

THE HENRY L. STIMSON CENTER

An Evolving US Nuclear Posture

Second Report of the Steering Committee
Project on Eliminating Weapons of Mass Destruction

Chair
General Andrew J. Goodpaster (USA, ret.)

Report No. 19 December 1995



Pragmatic steps toward ideal objectives



THE STIMSON CENTER MISSION

THE HENRY L. STIMSON CENTER was founded in 1989 as a nonprofit, nonpartisan institution devoted to public policy research. The center concentrates on particularly difficult national and international security issues where policy, technology, and politics intersect. Our aim is to produce research that is relevant to policymakers, rigorous by academic standards, and understandable by the public at large. Our projects assess the sources and consequences of international conflict, as well as the tools needed to build national security and international peace. They deal with regional security (peacekeeping, preventive diplomacy, and confidence-building measures), U.S. foreign and defense policies, countering the proliferation of weapons of mass destruction, arms control measures and their verification, and other building blocks of international security.

Henry L. Stimson's distinguished career in defense and foreign policy spanned four decades in which the United States grew into its new role as a global power. As secretary of war under President William Howard Taft, Stimson concentrated on reforms to streamline the U.S. Army. When the United States entered World War I, he volunteered his services at the age of forty-nine, and served as an artillery officer on the front lines in France. As Herbert Hoover's secretary of state in 1930, he negotiated the London Naval Treaty for the United States. He rejoined the government in 1940 as Franklin D. Roosevelt's secretary of war and managed both the buildup and operations of a twelve-million-person armed force engaged in conflict in all parts of the globe. His responsibilities during this last phase of his career included the development of the atomic bomb. His last preoccupation in office, and in the last few years of his life, was how this devastating weapon could be controlled.

We admire Henry L. Stimson's nonpartisan spirit and his sense of purpose. He had an ability to set long-range national security goals clearly and to steer a steady course toward them, combining idealism with pragmatism. By establishing a research center in his name, we hope to call attention to the issues he cared about, as well as to his record of public service, and to propose, as did Stimson, pragmatic steps toward ideal objectives.

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ABOUT THIS REPORT



CONVINCED OF THE NEED for a fundamental reassessment of the future roles of nuclear weapons and their associated risks after the Cold War, the Henry L. Stimson Center in January 1994 launched a multi-year project intended to encourage serious consideration of the conditions under which all states might move toward the progressive elimination of all weapons of mass destruction.

The first annual report of the project's Steering Committee, issued in January 1995, noted that much progress had been made in recent years to devalue weapons of mass destruction, but pointed out that much remained to be done. The Committee called for a high-level national and international debate on next steps toward diminishing nuclear dangers and on the longer-term future of nuclear weapons.

This report is intended to contribute to that debate. It is the product of a year-long discussion among the Committee members about the future risks and roles of nuclear weapons, both in US policy and in the United States' relations with other countries, and reflects general points of consensus on these issues among the members of the Steering Committee. We all support the general thrust of the report and its general conclusions, but obviously should not be held individually responsible for every specific phrase or nuance of wording. Where individual members are in strong disagreement with particular points, dissenting views have been expressed in footnotes to the text.

We would like to thank the Henry L. Stimson Center for organizing the project, Cathleen S. Fisher for drafting the report and helping us to reconcile our individual views, and the Ford and Rockefeller foundations for providing financial support.

SIGNED,

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SUMMARY



The Cold War's end and the dangers of nuclear proliferation demand a fundamental reappraisal of the role of nuclear weapons in US policy and in global politics. In the changing strategic environment, nuclear weapons are of declining value in securing US interests, but pose growing risks to the security of the United States and other nations. The only military role of nuclear weapons in this new era—the deterrence of other *nuclear* threats—could be met with far fewer nuclear weapons. US national security would be best served by a policy of phased reductions in all states' nuclear forces and gradual movement toward the objective of eliminating all weapons of mass destruction from all countries.

Although nuclear weapons have played a central role in US foreign and defense policies for over four decades, there is no military justification in the new strategic environment for current or planned nuclear force levels. US conventional forces can and should counter all conventional threats, and a combination of defensive measures and strong conventional forces are more appropriate responses to any threats of chemical and biological attacks. The only necessary function for nuclear weapons is to deter *nuclear* threats to the population and territory of the United States, to US forces abroad, and to certain friendly states. This deterrent function could be met at much lower force levels, as long as other states move in tandem with the US toward smaller nuclear forces.

Deeper cuts would bring important security benefits to the United States. Aside from their direct dollar cost, the continuing existence of nuclear forces entails risks of nuclear accidents and incidents, and of the inadvertent or deliberate use of nuclear weapons in a crisis. Most importantly, the United States' continued reliance on nuclear weapons undermines international efforts to persuade other countries not to acquire nuclear weapons—the only weapons that can utterly destroy the United States as a nation and a society. Only a policy that aims at curbing global reliance on nuclear weapons—including our own—is likely to progressively eliminate nuclear dangers.

An “evolutionary” nuclear posture of careful, phased reductions, combined with an up-front, serious commitment to the long-term objective of eliminating all weapons of mass destruction, could enhance US national security significantly. The United States has committed itself to the elimination of nuclear weapons under Article VI of the nuclear Non-Proliferation Treaty (NPT), but active governmental efforts to identify and solve the problems associated with achieving this objective have been notably lacking. A decisive commitment at the highest political level would signal to non-nuclear states that the United States' NPT pledge is real, and would bolster important gains in recent years to devalue all weapons of mass destruction.

The goal of elimination would be achieved in four phases, with each phase corresponding to a new strategic environment and involving changes in nuclear roles, in the operational status and size of nuclear forces, and in arms control arrangements. Alterations

in the US nuclear posture would be gradual and conditioned upon the cooperation of other states in reducing their arsenals and strengthening non-proliferation regimes for nuclear, chemical, and biological weapons. Progress toward elimination does *not* imply the creation of a world government.

During **Phase I**—the current phase—the US and Russia would work to reduce the importance of mutual assured destruction as a stabilizing element in their relations and would undertake cuts in their respective nuclear arsenals to roughly 2,000 warheads each. Although the United States must take into account the possibility of a reversal of reforms in Russia, the essential military role of nuclear weapons during this phase—the deterrence of nuclear attack—could be preserved at much lower force levels, and it would be beneficial for both states to undertake deeper cuts in their strategic nuclear arsenals. Without a commitment to deeper cuts, the reductions mandated under *START II* will be difficult to implement in Russia. Even if reforms in Russia fail, the United States would be better off if Russia were armed with 2,000 rather than 3,500 or 6,000 deployed warheads. As the US and Russian arsenals are downsized, the alert status of each country's nuclear force should be reduced and new measures to increase the transparency of each nation's nuclear forces introduced. Safety issues should be given added emphasis during this phase and steps taken to strengthen the non-proliferation regimes for nuclear, chemical, and biological weapons. During this phase, the US should initiate official studies of the implications of additional cuts for verification regimes and safeguards, US relations with allies, US conventional military forces, and the desirability and design of defensive systems.

During **Phase II**, stable and cordial relations among the declared nuclear weapon states would further ease the requirements for nuclear deterrence, allowing all five states to reduce their arsenals to hundreds of warheads each. As in Phase I, the only military role of nuclear weapons would be to deter nuclear attack. Nuclear weapon states, moreover, would no longer perceive nuclear weapons as contributing positively to their international status. Cuts in force levels would be accompanied by steps to remove many, if not all nuclear weapons from active alert status, and by the extension of nuclear transparency and safety measures to the smaller nuclear powers. Elimination of the political roles of nuclear weapons would require significant changes in US defense policy, military strategy, and force posture. The United States and the other nuclear states might facilitate this transformation by deploying national defensive systems during this phase.

During **Phase III**, all nuclear weapon states would reduce their arsenals to tens of weapons each. Achievement of the goals of this phase would require the widespread embrace of new principles and mechanisms for national security and the further marginalization of nuclear weapons in interstate relations. Although the principle of sovereignty would be preserved, states would rely on regional and global collective security systems for their security. In such a system, nuclear weapons over time might become so devalued, yet entail so many costs, that states might prefer to act as international "trustees" of nuclear weapons. The sole function of nuclear weapons would be to deter threats of mass violence against all states and societies. When the perceived costs of maintaining such a "trustee" arrangement came to outweigh the perceived benefits, the international community would be ready to move into the final phase.

During **Phase IV**, all nuclear weapons would be eliminated from all countries. A nuclear-free world would not require the creation of world government, but states would

have to have established alternatives to the threat of mass violence to maintain their security and advance their interests. Progress toward the elimination of all weapons of mass destruction would require stringent national and international verification regimes; companion regimes for biological and chemical weapons would be essential. Most importantly, the international community would have to possess the requisite political will and the tools to ensure that it could respond rapidly to any aggressor attempting to extract short-term gain from a position of nuclear monopoly.

Currently, it is not clear whether elimination can ever be achieved. Achieving the goal will certainly take decades, although reviewing the dramatic changes that have taken place in global politics since World War II makes clear that even such a visionary objective can be reached in one or two generations. Regardless of timing, much can be done in the current environment to reduce global reliance on weapons of mass destruction, while working in the long term to progressively eliminate nuclear dangers.

An Evolving US Nuclear Posture

SECOND REPORT OF THE STEERING COMMITTEE PROJECT ON ELIMINATING WEAPONS OF MASS DESTRUCTION



The Cold War's end and the threat of proliferation demand a fundamental reappraisal of the role of nuclear weapons in US policy and in the United States' relations with other states.

For over four decades, nuclear weapons have played a central role in US foreign and defense policies. In the current environment, however, Cold War nuclear arsenals are not only of steadily decreasing utility, but pose significant risks to the security of the United States. Apart from the devastating consequences of their use, the continued reliance of the United States on nuclear weapons for broad political or military purposes undermines our efforts to convince other states that these weapons have no value and thus may weaken our ability to stem nuclear proliferation. Although the prospects for Russian reform and the future role of nuclear weapons in world politics remain uncertain, the national security of the United States would be better served by a dynamic policy of phased bilateral and multilateral reductions and gradual movement toward the objective of eliminating all nuclear weapons from all states.

Nuclear weapons already have become less important in US-Russian relations. In accordance with the START I agreement, the United States is steadily reducing its nuclear arsenal, as is Russia. The two governments have taken additional steps to mute their nuclear rivalry. In 1994, for example, US and Russian leaders agreed to "de-target" their strategic nuclear missiles away from each other's facilities. Under the Cooperative Threat Reduction (Nunn-Lugar) Program, moreover, the US Congress has authorized \$1.25 billion to assist with the safe and secure transport and dismantlement of former Soviet nuclear warheads, while Russian and American scientists are pursuing joint programs to enhance the security of nuclear materials.

Attitudes in other countries toward nuclear and other weapons of mass destruction are also shifting to further devalue these deadly instruments. The support of over 170 states in May 1995 for the indefinite extension of the nuclear Non-Proliferation Treaty (NPT), a tough-minded stance by many states against the possible acquisition of nuclear weapons by Iraq and North Korea, and wide-ranging condemnation of French and Chinese nuclear tests are important signs of the growing disutility of nuclear weapons in the international community. After decades of stalemate, negotiators for a Comprehensive Test Ban Treaty



Seated under an SS-19 ICBM, Secretary of Defense William J. Perry (left) and Ukrainian Minister of Defense Valeriy Shmarov (right) sign an agreement for additional Cooperative Threat Reduction (Nunn-Lugar) Program funds. The CTR program provides funding for the dismantlement of former Soviet nuclear warheads.

(CTBT) are making steady progress, and serious efforts are underway to achieve a ban on the production of fissile material for military purposes. The completion of the Chemical Weapons Convention (CWC) and on-going efforts to strengthen the Biological Weapons Convention (BWC) similarly testify to an emerging international consensus on the need to control deadly technologies. If these trends are sustained, all countries may come to see ever less value—and greater risk—in the acquisition, possession, and use of weapons of mass destruction.

The United States has a strong interest in supporting these measures, but it must go further if the dangers and risks associated with nuclear weapons are to be eventually eliminated. A long-term strategic vision to guide future steps in arms control and disarmament is needed. In the absence of active efforts to achieve that objective, progress toward reducing these dangers and risks may slow or even halt. But US policy is currently tentative and even runs the risk of expanded reliance on nuclear weapons to deter biological and chemical threats.

In our view, the US objective should be to progressively *diminish* the roles of nuclear weapons in national policies and in international relations. Indeed, we believe that US

national security would be best served by an evolutionary nuclear posture intended to move the United States and all other countries toward the long-term objective of completely eliminating nuclear weapons from national arsenals.

