matter of principle, that arms control agreements must be verifiable. The Islamic Revolution in Iran had resulted in the loss of important technical intelligence collection capabilities needed to verify Soviet strategic nuclear programs. Many doubted whether the United States could verify SALT II effectively without some form of on-site inspection. Since SALT II made no provision for inspection, the administration believed the treaty failed to meet a first order arms control requirement. For these reasons, the Reagan administration concluded that the SALT II Treaty was fatally flawed. The administration did not attempt to secure Senate advice and consent to ratification, and it embarked on a new set of arms control negotiations, the strategic arms reduction talks, to pursue increased security, stability and predictability in its strategic relationship with the Soviet Union.

The Reagan administration defined security as preserving the peace by reducing the likelihood of war, improving relations with adversaries, and strengthening alliances. Arms control was said to contribute directly to the first two and indirectly, through allied consultation and cooperation, with the last. In the Department of Defense, particularly among the armed services, the term meant something else.

The armed services defined security in concrete terms. Arms control advanced United States security interests when it allowed the services to meet the requirements of combatant commands and support warfighter objectives. In the nuclear arena, the requirements of the Single Integrated Operations Plan (SIOP) dominated all other considerations. Air Force arms control staffs paid close attention to warfighter force structure objectives and future requirements when analyzing arms control positions. Arms control contributed to security when it shaped the threat environment constructively and protected operational preferences.

The United States government tended to define stability in terms of the arms race, crisis management, intra-war deterrence and escalation control. Arms control was said to contribute to these objectives by reducing incentives the forces themselves may have added to unwanted escalation.

The armed services defined stability as balance between opposing forces. In so doing, they sought to protect the qualitative advantages resident in their forces and operational practices. In general, the armed services and combatant commands believed that—weapon for weapon and man for man—American combat forces, military technology, and operational practices were far superior to any adversary.

The United States government defined predictability as a process resulting in defense planning certainty, confidence in arms control compliance, and capacity to take corrective steps to restore stability, if necessary. Arms control contributed to predictability by creating regimes for verification, confidence building, and transparency. The armed services wanted arms control agreements that permitted them to operate in accordance with their doctrines and operational preferences.

The armed services had a different perspective, operated at a different level of abstraction, and spoke a different arms control dialect than the national government did. The differences are
illustrated most clearly in START when the Reagan administration decided to seek a warhead ceiling representing roughly a 50 per cent reduction in United States and Soviet deployed warheads.

Prior to negotiations, the Strategic Air Command and Joint Staff completed a deterrence requirements study calling for many thousands of deployed warheads to execute the SIOP with an acceptable degree of risk (the actual figures are still classified). The Reagan administration’s ceiling representing a 50 per cent reduction was thousands of warheads less than the SIOP requirement. The disconnection between the arms control objective and the warfighter requirement meant that something had to give. Either the Air Force’s heavy bomber force must be cut significantly or START’s warhead objective had to change. For nine years, a cardinal objective of the Strategic Air Command, Joint Staff, and Air Force was to make sure that the Administration’s warhead objective of a 50 per cent reduction literally did not mean what it said.

For the duration of the START negotiations, SAC, the Joint Staff, and the Air Force supported a series of proposals that discounted the number of weapons attributed to heavy bombers. These positions included:

- Attributing no nuclear weapons to heavy bombers,
- Attributing only one weapon to each heavy bomber,
- Attributing one warhead to each penetrating heavy bomber and ten warheads to each bomber equipped for cruise missiles, and
- Changing the definition of an air-launched cruise missile so that neither side had any.

The United States and Soviet Union settled on the third approach—counting each penetrating bomber at one warhead and each ALCM-equipped bomber at ten. However, heavy bomber/ALCM issues supporting the counting rule remained unresolved throughout most of the negotiations. In the final months of the START negotiation, and as the Moscow Summit of July 1991 approached, 150 bracketed sections remained in the treaty text (down from one thousand a year earlier). Nearly all of the bracketed text pertained to heavy bomber/ALCM issues. The Head of Delegation estimated that the United States could expect to have only ten per cent of the bracketed text resolved in favor of the United States. Understanding the potential consequences for the bomber force, he allowed the Representative of the Joint Chiefs of Staff, an Air Force flag officer who had spent a career in SAC, to attempt to dismantle the Soviet negotiating positions and save U.S. heavy bomber force structure.

The U.S. found its negotiating position weak, because the Soviets had consistently reneged on agreements struck ad referendum. When heavy bomber/ALCM agreements were referred to the capitals, Moscow pocketed the American concessions and reopened their own. The JCS Representative’s strategy was to pick the Soviets’ pocket—threaten to withdraw all the U.S. concessions the Soviets had pocketed unless Moscow accepted the U.S. treaty language in the remaining brackets. Only weeks before the Treaty was to be signed in Moscow, the United States reopened scores of heavy bomber issues, adopting positions the Soviets thought had been settled in their favor months or years earlier. The United States finally had considerable negotiating leverage. The Soviets eagerly looked forward to the summer summit, because it promised to “normalize” relations between the Moscow and Washington. Normalization carried
with it significant economic and political incentives, including recognizing the Soviet Union as an entire equal. Of course, the Soviet Union was not the equal of the United States. Retrospectively, the Soviet Union was on the verge of internal collapse, and it did collapse within months of the summit. The JCS Representative’s strategy worked. The Soviets accepted American language in almost 100 of the brackets, and the U.S. heavy bomber force benefited significantly.186

The Department of Defense brings key strengths to U.S. arms control policy development and execution. Only the Department has the tools of analysis to understand the concrete effects arms control policy will have on U.S. military programs, budgets, plans, and operations. Only the Department is intimately familiar with the U.S. systems limited through arms control. The Department also cultivates versatile, capable arms control officers. Many have deep understanding of arms control policy, diplomacy, and the executive skills to lead arms control delegations. The Strategic Arms Reduction Talks had six U.S. chief negotiators in nine years. Three were retired military officers.

THAAD and the ABM Treaty. In the early 1970s, a Secretary of Defense memorandum established an arms control compliance review process for the ABM Treaty and Interim Agreement. Since then, Department regulations and instructions have formalized the compliance review process for all arms control agreements. The authority for administering the compliance process falls to the Department’s acquisition arm.

The ABM Treaty prohibited national or regional missile defense systems with the exception of defensive sites at an ICBM field or the national capital. The Army’s Theater High Altitude Area Defense (THAAD)187 system was designed to intercept high-performance theater ballistic missiles and provide broad coverage for dispersed, forward-deployed forces.188 In concept, theater missile defenses were legal, but U.S. compliance standards for the ABM Treaty, at the time considered by many to be the cornerstone of nuclear stability, were strict. And the Department had a long-established precedent of applying the standards with exactitude.

Although THAAD was designed against missiles with a range of 3000-3600 kilometers, its powerful radar, swift interceptor, and potential networking capabilities (other radars and sensors)

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186 After the collapse of the Soviet Union, the Strategic Air Command was dissolved and United States Strategic Command, a unified command, stood up. One of the first steps taken by STRATCOM’s commander was a review of U.S. nuclear targeting requirements. Finding that the target base had changed due to changes in the global security environment, STRATCOM substantially reduced its warhead requirements. Today, the heavy bomber force has reoriented its training and operations primarily toward non-nuclear operations in support of theater commanders. The legacy nuclear retaliatory mission remains, but the value of the heavy bomber force as an instrument of precision, long-range strike and massive force application is highly prized.

187 The Missile Defense Agency changed the name of THAAD in early 2004. Formerly, the “T” stood for theater rather than terminal. The name change is attributed to NSPD 23 (16 December 2002) in which President Bush repudiated the distinction between theater and national missile defense necessitated by the defunct ABM Treaty. Honolulu Advertiser (1 March 2004)

188 THAAD intercepts and destroys missile targets within and just outside the atmosphere. It uses high-speed impact to break-up incoming objects which then burn in the atmosphere during reentry. THAAD consists of four components—truck-mounted launchers, interceptors, an advanced radar, and a battle-management command and control system. The latter integrates THAAD components and connects individual sites within a larger missile defense system.
caused many to worry that it had latent potential to defend against strategic ballistic missiles. In October 1993, a paper written by interagency treaty lawyers questioned the THAAD program’s compliance with the ABM Treaty based on the interceptor’s performance. In January 1994, the Department of Defense provided to Congress a compliance report on THAAD. The conclusions of the report have never been released publicly, but the Director of the Ballistic Missile Defense Organization may have hinted at the report’s conclusions a few months later in open hearing when he characterized THAAD as having the capability to counter a “non-trivial portion” of the Russian strategic missile force if provided satellite cuing. Many regarded the director’s language as the legal definition of objective non-compliance with the ABM Treaty.

The Clinton Administration decided to seek a political solution with the Russians by clarifying the distinction between strategic and theater missile defense and ensuring that all U.S. theater missile defense programs were compliant with a modified treaty. The Compliance Review Group (CRG) continued to approve tests of THAAD systems, because none of the tests violated the treaty. The CRG undertook a systematic engineering review of THAAD looking for technical reasons to declare the system treaty compliant.

The CRG review created a new approach to assessing THAAD’s performance. Previously, engineering studies of interceptor lethality had been enough to prove compliance. Other missiles were too limited by speed, acceleration, or warhead power to intercept strategic reentry vehicles. THAAD’s interceptor was not so limited, and this prompted the original compliance concern. The CRG chose to characterize the size of the area THAAD could defend against Soviet ICBM and SLBM reentry vehicles.

It is a measure of the CRG’s diligence, and the stringency of U.S. compliance standards, that it undertook the study fully aware that for THAAD to offer any defense at all it must operate outside its design parameters. THAAD’s radar was designed to scan the sky for incoming theater ballistic missile warheads. For THAAD to have any hope of intercepting high velocity strategic warheads, it required help from a defense support satellite telling it the target’s velocity state at last stage burn out. The early warning and attack assessment system supporting THAAD would need to identify the enemy missile type and understand the performance parameters of the missile’s post-boost vehicle, if any. Armed with ephemeral and a priori knowledge, THAAD’s radar would stare at one or two spots in the sky until it detected reentry vehicles and commanded interceptors to attack them. The off-design mode of operation was known by a sports metaphor, goal-tending. If THAAD goal tended, it could defend a small area or footprint against strategic missile reentry vehicles.

The actual size of the footprint identified in the CRG analysis is still classified. However, a non-government study taking a similar approach predicted that a THAAD battalion could defend an area approximately the size of the District of Columbia against high-performance reentry vehicles. If THAAD operated as designed, scanning the skies for incoming warheads, it would see them too late to respond. Against slower theater ballistic missile targets, THAAD’s footprint

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was theater-wide. That is, the footprint would have encompassed an area that included the District and much of northern Virginia, southern Maryland, and the Chesapeake Bay.

There was no precedent to help the CRG determine whether the goal-tending footprint was compliant or not. While the simulations were being performed, the program office for THAAD in Huntsville, Alabama, discovered that software limitations in the battle management system prohibited THAAD from accepting the real time cuing data required to intercept strategic missiles. The limitations could be corrected, but it would take years of software modification and testing. Software limitations had precedents in the CRG, and compliance lawyers were comfortable with them. In January 1996, the Compliance Review Group gave THAAD final program certification. In 2004, THAAD changed its name from the Theater High Altitude Area Defense program to Terminal High Altitude Area Defense Program. By then, the United States had abrogated the ABM Treaty and the terms theater and strategic had become obsolete with reference to missile defense.

The THAAD experience had impact. It changed the compliance review process. Before THAAD, compliance review was associated with development tests. After THAAD, the CRG began information reviews long before testing began. THAAD also pointed out weaknesses in the U.S. approach to compliance. Compliance determinations were based on engineering simulations of untested equipment to discover non-trivial capability against Soviet systems whose performance was known imprecisely. Operational factors, if considered at all, were not dispositive of compliance concerns when perhaps they should have been, and anywhere else would have been.

The National Training Center and Open Skies Treaty. The Army’s National Training Center at Fort Irwin, California, is one of the premier sites in the world for realistic ground combat training. A training visit to the Center is a capstone event for Army mechanized infantry brigades. The training syllabus there is the culmination of months of brigade training, planning, and logistics preparation. Army brigades rotate through the NTC on a tight schedule in advance of being certified as fully available for deployment or contingency operations. The experience at Fort Irwin is a significant factor in a brigade commander’s personal assessment of his organization’s combat readiness.

The Eisenhower administration was the first to propose an Open Skies Treaty. The treaty was a solution to the administration’s concern about Soviet development of a large fleet of long-range nuclear bombers and the potential for such a fleet to destroy the U.S. retaliatory force in a surprise attack. “Eisenhower reasoned that getting permission to overfly Soviet military facilities while granting permission for the Soviets to overfly US military installations would greatly ease tensions between the two superpowers.” A supposed “bomber gap” between the United States and Soviet Union led Eisenhower to authorize overflights of Soviet territory in violation of international law. These ended when the Soviets shot down a CIA U-2 aircraft over Soviet territory on 1 May 1960 and an Air Force RB-47 in international airspace two months later. Interest in the Open Skies Treaty languished after the CORONA reconnaissance satellite

191 Deployment patterns, concepts of operation, design operating parameters, numbers, operational tests, etc.
192 Army brigades rotate through the NTC every two weeks, end on end, for the entire year. There are no make up days or flextime in the training schedule.
series began operation. The idea of an Open Skies agreement revived in 1989 as a multilateral plan to “allow countries without satellites to gain reliable information about military developments in other countries via unarmed planes equipped with cameras and signal detection sensors.”

The parties to Open Skies signed the treaty in Helsinki in 1992. It entered into force in 2002. Between signature and entry into force, the parties conducted joint training flights to familiarize aircrews and host country escorts with procedures, Open Skies aircraft, and flight conditions in host countries. In 1998, a Finnish Open Skies aircrew flew to the United States on a commercial aircraft, and using a U.S. Open Skies aircraft, conducted a joint training mission supervised by the Defense Threat Reduction Agency. The Finns came with no particular flight plan in mind, but the American escorts for the mission recommended over flying the National Training Center. In order to ensure safety of flight, the Army and Federal Aviation Agency cancelled an artillery live-fire exercise in on-going brigade training. The effect of the cancellation was the loss of 270 days of brigade planning and preparation for the NTC. This event is noteworthy not only for the gravity of its operational impact, but also for its rarity. After almost 20 years of arms control inspection compliance, this is the only negative operational consequence the armed services identify. Otherwise, the Services have never lost a training day due to arms control compliance. None of the services is aware of a combat unit whose readiness status has been degraded owing to arms control compliance. None of the services keeps a list of negative operational consequences associated with compliance. Compliance takes time and money—each of the armed services spends about $25 million dollars annually to comply with arms control requirements—but the operational impact is almost nonexistent. Except for high-impact sites like the NTC, training and test schedules are flexible enough, and the force is large enough, to adapt to arms control compliance requirements. Arms control compliance is like bad weather. It comes and goes. Units adapt.

