Reykjavik Revisited: 
Toward a World Free of Nuclear Weapons

At their October 1986 Reykjavik summit meeting, Ronald Reagan and Mikhail Gorbachev agreed orally that their two governments should eliminate all their nuclear weapons. Reagan said, “It would be fine with me if we eliminated all nuclear weapons.” Gorbachev replied, “We can do that.” Reagan’s secretary of state, George Shultz, participated in the discussion. While that proposal later floundered over U.S. plans for missile defense and differences over the Anti-Ballistic Missile (ABM) Treaty, the goal of going to zero nuclear weapons is highly relevant today.¹

George Shultz, now at the Hoover Institution on the campus of Stanford University, organized a conference to review the goal of Reykjavik in October 2006, the 20th anniversary of the Reykjavik summit. He invited former high-level government officials and other experts to consider major changes in current U.S. nuclear-weapon control and reduction policies, including the ultimate goal of a world free of nuclear weapons. He had the assistance of Sidney Drell, a distinguished Stanford physicist who has long been an adviser to the U.S. government.

¹ The best treatment of this extraordinary meeting is Don Oberdorfer, The Turn (1991), chap. 5, 155-209, including page 202 for the Reagan-Gorbachev quotes (This has been republished under soft cover under the new title, Front the Cold War To A New Era: The United States and the Soviet Union, 1983-1991). See also James E. Goodby, “The 1986 Reykjavik Summit,” Arms Control Today (September 2006), 49-51.
on nuclear matters, and another Stanford faculty member, former Secretary of Defense William Perry. In the conference at the Hoover Institution, they were joined by a group of experts from many disciplines and backgrounds. The conclusion of this 2006 conference, “to rekindle the vision shared by Reagan and Mr. Gorbachev” at Reykjavík, was published as an op-ed in the *Wall Street Journal* under the names of Shultz, Perry, former Secretary of State Henry Kissinger and former Sen. Sam Nunn.\(^2\) The announcement of a plan to move toward zero nuclear weapons by four “realists” – two Republicans and two Democrats who had held high government offices – received major attention in the United States and differentiates their plan from earlier proposals by others. For them, the plan represents a dramatic evolution in their positions. In addition, they have credibility and access to the media and leaders in the United States and around the world. Three weeks later Gorbachev responded enthusiastically in another op-ed in the *Journal*.\(^3\) We have therefore given our article the title of “Reykjavik Revisited” and refer to the initial *Journal* article as the “Hoover plan.”

There will be a follow-on conference at the Hoover Institution in October 2007. Papers have been commissioned, covering the points in the plan discussed in detail below, plus papers on verification, the joint international efforts necessary to implement the plan and ballistic missile defense. The papers will be published as appendices to the October 2007 conference report. Finally, a third (international) conference is planned for 2008 to receive feedback on what is, initially, an effort by Americans focused on the American political scene.

We believe the end product of this process should be useful to U.S. presidential candidates; to candidates for, and members of, Congress; to foreign governments; and to the general public. Consideration, debate, revisions and in the end greater understanding of the underlying issues and the plan’s proposals should help set the stage for the next U.S. president who will take office in January 2009 and his or her counterparts around the world. While cooperative efforts are essential for intergovernmental success, U.S. presidential leadership will be indispensable given the past and present role of the United States in the nuclear-weapon world.

I. The Hoover Plan

What is the Hoover plan? It begins:

Nuclear weapons today present tremendous dangers, but also an historic opportunity. U.S. leadership will be required to take the world to the next stage – to a solid consensus for reversing reliance on nuclear weapons globally.

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as a vital contribution to preventing their proliferation into potentially dangerous hands, and ultimately ending them as a threat to the world.

It argues that the world is “now on the precipice of a new and dangerous nuclear era,” and that, most alarmingly,

the likelihood that non-state terrorists will get their hands on nuclear weapons is increasing. In today’s war waged on world order by terrorists, nuclear weapons are the ultimate means of mass devastation.

The Hoover plan contends that terrorist groups with nuclear weapons were not foreseen in the 1950s when the U.S. nuclear strategy against a nuclear-armed Soviet Union was first developed. Such a terrorist threat was “conceptually outside the bounds of a [U.S.] deterrent strategy” at that time. Nor was the terrorist threat a focus of the 1968 nuclear Non-Proliferation Treaty (NPT). In the early days of the treaty, the NPT’s proponents focused on persuading the many nations around the world that did not have nuclear weapons not to pursue them. And, to do so, the five NPT members having nuclear weapons when the NPT was negotiated – Britain, China, France, the Soviet Union (now Russia) and the United States – promise in Article VI “to pursue negotiations in good faith on effective measures relating to the cessation of the nuclear arms race at an early date and to nuclear disarmament...”