Such an evolutionary approach would be idealistic in vision, but would be cautious in implementation. On military grounds, additional cuts in the US and Russian nuclear arsenals are possible now; but for political reasons, it may be necessary to peg even deeper reductions to domestic constraints, to changes in relations among the nuclear powers and other states, and to the progressive strengthening of regimes to control the spread of all weapons of mass destruction.

At present, it cannot be known whether the objective of elimination will ever be achieved at acceptable risk. The effective verification of a global ban on nuclear weapons would present formidable challenges. The risks of instability at very low force levels and of a sudden break-out from a disarmament regime would have to be diminished to tolerable proportions through a variety of national and international safeguards. Nevertheless, much useful work can be done to diminish nuclear dangers before tackling these extraordinarily difficult questions.

But only a decisive commitment to elimination can ensure that the efforts necessary to solve these and other thorny problems are forthcoming, and that well-entrenched patterns of thinking and strong organizational resistance are overcome.

The United States and all but a few countries have already affirmed their commitment to the long-term *objective* of eliminating all nuclear weapons, most recently on the occasion of the extension of the nuclear Non-Proliferation Treaty in May 1995.¹ Yet most observers correctly view this as a rhetorical goal; active governmental efforts to identify and solve the problems that would have to be overcome to achieve the elimination of all nuclear weapons have been noticeably absent. A more serious commitment to the goal of elimination is necessary to devalue these weapons globally, while signaling to non-nuclear states that the United States' NPT pledge is serious.

Just as in 1945, the current period of change requires US leaders to make essential choices about nuclear weapons. We stand, once again, at the crossroads. Valuable steps have been taken in recent years to devalue all weapons of mass destruction, but current trends could still be reversed. Whether the United States and other countries will ever be able to achieve the goal of eliminating nuclear risks is unclear. But the continuing dangers of nuclear use justify every effort to progressively eliminate nuclear weapons, or at least to move the world as close to that objective as feasible. The determined pursuit of the goal of elimination could enhance the security of those Americans alive today and make the world a safer place for the future generations for whom we bear responsibility.

**A long-term strategic vision
to guide future steps in arms
control and disarmament is
needed.**

1. Article VI of the Treaty, to which the United States has subscribed, states: "Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control." "Treaty on the Non-Proliferation of Nuclear Weapons," *Arms Control and Disarmament Agreements: Texts and Histories of Negotiations* (Washington, DC: United States Arms Control and Disarmament Agency, 1982 edition), 93.

THE CASE FOR CHANGE

The Declining Utility of Nuclear Weapons in the Post-Cold War World



For over forty years, nuclear weapons have played a central role in US foreign and defense policies. Throughout the Cold War, the United States relied on nuclear weapons to deter conventional and nuclear attacks by the Soviet Union and China on American territory, certain friendly states, and US forces abroad. The extension of US nuclear security assurances also dampened pressures for proliferation in Germany, Japan, South Korea, and other nations that otherwise might have chosen to seek to preserve their security through the independent possession of nuclear weapons.

But the possession of nuclear weapons and reliance on nuclear deterrence also entailed significant costs and risks:

Economic Costs. The development and maintenance of large nuclear arsenals absorbed tremendous resources in the United States and the Soviet Union, and the final price tag for nuclear activities—especially environmental and safety costs—continues to rise. It is estimated that the US will spend between \$200 and \$500 billion on environmental cleanup related to nuclear weapons facilities. The costs of cleaning up the monumentally worse contamination in the former Soviet Union is beyond calculation.² During a time of intense competition for budgetary resources, moreover, maintenance of the nuclear weapons infrastructure and currently planned force levels could divert scarce funds from other military programs of greater utility to US national security.

Political Costs. Throughout the Cold War, the central role of nuclear weapons in US and Soviet policies put the two states at odds with many non-nuclear states over non-proliferation policy and exposed them to increased dangers, particularly in crisis situations. If international support for non-proliferation continues to grow stronger, the United States' reliance on nuclear weapons is likely to be a source of renewed tension in relations with many non-nuclear states.

2. According to one estimate, the United States expended nearly \$4 trillion on its nuclear forces over the past fifty years. The ultimate cost to the Soviet Union may be counted even higher, to the degree that the nuclear arms race contributed to Soviet economic stagnation and, eventually, to the dissolution of the Soviet state. For an estimate of the total cost of the US nuclear arsenal, see *Atomic Audit: What the US Nuclear Arsenal Really Cost*, Stephen I. Schwartz, ed. (Washington, DC: The US Nuclear Weapons Cost Study Project, July 11, 1995), 3. For an estimate of the environmental clean-up costs, see Schwartz, 21. On the cost to the former Soviet Union, see Alexei G. Arbatov, ed., *Russian Arms Control Compliance and Implementation* (Washington, D.C./Moscow: The Henry L. Stimson Center & The Center for Geopolitical and Military Forecasts, Spring 1994).

The very existence of nuclear weapons entails a risk that these weapons will be used one day.

Nuclear Accidents and Incidents. Although the two nuclear superpowers devoted significant resources to the development of elaborate security and safety systems, both countries suffered a number of near-accidents and false alarms on several occasions. These incidents never resulted in catastrophic consequences and were relatively few in number compared to the total number of nuclear operations. Yet, even an advanced industrial power such as the United States with redundant safety and security arrangements was unable to eliminate these risks entirely. The risk of accident will persist so long as nuclear weapons exist. If an accident ever occurred, the human, environmental, and economic costs would be catastrophic.³

Risk of Nuclear Use. Most importantly, the very existence of nuclear weapons entails a risk that these weapons will be used one day, with devastating consequences for the United States and other nations. The manipulation of nuclear risk in US-Soviet relations, as during the Cuban Missile Crisis and the 1973 Middle Eastern crisis, by its nature implied a danger that a crisis could escalate and end in a cataclysmic nuclear exchange.⁴ In the multipolar structure of international relations that characterizes the post-Cold War period, the risks of nuclear use could increase with every new nuclear power.

During the Cold War, the contributions of nuclear weapons to US national security and international stability were believed to outweigh the dangers associated with their integration in foreign and defense policies and, indeed, their very existence. There was no feasible alternative to reliance on nuclear deterrence, in any event. As long as the US faced a nuclear-armed and implacable foe in Moscow, there was little reason to reconsider the desirability of reliance on nuclear deterrence.

The strategic context that undergirded the Cold War calculus of nuclear risks and benefits has changed fundamentally, however. The dawn of the nuclear age forced policy makers and military strategists to reexamine traditional assumptions about the uses and purposes of military force in interstate relations. In a similar vein, the new strategic situation demands a fundamental reassessment of the assumptions and theories that have guided US nuclear policy for four decades. What is the political and military utility of nuclear

3. For examples of several incidents involving the nuclear weapons infrastructure in the United States during the Cold War, see Scott D. Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons* (Princeton, NJ: Princeton University Press, 1993), chapters 2-4. Recent reports from the former Soviet Union may indicate that the risks of a nuclear accident are increasing due to the continued weakening of centralized control over nuclear facilities. See for example, Associated Press, "Russian Nuclear Plant Fire Stirs Furor," *New York Times*, 2 September 1994, A8; Associated Press Wire Service, "Russia—Misguided Missile," 13 March 1995; "Unpaid bill triggers 15-minute power cut at Plesetsk ICBM test site," *Aerospace Daily*, 18 September 1995, and Oliver Wates, "Russian brass apoplectic over missiles power cut," *Reuters News Service*, 22 September 1994.

4. In October 1962, the US believed that there were neither strategic nor tactical nuclear warheads in Cuba. That belief influenced officials who were prepared to recommend to President Kennedy that he authorize an attack on the island. It is now known that at the height of the crisis, Soviet forces possessed approximately 60 strategic and 100 tactical warheads, and Khrushchev, anticipating a US attack, had approved an order to move at least some of the warheads close to their delivery vehicles. Had the United States invaded Cuba, there was a high risk that the Soviets would have chosen to use their nuclear weapons.

weapons in the post-Cold War era? Alternatively, what costs and dangers does continued reliance on nuclear deterrence imply? In particular, what implications, if any, does the US nuclear posture have for international efforts to stem the spread of weapons of mass destruction? These are the key questions that need to be addressed.

In our view, US nuclear weapons are of declining military and political utility in both addressing the residual threats of the Cold War and in countering emerging threats to the security of the United States. There is no need for the United States to use nuclear weapons against a non-nuclear opponent; sufficient US conventional forces can and should be maintained to counter non-nuclear threats. In our view, the only military role of nuclear weapons should be to deter nuclear threats to the population and territory of the United States, to US forces abroad, and to certain friendly states. Although the US must be concerned about the proliferation of all weapons of mass destruction, a combination of defensive measures and strong conventional forces could neutralize the need for a nuclear retaliatory threat to deter chemical and biological attacks. Moreover, the nuclear deterrent function, the one necessary function in our view, can be preserved at much lower force levels, as long as other states move in tandem with the US toward smaller nuclear forces. There is no military justification to maintain US and Russian strategic nuclear stockpiles at their current or even planned START II levels.

Current rationales for nuclear weapons are primarily political. Perceptions of the political and military utility of nuclear weapons, while changing, have been slow to catch

Strategic Arsenals of the Nuclear Powers

Declared and Undeclared Powers, January 1995

COUNTRY	SIZE OF ARSENAL (APPROX.)*
United States	7,770
Russia	8,527
China	284 **
France	512
Britain	296
(Israel)	less than 100
(Pakistan)	5-10 ***
(India)	60-120 ***

Sources: David Albright, William M. Arkin, Frans Berkhout, Robert S. Norris, and William Walker, "Inventories of Fissile Materials and Nuclear Weapons," *SIPRI Yearbook 1995: Armaments, Disarmament and International Security*, (Oxford, England: Oxford University Press, 1995), 327-333; James E. Goodby, Shannon Kile, and Harald Müller, "Nuclear Arms Control," in *SIPRI Yearbook 1995*, 657.

* Numbers of stockpiled strategic warheads

** Figures for China are uncertain due to lack of public information

*** Numbers indicate estimates of potential nuclear weapons holdings at the end of 1994

up with the new strategic realities. Given the uncertainties surrounding the Russian reform movement, a certain reluctance to abandon traditional ways of thinking about nuclear weapons is understandable, and will necessarily constrain rapid movement to lower force levels.⁵ However, the assumed military and political value of nuclear weapons should be weighed against the dangers of continuing nuclear reliance. In addition to the costs and risks already noted, political upheaval or the weakening of state authority in Russia or China could cripple existing systems for ensuring the safe handling and control of nuclear materials and weapons, increasing the odds of accidents, more widespread proliferation, or nuclear terrorism.

Indeed, the dispersion of nuclear weapons and nuclear weapons material is a major risk of continued nuclear reliance. Only nuclear weapons can destroy the United States as a society and a nation. States in the Middle East and Asia that are unfriendly to the US already are seeking to acquire nuclear capabilities. While would-be proliferators may be motivated primarily by developments in their immediate regions, the actions and policies of the two largest nuclear powers could affect the health and durability of the non-proliferation regime more generally. A re-emphasis, or even continuing emphasis, on nuclear weapons in US policy, for example, would undermine the United States' ability to persuade other states to cap, reduce, or to eliminate their nuclear weapon capabilities. Indeed, a world in which no state or group possessed nuclear weapons would be a safer place for the United States.

In the long-term, only a policy aimed at steadily curbing global reliance on nuclear weapons—including our own—is likely to progressively eliminate nuclear dangers. Under existing political conditions, the elimination of nuclear weapons is infeasible. But progress toward elimination does *not* imply the creation of a world government. And much can be done in the current climate to reduce nuclear risks, while working progressively to narrow the roles that nuclear weapons play in US policy and in interstate relations.

5. Robert S. McNamara does not believe "uncertainties surrounding the Russian reform movement" should "necessarily constrain" balanced movement to lower force levels.

ELIMINATING NUCLEAR RISKS

An Evolutionary US Nuclear Posture



An evolutionary nuclear posture would establish a clear long-term objective—eliminating all nuclear weapons from all states—but enable the United States to undertake changes in the size and operational status of its nuclear forces in a gradual manner. The path toward the objective would be achieved in phases, with progress toward each successive phase influenced by key developments in domestic and world politics. Each phase would correspond to a different strategic environment and would involve changes in nuclear roles, in the operational status and size of nuclear forces, and in arms control arrangements. All elements would move in concert through the phases, an approach that would allow the United States to ensure that each successive step enhanced US security.