Arms control compliance has little operational impact for three reasons. First, to a degree that outsiders to the inspection community may not realize, inspectors and the inspected cooperate on many minor matters arising during inspections. Both sides normally work together to facilitate the inspection and bring it to a rapid, successful conclusion, if possible. At the execution level, the emphasis is on practicality, and it minimizes disruption. Second, treaties with complicated verification regimes often based their inspection provisions on the outcome of field experiments conducted during the course of negotiation. Inspected units used standard security, maintenance, and safety procedures to support the experiments. If new procedures were required specifically for inspection, their development was the joint responsibility of negotiators and experts from the field. Joint development ensured the safety and security of the inspected party’s weapon systems. It also minimized unit disruption. And third, the responsibility within the Department of Defense for implementing and complying with arms control agreements is lodged in the acquisition arm of the Office of the Secretary of Defense. Acquisition has a vested interest in

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194 This mission also over flew Los Angeles International Airport at the high point of its operational day and the Nellis Test Range requiring changes in commercial flight paths and military test programs.
195 The FAA clears airspace up to 30,000 feet over artillery ranges in the United States. The Open Skies aircraft fly at 10,000 feet.
196 Air Force costs are higher because it operates two Open Skies aircraft with 90 military personnel assigned in support.
program stability to which its executives, political appointees and career civil servant alike, are committed.\textsuperscript{197} In the opinion of one former senior policy official in the Department of Defense, had implementation and compliance been lodged in any other branch of OSD, the impact of arms control compliance on military units and organizations would have been far heavier.

Lessons Learned

The Department of Defense’s approach to compliance review has strengths and weaknesses. The process is remarkable for its thoroughness, sophistication, and commitment to the principle of guilty until proven innocent. The U.S. compliance process is as thorough as it is in order to serve as a model for the world. However, it is unclear that U.S. compliance review always produces a reasonable answer. Is it reasonable for a system like THAAD, without question optimized against theater ballistic missile threats, to be thought non-compliant with the ABM Treaty due to an off-design capability \textit{without} the additional corroboration of operational factors (numbers produced, deployment patterns, test history, and exercises)? The thoroughness of the U.S. compliance process argues that other nations are unlikely ever to adopt it, and its weaknesses suggest that the United States should be dissatisfied with it.

The Department of Defense’s approach to compliance has minimized operational disruption and compliance cost. Treaty compliance costs the Department time and money, but it has no apparent effect on the operational capabilities of the force. A few experts held the view that treaties requiring force reductions do affect operational capability. After all, less is less. However, no expert supported the notion that arms control obligations had undermined overall U.S. military power. Experts also expressed the view that implementation costs, particularly of arms reduction treaties, were expensive. After all, it costs money to eliminate weapons and facilities. Balancing that perspective was an alternative view. The requirement to eliminate the Department’s equipment, weapons, and installations is an inherent obligation arising from their creation. Arms control may accelerate or delay that obligation or attach to it other requirements, but arms control does not create the obligation to eliminate weapons and installations whose time has passed. It is unreasonable to attribute most of the costs of elimination to arms control.

The Department of Defense gains almost nothing institutionally from arms control agreements. Security, stability, and predictability are defined differently in the Department of Defense than they are by other agencies of the Executive Branch. The Department’s primary arms control objective is to minimize the impact agreements have on Department plans, programs, and capabilities. The Department has not recommended an arms control solution to a national security problem in at least 30 years.\textsuperscript{198}

\\textsuperscript{197} Executive positions in OSD acquisition are unlike the rest of the organization. Assistant secretaries and deputies are routinely civil servants. This is to ensure program stability. Even political appointees in acquisition are career acquisition executives. As such, their most important concern about arms control compliance is to minimize program disruption, if possible.

\textsuperscript{198} The Incidents at Sea agreement was negotiated by the Secretary of the Navy after concern arose that ship and aircraft incidents between Soviet and American forces might trigger conflict.
The Department of Defense brings irreplaceable expertise to the U.S. arms control enterprise. Arms control constrains the portfolio of equities for which the Department has primary, and often exclusive, responsibility. If U.S. arms control efforts are to succeed at any level, the Department of Defense must be a committed participant. Resources of time, personnel and money are required. In interviews associated with this study, officials from other agencies expressed the opinion that the Department’s reduction in arms control staff over the years had reached a level that worries other agencies.

Interview Results

SAIC interviewed roughly two-dozen serving and former U.S. arms control officials during its research for this study. Most had many years of arms control experience in the Department of Defense. Several had served in positions of arms control leadership in more than one agency of the executive branch. We asked questions in six issue areas: arms control’s value to U.S. security, key challenges facing U.S. arms control policy, the important attributes of arms control agreements, the status of the arms control bureaucracy, the role of leadership, and the future of arms control. The experts returned to many of the same themes repeatedly. The results of the interviews are synthesized below.

Stability and Global Norms. Experts agreed that the two most important contributions of arms control have been enhancing crisis stability, and establishing global norms that can in some cases regulate state behavior. Although the empiricist critique of traditional arms control discounts the role of negotiations in contributing to a more positive atmosphere between rival states, the experts were agreed that arms control negotiations are valuable for that purpose. The patterns of interaction created between the parties to arms control negotiations help key decision-players get to know each other, establish dialogue, and take account of the need for compromise and flexibility. Once arms control agreements are in force, they usually include verification and compliance mechanisms that allow further opportunities for dialogue and discussion, and that, too, can help build confidence and patterns of restraint. Finally, many agreements include data exchange or other confidence-building measures that contribute to an overall relationship of restraint. These factors add to stability by creating buffers against precipitous unilateral action when the states parties to an accord find themselves deep in a crisis triggered by other factors.

The contribution of arms control and arms control-like agreements to “global norms” is also significant. Often, global arms control agreements are formally in force and universal. However, international and domestic political realities are sometimes such that states will not or cannot subscribe. Instead, they choose to act in harmony with the restrictions while remaining legally outside them. For example, the United States observes a moratorium on nuclear testing even though the U.S. Senate rejected a comprehensive test ban agreement. The United States unilaterally implements a range of progressive measures regarding anti-personnel landmines, even though it did not sign the Ottawa Treaty. The arms control enterprise itself helps to identify a global consensus that carries weight, even if the agreements under negotiation fall short of entering into force or obtaining the broadest participation.
Although there was strong consensus on the contribution that arms control had made in the past, there was disagreement about its potential for the future. Changes in the international security environment, some said, had created challenges that were less susceptible to the solutions traditional arms control provides. Others believed that with executive leadership and commitment, bureaucratic transformation, and innovation, arms control policy can still accomplish a great deal, particularly in the area of non-proliferation.

**Treaty Non-Compliance.** There was strong consensus among the experts that non-compliance among our treaty partners is the most urgent problem facing U.S. arms control policy today. When non-compliance goes unanswered, it tarnishes arms control’s reputation and undermines global security. All the experts recognize bureaucratic obstacles stand in the way of effective responses to non-compliance. However, the principle problem in creating an enforcement culture in the United States security community, many believe, is lack of commitment on the part of executive authority. Some experts believe that response to non-compliance is the emerging measure of effectiveness for U.S. arms control policy.

Informal non-binding agreements have risen in stature compared to legally binding treaties, and eventually the U.S. may prefer informal agreements as a matter of routine. Experts express divergent views with respect to the structure and character of new arms control agreements. One view holds that any administration contemplating an arms control initiative must be pragmatic and realistic. However, if it enjoys strong support in the Senate, it should aim to make agreements formal, legally binding, of maximum longevity, and comprehensive in its membership. However, if the administration anticipates significant political resistance or outright opposition, it must be prepared to “trade” formality, longevity and/or universality to achieve lesser but still valuable contributions from the envisioned agreement.

An opposing view holds that arms control treaties of indefinite duration are a mistake, not the ideal, and it is never appropriate to negotiate treaties without sunset clauses. The justification for the rejection of indefinite duration is constant change in the global security environment. Treaties of indefinite duration deny states the flexibility they require to respond to new security challenges. The principle of indefinite duration may even undermine the treaties adopting it by postponing their evolution until it is too late.

Although legally binding agreements have remedies under international law for non-compliance, some experts observe that the inability to agree on effective responses to non-compliance undermines the value of legally binding commitments. Given the state of U.S. policy on non-compliance policy, informal agreements are probably no better than legally binding ones. However, from the perspective of flexibility, informal *ad hoc* agreements offer tailored approaches to arms control problems. If the informal approaches are effective, they can be continued. If ineffective, they can be abandoned for different approach.

A few experts doubt that arms control agreements demanding universal compliance will ever be effective. They believe the underlying principle is wrong. The theory of universal compliance holds that an interconnecting web of interests motivates a diverse community of nations to act in concert. In fact, diversity among nations unravels common interest and creates conflicting motivations. Ultimately, universal agreements depend on the good faith and honesty of the least
faithful, most dishonest of the parties. Experts ask, how can such a situation ever be effective? The alternative is to pursue joint arms control action among like-minded states. Technology control regimes covering advanced weapons technologies and dangerous dual-use materials are an example.

Organizational Transformation. Experts commented on organizational change that has occurred in the arms control community since the end of the Cold War. The number of people working on arms control issues is dramatically lower than it was ten years ago, particularly in the Department of Defense. The State Department absorbed the Arms Control and Disarmament Agency. Many experts agreed that these changes conformed to the logic and requirements of the international security environment following the end of the Cold War. The State Department’s transformation of arms control organization had the positive effect of eliminating a layer of management separating former ACDA bureau chiefs (now assistant secretaries of state) from the secretary’s office and providing avenues of access unavailable before. State also put increased focus and executive attention on verification and compliance matters, and bureaucratic turf has been redefined. New management measures of effectiveness are defined in State’s arms control functions that are similar in concept to the best practices found in industry.199

Experts also expressed concern about the Department of Defense’s arms control organization and functions. Organizational change appears to have been a function of serial reductions in the size of headquarters staffs and the Office of the Secretary of Defense and not systematic, well-conceived reform. Some believe that the Department’s personnel strength is too thin to allow it to cover the nation’s arms control agenda effectively.

Arms Control Policy Interagency Effectiveness. Experts expressed a range of opinion about the effectiveness of the arms control interagency and demonstrated great sophistication in describing it. However, the experts’ strongest and most consistent judgment was that the arms control policy interagency system is severely broken. Only a handful of experts respect the system and value its operation. Those most critical of it describe the arms control interagency as corrupt, because it sacrifices national interest to bureaucratic politics. The interagency system is criticized for its inability to resolve disputes, execute presidential decisions, and innovate.

With regard to innovation, experts criticize the system for failing to generate new ideas. Some experts believe that virtually all innovation comes from the principals committees, and not at lower levels. Some attribute this demerit to the design of the policy interagency. The interagency’s primary purpose is to remind policymakers of U.S. obligations, not to surface new ideas. Others blame agency leadership. Bureaucratic inertia, they say, is traceable directly to indifferent leadership at the level of agency head. Staffs merely reflect the indifference.

Some believe that strengthening the NSC staff may solve many of these problems. The arms control interagency system works best when the NSC staff is strong. Often the strength of the system is measured by the relationship of the assistant to the president for international security affairs with the president and cabinet members. Just as important, it is necessary to have an

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199 In the Office of the Assistant Secretary of State for Verification and Compliance, cross-disciplinary teams have formed to address compliance issues.
NSC system under which senior NSC officials below the assistant to the president are empowered to attempt to adjudicate or reconcile interagency disputes and seek innovative ideas.

**Executive Leadership.** Experts tell remarkable stories of individual leadership at many levels of the arms control enterprise. The anecdotes demonstrate initiative, innovation, and courage at the middle levels of the bureaucracy, but they have few stories of leadership at the highest level. They also tell of incidents in which lower level officials have worked with associates on Capitol Hill and in the press to resist arms control initiatives when they perceive that the support of executive authority is wanting. Leadership surfaces in many places in the U.S. arms control community, perhaps too many and not enough at the same time.

**Arms Control’s Role in Today’s Security Environment.** Experts expressed strong consensus that arms control as traditionally practiced is unequal to the challenges presented by a changing global strategic environment. Some experts recommend that the arms control enterprise focus on the most urgent security challenge of the period, the proliferation of weapons of mass destruction, rather than the arms control issues of the last generation: strategic arms reduction. Contemporary threats to U.S. national security are increasingly global and unorthodox. They require broad assistance from U.S. allies and partners to forge a common response. A good example is the Proliferation Security Initiative. Another is the effort to end Iran’s nuclear weapon program via negotiations with the United Kingdom, Germany and France. The current international security environment may require the United States to lead on some issues and operate from the margins on others.

Some experts believe the U.S. arms control enterprise loses its focus by putting forth initiatives that are insignificant to U.S. national interest.\(^200\) They propose that the interagency discipline future initiatives with a vital interest test.

**Conclusion**

If the modern era in U.S. arms control began with the Gaither Committee report, it arguably ended on 11 September 2001 with the terrorist attacks on New York, Washington, and Pennsylvania. From 9/11 to the present, the primary national security challenge acknowledged by the United States is the threat posed by international terrorism, rogue and failed states, and the spread of weapons of mass destruction. The United States pursues interconnected strategies to deal with terrorism, proliferation, and outlaw and failed states. These strategies draw on every tool of national power and the help of allies and partners. In this environment, the role of bilateral, competitive arms control as the United States has practiced it for the last forty-five years is understandably marginal, particularly from the perspective of the department responsible for waging the war on terror.

If the modern era of U.S. arms control is over, then it is not something to be looked back on with nostalgia or regret. The period was difficult and controversial, but it finished well. During its course, the United States set a clear purpose; applied reason, logic and experience to its cause;

\(^{200}\) Small arms transfers to Latin America.
negotiated with firmness; recovered from its mistakes; and got what it needed. It is a distinguished history, and its example is relevant for the future. If arms control is to play a constructive role in the post-9/11 period, it must transform to meet the challenges of the contemporary international security environment. Transformation begins with a vision of change. The Bush administration has supplied that vision:

The gravest danger our nation faces lies at the crossroads of radicalism and technology. Our enemies have openly declared that they are seeking weapons of mass destruction, and evidence indicates that they are doing so with determination. The United States will not allow these efforts to succeed. ...History will judge harshly those who saw this coming danger but failed to act. In the new world we have entered, the only path to peace and security is the path of action. (President Bush, The National Security Strategy of the United States of America, 17 September 2002)

Weapons of mass destruction could enable adversaries to inflict massive harm on the United States, our military forces at home and abroad, and our friends and allies. Some states, including several that have supported and continue to support terrorism, already possess WMD and are seeking even greater capabilities, as tools of coercion and intimidation. For them, these weapons are not weapons of last resort, but militarily useful weapons of choice intended to overcome our nation’s advantages in conventional forces and to deter us from responding to aggression against our friends and allies in regions of vital interest. In addition, terrorist groups are seeking to acquire WMD with the stated purpose of killing large numbers of our people and those of friends and allies—without compunction and without warning.