In 1986 during the Cold War, there were 65,000 nuclear weapons in the world, but today there are less than half that, about 27,000. While admitting that the estimates for some countries are uncertain, one source suggests the following approximate breakdown: Russia 16,000, U.S. 10,000, France 348, UK 200, China 200, Israel 135, India 100, Pakistan 85, and North Korea 5. Israel, India and Pakistan have never been parties to the NPT. North Korea was a party, but has withdrawn. Several states, including South Africa, which had produced six nuclear bombs, and Libya, which had a secret program that was far from producing enough fissile material for a weapon, have renounced nuclear weapons and accepted international inspections. Iran's present nuclear program is clearly challenging the basic purpose of the NPT as is North Korea’s. However, more immediately threatening in this age of increased terrorism is the fact that there is enough plutonium and highly enriched uranium (HEU) for over 300,000 nuclear weapons in the world based on conservative estimates of material needed for a single weapon, and over 580,000 nuclear weapons if less conservative estimates are used. Much of the material that is not already in nuclear weapons remains insecurely guarded, principally in Russia.

To reinforce the NPT’s basic nonproliferation requirement and to deal more effectively with the terrorist threat, the Hoover plan calls for the eventual elimination of all nuclear weapons – after the United States and other countries have taken many initial, concrete steps to control, withdraw and reduce them.

“In 1986 during the Cold War, there were 65,000 nuclear weapons in the world, but today there are less than half that, about 27,000.”

If this goal of elimination were reached (and the plan wisely sets no deadline), then the states possessing nuclear weapons would have fulfilled the above-quoted Article VI obligation of the NPT. The plan proposes some initial steps that it says should be taken toward the elimination of nuclear weapons. Years of negotiation and implementation of specific agreements would be

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5 Cirincione, note 4 above, 95, table 5.3.
required, perhaps decades. The peaceful pursuit of these goals in the interim by nations would, of course, affect the rate of reduction of nuclear weapons and their eventual elimination. The plan concludes, “We endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal…”

II. Earlier Proposals for Nuclear Disarmament

The first government proposal for eliminating nuclear weapons came in the form of the “Acheson-Lilienthal Plan” of 1946, when the United States had the only nuclear weapons in the world. This plan was the intellectual basis for the U.S. plan later presented to the UN Security Council where, with significant changes, it was called the “Baruch plan.” The Baruch plan proposed elimination of all nuclear weapons held by nation-states (only the United States then had them) – though the UN Security Council would have a few to enhance its enforcement authority. The Soviet Union raised so many objections to the Baruch plan that the UN Atomic Energy Commission, created to negotiate an international nuclear control system for nuclear weapons, gave up in 1949.

Later, during the Eisenhower administration, the United States proposed plans containing specific steps toward eventual elimination of all nuclear weapons, but the Soviet Union resisted the inspections that would be necessary to assure that both countries were complying with such a requirement. (Indeed, Soviet rejection of on-site inspection to verify compliance with arms limitation and reduction agreements was not reversed until 1987 by Gorbachev.) The Soviets proposed “general and complete disarmament” without provisions for inspections.

When the Kennedy administration resumed disarmament negotiations with the Soviets in 1962, it tried to call their bluff by offering an “Outline of the Basic Provisions of a Treaty on General and Complete Disarmament in a Peaceful World.” Instead of refusing to negotiate on a Soviet plan for “general and complete disarmament,” President Kennedy authorized a three-stage disarmament plan containing what its proponents in the Kennedy administration thought would be realistic, first-stage, nuclear-weapon limiting steps with the long-term goal of nuclear disarmament.6 During 1962-63 meetings of the Geneva disarmament conference, this and the Soviet plan for “general and complete disarmament” were debated, but no U.S.-Soviet agreement on any provisions was achieved. Eventually, attention turned primarily to a more realistic goal during the Cold War: negotiating the multilateral nuclear Non-Proliferation Treaty, an idea that the Americans and Soviets as well as their allies could generally support. Putting aside the Soviet and U.S. plans for “general and complete disarmament” led to more realistic negotiations and eventually to the NPT.

Later years produced further treaties relating to nuclear weapons and their potential use, particularly bilateral treaties between the United States and the Soviet Union (now Russia). The Nixon administration negotiated the Anti-Ballistic Missile Treaty (terminated by President George W. Bush in 2002), and a five-year, interim agreement on strategic offensive weapons. Bilateral treaties to limit and then reduce nuclear weapons followed, including the first and second Strategic Arms Limitation Treaties (SALT I and II) treaties, the Intermediate-Range Nuclear Forces (INF) Treaty, the Strategic Arms Reduction Treaties (START I and START II) and, finally, the Bush-Clinton Strategic Offensive Reductions Treaty (SORT), often called the Moscow Treaty.

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6 On Sept. 25, 1961, Kennedy had presented the “United States Program for General and Complete Disarmament in a Peaceful World” in a speech to the UN General Assembly. This formed the basis for the detailed Blueprint for the Peace Race presented by U.S. representatives to the Geneva disarmament conference in May of 1962.
“We endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal.”

III. Comparison of the Hoover Plan with the Current Bush Administration Policies

With knowledge of this history and other proposals made over the years, the designers of the Hoover plan call for urgent but partial first steps to control and reduce nuclear weapons. Some of these steps would be taken unilaterally and some would be negotiated first between the United States and Russia, and then with other countries having nuclear weapons. The plan’s “series of agreed and urgent steps that would lay the groundwork for a world free of the nuclear threat” are:

- “Changing the Cold War posture of deployed nuclear weapons to increase warning time and thereby reduce the danger of an accidental or unauthorized use of a nuclear weapon.”