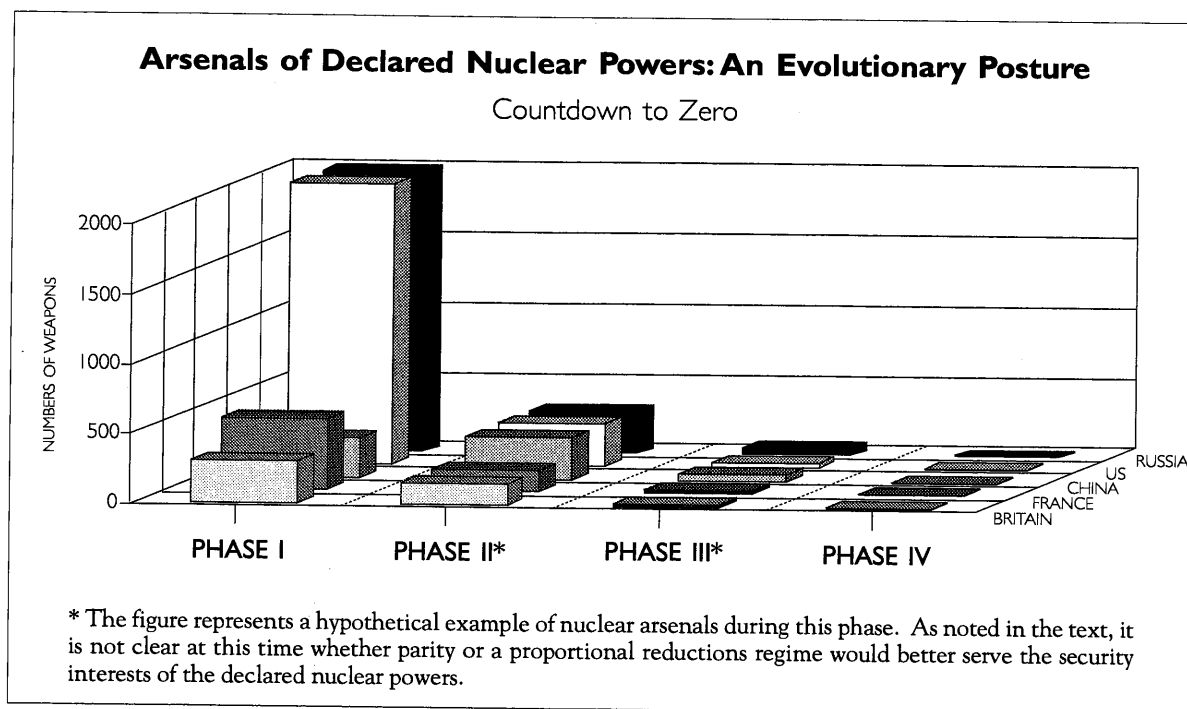
Initial steps could be undertaken in the current environment; subsequent phases would require further progress toward diminishing the salience of nuclear weapons in national policies and in interstate relations. The most far-reaching steps presume the resolution of regional conflicts and the establishment of stringent non-proliferation regimes for nuclear, chemical, and biological weapons. Progress toward elimination does *not* imply the creation of a world government. But it does presume that, over time, states will become less reliant on military force, and will not rely on nuclear weapons at all, to settle their differences and secure their interests.⁶ Essential prerequisites for progress toward this objective are increased openness and access to information regarding the activities, facilities, and materials related to national defense postures and weapons of mass destruction, and arms control regimes that would make reductions in nuclear weapons and in weapons materials irreversible. Without enhanced transparency, the military capabilities and intentions of states will continue to be shrouded in uncertainty and national decision-makers will be reluctant to place trust in existing or new constraints on arms. In the long term, effective regional and collective security regimes are likely to be necessary if states are to be persuaded to forego acquisition of all weapons of mass destruction.

The path described below entails four broad phases⁷:

- ◆ **Phase I:** During the first and current phase, the United States and Russia would work to shift the foundation of their relationship away from mutual assured

6. Robert S. McNamara and Will Marshall do not agree that the achievement of elimination requires the resolution of regional conflicts and wide-ranging renunciation of the use of force. They argue that if it is accepted that it is inconceivable that the United States would use nuclear weapons against a non-nuclear opponent, it is not necessary to presume either the "resolution of regional conflicts" or that states will find other means to settle their differences and secure their interests.

7. Because the report repeatedly states that the only military utility of nuclear weapons is to deter one's opponent from their use, Robert S. McNamara and Will Marshall believe the balanced reductions proposed in each of the four phases can be achieved without the establishment of cooperative security regimes, as desirable as these are in and of themselves.



destruction toward pragmatic cooperation, and would reduce their nuclear arsenals to roughly 2000 warheads each.

- ◆ **Phase II:** During the second phase, nuclear deterrence would become far less central to maintain stable and friendly relations among the declared nuclear powers, which would allow the five nuclear states to reduce their arsenals to hundreds of nuclear weapons each.
- ◆ **Phase III:** During the third phase, nuclear weapons would be further marginalized in national policies and interstate relations through the establishment of reliable cooperative security and verification regimes, and all remaining nuclear powers would reduce their arsenals to tens of weapons. At this point, the international community would evaluate the relative costs and benefits of eliminating all nuclear weapons from all nations.
- ◆ **Phase IV:** During the final phase, an international community of sovereign states would have effective and reliable security alternatives to the threat of mass violence and sufficiently stringent verification and safeguard regimes to allow for the complete elimination of nuclear weapons from all countries.

These phases are not intended to predict future trends, nor to prescribe a precise vision of how the world should evolve. Many developments in the international system are unforeseeable. Moreover, the United States alone certainly cannot impose order on the international community. But as the most powerful state in the international system, US policies and actions can make a difference in determining the direction, rate, and content of change in the international system. The four phases depicted above suggest one set of guidelines for US policy that might allow it to create the conditions necessary to eliminate nuclear risks.

PHASE I



The first phase would comprise US-Russian bilateral reductions to roughly 2,000 warheads⁸ and would require no fundamental changes in US deterrence policy.⁹ This current phase, in essence, would extend the process of START reductions and, indeed, could make it easier for Russia to implement the second START agreement by ameliorating Moscow's concerns over the perceived inequities of the accord.¹⁰ Just as important, the two governments would work to enhance the transparency of their nuclear forces and undertake additional changes in their operational status. To prepare for subsequent phases, multilateral discussions of procedures to account for nuclear materials and next steps in arms control also would be initiated. The principal rationale for the two powers' nuclear force levels during this phase would be political, rather than military. Although stable deterrence could be preserved at even lower levels, the residual distrust of both countries' future intentions and capabilities will likely make more rapid movement to lower levels, commensurate with military requirements, difficult. The principal objectives of this phase could be achieved by 2003, the year by which the force levels specified in START II are to be achieved. The complete dismantlement of the warheads and delivery systems slated for destruction in Phase I can be expected to extend beyond that date, however.¹¹

Strategic Environment

For the foreseeable future, the uncertain fate of Russia will complicate US military planning. In addition, US policy must take into account the possibility of a more adversarial China, as well as the emergence of additional hostile nations armed with nuclear, chemical, and biological weapons.

8. Reductions to this level have been supported by two former chairmen of the Joint Chiefs of Staff, General David C. Jones and Admiral William J. Crowe, Jr. See *The Future of the U.S.-Soviet Nuclear Relationship* (Washington, DC: National Academy Press, 1991); and McGeorge Bundy, William J. Crowe, Jr., and Sidney D. Drell, *Reducing Nuclear Danger: The Road Away From the Brink* (New York: Council on Foreign Relations, 1993).

9. Victor Utgoff believes that moving in Phase I to restrict the role of US nuclear weapons only to deterrence of nuclear attacks would constitute a fundamental change in US deterrence policy, a change for which some of the political transformations postulated for later phases are prerequisites. He believes that a key value of US nuclear security assurances is the hedge they provide to allies against overwhelming conventional attack by stronger neighbors. By providing assurance against both nuclear attack and unexpected conventional defeat, he argues, US nuclear deterrence undermines to the greatest possible extent the incentives of allies to seek nuclear weapons of their own.

10. On the problems of START implementation in Russia, see Arbatov et al., *Russian Arms Control Compliance*.

11. Under START II, deployed ICBMs and SLBMs are "eliminated" when the warheads have been separated from the launchers and the launchers have been destroyed. The US and Russia could destroy sufficient numbers of launchers to achieve Phase I reductions by 2003, although the process of complete warhead dismantlement and fissile material storage would continue beyond that date.

The future of democracy in Russia is likely to remain highly uncertain for many years. A reversion to authoritarian government is possible, as is the obverse outcome—the fragmentation of political authority within the Russian state. The most likely outcome lies somewhere in between. Although these risks merit close attention, they need not impede further cooperation between Moscow and Washington to reduce their nuclear arsenals. Even in the absence of sustained positive change in Russia, the two nuclear superpowers could preserve the essential military role of nuclear weapons—the deterrence of nuclear attack—at much lower force levels, and it would be beneficial for both to do so. Moreover, although the United States obviously needs to take into account the possibility of a reversal of reforms in Russia, an overemphasis on the need for nuclear insurance is unnecessary and unhelpful, and could eventually contribute to a reversion by the United States and Russia to competitive military behavior. As long as the United States and Russia maintain parity, the size of the US nuclear arsenal could be reduced significantly below the planned START II levels.

China is also undergoing a political transition whose outcome may be more or less threatening to the US and its allies in the Asia-Pacific region. China's leaders are seeking to maintain control over the country's political system while loosening their hold on the economy, an increasingly delicate balancing act of indeterminate sustainability. What course China's leadership will pursue after Deng Xiaoping's death remains unpredictable. Although most observers believe that China is likely to emerge from the current period of transition as a less centralized, but united, state, the possibility of political turbulence in the interim cannot be excluded. China is currently pursuing a nuclear modernization program, moreover, including tests of nuclear devices and new types of ballistic missiles. In part, this may reflect a recognition that its nuclear capabilities remain far behind those of the United States and Russia.

PHASE I: KEY FEATURES

US Declaratory Policy

- ◆ Presidential statement of renewed, decisive commitment to the goal of eliminating all nuclear weapons

Nuclear Force Levels and Operational Status

- ◆ Bilateral reductions to ~2000 warheads each
- ◆ Reduced alert status

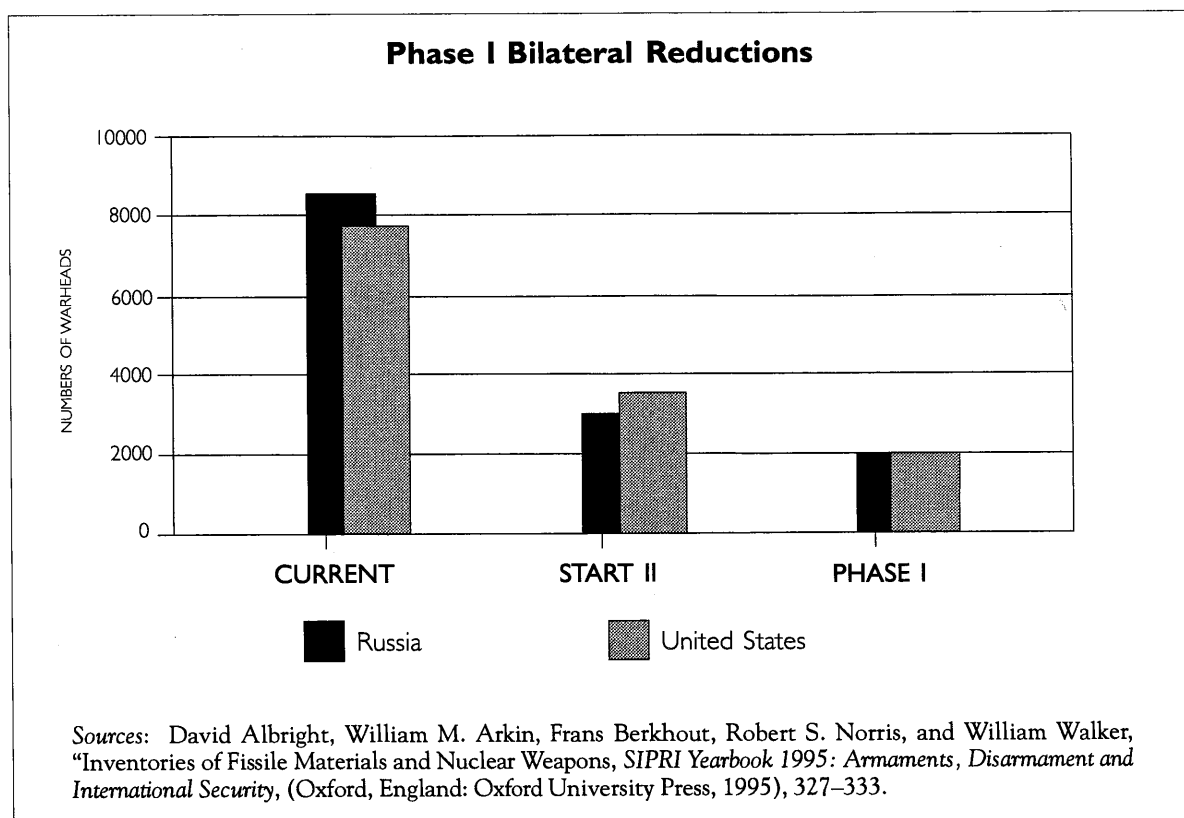
Arms Control Arrangements

- ◆ START II and CWC ratification and implementation
- ◆ Conclusion of CTBT
- ◆ Fissile material production ban
- ◆ Dialogue on nuclear safety, security, and accounting standards