We will not permit the world’s most dangerous regimes and terrorists to threaten us with the world’s most destructive weapons. We must accord the highest priority to the protection of the United States, our forces, and our friends and allies from the existing and growing WMD threat. (The National Strategy to Combat Weapons of Mass Destruction, December 2002)

What can arms control do to support this vision?

**Lesson 1: The definition of the arms control enterprise can expand.**

Arms control cannot be only about big treaties, sophisticated verification regimes, and arms reductions. Under the rubric of arms control should be included the entire range of non-proliferation activities: control regimes for technology and dangerous materials, ad hoc arrangements to interdict the illegal flow of controlled technology and materials, ad hoc
arrangements to share products of national methods of verification, general talks aimed at improving regional and global stability, international prosecution of companies and individuals involved in proliferation, coordination with international organizations which monitor compliance with proliferation agreements, enforcement regimes designed to compel non-compliant states to abide by their legal obligations, and regimes designed to secure protected status for civilians endangered by traditional or irregular warfare. This agenda is greater than arms control and is more appropriately termed, international security negotiations. Too often, experts make distinctions—weak distinctions—between the elements of an expanded negotiations agenda.

**Lesson 2: Executive leadership in the Department must unify around the President’s vision.**

When executive authority commits political capital to international security negotiations policy, progress occurs. The example of the Department’s unified leadership in regard to the final days of the ABM Treaty demonstrates what executive leadership can accomplish. If executive authority fails to unify around the non-proliferation vision in U.S. national security strategy, inaction, and probably tragedy, will follow.

**Lesson 3: U.S. national security interests are served poorly when the U.S. imposes severe compliance consequences on the Department of Defense and fails to impose any non-compliance consequences on others.**

The serial failure of the presidential administrations to deal with non-compliance effectively has undermined U.S. policy objectives and tarnished the entire arms control enterprise. Failure in the present security environment will cause the United States to face the perils it wishes most to avoid. Our treaty partners must face adverse consequences when they fail to meet their compliance obligations.

**Lesson 4: The arms control interagency community has shrunk since the end of the Cold War, but arms control activity remains high across a broad front of topical areas.**

If the critical challenge facing the United States for the indefinite future is WMD proliferation, perhaps not all the arms control activity underway serves a vital interest. If not, then perhaps some activity should be curtailed or ended.

**Lesson 5: The Department’s arms control staff has shrunk by two-thirds since the end of the Cold War while arms control activity has remained relatively constant.**

Human capital is the Department’s most important arms control policy, implementation, and compliance resource. If the staff is not deployed and organized to meet the requirements of the President’s vision, then it needs to be. The State Department’s reorganization of implementation and compliance authorities may be a useful example.

**Lesson 6: The structure of future arms control agreements is important to the Department.**

The value of treaties of indefinite duration is a matter of debate. However, the risk associated with indefinite duration (resistance to change after obsolescence) appears to outweigh the benefit (predictability). Treaties with sunset clauses are good arms control policy in a security environment characterized by rapid technological advance and political change. From the perspective of non-compliance, it makes no difference today whether arms control agreements
are formal or informal. From the perspective of flexibility and rapidity of action, informal agreements are good arms control policy. Future arms control treaties, if any, should contain provisions establishing obligations among signatories for responding to treaty non-compliance. The Department has achieved great success in reducing the operational impact of arms control compliance. The Department should employ in the future the measures that have succeeded so well in the past.

If the U.S. were to develop a principled policy of graduated response to non-compliance, then formal agreements might be preferred over informal.
Lesson 7: The strength and effectiveness of the arms control interagency system is important to the Department. If criticisms of the effectiveness of the interagency process are accurate, the Department of Defense has an obligation to support solutions that will strengthen interagency decision-making and resulting national security policy.
Section III: Impact of Science and Technology on Requirements for International Security Negotiations

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Introduction

The rapid advance of science and technology presents a growing challenge to the United States national security community. Advances in the sciences underpinning nanotechnology, biotechnology, information technology, and advanced energy sources have been accelerating and converging. They promise unprecedented change to nearly every aspect of global economy and society, including the global security environment. Recognizing and addressing the security challenges presented by new, potentially disruptive technologies will undoubtedly become a major United States and international objective.

To say that science and technology have had a profound impact upon international security negotiations is an understatement. Advances in scientific and technological knowledge have had a pervasive impact on nearly every aspect of modern international security negotiations. In fact, it was the landmark scientific achievement of harnessing atomic energy for weaponry in the middle part of the 20th century that spurred the Cold War arms race and first brought about the need for nuclear arms control. The development of satellite and aerial reconnaissance systems enabled verification of treaties and agreements by national technical means. In many ways, advances in science and technology made arms control both necessary and possible; however, recent developments in science and technology may very well make efforts to control weapons technologies much more difficult, but no less urgent. The nature and pace of technological advance in the era of globalization, and the quality of the measures taken to manage it, will likely serve as the primary drivers in determining the future success or failure of international security negotiations.

This paper seeks to assess the impact of rapid scientific and technological advance on requirements for international security negotiations, and on existing arms control regimes. The paper is divided into three sections beginning with a broad overview of the impact of science and technology on arms control, followed by a brief survey of emerging technologies with the potential to become or contribute to future weapons of mass destruction. The final section will examine the changing requirements for international security negotiations due to advances in science and technology.

Overview

It was in the middle of the twentieth century that the global arms race more fundamentally became a science race. Prior to World War II, military research and development (R&D) spending absorbed on average less than 1 percent of total major power military expenditures. By the 1980s, the R&D share of major power military spending had increased to 11-13 percent.\footnote{Data from SIPRI and Mary Acland-Hood cited in Vally Koubi, “Military Technology Races,” \textit{International Organization}, Vol. 53, No. 3 (Summer 1999), pp. 537-565, at p. 537} It was precisely during this period, as science became a more important part of military might, that the United States emerged as the clear global leader in science…During the Cold War, the U.S. lead grew stronger. Scientists from the Soviet Union briefly challenged the United Sates…but then decisively lost the race.\footnote{Robert L. Paarlberg, “Knowledge as Power: Science, Military Dominance, and U.S. Security,” \textit{International Security}, Summer 2004. Available from Lexis Nexis, (accessed April 28, 2005).}
With the advent of the nuclear age, the United States and Soviet Union emerged as the preeminent leaders in developing new weapons and systems. A disruptive technology from the first, nuclear science, and corresponding programs grew steadily in both size and scope beginning in the early 1950s and continuing throughout the following decades. Vertical and horizontal proliferation continued apace as states continued to pursue new and better kinds of weapons. As the Cold War competition grew, the arms race increasingly became a scientific race, with each of the superpowers vying for decisive offensive and defensive advantage. Nuclear warheads grew in size from one kiloton to tens of megatons. The infrastructure required to develop and support nuclear weapons programs expanded in an equally dramatic manner.

As early as 1955, President Eisenhower proposed his “Open Skies” plan, calling for reciprocal aerial inspection of the United States and Soviet Union and the exchange of military “blue prints” by the two countries. The U.S.S.R. ultimately rejected the proposal, arguing that such aerial surveillance would not be permitted until the last stage of a comprehensive disarmament process. But the need for detection and surveillance of nuclear sites helped, in part, to drive the race to space in the 1960s, and ultimately brought about the advent of satellite reconnaissance technologies. The explosion of a Chinese nuclear device in October 1964 helped to spur once and for all the need for measures to counter further proliferation of nuclear weapons technology and expertise, and an era of international security negotiations commenced.

Beginning with early arms control efforts such as the Nuclear Nonproliferation Treaty, Mutual Force Reductions and Strategic Arms Limitation Talks (SALT) continuing up to the present time, the issue of compliance and verification of compliance has dominated the negotiations discourse. Verification by national technical means (NTM) came to serve as the primary means of establishing bona fides in negotiations and attaining a degree of transparency, and, as such, the basis for deeper reductions by both the United States and Soviet Union. The resulting treaty provisions addressing inspection rights codified the use of NTM, complemented by onsite inspections (OSI). In this regard, developments in imagery and satellite technology grew to paramount importance as the chief means of verifying Soviet compliance with its treaty disarmament obligations, as access for on-site inspections was often highly restricted.

Despite innovation and growth in aerial reconnaissance technologies, NTM could not and still cannot perform all tasks required for full and complete verification, just as OSI can only verify compliance with declared data and systems. While both NTM and OSI are necessary, the two measures together remain insufficient for detecting non-compliance of undeclared or clandestine weapons activities—a problem that will only grow more complex as technology spurs innovation in both offensive and defensive systems. Early nuclear weapons programs required vast, energy-hungry gas diffusion plants and supporting infrastructure for the production of nuclear material that were—and in some cases still are—distinctive and difficult to conceal, and thus identifiable to imagery and signatures analysts. But modern gas centrifuges have changed this paradigm. Modern centrifuges, such as the P2 model so widely shared by the A.Q. Khan network, open up the nuclear option for a new class of proliferators with only moderate technical sophistication.

205 For more information on Chinese nuclear tests, dates, and yields, go to http://cns.miis.edu/research/china/coxrep/testlist.htm#top.
such as Iran, Libya, or North Korea. Moreover, the newer centrifuge enrichment plants are much smaller than the original gas diffusion plants and use potentially just five percent of the latter’s electrical power. Therefore not only does the new generation of centrifuge technology make the development of nuclear weapons easier, it also makes the monitoring of uranium enrichment for peaceful nuclear purposes and the detection of clandestine weapons programs far more difficult and uncertain.

In recent decades, U.S. science-based military dominance has driven potential adversaries towards pursuit of asymmetric strategies and weapons—an unintended consequence of U.S. conventional superiority. As Robert Paarlberg argues, “science-based military primacy on the battlefield is clearly not a guarantee of security. Determined adversaries can innovate increasingly asymmetric tactics against an endless list of soft targets, and the more domination and resentment they feel under U.S. conventional military hegemony, the more incentive they will have to move toward these unconventional responses.” U.S. military primacy draws heavily from the strength of our defense technology leadership. However, U.S. technology leadership is no longer a foregone conclusion. Today, the United States is finding its position challenged by changes in the international intellectual capital balance (most notably by China, Japan, and the European Union), the pace of technology development, the globalization of technology, and a rise in disruptive technologies and/or capabilities. Although the U.S. currently leads the world in the development of military systems, the military science and technology base shows signs of erosion.

As a result, one of the greatest challenges of the current era is to construct ways of engaging and constraining actors of greatest concern, whether state or non-state, in an effort to prevent the world’s most dangerous technologies from reaching them. But one of the many means of controlling access to weapons of mass destruction (WMD) and related systems is arms control, broadly and simply defined as international cooperation in the pursuit of controlling dangerous technologies and weapons. Without prejudging basic methods, participants, or modalities of arms control, there can be little debate about its continued necessity. Beyond “arms control” exists the broad range of other tools included under the rubric of international security negotiations—strategies of technology denial, cooperative threat reduction programs, unilateral declarations, law enforcement and/or interdiction efforts, et al—designed to tackle the same issue but from a different perspective.

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Emerging Technologies

In 1977 Richard Burt warned that “the small size and high mobility of new weapons systems, as well as the diversity of launch platforms available for their launch, will severely test the effectiveness of unobtrusive methods of monitoring compliance.” 209 While Burt could not have foreseen current advances in weapons technologies or the miniaturization made possible by nanotechnology, his concern remains eerily prescient for today. This paper highlights four important areas of distinct and converging technologies that are likely to challenge the utility of and impact requirements for existing and future international security negotiations. But the list is not meant to be exhaustive. The key issue is for military and national security planners to remain open to the possibility of rapid changes in the threat environment driven by advances in technology.

The convergence of nanotechnology with other fields of technological innovation, such as biotechnology, information technology, and advanced energy source weapons, represents precisely the types of new weapons systems that will severely test the effectiveness of capabilities to monitor compliance with existing or future international agreements. While it is far from certain whether any of the following technologies discussed will become weapons of mass destruction, it seems likely that some emerging technologies will in time. In an effort to prevent technological surprise and keep pace with scientific innovation, it is expedient to monitor technology developments and begin thinking through ways to prevent their harmful exploitation by U.S. adversaries.

Nanotechnology
Defined as a group of emerging technologies in which the structure of matter is controlled or manipulated at the atomic or molecular level to produce novel materials and devices that have useful and unique properties, nanotechnology offers the potential to become both an enabler of other forms of WMD and a discrete weapon of mass destruction on its own. 210 The basic concept behind nanoscience is the ability to build anything the laws of nature will permit. As an enabling technology, nanotechnology and miniaturization already plays a role in chemistry, biology, and advanced energy systems at the molecular level. As a discrete new kind of weapon of mass destruction, current nanotechnology research includes ultra-high explosive/ultra-incendiary devices, and micro-metallic particle-air explosives that have the potential to deliver greatly enhanced blast and thermal effects from conventional military high explosives. Current arguments supporting ethical standards and arms control measures to prevent the catastrophic possibilities of nanotechnology necessarily focus on what is realistic in the near term, not on what might eventually be possible. 211

Without appreciation of the full potential for weaponization of nanotechnology, many argue that it is premature to seek to control access, and therefore destined to fail. Others question whether

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211 Levi and O’Hanlon, 86-87.
it is more important to restrict access to the technology itself, or if it is the application of the technology that must be managed. Still others remain unsure whether or not we actually care about controlling emerging technologies such as nanotechnology. Perhaps even more importantly, the question arises as to what reaction attempts to establish early political controls might elicit from the technological have-nots who remain years behind the industrialized nations.

Biotechnology
What is new today in the biotechnology and genetics arena is the tailored development of more contagious and lethal pathogens or designer genes, and the increasing number of states and non-state actors that may have access to knowledge or cultures of them. A new generation of weapons based on genomic research has the potential to create entirely new types of and approaches to biological warfare. Specific areas of research that hold great potential for new approaches to biological warfare include: aptamers, which bind and block cell receptors responsible for biological functions; molecular poisons, toxic molecules designed to create specialized biological effects; and binary biological weapons such as chimeras or genetically modified pathogens. Many of these entities do not fall within existing treaty definitions of bioweapons, and many of these newer designer weapons will surpass states’ current abilities to detect attack, diagnose disease sources, and develop countermeasures. While most genomic research is geared towards expanding the frontiers of science and medicine or is defensive in nature, the research has already resulted in accidental innovations within the biological warfare arena. It is tempting to think that comprehensive measures to classify advanced biological research might prevent the development and spread of such agents and toxins, but it likely cannot do so on its own. “Even if the world were prepared to surrender many of the health benefits it derives from the open exchange of advanced biological information, too much information and too many advanced research techniques are already widely known.” Put differently, the biotechnology genie is out of the bottle and cannot be forced back inside.