Strategic Planning

- ◆ Official study of key challenges, including: verification, safeguards, relations with allies, implications for conventional forces
- ◆ Reevaluation of defensive systems

New nuclear threats to US security interests may be emerging as well. Despite notable non-proliferation success stories in the early 1990s, particularly the agreement of Belarus, Kazakhstan, and Ukraine to eliminate the nuclear weapons they inherited from the USSR, a number of states that are hostile to the United States continue to pursue nuclear weapon programs. Implementation of the Pyongyang Agreement to terminate and dismantle the North Korean weapon program has proceeded in fits and starts and will need continuing attention. And although the Iraqi nuclear program now seems to have been controlled, the international community needs to keep a watchful eye on Baghdad, as well as on Iran, which many experts suspect of harboring nuclear ambitions, and which has been trying to exploit divisions among the major powers to purchase essential materials.



During Phase I, the United States should seek to forge an over-arching structure of cooperation with Russia that would be robust and resilient enough to withstand disputes over specific issues. In the long term, this structure of cooperation should supplant mutual assured destruction as the basis for stable US-Russian relations. To achieve this goal, a strong and sustained political commitment to more intensive engagement with Russia at all levels and in many spheres of activity will be necessary. Until patterns of cooperation are firmly entrenched, the possibility of violent confrontation between the two states cannot be wholly excluded.

During this period of transition, the two governments will need to develop cooperative mechanisms for settling disputes and make it clear to each other and to the world that neither side views the manipulation of nuclear threats or the use of nuclear weapons as an appropriate or effective tool of conflict stabilization or resolution. In addition, institutional and individual exchanges between US and Russian elites that support the development of a substantive political, economic, and military bilateral agenda could serve valuable educational and confidence-building functions and should be expanded. Exchanges between legislators are particularly important, given the roles of the US Congress and the Russian Duma in ratifying arms control agreements and in defining the basic political atmosphere in each capital. Elites in the United States need to gain a better understanding of Russian views on the future utility of nuclear weapons and nuclear deterrence, and of perceptions of threats and security needs in the new international context. Similarly, new political actors in Moscow could benefit from greater familiarity with US perspectives and decision-making processes.

Some setbacks both within Russia and in bilateral relations are to be expected; some may call for a temporary moratorium on the implementation of completed agreements or on further changes in the US posture. The election of a nationalist government in the Russian parliamentary elections, for example, may slow but need not necessarily halt further cooperation to reduce nuclear risks. Any Russian government would be hard-pressed economically to maintain force levels higher than those envisioned in START II indefinitely. While perhaps less willing than the current leadership in Moscow to cooperate with the US on broad foreign policy initiatives, a more nationalist government might still see advantage in considering deeper cuts in both countries' nuclear arsenals.

Building a strong cooperative relationship with Russia will take time and an enduring political commitment at the highest levels. In the absence of a common, unifying threat, disputes and conflicts are certain to occur and should be expected. Relations may never achieve the degree of comity attained in NATO; indeed, there may be no perfect historical analogy for the future of US-Russian relations. The United States has no alternative to cooperation with Russia, however, if it is to halt the spread of weapons of mass destruction and should seek to build a partnership that can weather periodic conflicts.

In Asia, US engagement should be directed toward building a cooperative, productive relationship with China, and toward promoting cooperation between China and other Asian nations, and greater stability on the Korean peninsula. Where prudent, the United States should encourage the forces of economic and political liberalization in China, recognizing that these forces may strain the stability of the Chinese state and weaken regional peace and stability. Sustained engagement is vital, nevertheless. As it develops economically, China can be expected to assume a greater role in regional and international affairs; in the near-term, Chinese cooperation will be indispensable to the full and successful implementation of the agreement to dismantle North Korea's nuclear program and to the success of global non-proliferation regimes for nuclear weapons and missile technology.

Nuclear Roles

Nuclear weapons would continue to play an essential role in US security and foreign policy throughout Phase I. The military role of nuclear weapons would be to provide deterrence against *nuclear* threats to the territory and population of the United States, to US forces abroad, and to certain friendly nations.¹² This essential function could be accomplished at lower force levels, so long as the United States and Russia take care to preserve rough symmetry in numbers and operational practices.

Nuclear weapons already have become less salient in US-Russian relations, as evidenced by the two START accords, the de-targeting agreements, and bilateral cooperation on nuclear safety and security issues. In the current strategic environment, the massive employment of nuclear weapons against Russia is increasingly implausible. As long as Russia and other states possess nuclear forces, however, the United States must retain a survivable nuclear capability.

During this phase, nuclear weapons also will remain essential to deter nuclear threats against those states to whom security assurances have been extended, and against US forces deployed overseas. The European and Asian security environments are fraught with uncertainties; new nuclear threats to US interests and friendly nations may emerge in

12. See Victor Utgoff's dissent in fn. 9.

several regions. The European Union's plans to create a European Security and Defense Identity, separable but not separate from NATO, are unlikely to be realized in the foreseeable future, and NATO will remain essential to the continued security and stability of Europe. In Asia, Russia has retrenched, but retains formidable nuclear capabilities, and concerns about the future domestic and foreign policies of China persist, while the situation on the Korean peninsula could easily deteriorate. During this period of transition, the US nuclear deterrent can provide valuable reassurance and protection to allied nations.

As in the past, US nuclear weapons in Phase I will help to dampen pressures for proliferation in particular regions. Although friendly nations such as Germany, Japan, and South Korea have chosen not to acquire nuclear weapons for a variety of reasons, American security assurances have certainly contributed to these decisions and have provided a powerful political constraint on any groups that might otherwise advocate pursuit of an independent nuclear capability. For the foreseeable future, US security assurances will remain essential to preserve the non-proliferation regime.

Although new nuclear, chemical, or biological threats could emerge during this period of transition and potential reversals, the United States should eschew commitments to any roles for nuclear weapons *other than the deterrence of nuclear threats*.

The risks posed by the potential proliferation of biological and chemical weapons are real. A number of states have already acquired, or seek to acquire, quantities of chemical or biological weapons. Under certain circumstances, these weapons might be used against, or threaten, US allies or US armed forces seeking to protect other countries. During the Persian Gulf War, for example, Iraq apparently had filled bombs, artillery shells, and missiles with biological agents, and was conducting research on mycotoxin, plant pathogens, and bacteria that could attack crops and wreak damage against US forces and its allies.¹³ According to US intelligence sources, a number of additional countries hostile to US interests, including North Korea, Iran, and Libya, are believed to be seeking actively to acquire chemical or biological capabilities.¹⁴

US policy must address these new threats. However, a declaratory role for US nuclear weapons to deter chemical or biological attacks, as some have suggested, would be of marginal military utility and any potential gain would be outweighed by the negative effects on US non-proliferation efforts. We take this position for four reasons:

- ◆ **First**, despite claims to the contrary, the deterrent effect of nuclear weapons against chemical or biological threats has neither been proven nor refuted by firm evidence. Many have already concluded that Iraq was deterred from using biological or chemical weapons during the Persian Gulf War because of an ambiguous nuclear threat from then President George Bush. No one knows this for certain, however.¹⁵

13. See R. Jeffrey Smith, "Iraq Reveals Huge Arms Effort," *Washington Post*, 24 August 1995; *Reuters News Service*, "UN: What the new Iraqi disclosures reveal," 25 August 1995.

14. Barbara Starr, "Nightmare in the Making," *Jane's Defence Weekly*, 3 June 1995, 23.

15. Then Secretary of State James Baker observes that "we do not really know" whether the ambiguous threat of nuclear retaliation dissuaded Iraq from using chemical weapons during the Gulf War. His own view "is that the calculated ambiguity regarding how we might respond has to be part of the reason." See James A. Baker, III, with Thomas M. DeFrank, *The Politics of Diplomacy: Revolution, War & Peace, 1989-1992* (New York: G.P. Putnam's Sons, 1995), 359.

- ◆ **Second**, where a biological or chemical threat is present, the United States may benefit from the deterrent effects of nuclear weapons even without a declaratory commitment to the nuclear option. This is not to suggest that the US should shift to a policy of implicit — but not explicit — reliance on the first use of nuclear weapons as a response to a chemical or biological attack. Such a policy would win few concessions from potential proliferators and might create dangerous misunderstandings with US friends and allies. But as long as the United States retains nuclear weapons, in fact, it will have the capability to respond to an unconventional attack with unconventional means. Any potential user of unconventional weapons will recognize this possibility, regardless of US statements. In the Persian Gulf War, for example, whether a nuclear threat was made explicit or not, the fact that the United States possessed nuclear weapons meant that Iraqi decision-makers had to take into account the possibility of a nuclear response.

- ◆ **Third**, reliance on nuclear weapons to deter, or to respond to a chemical or biological attack, could further legitimate nuclear weapons and increase the apparent desirability of their possession in the eyes of other nations' decision-makers. Such an elevation of nuclear weapons in US policy would send the wrong signal to would-be proliferators and could fracture the growing international consensus against the spread of weapons of mass destruction.

- ◆ **Fourth**, there are better ways to respond to biological or chemical attacks. Passive defense measures, for example, could drastically reduce the number of potential casualties from a biological attack.¹⁶ The United States' conventional deterrent could be strengthened as well. Retaining conventional superiority is essential, of course. In addition, US leaders and citizens might have to be willing to support particular objectives for the employment of military forces, objectives from which the US has shrunk in the past. Aggressive leaders may not be deterred by the prospect of devastating damage to their populations; a pledge to destroy threatening regimes themselves might be necessary to be effective.

While the military role of nuclear weapons during Phase I could be met with far fewer weapons than are now planned, attitudes about the role of nuclear weapons in relations among states have been slower to change, and could preclude movement to even lower levels in the near term. During this and subsequent phases, the United States should encourage new thinking about the role of nuclear weapons in US-Russian relations and in international relations more generally, doing all in its power to reduce the currency of nuclear weapons further and to undercut any prestige attributed to their possession. While nuclear weapons today may enhance the perceived power of the United States, they are no longer central to this country's international rank. The continued security and well-being of the United States depend primarily on its economic and political standing relative to other states, and on its overwhelming conventional superiority.

Other countries, however, such as France, Russia, and China, may continue to view nuclear weapons as essential to maintain their geo-political position in the world. As long

16. Karl Lowe, Graham Pearson (CBDE), and Victor Utgoff, "Potential Values of a Simple BW Protective Mask," *Institute for Defense Analyses*, September 1995, 9.

as nuclear weapons are believed to connote special privileges in the international system, some states and groups will seek to acquire nuclear capabilities. One US goal during this phase thus should be to break the perceived link between the possession of nuclear weapons and a country's standing among other nations. Making major non-nuclear powers permanent members of the UN Security Council would be helpful. In the case of India, permanent membership might be made contingent on the verified dismantlement of its nuclear weapon capability. In any case, it should always be made evident that the possession of nuclear weapons is legitimate solely to deter the nuclear threats of others.

Nuclear Force Levels and Operational Status

The principal rationale for Phase I force levels would be political. Although there are no compelling military reasons why the two nuclear superpowers could not undertake very deep cuts in their strategic arsenals, forging a new consensus on the roles of nuclear weapons in US policy will take time. Given the uncertainties surrounding Russia's future course, disagreements over long-term objectives in strategic arms control are to be expected. A majority should agree, however, that a force level of roughly 2,000 warheads would be sufficient to carry out the deterrent role of nuclear weapons described for this phase, so long as US and Russian forces were being reduced in parallel and in a transparent manner. Even if democratic and economic reforms in Russia were to turn sour, the United States would be better off if Russia were armed with 2,000, rather than 3,500 or more, deployed warheads; the case for deeper reductions would be even stronger for a Russia in which political authority had dissolved.

Moreover, the United States could lose the gains promised by the START II accord—a significant reduction in the Russian strategic nuclear arsenal—without a more forthcoming commitment to deeper cuts. In order to conform with the Treaty's prohibition on MIRVed missiles and yet maintain START II levels, Russian officials have indicated that they would need to build a new single-warhead missile to replace current missiles, which would place a heavy financial burden on an already strained state budget. Many in Russia would prefer to move to even lower levels to permit a less costly modernization program.

In determining how to apportion its remaining nuclear weapons among different types of forces—whether there were 3,500 or 2,000 of them, or some number in between—the United States should emphasize those forces best suited for a deterrent role. This means retaining highly survivable forces able to withstand an attack and retaliate as directed by the president. Whether the United States should retain the triad or move over time toward a mixed force of submarine-launched missiles and advanced bombers or, alternatively, solely a fleet of highly protected ballistic missile submarines, will have to be determined. Highly effective and redundant command, control, communications, and intelligence systems would be essential whatever the distribution of forces, however. Fundamental changes to US targeting principles—such as the targeting of civilian populations rather than military facilities—should not be required to get down to Phase I levels, although this question could be raised in subsequent phases.

Changes in the operational status of US and Russian forces will be essential to maintain stability during Phase I and, to a greater extent, in subsequent phases. In the

Even if democratic and economic reforms in Russia were to turn sour, the United States would be better off if Russia were armed with 2,000, rather than 3,500 or more, deployed warheads.

current strategic environment, the massive employment of nuclear weapons against a wide range of Russian targets is increasingly implausible. The de-targeting decision and cooperation on missile dismantlement render visible changes in US and Russian thinking. But much more could be done to bring operational practices in line with changing political realities. An agreement between the two governments to remove at least a portion of their remaining nuclear arsenals from high levels of readiness would provide verifiable testimony as to the waning likelihood of a sudden nuclear attack by either side, and diminish whatever risks are associated with maintaining nuclear forces on a high state of alert. In addition, a lower state of alert for US and Russian forces would underscore the diminishing importance of nuclear weapons in both countries' policies and send a useful signal to other regions, such as South Asia, where the nuclear competition between India and Pakistan shows signs of heating up.

Initiatives that clearly benefit US security, such as the Cooperative Threat Reduction Program, deserve continued support and could be expanded significantly.

By inviting President Clinton to a summit in 1996 on nuclear safety and proliferation, President Yeltsin provided an opportunity to continue this dialogue. Initiatives that clearly benefit US security, such as the Cooperative Threat Reduction Program, deserve continued support and could be expanded significantly; regardless of whether democratic reforms in Russia succeed, stagnate, or falter, it is in the US interest to ensure that the dismantlement of the Russian nuclear arsenal is conducted safely and that nuclear materials are not diverted during the downsizing process.

To further ensure that US and Russian deterrents remain stable and non-threatening, even if political relations turn sour, safety issues should be given added emphasis in the US-Russian nuclear dialogue. By inviting President Clinton to a summit in 1996 on nuclear safety and proliferation, President Yeltsin provided an opportunity to continue this dialogue. Initiatives that clearly benefit US security, such as the Cooperative Threat Reduction Program, deserve continued support and could be expanded significantly; regardless of whether democratic reforms in Russia succeed, stagnate, or falter, it is in the US interest to ensure that the dismantlement of the Russian nuclear arsenal is conducted safely and that nuclear materials are not diverted during the downsizing process.

Arms Control Arrangements

It is essential, early in Phase I, for the United States to seek to consolidate the arms control gains of recent years, some of which are now in danger of being stalled and even reversed. The future of several milestone treaties currently hangs in the balance.

Formal ratification of START II without crippling conditions is in the national security interests of both the United States and Russia. The verification regime called for under START II is stringent and highly transparent, and would make it very difficult and costly for either country to circumvent or violate the regime, while providing early warning of any attempt to do so. The implementation procedures specified in the treaty are designed to make launcher reductions irreversible.

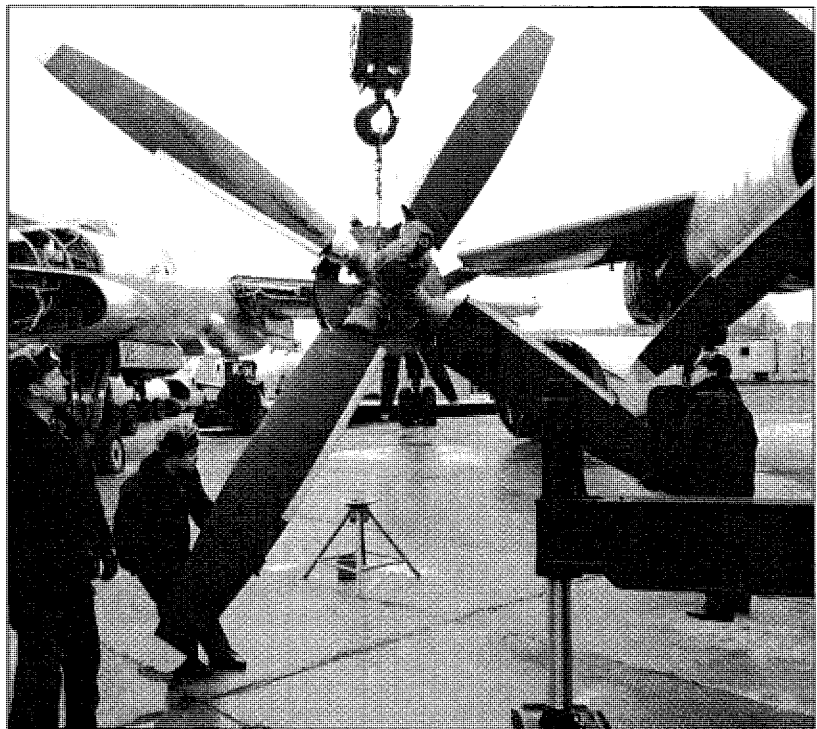
A failure of the Russian Duma or US Senate to ratify START II, or a decision to ratify the accord with crippling conditions, would be a serious blow to bilateral arms control but need not halt the process of strategic arms reductions. If the treaty is not ratified, the US and Russia could retain over 6,000 strategic nuclear warheads each — stockpiles far exceeding either country's military requirements. The costs of maintaining such large nuclear arsenals could be extremely burdensome in Russia over the long run, and could divert budgetary resources in the United States from military systems of greater utility and relevance to post-Cold War security needs.

Impasses between the executive and legislative branches in both countries may necessitate greater flexibility and innovative approaches in nuclear arms control and

reductions. In the absence of START II ratification, the two governments might be able to agree to proceed informally with parallel and verifiable implementation of the accord. Some of the benefits of ratification would be lost, however. Russia, for example, might pursue the most expedient path to downsizing and, as a result, might refrain from destroying missile silos as stipulated in the treaty, or choose to retain MIRVed missiles as a more cost-effective alternative to a force comprised of single-warhead missiles. So long as such steps were transparent, verifiable, and undertaken in parallel, the two states could still reap significant benefits from shedding unnecessary and expensive nuclear force structures.

The indefinite extension of the nuclear Non-Proliferation Treaty in May 1995 was a major victory in efforts to slow the spread of nuclear weapons, but by no means is a *carte blanche* for the nuclear powers to proceed with business as usual. The treaty was extended along with parallel obligations on nuclear weapon states, including a commitment to the elimination of nuclear arsenals. The conference also rendered five-year review conferences mandatory, stipulated that preparatory meetings for these periodic reviews focus on substantive issues, and identified a set of “yardsticks” for measuring progress toward eliminating nuclear danger.

Under the enhanced review process approved at the conference, the actions of the nuclear powers will be subject to careful scrutiny beginning in 1997, when the preparatory committee meets for the first time in anticipation of the next review conference in 2000. Specifically, under the bargain struck between the nuclear and non-nuclear signatories, the United States, Russia, China, France, and Britain are committed in the near-term to: (i) complete a Comprehensive Nuclear Test Ban Treaty by 1996 and to exercise the “utmost restraint” with regard to nuclear testing in the interim; (ii) to conclude negotiations for a ban on fissile material production for military purposes; and (iii) to pursue “systematic and progressive efforts to reduce nuclear weapons globally.”¹⁷



These Tu-95 Bear strategic bombers being disassembled by Russian Air Force personnel are being verifiably eliminated under the Strategic Arms Reduction Treaty. The aircraft fuselage are then guillotined and displayed for verification by US reconnaissance satellites.

DEPARTMENT OF DEFENSE PHOTO BY R. D. WARD (COURTESY OF THE ARMS CONTROL ASSOCIATION)

17. “Principles and Objectives for Nuclear Non-Proliferation and Disarmament,” 1995 Review and Extension Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, New York, 17 April–12 May 1995, NPT/CONF.1995/L.5, 9 May 1995, 2.

All of the declared nuclear weapon states have obligations to fulfill under the NPT. Moscow and Washington must assume the leading role in drawing down strategic nuclear force levels, and, given contrary pressures in China, France, and Russia, only the United States is capable of leading the declared nuclear weapon states toward agreement on a comprehensive test ban. But, at the very least, China, France, and Britain have the responsibility not to undertake any actions that might weaken the non-proliferation regime, such as increasing their nuclear arsenals or producing more fissile material for weapons. The resumption of testing for one year by China in May 1995 and by France in September 1995 clearly detracts from the recent commitments of both states at the NPT extension conference.

An important initiative that the US might undertake during Phase I would be to engage Russia, China, France, and Britain in a dialogue about non-proliferation policy, nuclear safety and security, and long-term objectives in nuclear arms control. Achieving consensus on these issues will be difficult, but if the nuclear non-proliferation regime is to be strengthened, the five states must cooperate closely on reducing nuclear dangers. The current negotiations in the UN Conference on Disarmament provide a possible foundation and forum for continuing exchanges on nuclear issues. Following completion of a comprehensive test ban, the existing dialogue among the five declared nuclear powers might be extended and perhaps even transformed at a later date into more formal negotiations to establish multilateral ceilings on or to achieve reductions in nuclear arsenals.

Fulfillment of the nuclear weapon states' NPT obligations would strengthen the case for restraint in the policies of the threshold nuclear states as well. During this period, India, Israel, and Pakistan—all non-signatories to the NPT—at a minimum should refrain from

taking actions that might undermine the non-proliferation regime. In particular, threshold nuclear states should not conduct nuclear tests, nor transfer nuclear weapons and their components to other states. In addition, these states should eschew steps that might provoke costly and potentially destabilizing regional arms races, such as the deployment of missile systems that could be perceived as increasing the risks of nuclear attack by adversaries.

An integral component of the cessation and dismantlement of the nuclear legacy is a ban on the production of fissile materials for weapons purposes. The US has already stopped production of fissile material for nuclear weapons and has placed considerable quantities of such material under IAEA safeguards. A production cut-off would have the effect of capping existing nuclear stockpiles. The scope of the cut-off is a central issue for many countries. There is much disagreement about whether a ban should apply only to

THE NUCLEAR NON-PROLIFERATION TREATY: WHAT NEXT?

The 1995 NPT Conference extended the treaty indefinitely and took steps to promote its full implementation:

Strengthened Review Process

- ◆ Mandatory review conferences every five years to evaluate progress toward "yardsticks" and to set future goals

New Non-Proliferation "Yardsticks"

- ◆ Completion of the Comprehensive Test Ban Treaty
- ◆ Completion of a fissile material production ban
- ◆ Determined pursuit by the nuclear powers to reduce and ultimately eliminate nuclear weapons
- ◆ Development of nuclear-weapon-free zones in the Middle East and other regions of tension
- ◆ Establishment of additional security assurances for non-nuclear states
- ◆ Regular assessment and evaluation of IAEA safeguard agreements
- ◆ Provision of sufficient financial and human resources for the IAEA

future production of fissile material for weapons or whether existing stockpiles of material should also be affected by the treaty's provisions and, if so, at what stage in the process of negotiations. The issue is particularly important to states that would like to see effective constraints placed on further growth in the nuclear arsenals of the undeclared nuclear states, Israel, India, and Pakistan. Negotiations may be prolonged, and sustained US engagement will be vital to maintain sufficient momentum to secure an agreement.