The issues involved with establishing controls for biotechnology innovations are similar to those of nanotechnology. One proposed method for controlling access to advanced biotechnology research holds that a broader definition of arms control, including the coordinated use of domestic legislation by individual countries, is necessary to restrict and monitor biological research activities to give arms control and nonproliferation efforts more weight. While it is recognized that this approach may not be able to prevent the efforts of determined countries to

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212 In 2001, genetic research at the Australian National University inadvertently created a lethal biological agent using the mousepox virus. Although mousepox is related to smallpox, it normally causes only mild symptoms among the variety of mice used in the experiment (and does not affect humans at all). The researchers were experimenting in ways to suppress mouse fertility as a means of pest control. They inserted into a mousepox virus a gene that stimulates the production of a compound, Interleukin-4, known to suppress the fertility of female mice. Mousepox virus was simply the delivery vehicle for the foreign gene. The genetically altered mousepox virus had the desired effect. It stimulated the production of Interleukin-4 in the mice; however, it also unexpectedly suppressed the test animals’ immune defenses against viral infection. The normally harmless mousepox virus killed every test animal in less than ten days. The modified virus also proved highly deadly to mice vaccinated against mousepox. In subsequent research in the United States and Australia, the mousepox virus was modified again. Now, it is 100 per cent lethal even against inoculated laboratory mice. The research conducted in the U.S. after the Australian accident has generated much discussion among genetic researchers and laypersons, many of whom question its ethical propriety and fear its consequences as an example for biological warfare.

213 Levi and O’Hanlon, 76.

214 Levi and O’Hanlon, 75.
acquire dangerous weapons, it could reduce the risk that terrorists would obtain them as well as reduce the risk that advanced pathogens would quickly spread if developed; after all, slowing the spread of technological expertise and the development of advanced pathogens is a worthy goal in itself.  

As Michael Levi and Michael O’Hanlon have argued in The Future of Arms Control, “Arms control will never be a perfect tool for preventing the proliferation of dangerous biological agents, given the nature of the agents and technologies involved.”  But taken together, arms control and coordinated national legislation could serve as an important step forward in restricting access to cutting-edge biotechnology and expertise.  Levi and O’Hanlon write:

Addressing the threat of biological terrorism requires a combination of better domestic law, better intelligence, stronger coordination of international legal approaches, greater support for Nunn-Lugar and related efforts in the former Soviet states, and greater research into defenses, including vaccines and medical treatments. It is not a case of choosing between traditional arms control options and other approaches to address the problem; all are needed…the right arms control tools must be selected if effort is not to be wasted on largely useless procedures that might create an aura of effectiveness without preventing proliferation. And the U.S. and its allies must avoid arms control concepts that could impair biodefense efforts.

If access to new forms of bio-weapons is to be effectively controlled and restricted, policymakers must make use of all the tools in the policy toolbox, with an eye towards continuous adjustments and information-sharing to keep pace with scientific advance.

Information Technology
Information technology (IT) is already an enabler of existing weapons of mass destruction. Information technology is critical to every supporting and operating system associated with United States nuclear forces. Over the next two decades, information technology is likely to fully realize the information-communication revolution that began with general public acceptance of personal computers, Internet access, and wireless communications. Global connectivity, ready access to information, and integrated sensor-communications networks will be an important part of the future strategic environment. Those with access to modern information technology will have near-instantaneous connectivity with more information, sources of knowledge, people, products and services, and institutions than was ever available before. The sensor-data-communications networks forming the backbone of the information technology revolution will support the information and connectivity requirements for conflict between individuals, non-state groups, and states. The United States is currently at the forefront of a military transformation initiative based on networked combat units.  

The Department of

\[215\] Ibid.
\[216\] Levi and O’Hanlon, 83.
\[217\] Levi and O’Hanlon, 77.
\[218\] The transformation efforts of the Department of Defense have the objective of creating “network-centric,” or “net-centric” combat unites organize to accept and act on operation intelligence with unprecedented speed and effect. Other nations, primarily allies, are aware of US transformation objectives and some are attempting to adopt them.
Defense believes the initiative will create unprecedented military effectiveness. In the future, this type of transformation will be available to many states and non-state actors.

Information technology is unlikely to constitute a new kind of weapon of mass destruction on its own. Computer network attack (CNA), netwar, corruption of the information sphere, and impairment of critical infrastructures is disruptive but should not be ranked alongside nuclear, biological, or chemical weapons in terms of lethality. The emergence of CNA and netwar imply a need to rethink strategy and doctrine to move towards network-based constructs, since more traditional notions of warfighting will likely prove inadequate to cope with a nonlinear landscape of conflict.219

One form of information technology, artificial intelligence, could become the foundation for a new kind of WMD if integrated with other weapons technologies to replace human decision-making. The weapons would be small, smart, autonomous, lethal robots, capable of networking in large numbers (and swarming) to achieve massively destructive effects. The technology to produce a weapon of this nature is already available in the United States, and could be greatly enhanced when married to nanotechnology and micro-electromechanical systems. While it is impractical to argue that access to all forms of information technology should be controlled, the convergence of advanced IT with nano- or biotechnologies, or directed energy weapons, is a phenomenon to be monitored closely by the international security negotiations community.

Advanced Energy Sources

Research on advanced energy sources, while driven by the need to diversify energy sources and reduce associated pollution, has also produced latent new WMDs. The most mature directed-energy weapon today is the high-energy laser (HEL), which generates an intense beam of monochromatic light. Another fairly mature concept is radio-frequency weapons, particularly high-power microwaves (HPMW).220 While HPMWs are categorized as non-lethal, anti-personnel weapons, at higher intensities of power, longer exposure times, or different frequencies, they can disable or kill.

One potential advanced energy source concept that moves more into the realm of theory is metastable nuclear isomers. While questions exist concerning the ability to trigger their energy release, research into metastable nuclear isomers is ongoing in half a dozen or more advanced industrialized states. Similarly, a weapon based on anti-matter annihilation which produces 100 times the amount of energy produced by thermonuclear reactions is now theoretically possible.221 The Air Force Research Laboratory reportedly is pursuing research programs into anti-matter production and storage hoping to advance basic science in the field and to examine future military applications for anti-matter energy sources.222 Although these concepts are currently more theoretical in nature and offer little near-term prospect of weaponization, their mid- to long-term potential is very high.

221 One gram of antimatter contains the same amount of energy as 23 space shuttles. One millionth of a gram of antimatter contains as much energy as 80 pounds of TNT.
While directed energy weapons in general have lesser potential as WMD, development of certain categories of directed-energy weapons may need to be restricted under international humanitarian law such as the Convention on Certain Conventional Weapons. Much like nanotechnology, it is problematic to establish early political controls over immature advanced energy source technologies that may never achieve the desired or anticipated weapons effects. Aside from being ineffective, critics believe that establishing political control over such emerging technologies will stigmatize directions of new scientific research that have the potential to yield great benefit outside the realm of WMD.

Changing Requirements

As Richard Burt argued during the height of the Cold War, sovereign states are unlikely to place early constraints on newer technology until they can fully exploit it for themselves, understand its long-term operational potential, and then demonstrate the capacity to exploit it.223 The statement holds particular resonance for today’s most cutting-edge technological pursuits, and yet we are no closer to finding a definitive solution to the problem of restricting emerging technologies with potentially devastating applications.

The pace of technological change will remain greater than the ability of negotiating nations or international organizations to set up formal, comprehensive controls. Improvements in technology and advanced weapon systems demand that greater flexibility—if not also sunset clauses—be built into existing treaties and agreements in order to remain relevant. Live monitoring bodies can be established to share information and maintain continuous dialogue among states parties to address technological innovation and work to maintain treaty relevance. A body designed to sustain continuing dialogue—such as the Bilateral Implementation Commission or Joint Compliance and Inspection Commission in the Moscow and START treaties, respectively—is an important piece of the overall effort to control dangerous technologies, but can only serve as one small part of a larger integrated strategy.

While some formal multilateral measures are not commonly viewed as classic arms control but are closer to law enforcement, their objective is the same: preventing the most dangerous technologies from falling into the hands of the most dangerous actors. As such, absolutist arguments either in favor of or in opposition to “arms control” and international security negotiations are unhelpful, and fail to describe the complexities of the current environment. The successes of the A.Q. Khan network demonstrate that proliferators are adept at circumventing export controls through falsification of end-use information, end-user documentation, and cargo manifests.224 Illicit suppliers and shippers collude and use transport routes and transshipment points in countries that lack strong controls and enforcement mechanisms, such as Malaysia. While the United States has developed active measures such as the Proliferation Security Initiative (PSI) and has worked to expand cooperative threat reduction programs, the international community has responded with the adoption of various measures including United

223 Burt, “Technology and East-West Arms Control.”
Nations Security Council Resolution 1540, reforms considered by the Nuclear Suppliers Group (NSG), expansion of the PSI, the G-8 Global Partnership’s Action Plan on Nonproliferation, and proposed steps to strengthen International Atomic Energy Agency (IAEA) inspections.225

Passed in April 2004, United Nations Security Council Resolution 1540 requires all states to criminalize proliferation by non-state actors and to establish, review, and maintain effective national export control systems.226 The resolution endorses cooperative action to counter proliferation, and expressly states that it will not alter existing multilateral regimes such as the Nuclear Non-Proliferation Treaty, Chemical Weapons Convention, or Biological and Toxin Weapons Convention. The universality of Resolution 1540 serves as a strong complement to voluntary, limited-membership organizations such as the NSG or Missile Technology Control Regime, but it remains too soon to tell what the first round of annual reports on implementation actions by individual states will reveal with regard to compliance. The NSG has considered the following steps designed to close the loopholes revealed by the successes of Iran, North Korea, Libya, and A.Q. Khan, including: a “catch-all” provision to give member states discretion to deny suspicious exports beyond those specifically targeted by the agreement; making the IAEA Additional Protocol a condition for supplying nuclear technology for civilian use; expanding NSG membership; and increasing communication and information-sharing among NSG countries and the IAEA.227

Since the launching of PSI in 2003, more than sixty nations have signed on to coordinate efforts to interdict shipments of WMD-related items and develop new approaches to counter the global trafficking of weapons of mass destruction. Membership in PSI continues to expand, with most recent endorsements from Argentina, Croatia, Georgia, and Iraq. Through training exercises involving military, law enforcement, customs, intelligence, and legal experts, the PSI partners are seeking to develop new tools to improve their national and collective capacities to interdict WMD and related shipments—whether on land, at sea, or in the air.228 In his February 2004 speech at the National Defense University, President Bush called for further expansion of PSI to take direct action against proliferation networks by using Interpol and other mechanisms to strengthen coordination among countries in their efforts to bring weapons traffickers to justice.229

In the same speech, President Bush called upon the G-8 partners to take action on promises made to combat the export of “sensitive items with proliferation potential” at the 2002 Summit.230

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227 Albright and Hinderstein, 122.
a result, the G-8 partners reached agreement to commit to an Action Plan on Nonproliferation at Sea Island in July 2004, to pursue nonproliferation objectives by amending the NSG guidelines and working to gain broad support for the measures. The G-8 nations also agreed to a one-year freeze on initiating new contracts for reprocessing or uranium-enrichment technologies to additional states. The possibility of longer-term prohibitions on the sharing of nuclear fuel cycle technology and expertise remains under debate, but has exacerbated the issue of the NPT guarantee on sharing nuclear power for peaceful purposes.

Finally, the IAEA responded to the growing proliferation challenge by pledging to strengthen inspections in detecting undeclared nuclear facilities and materials, and in urging all states to implement the Additional Protocol to foster information-sharing and expand the right of inspectors to verify data. The revelations of the Khan network demonstrated the need for the IAEA to collect more information from states regarding imports and exports of sensitive dual-use items, as did the disclosure of Libya’s clandestine program.

But the issue of verification of compliance with existing treaties and agreements, and adequate monitoring of illicit weapons production activities remains a challenge. New thinking is needed to capture newly emerging technologies in international security negotiations, as well as contain future proliferation of keystone technologies. Although no satisfactory solution to verification and compliance issues has yet been found, no one method should be discarded until the proper mix of tools can be found. Detection of noncompliance must lead to enforcement action, and states and international bodies must have more comprehensive national means and methods to adequately verify and enforce compliance. Without setting a standard for response, even newer hybrid measures geared toward supply-side restrictions, interdiction, and law enforcement such as PSI will remain largely ineffective.

Perhaps it is time for a change in thinking regarding collection of verification data in order to move away from reliance on passive observation. Newly emerging technologies with unique signatures and/or unidentified effluents will require new technical means and methods of detection, as well as new applications, concepts of operations, and doctrine. Innovative thinking and technological advances need not only result in improvements for offensive purposes, but should also yield benefit for defensive purposes as well. Put differently, the same advances that can be used to create weapons can also be used to set up countermeasures against them.

In sum, the requirements for international security negotiations will remain in flux due to scientific and technological innovation. The pace and nature of technological advance demands greater flexibility and on-going dialogue or information-sharing for both existing agreements and future negotiations. Drawing from the concepts behind Moore’s Law, Fiber Law, and Storage Law (computing speeds double every eighteen months, communication capacity doubles every nine months, and information storage doubles every twelve months), the threat posed by emerging technologies and their applications by United States’ adversaries will increase as technology develops. We are currently only in the initial stages of revolution in each of the four fields discussed in the previous section.

231 Ibid; Albright and Hinderstein, 124.
232 Albright and Hinderstein, 125.
Conclusion

Emerging technologies are revolutionizing traditional weapons concepts and warfare. Developments in nanotechnology, biotechnology, information technology, and advanced energy sources have enormous potential to yield new kinds of weapons equal to or surpassing the destructive potential of existing weapons of mass destruction. The diffusion of technology has contributed to the likelihood of emerging technologies of mass destruction reaching the hands of our adversaries. The convergence of emerging weapons technologies and adversaries willing to employ asymmetric means to achieve their objectives only adds to the urgency with which the United States and international community must work to meet this challenge.

In order to deal with the spread of new, potentially dangerous weapons technologies, several international security negotiation initiatives should be considered:

- Educate executive national leadership on the potential dangers of emerging WMD technologies and seek their support for early dialogue among like-minded states;
- Establish early dialogue among the advanced industrialized states on issues of emerging WMD technologies; early dialogue can help identify technologies of concern, keep existing regimes relevant, and better understand what technological innovations others are pursuing;
- Establish both formal and informal regimes for sharing information about technologies of concern;
- Establish programs for domestic control, detection, defense, and environmental remediation for weapons of mass destruction based on non-traditional principles; and
- Work with friends and partner states to coordinate domestic and international technology control regimes.