Bilateral exchanges between the United States and Russia on nuclear safety and security, and on accounting systems for nuclear materials, eventually should be expanded to include other states, as well. All nations have an interest in preventing nuclear accidents and the unauthorized seizure of nuclear materials or weapons. Moreover, unless accurate accounting standards can be established, future agreements to scale back or dismantle existing nuclear arsenals may be undermined by doubts regarding unreported nuclear materials or secret bombs, as has occurred in the case of South Africa. International cooperation to account for nuclear materials, perhaps by strengthening the capabilities and authority of the IAEA, would lay the foundation for an international monitoring regime to verify even deeper cuts in nuclear weapon arsenals.

Finally, measures to strengthen the nuclear non-proliferation regime should be coupled with renewed efforts to eliminate chemical and biological weapons. As long as some countries possess chemical and biological weapons, it will be difficult to forge a political consensus in favor of reduced nuclear reliance in the United States and in other nuclear weapon states. Conversely, progress toward reducing global nuclear reliance could help to



UN PHOTO 1590897 H-ARVIDSSON (COURTESY OF THE ARMS CONTROL ASSOCIATION)

After the Gulf War, UN inspectors uncovered the true scope and depth of the Iraqi chemical weapon arsenal. International agreements to ban chemical and biological weapons will increase the likelihood of early detection of such programs in the future.

weaken motivations for chemical and biological weapons programs, to the degree that the latter are perceived as useful in countering a nuclear-armed adversary.

Treaties intended to eliminate all chemical and biological weapons currently face an uncertain future. Senate and Duma consent to ratification of the 1993 Chemical Weapons Convention is critical to the cwc's entry-into-force and to the establishment of a strong inspection corps for the verified destruction of existing stocks of chemical weapons throughout the world. Failure to ratify and implement the cwc also would have repercussions for international efforts to address the growing threat of biological weapons proliferation. Because the ongoing discussions to provide the Biological Weapons Convention with verification provisions have drawn heavily on the cwc for verification mechanisms, the bwc discussions will lose significant momentum if the Chemical Weapons Convention is not ratified by the United States and Russia. Recent revelations about the extent of Iraq's germ warfare program prior to the Gulf War underscore the need to move quickly to determine compliance with the bwc. Future discussions should be directed toward providing the bwc with effective mechanisms to uncover offensive biological weapons programs and punish violators of the treaty.

Strategic Planning

Unless a number of formidable challenges can be surmounted, progress toward successive phases will be stalled or halted. An early commitment to finding solutions to these problems is essential if momentum toward the objective of elimination is to be sustained. Phase I should be a period of serious official study of the implications of additional and, eventually, very deep cuts in nuclear forces:

- ◆ **Verification:** How can reductions be made irreversible? What additional levels of transparency are required to undertake deeper cuts in United States, Russian, and other nuclear arsenals? Could a global agreement to eliminate all weapons of mass destruction be verified adequately? What would be the elements of such a system, and how might they be created? For example, what kind of accounting procedures or inspections regime would be necessary?
- ◆ **Safeguards:** As the knowledge to build weapons of mass destruction can never be eliminated or controlled, movement to ever lower levels will require national and international safeguards against sudden break-out. What steps should the United States take unilaterally to protect American lives and interests against the re-introduction of nuclear, chemical, or biological weapons, and when would such steps be implemented? What measures would require cooperation with other states? Should nuclear weapons be retained in some multinational context as a form of ultimate insurance and, if so, how would such forces be structured? What kind of international control system would be required? How would states make decisions to authorize the activation of nuclear weapons or even a nuclear response to aggression? How could the nuclear infrastructure necessary for this force be maintained? What intelligence requirements would be associated with such a system?

- ◆ **Relations with allies:** US nuclear assurances have been central to our relations with allied nations for most of the post-war period. What impact would deeper cuts in nuclear force levels have on US relations with key allies? What changes would have to be made over time to alliance strategy and the structures and institutions of NATO? What adjustments would be necessary in US defense cooperation with Japan and South Korea?
- ◆ **Impact on conventional military forces:** To maintain US security at significantly lower levels of nuclear weapons, what types of modifications or enhancements to US conventional forces, if any, will be needed? Would these modifications or enhancements require significant investments in new weapon systems? What should be the structure and extent of defensive systems? What types of conventional technologies will be necessary to ensure that the US has the capability to disable threatening nuclear weapon facilities, assuming that other non-military approaches fail? How will potential enhancements or modifications affect other areas of the defense budget, such as force readiness or personnel costs? Will these modifications require renewed, or less, emphasis on forward-stationed US troops?

The movement toward ever lower levels of nuclear weapons will require a serious re-evaluation of the advantages and disadvantages of defensive systems.

Finally, the movement toward ever lower levels of nuclear weapons will require a serious re-evaluation of the advantages and disadvantages of defensive systems. During the Cold War, the United States and the Soviet Union agreed to place constraints on defensive systems in the interest of preserving stable deterrence. In the current environment, the United States and Russia are more concerned about the threat of an accidental launch of one or a few missiles, or a deliberate, but small, attack by a "rogue" nuclear power, than about a massive nuclear strike launched by the other nuclear superpower. Both countries today might benefit from increased investment in theater missile defense systems, but under the terms of the Anti-Ballistic Missile Treaty mutual agreement would be necessary to move toward that end. This group generally believes that the necessary adjustments could be made without undermining stable deterrence or blocking the progressive reduction of nuclear arsenals.¹⁸ To address the potential concerns of the smaller nuclear powers, the United States and Russia should make it clear that their respective theater missile defense systems are directed at "rogue" threats and are not intended to weaken the deterrent value of Britain, China, or France's nuclear arsenal, and should initiate a dialogue with the smaller nuclear powers on the implications of defensive systems for future cuts in nuclear forces.

In the long term, defensive systems could be one component of a regime to protect against violators of a complete ban on weapons of mass destruction.¹⁹ The United States

18. Robert S. McNamara strongly opposes re-opening the Treaty and believes that such action could have a negative impact on stable deterrence. The deployment of theater defense systems, he argues, could weaken the deterrent value of British, Chinese, and French nuclear forces and diminish the likelihood of even deeper cuts in offensive forces.

20. Robert S. McNamara disagrees. See fn. 6.

19. Michael Krepon believes that defensive systems will be an essential component of such a regime.

should continue research into technologies that might contribute to the creation of such a system and explore key questions associated with the design and implementation of defensive systems. If a strategic defense system were necessary, what would be the scope and cost of such a system? Is a strategic defense system technologically feasible? Against what type of threats? Could the development process and deployment of such a system be achieved while maintaining stability in US relations with other nations? Could limited strategic defenses be deployed without blocking deep offensive reductions?

PHASE II



During Phase II, multilateral negotiations including the five declared nuclear weapon states would reduce nuclear arsenals to several hundred warheads each. The military rationale for nuclear weapons—the deterrence of nuclear attack—would be essentially unchanged during this phase. But increased domestic and international understanding of the limited utility of nuclear weapons would have eliminated important political justifications for nuclear force levels in all five countries. Multilateral quantitative constraints would be accompanied by additional measures designed to improve the transparency of military operations involving weapons of mass destruction, and—on a global basis—the safety of, and accountability for, all nuclear materials.

Strategic Environment

To achieve the goals of Phase II, the nuclear powers would have to conclude that more powerful nuclear postures are not necessary for their national security or political standing. Three changes are likely prerequisites for progress toward Phase II objectives:²⁰

- ◆ The declared nuclear weapon states would have to have established stable and cooperative relations, in which nuclear deterrence no longer played a central role.
- ◆ Effective and robust non-proliferation regimes for nuclear, chemical, and biological weapons would have to be well-established, and significant progress toward the resolution of conflicts in Europe and Asia would have to have been achieved, in order to minimize the risks that new states would emerge to threaten the interests of any of the declared nuclear powers.
- ◆ The value of nuclear weapons as symbols of global status would have to have been greatly diminished.

Of these prerequisites, the third is already being achieved. It is hard to find evidence in any of the five declared nuclear powers for continuing prestige associated with their nuclear weapon status. Indeed, the opprobrium that recently greeted the French decision to resume nuclear testing—an implicit reminder of France's nuclear status—suggests that reaffirming one's status as a nuclear weapon state may do more harm than good in terms of political standing. Other states, including South Africa, Argentina, and Brazil, have voluntarily abandoned their nuclear ambitions, in part because of concern that nuclear status would lead to international isolation and economic penalties.

The first and second prerequisites to achieving nuclear force levels in the hundreds—the need for stable and cooperative political relations and the resolution of regional

20. Robert S. McNamara disagrees. See fn. 6.

conflicts—are more challenging. Perceptions of the need for deterrent roles are more dependent on the views of elites and governments than ordinary citizens, who tend to defer to their elected and appointed officials on such matters. Insofar as the fundamental character of interstate relations typically changes only slowly, and governments respond even more slowly to indicators of change, the need for all five declared nuclear powers to view nuclear deterrence as much less necessary to preserve stable relations is likely to be the most difficult goal to accomplish.

The goal would be to create an alternative to mutual assured destruction as the foundation for stable political relations, not only between the United States and Russia, but among all nuclear weapon states. While differences among these countries certainly would not disappear entirely, shared economic and political interests would make it less likely that any state would see benefit in the use of military force to settle disputes, and more certain that it would be inhibited from utilizing nuclear weapons in almost any circumstances.

For such a stable peace among all powerful states to be achieved, Russia clearly would have to find a place in Europe that the United States and European countries can accept without concern for their security. The NATO alliance in all likelihood would have to evolve gradually from a relatively small but tightly integrated military organization into a broader and looser structure incorporating most, if not all, European and North American countries. Regional security organizations, such as the Western European Union, might also play an effective role in European security affairs. If sufficient progress toward European unification had occurred, decision-making authority for foreign and defense policy might devolve to the structures and mechanisms of the European Union. As intra-European relations stabilized and improved, collaboration among Russia, the United States, and Europe on crisis management and dispute resolution could address common problems of nuclear security and nuclear risks.

China's participation in a process of multilateral cooperation would be just as necessary and, in all likelihood, even more difficult to achieve. China's internal evolution will be pivotal, as will broader developments in Asia. As Asia lacks the long history of effective regional institution-building that has been part of the European experience, the path toward the establishment of stable relations may be more treacherous, and certainly will take longer to complete. Widespread national participation in confidence-building measures and preventive diplomacy, and a regional dialogue on military issues, will be

necessary to build a cooperative security regime in Asia. Powerful countries in the region, particularly China, Korea, and Japan, that now maintain proper, but wary relations, will have to assume more cooperative roles in the region that make it clear that they will not pose any future threats to their neighbors.

Progress toward stemming the demand for weapons of mass destruction in other regions of conflict would eliminate important political justifications for higher nuclear force levels in all five countries. Strong,

PHASE II: KEY FEATURES

Nuclear Force Levels and Operational Status

- ◆ Multilateral reductions to ~100s of warheads each
- ◆ Reduced alert status for all declared nuclear powers
- ◆ Nuclear transparency measures extended to smaller nuclear powers

Arms Control Arrangements

- ◆ Multilateral system for accounting, safety, security
- ◆ Discussion with undeclared nuclear powers to roll-back nuclear programs

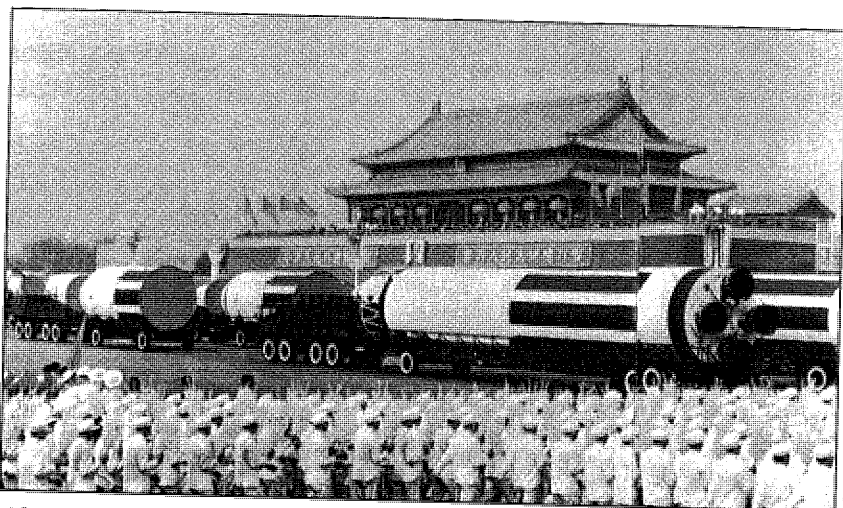
global non-proliferation regimes for nuclear, chemical, and biological weapons are essential. Significant breakthroughs in resolving the underlying regional conflicts that create pressures for proliferation in the first place would provide an even firmer foundation for future steps to reduce nuclear risks.