In the past, international security negotiations have formed a vital component of national security strategies for controlling proliferation and denying technological advantage to adversaries. However, negotiations to date have tended to focus narrowly on traditional WMD programs, particularly nuclear proliferation. Advances in science and technology promise to present a variety of new proliferation challenges to the Department of Defense.
Section IV: Business Risk Management and International Security Negotiations

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The views herein are those of the author not necessarily those of SAIC or any of its sponsoring organizations.
Introduction

This section responds to a request from the sponsors of DTRA’s International Security Negotiations Project for an examination of business risk management practices and their applicability to United States international security negotiations. The unstated assumption supporting the request is the suspicion that international security negotiations, particularly arms control negotiations, elevate risk to United States national security interests. A second unstated assumption is that arms control agreements do not contain adequate measures for reducing inherent security risk.

The paragraphs which follow outline several business risk management principles and practices; they address the question of the relevance of business risk management practices to an inherent government activity like international security negotiations; they apply (for the sake of discussion) a common risk discovery model to an international security negotiation problem; and they speculate about the potential implications of applying business risk management strategies consistently to national security negotiations policy.

Business Risk Management—Principles and Practices

Risk management has been a commercial enterprise for nearly 400 years. In the mid-17th Century, syndicates formed in Europe for the purpose of insuring the cargoes of ships making long-distance voyages. The syndicates prospered, because it was possible after almost two hundred years of world exploration and colonization to calculate the probability of ships being lost at sea over common routes of passage during various seasons of the year. Insurance syndicates calculated premiums that were commensurate with the risk of ocean passage and spread the risk among investors (underwriters) willing to insure a portion of a cargo’s value in exchange for a portion of the premium. Today, the risk management industry is equal in value to approximately 5 per cent of global gross domestic product. In terms of capital and earnings, it is economically significant on a global scale. However, the risk management industry’s significance goes far beyond dollars and pounds sterling. Very few people on earth are unaffected by the efforts of government and industry to manage the risks associated with manufactured products, transportation, pharmaceuticals and healthcare, processed foodstuffs, and commercial construction. Risk management is a science with specialized advanced degree programs, laboratories, and professional standards. Business risk management relies increasingly on advances in the physical sciences to assess and mitigate the risks of modern life. Large corporations increasingly use risk management practices and principles to improve the probability that their business ventures will succeed.

Definitions. The word, risk, means an adverse consequence or peril that may result from, or affect the outcome of, an activity. Normally, risk is described two-dimensionally: its probability of occurrence and the severity of its impact. Risk management in business involves finding ways to reduce both the likelihood and impact of perils to a level commensurate with the rewards expected from a business venture. Risks fall into four categories.
• **Hazards** are natural or anthropogenic perils. They can include adverse consequences due to severe weather, accident, or even political decisions. For example, in the early 1980s, the underwriters of Lloyd’s of London (an enterprise that opened its doors for business in 1688) had to restructure, recapitalize, and re-charter following a series of devastating ocean storms that came ashore in the Western Hemisphere, the loss of a large natural gas container ship and its cargo in an accident at sea, and a pay-out to CBS News after the Carter administration decided to cancel American participation in the 1980 Moscow Olympics.

• **Legal risks** are civil liabilities or criminal penalties that businesses may encounter if they deviate from accepted or prescribed business practices. In June 2005, a civil court awarded the shareholders of the Enron Corporation a $2.2 billion judgment against JP Morgan (an investment house proudly tracing its lineage to 1799) for the bank’s role in establishing accounts through which officers of the Enron Corporation defrauded investors. The court judgment followed a $135 million fine by the Securities Exchange Commission against JP Morgan for the same thing.

• **Operational risks** involve mistakes and errors in production, the failure of business partners or vendors to perform as expected, or the impact of crime. The all-too-familiar recalls of automobiles to repair design, materials, or production flaws are an example of operational risk management. One of the most famous of these was Ford’s recall and subsequent termination of the Pinto line, after it was discovered that a design flaw in the gas tank could lead to fire if the Pinto was struck from behind.

• **Financial risks** are the adverse consequences businesses encounter when they choose to invest in equities, lend money during periods of interest rate fluctuation, or must deal with fluctuating exchange rates when conducting international operations.

**Risk Management Strategies/Processes.** Risk managers apply four strategies when dealing with the aforementioned categories of risk. If the risks are improbable and their impact is slight, risk managers will **retain risk** as a cost of doing business. If the risks are highly probable and impacts are severe, they will likely **avoid risk** altogether by rejecting the venture. Risks falling within the middle ranges of probability and severity pose the greatest dilemmas for risk managers. Managers can choose to **reduce risk** by taking steps to address the peril directly. For example, the risk of fire in hotels is a peril that requires hoteliers like the Marriot Corporation to ensure that its hotels are constructed using fire retardant materials and technology, have adequate emergency exits, train staff to assist the exit of guests during an emergency, and construct adequate underground utility infrastructure to support fire fighters. If possible, Marriot will also **transfer risk** to other business entities through fire insurance policies and construction warranties.

Many of the largest corporations apply systematic risk management processes throughout the corporation. Corporate culture will dictate the specifics of the processes, but they will have certain things in common. At the enterprise level, interdepartmental groups involving corporate staff, business unit managers, auditors, and resource managers will work in an integrated, continuous system to identify day-to-day risk sources and create controls to mitigate risk. Lower
in the corporate hierarchy, at the level of program control, managers will use nearly identical processes within their program. Sometimes program managers will seek outside help. Often, they will work exclusively with internal resources. In theory, the enterprise and the program processes will be systematic, disciplined, and continuous. The processes encourage constant learning. At the project execution level of a corporation, the lowest operating level of business, risk management involves compliance with policy direction, regulations, and procedures set by higher management to reduce or eliminate risk.

Relevance to International Security Negotiations

Since the end of World War II, international security negotiations have focused on a series of defined perils to reduce the likelihood and impact of their appearance. The perils include: nuclear war, proliferation, arms race instability, unstable military balances, armed conflict’s risk to protected life and property, and armed conflict’s risk to the natural environment. International security negotiations have been, and are, a form of international security risk management. Nations seeking to reduce the risks associated with the above perils have relied heavily on arms control negotiations and agreements. However, in recent years, governments have used environmental treaties, international humanitarian agreements, initiatives to expand protections afforded under the law of war, and threat reduction initiatives to manage risk. The breadth of risk management approaches in international security negotiations is no longer captured reliably by the complex of activities encompassed by the term, arms control.

Risk Management Strategies. The international security risk management strategies pursued by governments are roughly analogous to business risk management strategies. States routinely employ security strategies that retain, avoid, transfer, and reduce risk.

- Risk Retention. Although the goals of defense programs and military operations are pronounced in terms that seem far removed from risk management ideas, the creation of military forces and the conduct of military operations give evidence that a nation has accepted the necessity of absorbing directly the potential cost of national security perils. Defense programs and military operations are comparable to a risk retention strategy in business.

- Risk Avoidance. International agreements outlawing war, specific weapons of mass destruction, weapons that inflict unnecessary suffering, weapons that are indiscriminate, weapons that inflict superfluous injury obviously have the objective of ensuring that certain perils never appear. Agreements banning conflict or particular weapons are comparable to a risk avoidance strategy in business. Refusing to negotiate international security agreements believed to carry too much inherent risk is also a risk avoidance strategy.

- Risk Transfer. Regional security alliances share national security risk among allies. However, the distribution of risk is not equal for all. Militarily capable states almost certainly will accept increased operational and financial risk compared to weaker members of the alliance. International security agreements that create international
organizations to monitor compliance with, or enforce adherence to, international security norms transfer a portion of risk from member states to the international organization. So, certain kinds of international security agreements are comparable to risk transfer strategies used in business.

- **Risk Reduction.** Traditional arms control has the objective of increasing stability among military rivals. Arms control agreements confine, constrain, and limit defense programs and military forces through qualitative and quantitative restrictions. Arms control agreements can lead to improved national relationships based on greater understanding and confidence between executive authorities, leading to less likelihood of precipitous action during a crisis. Agreements beyond the sphere of traditional arms control, like the Cooperative Threat Reduction Program, create “industrial” relationships having similar outcomes. Both kinds of agreements are comparable to a risk reduction strategy in business.

**Risk Management Processes.** Business risk management processes occur at the enterprise, program control, and project execution levels. A rough analog to this structure exists in the United States government’s international security negotiation enterprise.

- At the enterprise level of organization, the National Security Council interagency decision-making process performs most of the same functions performed in theory by corporate risk management processes. The interagency process itself uses a regularized pattern of interaction involving multiple agencies concerned with minimizing institutional disadvantage. The interagency decision-making process depends on information generated from within the system, and the process is continuous.

- At the program control level of organization, the United States’ negotiating delegation is roughly analogous to a business unit providing mid-level direction of operations. In many ways, the negotiating delegation is a smaller version of the interagency process and relies on most of the same principles and processes.

- At the project execution level of organization, the Department of Defense’s compliance community performs many of the same functions as project execution organizations in business. Department compliance organizations are guided by policy directives, regulations, and procedures, just as business units are at the project execution level. And both are audited for compliance.

**Dissimilarities between Business and Government.** While we believe that risk management strategies and processes in the United States international security negotiations community have rough analogs in the corporate world, it would be a mistake to believe that they are more than just that. There are important dissimilarities. The international security community pursues political objectives and social goods. Accountability for that pursuit ultimately falls to elected officials, but it is sometimes difficult to assign responsibility for risks that go poorly managed. Corporate decision-makers have fiduciary responsibilities for which they are legally liable. Responsibility is well-defined among all corporate officers, not just one or two at the top. Government agencies, stock exchanges, boards of directors, and large investors monitor
corporate decisions carefully in real time. They have the means to immediately penalize decision-makers whose risk management decisions they question.

Information about international security negotiations is privileged and often classified. Corporations have privileged information, too; however, corporations are obliged to release quantitative and qualitative data to the public each quarter, allowing professionals and laypersons to determine whether corporate leaders have succeeded in managing business risk. New laws (such as the Sarbannes-Oxley Act of 2002) require corporate executives to personally certify the accuracy of reports released to the public. There are legal penalties for deception. There is no counterpart in government to such liability.

Foreign non-governmental organizations can compel corporations to alter their business practices. Following the surprise failure of several large American corporations in the 1990s, a non-governmental organization setting standards of accountancy in Europe observed that American standards were more lax than in Europe, to the detriment of investors and shareholders alike. It recommended to European bourses that American businesses be compelled to match European standards of accountancy before American securities could be offered for sale in European stock markets. The bourses agreed, and hundreds of American corporations were obliged to review their accounting methods in order to have direct access to European investors. There is no counterpart in government to such vulnerability.

One of the underlying assumptions leading to this report, that international security negotiations contain inherent risks to the very objectives sought through them, is another important dissimilarity between government and business risk management. The suspicion that risk management practices are themselves an independent source of risk is foreign to industry. In business, risk management practices are adequate or not. They are correctly applied or not. They are heeded or not. They are not regarded as inherently risky and potentially worthy of risk avoidance.

**Inherent Risk in International Security Negotiations**

Critics of United States arms control policy often cite four risks that surface from international security negotiations. First, agreements rapidly become obsolete. Arms control negotiations can take time, sometimes a long time, to produce agreements. Parties to a negotiation may need years to become satisfied that their political-military objectives have been satisfied at acceptable risk. While negotiations move slowly forward, military technology makes relentless, rapid progress. Weapon systems that were in the prototype stage when negotiations began may be deployed systems by the time treaties are concluded. Weapon concepts that were in the “proof of concept” phase may be prototypes by the time a treaty is signed. As a result, treaties are in danger of technological obsolescence before they enter into force. Other critics assert that technological advance is setting the stage for new kinds of weapons of mass destruction based on different physical principles than those addressed by the last two generations of arms controllers. Rapid advances in biotechnology, advanced energy systems, distributed weapons of mass destruction, and nanotechnology promise to make existing treaties irrelevant.
Treaty obsolescence is compounded by provisions allowing indefinite duration. Critics allege that treaties without sunset clauses take on lives of their own even when they fail to add value to national security. The absence of sunset clauses allegedly inhibits the very amendments needed to restore relevancy. Treaties also become obsolete due to changes in the international security environment. Critics of arms control point to the changes that have occurred over the last 15 years in relations between Moscow and Washington and contrast those changes with the static terms of strategic arms control treaties negotiated during the Cold War. The latter are said to be political artifacts of an era that is gone in every respect except one—we continue to resurrect pointless Cold War animosities twice a year in treaty compliance meetings. Even worse, critics allege, these artifacts impose obligations that prohibit the United States and Russia from taking the unilateral measures needed to respond to emerging threats from third parties.

Second, critics of Cold War arms control agreements complain about implementation and compliance costs. The cost of implementation and compliance to the Department of Defense is estimated at $250 million per year.

Third, some critics complain about the conflict that arms control compliance and implementation creates. In particular, the Air Force objects to its role in implementing the Open Skies Treaty. The Air Force is responsible for maintaining unique Open Skies aircraft. It is also responsible for supporting air operations and far-flung deployments in a time of war. The Air Force believes Open Skies implementation ought to be the responsibility of those who derive value from implementation rather than those whose responsibilities demand concentrated support for wartime operations.

Fourth, arms control critics consistently warn about the problem of non-compliance. The warning is old and often repeated. Treaty non-compliance undermines the value of international security negotiations as a risk management device and as a tool for “preparing the battlespace”. The persistence and logic of this criticism over many years makes it difficult to ignore. The inability of the United States to develop graduated, effective responses to non-compliance is a significant national security policy failure.

Supporters of arms control agree that many of the criticisms above are accurate. However, remedies for the problems already exist and can be applied if necessary. First, supporters point out that the criticism about the tortoise-like nature of arms control negotiations and hare-like pace of technological advance is accurate. Potential fixes for the obsolescence problem include agreements which focus on a specific issue (e.g., technology) or specific attributes of a military relationship (e.g., the Ballistic Missile Launch Notification Agreement); greater use of provisions allowing treaty amendments; greater use of agreements that are not legally-binding; and use of treaty review conferences to introduce and negotiate treaty amendments.

Second, supporters of arms control point out that $250 million dollars for arms control implementation and compliance is 0.06 per cent of a $419 billion Defense Budget. In addition, they observe that other agencies of the Executive Branch would be eager to take a larger role in supervising United States implementation and compliance with arms control agreements should the Department need help or tire of the overall responsibility.
Third, supporters of arms control agree that treaty non-compliance is an aggravating problem and the failure to impose penalties occasionally has been regrettable. They also note that the United States has many interests, in addition to Department of Defense interests, that must be balanced against arms control priorities. Some arms control supporters are confident that if a non-compliance event is serious enough to warrant the imposition of a penalty, the United States will impose one.

**Due Diligence Applied to a Real Problem**

The last two presidential administrations have faced a difficult international security negotiations problem in Northeast Asia, North Korea’s nuclear program. The Clinton administration negotiated an agreement to supply economic support to the North Koreans in exchange for their restraint in processing fissile materials. Although there is an on-going debate in professional journals as to whether the North Koreans have violated the agreement, the consensus among experts is that they, the Koreans, have shamelessly ignored their obligations. The North Korean nuclear issue exemplifies the gravity of the non-compliance problem inasmuch as it threatens to aggravate security risks throughout the entirety of East Asia. Is there a business risk management model that would have helped the United States approach the North Korean issue differently or deal with the risk of Korean non-compliance with greater understanding? One may exist.