The United States would work during this phase to address the security concerns of states in volatile regions, including the Middle East, the Persian Gulf, and South Asia. Building on existing networks of confidence-building measures and regional security organizations, and

working in a variety of multilateral fora to address regional tensions, the US would encourage local antagonists to achieve breakthroughs in their historic conflicts. Progress, of course, is already being made in the Middle East, but other regions lag far behind. An end to hostilities in the Persian Gulf and South Asia, in particular, would mute the risk of proliferation at the source and lessen the current importance that the United States attaches to retaining options to extend nuclear deterrence.

The resolution of long-standing conflicts is likely to require a new commitment to building or strengthening regional institutions and organizations. While not without drawbacks and limitations, multilateral action offers significant advantages in managing international problems, including increased political legitimacy and financial and political burdensharing. An expanded UN Security Council that included Germany and Japan, for example, would more accurately reflect power relationships among nations in the contemporary international system. Including Germany and Japan as permanent members of the Security Council would have the additional advantage of demonstrating that nuclear forbearance is not an impediment for recognition of a nation's great power status. Similarly, the IAEA might be restructured and strengthened so that its inspection capabilities resemble those of the Organization for the Prohibition of Chemical Weapons (OPCW) established by the Chemical Weapons Convention. Inspectors for the OPCW will be given unprecedented access in conducting regular inspections of specified facilities within the borders of signatory countries, and the authority to make challenge inspections of suspect facilities as well.

Finally, to accomplish the goals of Phase II, all declared nuclear powers would have to see little value in higher force levels to secure their political standing in the international community. The United States' status relative to other states already relies more on its economic resources, political leadership, and conventional military strength than on its nuclear arsenal. A reformed and strengthened Russia would have alternative means for securing its status among nations, as would China. Over time, France and Britain may



China's most advanced ICBM, the Dong Feng-5 (DF-5), on parade. Chinese participation in multilateral reductions talks will be critical.

PHOTO COURTESY OF G. JACOBS
(COURTESY OF THE ARMS CONTROL ASSOCIATION)

find that their association with the European Union does more for their international prestige than expensive nuclear arsenals of questionable utility. Both countries may eventually come to view independent nuclear arsenals as more of a liability than an asset, particularly if insistence on an independent nuclear option impedes progress toward European unification.

Nuclear Roles

As during Phase I, the only military role for the US nuclear arsenal in Phase II would be to deter nuclear attacks on the US homeland, US forces overseas, and some friendly nations. Effective regimes for chemical and biological weapons disarmament would have been in place since Phase I. Any residual threats posed by these weapons of mass destruction should be countered by the United States' conventional forces and passive defensive measures. The importance of nuclear deterrence in relations among the major powers would be diminished, however. While the United States could continue to offer nuclear security assurances to friendly nations in Europe and Asia, extended deterrence would serve as protection for non-nuclear US allies and forces primarily against a nuclear attack from "rogue" states that refused to be bound by an emerging international consensus against the use, threatened use, possession, or acquisition of nuclear, chemical, and biological weapons.

Nuclear Force Levels, Operational Status, and Arms Control Arrangements

Under the political conditions presumed to prevail in Phase II, the United States and other nuclear weapon states could contemplate cuts in their respective arsenals to very low levels. Entering Phase II with roughly 2,000 nuclear warheads each, the United States and Russia could invite France, Britain, and China—each in all likelihood with many fewer than 1,000 warheads—to participate in multilateral talks on nuclear forces as equal negotiating partners. The talks might aim at reducing the five powers' arsenals to hundreds of weapons each. Whether parity among the nuclear powers' arsenals would serve US security interests most effectively, and be acceptable to US leaders and the American public, or whether a regime based on proportional reductions would be preferable, and feasible, is one of many subjects deserving serious study. Russian leaders might find it even more difficult than Americans to reduce to equal levels, while China, on the other hand, would no doubt be reluctant to lock itself formally into an inferior status except, possibly, as a guaranteed transitional phase toward equal numbers.

Cuts in force levels should be accompanied by additional changes in the operational status of nuclear weapons. Under the right political conditions, for example, participating governments might agree to remove most, if not all of their nuclear weapons from active alert status.²¹ The idea would be to further stabilize relations among the nuclear powers by separating all warheads dedicated to basic deterrence from their delivery vehicles in a way such that the process of uploading nuclear warheads would be time-consuming and

21. Bruce Blair, "Lengthening the Fuse: Global Zero Alert for Nuclear Forces," *The Brookings Review* (Summer 1995), 30.

transparent.²² Such an arrangement would preserve each country's deterrent capability, but help to enhance nuclear safety. Actions by a signatory government to restore a higher alert status in preparation for an attack would be detectable, and the benefits of a preemptive attack thereby negated. Under such an arrangement, the five nuclear powers might exempt a very small portion of their arsenals. The small forces continuing on alert would be dedicated solely to deterring nuclear threats by "rogue" states but would be too small to threaten another nuclear power.

The bilateral regime of nuclear transparency measures established during Phase I would be extended to the smaller nuclear states during this phase, if not earlier. Comprehensive exchanges of data on inventories of nuclear weapons and stocks of fissionable material would be necessary to establish accurate accounting standards and would have to be completed before a process of multilateral reductions could commence.²³

Significant changes also would be necessary in US defense policy, military strategy, force posture, and targeting policy during Phase II. While a detailed description of such changes lies beyond the scope of this report, the United States would very likely want to undertake steps to ensure the effectiveness of its conventional deterrent. Reductions to a force of several hundreds of weapons could require major changes in US nuclear targeting policy, as well, but this is a controversial point. The Project on Eliminating Weapons of Mass Destruction has commissioned several papers, to be released throughout the coming year, that will address many of these challenges in detail.

During Phase II, if not before, the United States and the other nuclear states might also wish to deploy defensive systems capable of providing reasonably high confidence of defending successfully against small attacks.²⁴ This phase would signal a key turning point in the transition from a system in which national security is founded on mutual assured destruction to a regime based on new principles of national and international security, in which defensive systems played a more prominent role. Although deterrence among the declared nuclear weapon states would be preserved during Phase II, albeit at much lower levels, the smaller nuclear powers could join the United States and Russia in incorporating limited defensive systems into their nuclear postures. The strict bilateral limitations on defensive systems contained in the ABM Treaty during this phase would likely be further muted, as the United States and Russia cooperated with Britain, China, and France in the development and, perhaps, deployment of defensive systems. As long as the great powers had come to perceive nuclear deterrence as unnecessary to preserve stability in their mutual relations, the shift to a defensive-dominant system should be feasible.

Finally, as the declared nuclear powers downsize their arsenals to hundreds of weapons each, provisions would have to be made for the threshold nuclear states, which will

Including Germany and Japan as permanent members of the Security Council would demonstrate that nuclear forbearance is not an impediment for recognition of a nation's great power status.

22. See, for example, the proposal for non-weaponized deterrence by George Perkovich, "A Nuclear Third Way in South Asia," *Foreign Policy*, no. 91 (Summer 1993), 85-104.

23. See, for example, Carnegie Commission on Preventing Deadly Conflict, "Comprehensive Disclosure of Fissionable Materials: A Suggested Initiative," Carnegie Corporation of New York, June 1995.

24. Robert S. McNamara *disagrees with the deployment of such defensive systems. See fn. 18.*



U.S. ARMY PHOTO (COURTESY OF THE ARMS CONTROL ASSOCIATION)

A test-firing of the Theater High Altitude Area Defense anti-missile system. In the future, missile defense systems may provide limited protection against attacks from hostile states with nuclear weapons.

have to be treated differently than nuclear “rogues.” While Israel does not admit to the possession of nuclear weapons, most experts believe that the Israeli arsenal currently contains approximately 100–200 warheads.²⁵ China and Russia, France and even Britain, might be unwilling to reduce their arsenals to levels approaching that of the current Israeli arsenal unless provisions were made to include Israel in the process of multilateral reductions. If a comprehensive peace settlement in the Middle East could be achieved—and trusted—the United States might be able to induce Israel, perhaps through confidential side agreements and additional security assurances, to begin to roll back its nuclear program. At the same time, the United States would have to begin working with the other threshold nuclear states to address their remaining security concerns and to assist, if requested, in the gradual dismantlement of their nuclear weapon capabilities.

25. *The Middle East Military Balance, 1993–1994*, Shlomo Gazit, ed. (Boulder, CO: Westview Press, 1994), 236–237.

PHASE III



Further progress toward marginalizing nuclear weapons would be the objective in this phase, a goal that could be supported by movement toward new guiding principles for national security policy, the exact form and content of which can only be suggested in broad and tentative, even quite speculative, terms at this time. The beginning of this phase would not be conditioned on a complete end to interstate conflict, but functioning and reliable collective security regimes would have to have been created, so that political leaders would see much less need to use even conventional military forces unilaterally to protect their territory, populations, and interests. High levels of transparency would be necessary for the goals of this phase to be accomplished, as would an effective system of incentives and penalties, including, perhaps, international military sanctions, to ensure that states continued to abide by constraints on the use of military force and on the acquisition of weapons of mass destruction. In such an international system, US nuclear weapons would have little use other than to provide additional reassurance to all states that the international community had the means to respond to an unexpected threat of mass violence.²⁶

Nations would of course remain sovereign in such an international system, but security would be achieved increasingly through the functioning of global and regional collective security systems. So long as states possess no effective alternative to self-help or reliance on a nuclear-armed ally, some leaders will perceive nuclear weapons as providing valuable reassurance. Thus, during the third phase, the United States would continue to work to strengthen the ability of regional organizations and of the international community at large to anticipate, resolve, and respond to threats to national and international security. The building blocks of regional security systems already exist in some parts of the world. For example, although European security organizations' attempts to end the war in the former Yugoslavia have been woefully inadequate, the states of Europe nevertheless have so far been able to contain the violence, a testament in part to the array of institutions and mechanisms already in place in Europe that may yet be transformed into an effective collective security system. In certain other regions, such as Asia, multilateral mechanisms to facilitate and encourage conflict prevention and resolution are available in nascent form only. The United Nations, similarly, must be reformed if it is to become a truly effective tool of conflict prevention, management, and settlement.

As regional and global security mechanisms evolve in Phase III, the possession of nuclear weapons would entail increasingly fewer benefits. Indeed, over time, nuclear weapons might become so devalued that no one state would want to bear the burden of retaining these arsenals, let alone the decision to threaten or use nuclear weapons, for fear of the substantial economic, political, and military costs that such a unilateral decision

26. Robert S. McNamara disagrees. See fn. 6.

would entail. The United States and other nuclear weapon states might come to prefer to act as "trustees" of nuclear weapons, whose sole purpose would be to deter nuclear threats to the security of all states, including the United States. The development of guidelines for nuclear policy, as well as decisions to threaten nuclear use or to actually respond to aggression with nuclear weapons might be shared with other states. For extended deterrence to be credible under this arrangement, collective security mechanisms would need to have an established track record of success and reliability. The international community would have to have developed a range of instruments for dealing with "rogue" states *before* they were capable of threatening mass violence against other states or societies, and have demonstrated the willingness to act decisively when confronted with such a threat.

Under such an arrangement, all remaining nuclear weapon states would have to agree to act as international trustees, and to bear all attendant costs and risks, in order to retain their arsenals. As nuclear weapons would play no role other than extended deterrence on a global scale, the specific number of weapons that would be retained would be relatively unimportant, but arsenals of tens of nuclear weapons would likely be sufficient to deter potential aggressors. Residual nuclear forces would remain under national control, but would be subject to international safeguards so as to minimize the opportunities for, and fears of, collusion among the nuclear participants. To reassure the non-nuclear participants in the system, the arsenals of the international trustees would be maintained at a very low or zero alert status, and the steps to ready nuclear forces for launch would take enough time and be sufficiently transparent that the international community would be aware of such preparations.

Such an arrangement would require the highest level of transparency and enhanced international cooperation. Access to accurate information on the nuclear weapon and fissile material stockpiles of the remaining nuclear weapon states, as well as an intrusive international inspection regime, would be essential if states were to have confidence that one or more of the nuclear "trustees" had not retained a clandestine stock of weapons, and that potential proliferators could be detected. During Phases I and II, the five declared nuclear weapon states presumably would have begun consultations on a range of nuclear-related matters. Consultative fora would have to be expanded during the third phase, and credible mechanisms for shared policy-making and decision-making created. For example, states would have to discuss scenarios in which nuclear weapons might be actuated and their use threatened. Agreement on conventional responses, and a demonstrated willingness

to undertake such actions, would be crucial to make such a system credible.