Due diligence is a process used throughout industry to identify categories of business risk and reward. Prior to entering equity positions, investment banks and financial institutions will thoroughly review publicly available information about a company’s balance sheet, cash flow, product line, market share, management experience and vision, legal liabilities (if any), and factors that could operate to the detriment (or benefit) of future company performance. Investment banks may also collect and evaluate information that is not publicly available. Prior to granting a contract to a vendor, corporations will evaluate a vendor’s proposal, review a vendor’s past performance, and judge whether the vendor is able to complete the contract as proposed. Government contract organizations are very familiar with the due diligence framework. If a due diligence process were applied to the risk of North Korea’s likelihood to comply with an international agreement, it might do the following:

- **Evaluate North Korea’s ability to perform obligations successfully.**
  - North Korea’s record of past performance
  - North Korea’s motivation to perform its obligations in future
    - Executive commitment to compliance
    - Benefits received from compliance
    - Value Party places on good will
    - Value Party places on its reputation

- **Assess United States ability to monitor North Korea’s compliance performance.**
  - Can performance be monitored routinely? Successfully?
  - Can the reasons for non-performance be identified?
  - Can the impact of non-performance be assessed?
• Evaluate United States and allied ability to recover lost interest from North Korean non-performance.
• Compare the cost of failure and risk mitigation with the potential rewards of negotiation.

Although a due diligence analysis of an agreement on North Korea’s nuclear weapon program would take many months to do properly, the following sketch provides for discussion a set of results that plausibly might have followed a due diligence process.

**Ability to Perform.** Although experts debate Korea’s record of performance on past non-proliferation agreements, the consensus among subject matter experts appears to be that Korea’s record is bad. Korea allegedly has failed to comply with all of the non-proliferation obligations it freely accepted. Korea’s motivation to perform on future non-proliferation agreements is suspect, because North Korean executive authorities send mixed signals about their commitment to completing and complying with a new agreement to end their nuclear weapon program. The Korean government has advanced toward and retreated from international security negotiations related to their program. The other five parties to the Six-Party Talks have tried to tie economic incentives to a de-nuclearization agreement. Although the value of the economic benefits is substantial, American diplomats recently testified before Congress that the economic package may not be sufficiently tempting for the Koreans to end their weapons program. The North Korean regime also has shown interest in ending its international isolation; so, it values international good will and may wish to improve its international reputation. The juxtaposition of a bad record of past performance and uncertain motivation for future performance is a red flag on North Korea’s compliance worthiness. However, there are factors that inspire hope that negotiations might succeed if North Korea is given positive reinforcement for good conduct.

**Ability to Monitor Compliance.** With regard to monitoring North Korea’s performance, the United States and other parties to the Six-Party Talks apparently have severe limits on their ability to verify Korean compliance independently. And North Korea is notoriously resistant to intrusive measures. Weaknesses in monitoring and Korea’s compulsive secrecy further complicate the parties’ ability to understand all the reasons for Korean non-compliance. For several years, the United States has tried to quell North Korea’s fear that the United States is determined to replace the Kim Jong-Il regime. Given the history of relations between the two states, that may not be possible for many years.

**Recovery.** Any state that judges its security jeopardized by another’s non-compliance with an international agreement legitimately can attempt to recover its interest. A friendly approach to recovery might involve renegotiation of the agreement on more favorable terms. Or, it might involve forgiving non-performance outright. The United States forgave the Russian Federation’s failure to destroy the Krasnoyarsk radar, an obligation the Federation inherited from the Soviet Union. By forgiving Russia its obligation to destroy the radar, the United States signaled its intent to form a relationship with Russia based on different principles than those which guided US-Soviet relations. Forgiveness avoids disputes and loss of good will. The United States could have chosen to apply political and economic pressure to secure Moscow’s compliance, but that approach might have jeopardized the larger strategy of rapprochement.
Were the United States to forgive a North Korean nuclear weapon program, it almost certainly would be interpreted as a sign of capitulation to a rogue state. Forgiveness might encourage other rogue states to present the United States with faits accomplis like the Koreans did. Unfriendly approaches to recovery, such as economic sanctions or military responses, might lead to war. In the past, North Korea has created dangerous military incidents in which the United States, for all its advantages of power, was at a serious disadvantage. On balance, the ability of the United States to recover from North Korean non-compliance with a de-nuclearization agreement is highly problematic.

**Risk Management Approaches.** The United States could try to transfer a portion of its risk to states in Korea’s neighborhood by calling for collective regional action in response to non-compliance. A North Korean atomic bomb is primarily a threat to Northeast Asia, not the United States. It would be unwise for the United States to act as though its own security interests trumped those of the other states of the region, states enjoying good relations with Washington. The United States might conclude that despite its best efforts Korea is likely to become, and remain, a nuclear power. If so, Washington could absorb a portion of the increased risk to itself through defense programs, like deployment of ballistic missile defenses and deterrent forces. The United States might choose to absorb a portion of the risk other states in the region face by extending deterrence guarantees and missile defenses to them.

The conclusion that North Korea is a poor prospect for partnership in an international security agreement would have raised no eyebrows in the United States at anytime during the last 50 years with or without a due diligence test. And that brings us to an important point about business and political decisions. Sometimes businesses and governments must pursue high-risk courses of action when the value of the objective is great. Preventing North Korea from acquiring and keeping a nuclear bomb is a valuable objective for the United States and the states of Northeast Asia. Sometimes great risk is worth accepting although the prospects of success are low or eventual success may be in the distant future.

International security negotiations can be valuable even when they result in no agreements or result in agreements that fail. Negotiations can show that the United States is dealing with an untrustworthy, dangerous regime that poses high risk to the international community. They can give evidence to third parties that the United States is willing to do everything it can reasonably be expected to do to settle a problem before it becomes a crisis. They can be used to warn adversaries about actions the United States will not tolerate. They can quiet detractors and strengthen allies and friends. In short, the United States can show itself to be simultaneously responsible, patient, fair, and deadly serious. Viewed from this lens, international security negotiations with the North Koreans in the context of Six-Party Talks have many benefits, including potential success in negotiating an agreement, and few liabilities.

**Systematic Application of Business Risk Management Practices**

In this paper, we have described international security negotiations as a form of risk management dealing with defined perils. We have compared risk management approaches used in business and found parallels in the U.S. approach to international security risk reduction. We have found
the structures of risk management in the U.S. arms control community to be roughly analogous to those in industry with dissimilarities that are important and understandable. We have surveyed both sides of a debate on the degree to which arms control poses a risk to United States security either because the risk is inherent to the enterprise or because we lack the tools to mitigate “arms control risk”. And we have applied an ordinary risk discovery process to an actual international security negotiations problem and concluded that high risk can be tolerable given the prospect of multiple rewards.

If the United States were to expand the use of business-based risk management principles and practices, what might the consequences be? A wag might answer the United States would reduce risk for itself as brilliantly as Lloyd’s of London, JP Morgan, or Ford. There is strong interest in business and the international security negotiations community in managing risk. Both communities share an interest in good agreements and faithful performance of obligations. Both take great care with the creation of their agreements. And both communities must monitor performance carefully.

There are also important differences in the ability of the two communities to manage risk, and the business community appears to have the advantage. Performance measurement is easy in business, because there is usually an open transfer of goods, services, and funds. There rarely is disagreement within a business enterprise, like there often has been within the U.S. interagency, on whether a treaty partner has violated an obligation. Business organizations have disinterested third parties to assist them in carrying out, and hence monitoring, business performance (banks, brokers, transfer agents, government agencies). Most of the information exchanged in the course of conducting business can be revealed publicly. Most of the information about international security negotiations and compliance is classified. In international security negotiations informal agreements have grown in importance while in business arrangements formal contracts remain the norm and strong preference.

Applying stronger risk management approaches in international security negotiations has potential benefits. By raising thresholds for entering negotiations, the United States could exercise greater selectivity over its negotiations partners and negotiating issues. Although this could mean fewer efforts to negotiate with hard cases, it might also mean that the negotiations we do enter are more satisfying, particularly from the perspective of treaty partner compliance. In instances where the United States negotiates agreements with adversaries, stronger responses to non-compliance might become more acceptable within the interagency.

Stronger risk management approaches might also lead to potential risks. High-risk negotiations can lead to good agreements. Higher thresholds for entry into negotiations might mean lost opportunity. Negotiating partners might also expect higher standards of compliance from the United States.

**Conclusion**

Risk management is about identifying and dealing with definable perils. In international security affairs, the perils of greatest interest are major threats to United States’ vital interests and the
stability of the international system, from which the United States derives great benefit. International security negotiations have been used to deal with these perils for two generations, and states turn to negotiation, often at great risk of failure, as a preferred tool of policy. Risk management practices in business offer principles and practices that potentially are useful to government risk managers. In fact, many are accepted and applied. Government risk managers often are tempted to say that they routinely apply these principles and practices, but others admit that risk managers apply risk management tools less systematically than large corporations do. If the latter is true, then an objective appraisal must conclude that business risk management practices are likely to improve existing governmental practices in proportion to their faithful application.
Section V: Guidelines for Future International Security Negotiations

Prepared by:
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December 2005

DTRA/ASCO Task Order 21
Rapid Response Tasking No. RR 3-04-6

The views herein are those of the author not necessarily those of SAIC or any of its sponsoring organizations.
Introduction

Over the past decades, the United States has engaged in a wide-ranging set of international negotiations as a means to enhance national security. Drawing on the experience of those negotiations (as partly reflected in the judgments of senior U.S. negotiators), guidelines for assessing proposals for future international negotiations can be derived. Set out in the following table (p. 4), those guidelines are usefully divided into “red lines” and “yellow lines.” The former “red lines” comprise tests or standards which must be met by a particular proposed negotiation—or otherwise, a particular negotiations option is unlikely to serve U.S. interests. The latter “yellow lines” entail tests or standards that need to be weighed both in the design of a U.S. negotiation posture and in making a final determination on whether a negotiated solution would serve U.S. security interests. Consider first the two types of guidelines, then their illustrative application in some proposed negotiations.

The “Red Lines”

For certain negotiations “tests,” if it is not possible to provide a “yes” answer, past experience strongly suggests not proceeding further. In these cases, negotiations are likely to prove not in U.S. national security interests.

Relevance – Negotiations Fit the Problem. Relevance is the first red line. There needs to be a negotiated solution to the problem at hand. By way of example, the Intermediate and Shorter Range Nuclear Forces Treaty (INF) provided a negotiated means to counter the direct threat to NATO’s security and cohesion presented by the Soviet deployments of SS-20 INF missiles in the late-1970s and early 1980s—in effect, by eliminating both Soviet and matching NATO ground-launched intermediate-range missiles. Conversely, throughout the Cold War, there was no negotiated solution to the threat posed by the presence of large numbers of Soviet ground forces in the heart of Europe. Instead, European security depended on maintaining a robust NATO alliance, with the deterrent to attack based on the doctrine of flexible response up to and including use of nuclear weapons.

Ripeness for Negotiations. In some instances, there may be a potential negotiated solution to a security problem but the military or political conditions may not be ripe for successful negotiation. Sometimes, the time is not ripe because potential negotiating partners are not yet prepared to engage seriously. To continue with the preceding example of INF negotiations, there was no Soviet readiness to negotiate seriously until after the United States and its NATO allies had successfully deployed the first NATO Pershing 2 and ground-launched cruise missiles into Europe. Somewhat differently, the time is not ripe today for negotiations between India and Pakistan aimed at stabilizing their nuclear relationship because neither side believes that the risks of an unintended nuclear confrontation are sufficiently high to demand a change in their behavior. International shocks as well as changes of leadership frequently can alter the ripeness of negotiations: sudden U.S. and Soviet readiness to negotiate in a Limited Nuclear Test Ban Treaty in the aftermath of the 1962 Cuban Missile Crisis exemplifies the former phenomenon; the flurry of arms control agreements after Mikhail Gorbachev became the Soviet leader exemplifies the latter.
A Credible Negotiating Partner or Partners. Whether or not there is a credible partner or partners with whom to negotiate is another yes-no red line for negotiations. At one level, credibility depends simply on the existence of a leadership in other countries that is willing and able to negotiate a solution to a problem. For most of the early to mid 1980s, there was no such leadership in the Soviet Union as first Chernyenko then Andropov rapidly succeeded Brezhnev as Soviet leader. At another level, credibility also entails an assessment of the readiness of a potential negotiating partner to negotiate seriously and in good faith – and to live-up to commitments made. In effect, is the potential partner or partners sufficiently compliance-worthy? This long has been an issue to be addressed in negotiations with the Russians, evidenced by a persistent Moscow pattern of at best questionable compliance practices and at worst periodic outright violations.

White House/NSC Backing. Experienced U.S. negotiators repeatedly stress the importance for successful negotiations of backing by the President and the senior National Security Council staff. Such backing is critical to break deadlocks and provide political momentum behind pursuit of a negotiated solution for a given national security problem – whether with negotiating partners or within the U.S. Interagency. Absent White House and NSC backing, stalemate is too likely to be the outcome.

The “Yellow Lines”

Past negotiating experience also suggests a considerable number of other tests or guidelines for assessing future international security negotiations. These “yellow lines” are less definitive. Frequently, they entail judgments of more or less, enough or not enough. Quite often, moreover, the ultimate answers are very much subject to the negotiations themselves – and how well U.S. negotiators are able to shape the ultimate outcome. Taken together, the answers will feed into an overall net assessment of whether or not a particular negotiation would be likely to serve U.S. national security interests.

Sufficient Defense Flexibility. Whether a negotiated solution provides sufficient flexibility to protect future U.S. defense posture choices is one such consideration. By definition, negotiated solutions entail some loss of U.S. flexibility of action in return for restraints on other negotiating parties. In that process, U.S. negotiators can seek to build in sufficient flexibility to protect important future defense options – from shaping the technical terms of the negotiations to arguing for a limited duration of any agreement. At the same time, evolving and even unexpected military, political, and technological requirements and developments can change the initial judgment about whether too much flexibility has been lost. Perhaps the classic example is in the area of missile defense. As the threat posed by ballistic missile programs in regional adversaries evolved in the 1990s, for example, it became increasingly clear that the 1972 Anti-Ballistic Missile Treaty severely constrained U.S. defense options to deploy defenses to meet a changing challenge.
<table>
<thead>
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<th>Table 1: Guideline/Area of Negotiation</th>
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**Red Lines**
- Relevance – negotiations fits problem
- Ripeness – issue ready for negotiations
- Credible negotiating partner(s)
- White House/NSC Backing

**Yellow Lines**
- Sufficient defense flexibility
- Timeliness of results
- Acceptable balance of obligations
- Technical feasibility of negotiations
- Identifiable “fixes” to manage risks
- No dangerous disadvantage – if non-compliance
- Acceptable clarity-ambiguity balance
- Acceptable verifiability
- Positive spillover effects
- Acceptable implementation costs
Timeliness of Results. Whether or not – but perhaps even more so, how – to pursue a negotiated solution to a security problem depends partly on whether negotiations can produce a timely result. As typified by traditional Cold War nuclear arms control negotiations under first the SALT then the START process, pursuit of formal, legally binding treaties almost always has been a prolonged process. To the extent that the primary purpose of such negotiations was to codify existing strategic realities and enhance predictability, however, lack of timeliness was not necessarily a reason to eschew negotiations. By contrast, parallel unilateral Presidential political commitments provided a very different negotiations approach when a rapid result was required to deal with the threat of “loose Russian tactical nuclear weapons” after the 1991 collapse of the Soviet Union.