The longevity of a trustee arrangement would depend on several factors. If the governments of the world continued to desire a form of ultimate insurance against the emergence of a "rogue state" or other group that had acquired weapons of mass destruction, or if the obstacles to verification of a complete ban on weapons of mass destruction were to prove insurmountable, then the international community might choose to retain nuclear weapons, but move toward the

PHASE III: KEY FEATURES

Nuclear Force Levels and Operational Status

- ◆ All remaining arsenals cut to ~10s of weapons
- ◆ Possible nuclear "trustee" arrangement

Arms Control Arrangements

- ◆ Global standards for accounting, safety, security
- ◆ Intrusive international inspection regime
- ◆ Consultative fora and mechanisms for shared decision-making
- ◆ Evaluation of benefits/risks of elimination

creation of an integrated multilateral nuclear force through the pooling of the trustees' resources. Alternatively, the integration of national nuclear forces into a single organization might be perceived by states as too dangerous and suffer from such a lack of credibility that the international community might decide that the elimination of all nuclear weapons was preferable.

Concepts for an integrated multilateral nuclear force have been advanced and deserve serious scrutiny.²⁷ Under one proposal, an "international nuclear deterrent force" (INDF) would assume the residual deterrent role performed by the nuclear trustees. An INDF would require sophisticated international control systems and multilateral decision-making mechanisms to authorize the use of nuclear weapons in retaliation against a nuclear attack by a "rogue" state or terrorist group. The ultimate size of the force would depend on many factors, including the assessment of the potential threat, the adequacy of international intelligence resources to discover clandestine nuclear activities before large arsenals had been built, and the effectiveness of any existing defensive systems. Over time, even this residual nuclear force might prove to have so little use as insurance, yet entail so many costs, that the complete elimination of nuclear weapons would appear to be a preferable option.

27. Roger D. Speed, *The International Control of Nuclear Weapons* (Stanford, CA: Center for International Security and Arms Control, Stanford University, June 1994); Richard Garwin, "Nuclear Weapons for the United Nations," in *A Nuclear-Weapon-Free World: Desirable? Feasible?*, Joseph Rotblat, Jack Steinberger, and Bhalchandra Udgaonkar, eds. (Boulder, CO: Westview Press, 1993), 169-180; and Vitalii Goldanskii and Stanislav Rodionov, "An International Security Force," in Rotblat et al., 181-190.

PHASE IV



Most observers find it difficult, if not impossible, to envision a nuclear-free world. Skeptics argue that the complete elimination of nuclear weapons would require an end to the principle of sovereignty in the global system and the creation of world government. In this view, as long as we live in a world of sovereign states, we are doomed to coexist with the threat of mass destruction.

We disagree. It is not too early to think hard about the issues involved. In our view, the continuation of an international system founded on state sovereignty does not imply a perpetual state of nuclear deterrence. Other outcomes would preserve the state system in recognizable form, yet offer effective alternatives to the threat of mass violence. The slow, if irregular, spread of democracy to formerly authoritarian systems could create a system in which sovereign states would remain the principal actors, but could see so little value in the threat of mass destruction that nuclear weapons and nuclear deterrence would wither away.

In order to achieve the complete elimination of all weapons of mass destruction from all countries, many serious obstacles and problems would have to be addressed and overcome. National and international verification regimes would have to be capable of detecting violations of a ban on nuclear weapons in sufficient time for the United States and the international community to mount an effective response. All relevant materials and technology would have to be subject to stringent controls, and the production of weapons-grade nuclear material and other precursor items prohibited and closely monitored.

Safeguards against the risks of a non-nuclear world would be essential. Critics of the disarmament option have argued that a non-nuclear world would be fraught with instability, since at any time some state or group might aspire to become the sole nuclear power in a world otherwise at peace. Under a worst case scenario, a clandestine nuclear program would go undetected until a "rogue" state or terrorist group announced that it possessed one or more nuclear devices. But how great are the risks of such a break-out from a disarmament regime? Might they be countered with alternative military capabilities — both conventional forces and strategic defenses? And what political or military benefits could be extracted from an announcement of nuclear acquisition in any event? Such questions deserve close study.

The safeguards regime would have to provide the international community with the appropriate tools to respond rapidly to any aggressor attempting to extract short-term gain from a position of nuclear monopoly. Under the political conditions envisioned for Phase IV, the detection of a violation against a global ban on weapons of mass destruction would trigger the imposition of severe economic, political, and military penalties on the perpetrator, and would likely lead to the reconstitution of nuclear forces in one or more states.

The continuation of an international system founded on state sovereignty does not imply a perpetual state of nuclear deterrence.

PHASE IV: KEY FEATURES

Nuclear Force Levels and Operational Status

- ◆ Residual arsenals eliminated
- ◆ Internationally monitored/controlled reconstitution capability

Arms Control Arrangements

- ◆ Stringent control of all WMD-relevant materials/knowledge
- ◆ System of preventive measures for violators
- ◆ Highly reliable verification and breakout response/safeguard system in place

Although a “rogue” state might threaten other countries with a nuclear, chemical, or biological attack in order to force concessions in the near-term, any potential perpetrator would know from the outset that the benefits of blackmail would almost certainly be short-lived. Sooner or later, the violator would face the prospect of severe penalties or certain and massive retribution, depending on its actions; the short-term benefits of nuclear possession would come at the price of sure and certain reversal weeks or months later. If such a system of safeguards could be established, it is far from evident that a position of nuclear monopoly could be used to compel states to make economic, military, or

other concessions in the future, although this question deserves further study.

In the event of nuclear disarmament, it is presumed that the United States and other currently nuclear-armed states would preserve components of their nuclear arsenals under international safeguards. The only way for a violator of the ban on nuclear weapons to minimize the chances of a retaliatory strike would be to launch a preemptive attack against repositories of controlled nuclear materials and components. If storage sites were sufficiently numerous and dispersed, such an attack would require tens of nuclear warheads. The risks that a state or group might amass enough nuclear weapons to carry out such an attack without detection by the international community could be minimized, moreover, through the acceptance of highly transparent and stringent verification regimes. The anticipated costs of cheating, in short, might so far outweigh the potential benefits of nuclear monopoly as to reduce the risk of cheating to insignificant levels, particularly if a global ban on all weapons of mass destruction were coupled with comprehensive national and international verification systems and effective regimes to safeguard against cheaters and sudden abrogators.

A RENEWED COMMITMENT TO ELIMINATION



Under current political conditions, the elimination of nuclear weapons is infeasible. The objective will only be achieved—if it can be achieved at all—after far-reaching changes occur in the principles that guide state policies and actions. The evolutionary posture described in this report suggests one possible path by which that objective might be achieved. The phases depicted are not intended to be predictive, nor to provide a precise blueprint for US policy and actions. Our intent is only to underscore the important linkages between the international strategic environment, the roles that nuclear weapons fulfill in US defense and foreign policy, and the size and operational status of US nuclear forces, and to suggest that it is in the interest of the United States now to embrace seriously far-reaching goals for an evolutionary nuclear posture.

Further changes in the US nuclear posture are possible in the near term, despite the uncertain future of reforms in Russia. Both the United States and Russia would derive substantial benefits from smaller, safer arsenals of roughly 2,000 nuclear warheads each; cuts to this level could be achieved without jeopardizing current and prospective security needs for the next decade. To move much below this level, however, to reach the level of hundreds of nuclear weapons in national arsenals, requires that the participation of the smaller nuclear powers be secured. Improving relations among all major states, sharp cut-backs in US and Russian nuclear forces, and strong non-proliferation regimes might be sufficient to persuade Britain, China, and France to participate in multilateral reductions. It is time to engage these latter three governments in serious discussions of the future roles and risks of nuclear weapons.

Movement toward even lower force levels—tens of nuclear weapons or their complete elimination—presumes even more far-reaching changes, which are difficult to describe in any detail at this juncture. At a minimum, even deeper cuts probably would require the near universal embrace of new principles of, and mechanisms for, ensuring national security, including effective, reliable, and proven collective security systems that offer viable alternatives to the unilateral resort to force.²⁸ Moreover, solutions to difficult technical problems, which so far have been given scant attention in official circles, would have to be found before states would be prepared to scale back their arsenals to small numbers of weapons. Governments would have to have confidence that violators of arms control arrangements would be discovered, and that the international community possessed the means—and political will—to protect all states against a sudden threat with weapons of mass destruction.

As the leading military and political power in the world, the United States bears a special responsibility to spearhead the movement to gradually decrease and, if possible,

28. Robert S. McNamara disagrees. See fn 7.

eliminate the dangers associated with nuclear weapons. Adoption of an evolutionary nuclear posture, and a revitalized commitment to the long-term objective of eliminating all nuclear weapons, could bring important national security benefits to the United States while entailing minimal risks.

Many will object to a commitment that could only be achieved, if ever, after decades. Believing the abolition of nuclear weapons to be infeasible, some would dismiss such a declaration as incredible, and therefore worthless. In this view, while it may be possible to control adequately the materials necessary to build a nuclear device, the requisite knowledge can never be eradicated. Others will argue that such a commitment might seriously compromise US security interests both now and in the future. Friendly nations that now depend on our nuclear assurances might be prompted to reevaluate their nuclear forbearance, and enemies, perceiving the US declaration as a sign of weakness, might be emboldened to seek nuclear weapons or to challenge US interests around the world with conventional forces. Moreover, critics might maintain, as motives to acquire nuclear weapons cannot be eliminated, a disarmed world would be highly unstable. As long as there is no global government to guarantee the continued survival of states and to protect their interests, this view argues, the United States would be ill-advised to do away with the most powerful weapons on earth. A declaratory commitment to an objective that will only be feasible in the long-term, if at all, can only divert attention and resources from steps that could be taken in the near-term. In this view, a pragmatic focus on immediate steps will continue to serve US interests well, and should not be hindered by attention to more radical alternatives, even as long-term possibilities.

While these objections deserve thoughtful consideration, in fact, the United States has already committed itself to the long-term objective of eliminating nuclear weapons. As a signatory to the NPT, the United States, under Article VI, is pledged to pursue "negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament."²⁹ That commitment has been reaffirmed and made more explicit during the 1995 NPT Review Conference; tangible steps now should be taken.³⁰ Serious attention in official circles to the problems associated with going to very low levels of arsenals or to zero itself has been lacking due to the disapprobation associated with the disarmament option. Only a sustained commitment at the highest political level will legitimate serious discussions of the elimination option and ensure that resources and personnel are devoted to finding solutions to the problems associated with moving to zero, and to crafting appropriate transition strategies. In the absence of such a commitment, the nations of the world may never reach the point at which the desirability and feasibility of a nuclear-free world can be evaluated with greater certainty. To paraphrase Herman Kahn, by contemplating the unthinkable, the boundaries of the feasible might well be stretched.

In contrast, a policy concentrating only on near-term pragmatic options could raise grave dangers to US security. While the existing nuclear non-proliferation regime has been remarkably robust, the status quo is unlikely to be sustainable in the long-term. Despite

29. "Treaty on the Non-Proliferation of Nuclear Weapons," 93.

30. The statement of principles and objectives approved at the NPT Extension Conference reiterates "the ultimate goal(s) of the complete elimination of nuclear weapons." See "Principles and Objectives for Nuclear Non-Proliferation and Disarmament," fn. 17.

apocalyptic predictions of widespread proliferation, the spread of nuclear weapons, thankfully, has been contained to a handful of states. But determined countries have proven that it is possible within the current regime to acquire the necessary material and know-how to construct numbers of nuclear devices. Although the NPT was extended indefinitely in 1995, the support of many non-nuclear states was conditioned on tangible, measurable progress toward the Article VI objective of eliminating all nuclear weapons and thus on the abolition of the dual standard that sanctions nuclear possession for five states and condemns the acquisition of nuclear forces by all other participants in the regime. Without a more radical approach to non-proliferation, the challenges posed to the non-proliferation regime can only mount over time, and the United States, eventually, is sure to face new nuclear threats.

The prospects for a nuclear-free world may be decades over the horizon. But it certainly could be achieved in one or two generations. This history of world politics since 1945 shows clearly that radical changes are possible in such a timeframe. Regardless of the amount of time required, it is virtually certain that the world will never be rid of nuclear risks without a serious political commitment to the objective of progressively eliminating weapons of mass destruction from all countries. The time to start is now.