Acceptable Balance of Obligations. A negotiation needs to entail a balance of obligations – on the part of the United States and that of other parties – that is acceptable to U.S. officials in the executive branch and ultimately in the U.S. Senate. Sometimes, an acceptable balance of obligations will entail equal or comparable obligations, e.g., as in the commitment of all of the parties to the Chemical Weapons Convention not to possess such weapons. In other instances, an acceptable balance of obligations could place different obligations on the United States and on other countries. This is so, for example, in the Nuclear Non-Proliferation Treaty with its differentiation between nuclear and non-nuclear weapon states.

Technical Feasibility of Negotiations. Though related to several of the other guidelines, the technical feasibility of a negotiated solution warrants treatment as a guideline in its own right. Pursuit of a Verification Protocol to the Biological and Toxin Weapons Convention (BWC) provides an apt example. In principle, the lack of effective means of verification of the BWC is a significant gap in that treaty’s effectiveness. Growing concerns about biological weapons proliferation as well as continuing evidence of BWC violations make this issue ripe for consideration. Nonetheless, technical considerations related to the production of biological weapons provided a compelling argument to oppose a formal set of verification measures for the BWC.

Identifiable “Fixes” to Manage Risks. Negotiated solutions may entail possible risks deriving, for instance, from the specific substantive obligations of the agreement, the compliance of other parties, the possibility of unexpected technological or political developments, or quite often in recent agreements, from the very process of on-site inspection for verification. The ability to identify ways to manage if not fully eliminate any such risks is another test for negotiations. Sometimes such fixes may be readily identifiable, e.g., by excluding certain items from being covered by a treaty or for some treaties, placing clear limits on the modalities of on-site inspections. Prospects for other parties’ agreement to those fixes also may be high. In other cases, it may be more difficult to identify acceptable, clear fixes to such risks.

No Dangerous Military Disadvantage – if Non-Compliance by Others. Particularly within the U.S. defense community, another important test has been whether non-compliance by another party or parties with a negotiated agreement would put the United States at a dangerous military disadvantage. The core of this judgment would be an assessment of the impact of different potential cheating scenarios as well as availability to the U.S. Department of Defense of timely actions to neutralize or counter that impact. In turn, such actions could entail direct steps to
match an adversary or indirect steps to negate the benefits of non-compliance. This test figured prominently, moreover, from the Limited Test Ban Treaty (LTBT) onwards. In that latter treaty, support within the military and ultimately in the U.S. Senate ratification debate was directly linked to maintenance of a capability to resume above-ground nuclear testing if the Soviet Union did so.

**Acceptable Clarity-Ambiguity Balance.** An acceptable balance of clarity and ambiguity in any negotiation comprises another guideline, even though one that may be difficult to apply prior to the start of negotiations. On balance, a strong case can be made for seeking as much clarity as possible in order to solidify commitments, avoid later misunderstandings, and in effect, to test whether sufficient commonality of purpose exists for a successful negotiation. Sometimes, however, ambiguity may be useful as a means of deferring a difficult but secondary issue, solidifying a political consensus while leaving technical questions for experts, taking a problem off the table, or otherwise facilitating overall agreement. Many of these reasons, for instance, appear to be at work in the recent Six Party Talks Agreement’s deferral of inspection mechanisms to verify North Korea’s dismantlement of its nuclear weapons capability. In making any such judgment about what balance of clarity and ambiguity would be acceptable, not only the specific issues involved but also the past track record of the negotiating partners would be important inputs.

**Acceptable Verifiability.** Whether or not to pursue a negotiated solution – or to accept a negotiated outcome – depends also on whether acceptable verifiability can be attained. In that regard, acceptable verifiability has been defined quite differently by U.S. officials at different times, in different negotiating contexts. Reliance on National Technical Means to verify Soviet compliance with the LTBT gave way in the late 1980s and 1990s to very intrusive on-site inspections, declarations, and other means to verify Soviet (then Russian) compliance with multiple arms control treaties. Almost at the same time, the exigencies of action under the 1991 Presidential Nuclear Initiatives made little if any verification of Russian compliance with President Yeltsin’s undertakings to withdraw and eliminate Russian ground-launched tactical nuclear weapons. In the SORT agreement, a desire to break with Cold War tradition and put the U.S.-Russian relationship on a different footing equally led to a very different definition of acceptable verifiability. At the same time, U.S. officials have already signaled that the United States and its close allies will press for quite intrusive verification of North Korea’s agreement to eliminate its nuclear weapons program under the Six Power Agreement.

**Positive Spillover Effects.** Still another test to include in an overall assessment of whether or not to pursue negotiations is whether or not there would be any positive spillover effects for other U.S. national security interests. During the Cold War, for instance, the very process of U.S.-Soviet arms control negotiations had an important impact in reassuring U.S. NATO allies and helping preserve alliance cohesion. Such spillover effects are not a reason in and of themselves to negotiate. But they may help tip the balance in any net assessment of the plus and minuses of negotiations in a specific area. In that regard, even if unsuccessful, the readiness of the European Union – led by France, the United Kingdom, and Germany with U.S. support – to seek a negotiated solution to constrain Iran’s nuclear ambitions can provide a stronger foundation for later seeking action by the United Nations Security Council.
**Acceptable Implementation Costs.** The costs of implementing the outcome of a negotiated solution also need to be acceptable. In part, this entails an assessment of the direct and indirect costs of compliance with an agreement, for example, in preparing for and hosting on-site inspections under START I. But the costs of safeguards to hedge against non-compliance, as in the case of the LTBT, the costs of developing alternative capabilities or workarounds, and any possible operational adjustments also would come under implementation costs. Depending on the negotiating area, as in the case of the Chemical Weapons Convention, there also could be implementation costs that would need to borne by U.S. industry.

**Applying the Guidelines – What Role for Future Negotiations?**

Taken together, the preceding red lines and yellow lines provide a set of guidelines for negotiations. As a heuristic device, this section applies those guidelines to a set of proposals for future negotiations. In so doing, its purpose is two-fold: first, to illustrate how the guidelines provide a framework for assessing negotiations; and second, to foster debate about the potential role of international security negotiations in today’s global security context.

**Six Illustrative Proposals**

Within the analytic, think tank, academic literature as well as on the part of officials of other countries, many different proposals have been set forth for using negotiations to strengthen international security. Table 2 summarizes six potentially promising proposals, from consolidated storage of nuclear weapons to lessen the risk of a nuclear terrorist incident in Russia to creation of an International Nuclear Fuel Bank to move forward President Bush’s proposals for new approaches to the nuclear fuel cycle. Using the analytic guidelines set out above, Table 3, following page, provides a summary assessment of six prominent proposals for future negotiations. Based on that assessment, a number of cross-cutting propositions stand out.

<table>
<thead>
<tr>
<th>Table 2: Some Illustrative Negotiations</th>
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<tr>
<td><strong>U.S.-Russian Nuclear Consolidation Agreement:</strong> Parallel U.S.-Russian unilateral commitments to consolidate storage of non-deployed, surplus, and reserve nuclear warheads in a few sites</td>
</tr>
<tr>
<td><strong>U.S.-Russia-NATO Nuclear Attribution Cooperation:</strong> agreement on types of technical, political, logistics, and other mutual support after a nuclear terrorist incident in order to determine the identify of the perpetrator</td>
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<tr>
<td><strong>SORT II:</strong> parallel unilateral statements of U.S.-Russian intent to continue the SORT limits after 2012, with readiness to negotiate further reductions</td>
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Some Cross-Cutting Propositions

Relevance of the Negotiations Option. Though other considerations may lead to a decision not to pursue international security negotiations, such negotiations do provide a potential approach to deal with some of today’s problems. Consolidated storage of U.S. but especially Russian surplus, non-deployed, and reserve nuclear warheads would support ongoing U.S. efforts under the Cooperative Threat Reduction programs to work with Russian counterparts to enhance physical protection and lessen the risk of terrorist nuclear access. By contrast, in a changing U.S.-Russian political relationship, even streamlined negotiations for nuclear reductions per SORT II appear to have much payoff than in the Cold War era when the nuclear reductions process provided insights into Soviet thinking, enhanced predictability, and was a bellwether of the overall relationship.

Varying Ripeness. As in the past, even assuming a possible fit between negotiations and a problem, the time may or may not be ripe for pursuing negotiations to work a problem. Nuclear stability talks between the United States and China could well contribute to avoiding Chinese miscalculation if not also an expanding offense-defense competition between Washington and Beijing. But many preconditions for successful talks appear lacking – from a common concepts to a shared sense of necessity. As Table 3 also suggests, however, a widely shared fear of a nuclear terrorist incident could provide a good basis for initiating negotiations among the United States, Russia, and NATO on cooperative actions to be taken in the event of a nuclear terrorist incident at the least to identify the perpetrator.

With Whom to Negotiate? From a U.S. vantage point, uncertainty about the presence of a credible negotiating partner or partners appears to stand out as one feature of today’s international negotiating environment. Russian resentment at its post-Cold War decline and periodic questions about Russian compliance-worthiness make it at least a difficult negotiating partner. China is almost an unknown. For other multilateral efforts such as an International Fuel Bank of and FMCT, many different parties, with very different technical capabilities, political agendas, and experience, would be involved. This would complicate if not possibly undercut successful pursuit of a negotiated imitative.

Uncertainty about Senior-Level Support. Past experience, as already noted, makes clear that support from the White House and the NSC for a negotiated solution is critical. At least for now, there is considerable uncertainty about whether such support would be present in the illustrative negotiating areas – with the exception of the proposal for a streamlined FMCT. But past experience also suggests that the pressure of events and external shocks can sometimes impact White House and NSC support for a specific negotiation. This could well occur again. For example, an aborted nuclear terrorist incident could trigger interest in a nuclear attribution agreement, while the demands of Security Council diplomacy to stop Iran’s pursuit of nuclear weapons could generate interest in the idea of an International Nuclear Fuel Bank.
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<td><strong>Red Lines</strong></td>
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<tr>
<td>Relevance – negotiations fits problem</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
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</tr>
<tr>
<td>Ripeness – issue ready for negotiations</td>
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<td>Y</td>
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<tr>
<td>Credible negotiating partner(s)</td>
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<td><strong>Yellow Lines</strong></td>
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<td>Sufficient defense flexibility</td>
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<td>Y</td>
<td>?</td>
<td>?</td>
<td>N/A</td>
<td>Y</td>
</tr>
<tr>
<td>Timeliness of results</td>
<td>?</td>
<td>Y</td>
<td>?</td>
<td>?</td>
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<td>N</td>
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<tr>
<td>Acceptable balance of obligations</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<td>?</td>
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<td>Technical feasibility of negotiations</td>
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<td>Identifiable “fixes” to manage risks</td>
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<tr>
<td>No dangerous disadvantage – if non-compliance</td>
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<td>?</td>
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<td>Y</td>
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<tr>
<td>Acceptable verifiability</td>
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<td>N/A</td>
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<td>Positive spillover effects</td>
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<td>Acceptable implementation costs</td>
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</tr>
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</table>
Other Negotiations “Tests” – Many Yes, Some No, Many Questions. Absent a more detailed definition of a possible negotiation than is possible at this stage, it is difficult to do more than speculate on how many of the other – yellow line – questions or tests would be answered. Indeed, the answer to those questions almost certainly would vary depending on the specifics if a decision were made to pursue negotiations. Different officials and analysis also could well come to different judgments about these tests for pursuing or not pursuing a negotiated solution. Nonetheless, several other cross-cutting considerations do appear warranted. More specifically, consider these other negotiations tests from a DOD perspective:

- **Defense Flexibility.** Ensuring sufficient defense flexibility is a key consideration. Some possible negotiations, e.g., for a streamlined FMCT without intrusive verification or a nuclear terrorist attribution agreement, appear likely to have little impact on DOD. But in other instances, the answer is uncertain, with the extent of impact depending on the specifics, e.g., as in a nuclear consolidation agreement.

- **Timeliness.** In many instances, achieving timely results will remain an uncertainty. This is so even assuming pursuit of more informal, less cumbersome agreements. But it also characterizes those agreements that would entail extensive multilateral participation, e.g., the FMCT.

- **Acceptable Balance of Obligations.** For several illustrative negotiations, it is relatively straightforward to envisage outcomes that entail an acceptable balance of obligations for the United States. For instance, nuclear storage consolidation almost certainly would have a greater impact on Russian than on U.S. practice. Similarly, a decision to extend SORT would entail mutual and balanced U.S. and Russian obligations. If U.S.-China stability talks were limited to exchanges of views, the issue of balanced obligations would not arise. But if informal or formal restraints were put on the table, acceptability would become a question at that time.

- **Technical Feasibility.** None of the illustrative negotiations options appears at first glance to raise major technical issues, from consolidating nuclear weapon storage sites to a streamlined cutoff agreement.

- **Fixes to Risks.** Any answer to this question clearly would depend on the specifics of any of the future negotiations options. Suffice it here only to assert that the most questions would likely arise in the case of nuclear consolidation and U.S.-China negotiations that went beyond exchanges of views.

- **No Dangerous Disadvantage if Non-Compliance.** Compared to the Cold War negotiations with the Soviet Union, this test appears likely to be less burdensome for future international security negotiations. In part, that change reflects the changes in the U.S. relationship with Russia as well as the nature of the negotiating areas, e.g., nuclear storage, a ratification of reductions of deployed nuclear systems. In part, the overall military preeminence of the United States provides greater flexibility, e.g., in any negotiation with China or in an FMCT.

- **Acceptable Clarity-Ambiguity Balance.** With the exception of extension of the SORT agreement beyond 2012, the balance of clarity and ambiguity in any agreement
cannot be gainsaid in the abstract. The answer would depend on the negotiations specifics.

- **Acceptable Verifiability.** Assuming continued U.S. readiness not to seek formal verification of agreements with Russia, acceptable verifiability appears to be an easily met test in that case. This also would be so in a streamlined FMCT, given the U.S. position opposing efforts to include intrusive on-site verification. Contrariwise, this test may be considerably more important – and uncertain – if any putative talks with China were to go beyond simply exchanges of views. Similarly, to the extent that eventual support for an International Nuclear Fuel Bank rested on judgments that IAEA safeguards could be trusted to verify the lack of clandestine enrichment programs in potential Fuel Bank borrowers, that effectiveness could be subject to debate.

- **Positive Spillover Effects.** Most of these negotiations would likely have positive spillover effects -- for the NPT, for political relations with Asian allies, and for efforts to foster a new approach to the nuclear fuel cycle. Pursuit of a streamlined FMCT could be an exception since most other countries want to include intrusive verification measures.

- **Acceptable Implementation Costs.** Across all of these illustrative areas, the implementation costs appear likely to be modest. Indeed, past experience examined elsewhere in this report suggests that overall the costs of implementing these types of international security agreements have been limited.
Section VI: Concluding Observations

Prepared by:
Michael O. Wheeler and Forrest E. Waller

December 2005

DTRA/ASCO Task Order 21
Rapid Response Tasking No. RR 3-04-6

The views herein are those of the author not necessarily those of SAIC or any of its sponsoring organizations.
Key Themes

Ten broad themes emerged over the course of this study:

XI. **International security negotiations have served an important norm-setting function which contributed to global security, stability, and predictability.** Arms control and non-proliferation agreements helped stabilize military competition during the Cold War and created conditions in which it became possible for the Cold War to end peacefully. From the 1960s onward, international security negotiations provided a structure and process for peaceful engagement and negotiation between the two superpowers. Although there is always danger that policy-makers will stress process over results, American policy-makers have been results-oriented practitioners. For future negotiations, the norm-setting function has direct relevance for emerging security relationships with China, Iran, North Korea, and perhaps others.

XII. **United States international security negotiations policy has had to reinvent itself repeatedly to meet the challenges presented by changes in the global strategic environment.** Viewed from a broad historical perspective, United States international security negotiations policy has changed methods and approaches relentlessly as required to achieve national security policy objectives. When negotiating conditions changed, or were better understood, or approaches failed, United States negotiations policy showed great flexibility and responsiveness. If success is defined as “all is well that ends well,” then United States international negotiations policy has been a success. Moreover, policy continues to evolve with the security environment as new challenges, like proliferation, merit greater attention and resources.

XIII. **The Department of Defense has irreplaceable expertise in advancing United States international security negotiations policy.** The Department of Defense made indispensable contributions to the success of United States international security negotiations policy during the Cold War. The expertise of the uniformed elements of the Department in weapon acquisition, planning, operation, and support were vital. Without DOD’s expertise, United States negotiation efforts during the Cold War period almost certainly would have failed to result in a militarily sufficient force. Good people and good practices were more important than good organization in contributing to the Department’s success. In recent years, the Department’s cadre of arms control experts has shrunk significantly along with its overall negotiations expertise. The trend continues and is very worrisome.

XIV. **The international security negotiations enterprise is much larger than traditional arms control.** The international security negotiations enterprise rightly includes arms control and non-proliferation and other activities that have similar effects on the Department’s plans, programs and operations. Under the rubric of international security negotiations should be included the entire range of arms control and nonproliferation activities, including control regimes for technology and dangerous materials, ad hoc arrangements to interdict the illegal flow of controlled technology and materials, ad hoc arrangements to share products of national methods of verification, general talks aimed at improving
regional and global stability, international prosecution of companies and individuals involved in proliferation, coordination with international organizations which monitor compliance with proliferation agreements, enforcement regimes designed to compel non-compliant states to abide by their legal obligations, and regimes designed to secure protected status for civilians endangered by traditional or irregular warfare.

XV. **The Department of Defense has been extraordinarily successful, perhaps more successful than any other interagency player, in influencing the direction and content of United States international security negotiations policy.** The most successful interagency players in the Department with respect to arms control have been the uniformed departments and commands. The key measures of their success are the low cost of arms control implementation and compliance ($250 million per year or 0.06 per cent of the Defense budget) and the nearly imperceptible impact of compliance on military operations (the Services have never lost a training day due to arms control compliance, have never had a combat unit’s combat readiness status reduced due to compliance measures, and do not keep lists of arms control compliance regrets). Complaints about the cost and operational impact of arms control on the force are greatly exaggerated.

XVI. **The Department of Defense is an arms control compliance overachiever.** The Department’s compliance review process is scrupulously attentive to the letter and spirit of United States international agreements. The process is so strict that it is unlikely ever to be an example our treaty partners will follow voluntarily. And on occasion, the judgments of the process have been confounding. The Department’s exactitude in compliance process and judgment contrast sharply with the persistent inability of the United States Government to respond effectively to our treaty partners’ failure to comply with their legal obligations. The Department would be justified in concluding that two standards of compliance operate simultaneously.

XVII. **The rapid progress of worldwide science and technology poses a great security challenge to the United States.** The Department and interagency focus attention and resources on the weapon technologies our grandfathers developed. State-of-the-art technologies, many with effects comparable to existing weapons of mass destruction, are overlooked. Technological progress holds the potential to undermine the accomplishments of three generations of Americans in negotiated threat reduction. There is an urgent requirement to manage emerging technologies and their applications.

XVIII. **The value of international security negotiations has more dimensions than simply a finished agreement.** Negotiations can transfer responsibility for international security risk reduction to other states, weaken our detractors, reinforce our friends, demonstrate the rogish behavior of our international adversaries, and make clear what behavior the United States will not tolerate. Negotiations can also provide a forum for continuous dialogue and information-sharing. In short, negotiations—even without tangible agreement—can show the United States to be reasonable, responsible, and deadly serious.
XIX. *The interagency system for policy development and coordination is a key to success within the international security negotiations enterprise.* The United States has been most successful in its international security negotiations policy when political support at the highest executive level was apparent and a strong, balanced interagency process was at work. This study uncovered great dissatisfaction with the interagency process among practitioners. If the criticisms are accurate, the Department of Defense bears an obligation to support remedies that will strengthen decision-making.

XX. *International security agreements should be of definite duration and should contain provisions requiring responses to non-compliance.* Given the speed with which the international political-military environment can change, the risk associated with treaties of indefinite duration seems to outweigh the benefit. Treaties with sunset clauses are good policy. Future international security negotiations should contain provisions setting obligations for dealing with non-compliance.

**The Central Question**

When American national security officials considered international security negotiations over the last two centuries, they repeatedly faced the same question, when are negotiations in the national interest? In general, American officials have answered, when negotiations sustain or improve United States national security they are in our interest. However, Americans have been elastic about their definition of national security and hence the role of international security negotiations.

National security can mean freedom from threats or danger, confidence in one’s ability to deter or defend against attack, or protection of the world from potentially catastrophic threats. National security is a political judgment based in the context of a particular international security environment:

> Among the many objects to which a wise and free people find it necessary to direct their attention, that of providing for their safety seems to be first. The safety of the people doubtless has relation to a great variety of circumstances and considerations, and consequently affords great latitude to those who wish to define it precisely and comprehensively. (John Jay, *The Federalist Papers*, No.3)

The meaning of national security is not defined explicitly in *The National Security Strategy of the United States of America* (September 2002), but it is implicit in the document’s contents. It champions human dignity, calls for defense against international terrorism, sets objectives in non-proliferation, supports global economic prosperity and development (particularly among reform-minded less developed states), hopes to expand the circle of democratic societies, and promises to work with others to defuse regional conflict and instability.

American attitudes toward diplomatic negotiation as a means to deal with such national security threats have varied over time. Protected by two great oceans in the 19th Century, the United States avoided entangling alliances and refused to become a part of the security problems of largely undemocratic Europe. Americans tended to regard diplomacy with suspicion.
Arms and alliances were considered immoral and reactionary. Negotiations were treated less as a means of reconciling our ideals with our interests than as a trap to entangle us in the endless quarrels of a morally questionable world. (Henry Kissinger, *White House Years*, 1979)

Americans’ doubts about diplomacy and international security negotiations persisted well into the 20th Century. Will Rogers used to get a reliable laugh from American audiences with this observation, “America never lost a war and never won a conference.”

In the mid-20th Century, official American attitudes toward international security negotiations changed dramatically. The United States was instrumental in creating and maintaining an anti-Axis alliance during World War II. It proposed and secured the creation of the United Nations with its Security Council and commitment to collective security. It joined with allies around the world and created the North Atlantic Alliance, Southeast Asia Treaty Organization, and a variety of other security pacts designed to contain communist aggression. It proposed and pursued limitations on nuclear weapons, attempted to negotiate a more stable balance of military power in central Europe, and negotiated agreements to introduce greater strategic stability with the Soviet Union. None of this was easy, but the most difficult negotiations were those in which the United States had to deal with states opposed to the international order Washington and its allies were trying to create. The Soviet Union and Eastern Bloc were unreliable, untrustworthy negotiating partners in many ways. This report observes more than once that the United States succeeded in achieving its negotiating objectives in spite of frequent setbacks and disappointments. In the end, international security negotiations and the steady growth in American power (economic, scientific, military, and cultural) succeeded in establishing an ordered international system from which the United States and its allies derive great benefit. Tangible benefits are now available to any state willing to integrate with, rather than oppose, that system.

**The Straightforward Answer**

Today, American officials ask the same question their predecessors asked two centuries ago, when are international security negotiations in the national interest? The answer to this question has always been a political judgment answered on a case-by-case basis. Each administration’s answer is subject to challenge from Congress and the opposing party. Ultimately the American people judge whether the administration has found the right answer. For the last two generations, a solid majority of Americans has supported negotiation as a tool to support the objectives of international peace and stability. Recent polls of American opinion confirm that a strong majority favors diplomatic negotiation to help deal with the problem of proliferation.233

At one level, the answer is straightforward. If national security negotiations can help the United States secure its vital and important interests—the survival, safety and well-being of the nation—then negotiations should be considered. The guidelines set out above offer an initial framework for answering that question—or at least beginning an internal dialogue in the case of specific proposals for negotiations. At a broader level, we postulate that there are two practical criteria

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233 Arms Control Association Survey, June 2004
for determining whether negotiations serve the national interest. If negotiations can preserve or increase security by successfully managing United States power relationships and result in a condition of military sufficiency, then they serve the national interest. Managing power relationships is a strategic political task. Management must involve every dimension of power, including economic vitality and non-coercive political influence. The Department of Defense is steward of only one dimension of national power, but it becomes involved in others tangentially through the considerable expertise it provides during international security negotiations, its global presence, and its effective use of scarce resources.

The Department has a pre-dominant role in determining military sufficiency. Military sufficiency is best understood as an armed force large and effective enough to accomplish its assigned missions and tasks with an acceptable degree of risk. Determining military sufficiency is a task appointed to the uniformed elements of the Department. Recent examples of military sufficiency analysis show that negotiations can have a positive impact on overall military capability:

The Chiefs and I have examined the capabilities of our post-START nuclear forces to meet these goals and to determine the military sufficiency of our nuclear forces. To make this assessment, we analyzed several measures of effectiveness such as level of damage expected, the numbers and types of survivable warheads, and our reserve force posture. When we compared the level of damage against the smaller target base that results from the START reductions, we determined that our modern, more capable weapons systems will allow us to maintain approximately the same levels of damage and target coverage that we can achieve today. When we examined the mix of weapons in the case when all our forces are generated to full alert, warheads increase because of the higher ratio of submarine and aircraft warheads compared to ICBM warheads. Of the land-based and sea-based missiles on a day-to-day alert, the percentage of survivable warheads will increase in the post-START force. The percentage of reserve weapons remains approximately the same. Our military judgment of all these measures is that national security is enhanced for both the U.S. and the republics of the former Soviet Union as a result of the START Treaty. (General Colin Powell, CJCS, Statement for the Record, Ratification Hearings, Senate Foreign Relations Committee, 26 June 1992)

Our logic at that time and during the negotiations was to reduce the numbers of warheads but to preserve a balanced force—a mix of ICBMs, SLBMs and bombers—sufficient in size and capability to meet our future deterrent requirements. It was our view that with the 3,500 warheads allowed under this treaty we would remain capable of holding at risk a broad range of high-value political and military targets to deter any rational adversary from launching a nuclear attack against our nation or against our allies…. More specifically, we concluded that the START II/NPR force is sufficient to prevent any foreseeable enemy from achieving its war aims against us or our allies no matter how a nuclear attack against us is designed. (General John Shalikashvili, CJCS, Statement for the Record, Ratification Hearings (START II), Senate Foreign Relations Committee, 1 March 1995)

The concept of military sufficiency is closely related to the idea of militarily significant cheating. This report observes more than once that non-compliance with treaty obligations among our negotiating partners is a problem that the United States Government has never been able to resolve satisfactorily. Judgments on the military significance of cheating are made on a case-by-case basis. The United States is never explicit in advance about the significance of cheating. And cheating is always of concern whether significant or not. The factors that lead to militarily
significant cheating involve complex judgments. They include the quantitative level of cheating, the kinds of weapons involved and their capabilities, the state of readiness and training of the force created through non-compliance, other forces the adversary may have that are affected by non-compliance, United States and allied capabilities to respond to the force created through non-compliance, and the overall political-military situation surrounding cheating. Military sufficiency has been understood primarily in the context of arms control and the Cold War. However, it has wider application across the entire spectrum of international security negotiations in the emerging international security environment.

Why Negotiations Succeed

Thirty years ago, in his seminal work on the SALT negotiations, Thomas Wolfe (RAND) concluded that arms control negotiations succeed when two parallel activities converge. Arms control is about qualitative and quantitative limitations on particular weapons, but these negotiations succeed only when the general relationship of power between states has been settled. Wolfe pointed to the unsatisfactory conclusion of SALT II as evidence that the broader power relationship between the United States and Soviet Union was unresolved. Over the subsequent 20 years, that relationship was settled with finality. The Soviet Union collapsed peacefully and the United States emerged as the most powerful nation in history by every measure. Many attribute the peaceful quality of the Soviet collapse to the long history of US-Soviet negotiation in arms control, economics and trade, science and technology, and cultural exchange.

Over the next 20 years, the United States likely will resolve its unsettled relationships of power with Western Europe, China, India, Iran, North Korea, and the states of the Middle East. It would be imprudent to give short shrift to international security negotiations as a potential approach given the success of this tool in the past. Such negotiations almost certainly will be painful and difficult for policy makers and the Americans who participate. The international order the United States hopes to maintain and advance offends many of our potential negotiating partners. Some will be unreliable, untrustworthy, and non-compliant even if they choose to negotiate. However, past experience, including the insights gleaned from Department of Defense negotiators, suggests not only that the Department has an indispensable role to play in any future negotiation, but also that such negotiations can serve national interests well.

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234 Admiral William Crowe, CJCS, Answer for the Record, INF Ratification Hearings, 1988