- “Continuing to reduce substantially the size of nuclear forces in all [nation] states that possess them.”

- “Eliminating short-range nuclear weapons designed to be forward-deployed.”

- “Initiating a bipartisan process with the Senate …to achieve ratification of the [multilateral] Comprehensive Test Ban Treaty…”

- “Providing the highest possible standards of security for all stocks of [nuclear] weapons, weapons-useable plutonium, and highly enriched uranium everywhere in the world.”

- “Getting control of the uranium enrichment process [around the world], combined with the guarantee that uranium for nuclear power reactors could be obtained at a reasonable price… [and dealing] with proliferation issues presented by spent fuel from reactors…”

- “Halting the production of fissile material for weapons globally; phasing out the use of highly enriched uranium in civil commerce and removing weapons-useable uranium from research facilities around the world…”

- “Redoubling our efforts to resolve regional confrontations and conflicts that give rise to new nuclear powers.”

The plan is an important implied critique of the Bush administration’s limited nuclear arms control and reduction efforts which have no long-term vision and shun mutuality of obligations. In the Moscow Treaty of 2001, Bush agreed with Putin that Russia and the United States should reduce by 2012 the deployment of strategic nuclear warheads of the two countries to between 1,700 and 2,200. But this agreement does not provide for the elimination of any of the nuclear warheads that are removed from these missiles or their launch sites, and it contains no verification provisions to provide assurances (that reconnaissance satellites alone cannot provide) that both sides are taking the agreed steps to reduce deployed nuclear warheads. Further, Bush has refused to support the already negotiated Comprehensive Test Ban Treaty (CTBT), refused to extend the verification provisions in START I which expire in December 2009, refused to begin to negotiate a treaty prohibiting the production of fissile nuclear materials for nuclear weapons unless that treaty would reject inspections to achieve compliance with its terms, and shown little interest in discussing agreements to reduce nuclear weapons in all the countries that have them, except for the Moscow (SORT) agreement with Russia.

An expert panel of the Defense Science Board, an advisory group to the Defense Department, concluded last year that, given the end of the Cold War, there was now no general agreement within the administration on what the United States needed in the way of nuclear weapons. The task force added:

[Most Americans agree that as long as actual or potential adversaries possess or actively seek]
nuclear weapons or other weapons of mass destruction, the United States must maintain a deterrent to counter possible threats and support the nation’s role as a global power and security partner.

Beyond this conclusion, this Defense Department task force said, there was “no real consensus on what to do with the nuclear posture we were left with that was designed for use against the Soviet Union.” The task force proposed a national goal of reducing the U.S. nuclear stockpile from the 10,000 or so warheads (consisting of both strategic and tactical weapons) to about 6,000 warheads for today’s world. But, instead of proposing a vision for the future of reduced reliance on nuclear weapons, the Bush administration has asked Congress to support funding for the long-term “refurbishment of deployed nuclear weapons” and the development of new nuclear weapons such as the “Reliable Replacement Warhead” to replace, in 2012 or later, the warheads the United States has today. For future work on nuclear weapons, the administration also seeks funds from Congress for “Complex 2030,” a costly program for rebuilding the existing 50-year-old U.S. buildings and other facilities for assembling and disassembling nuclear weapons. This overall approach seems quite inconsistent with the recommendations of the Hoover plan.

The plan is premised on the proposition that U.S. leadership in reducing nuclear weapons around the world is vital, but that the United States must work cooperatively with Russia and other countries to produce major, long-term, verified, nuclear-weapon reductions and eliminations. Full-fledged cooperation has too often failed of expression and action in the Bush administration. Therefore, a word about U.S. cooperation in the world we live in today.

IV. The Nuclear World of Today and a Necessary Joint Enterprise

The United States and Russia possess about 96 percent of the estimated 27,000 nuclear weapons in today’s world and realistically must be the initiators of deep reductions, either unilaterally or by agreement. However, when their strategic nuclear weapons are reduced to 1,000 each or below, and their forward-deployed tactical nuclear weapons are eliminated, it is evident that the actions of the remaining nuclear-weapon states become relevant. For this reason, we believe, the Hoover plan includes the following two-sentence paragraph just before listing the steps quoted above:

First and foremost is intensive work with leaders of the countries in possession of nuclear weapons to turn the goal of a world without nuclear weapons into a joint enterprise. Such a joint enterprise, by involving changes in the disposition of the states possessing nuclear weapons, would lend additional weight to efforts already under way to avoid the emergence of a nuclear-armed North Korea and Iran.

We believe early efforts to establish this “joint enterprise” should include periodic dialogues among the five countries that are recognized as nuclear-weapon states by the NPT and are also the “Permanent Five” (P-5) members of the UN Security Council – the United States, Russia, the UK, France and China. Except for occasional high-level meetings of these five before or during periodic NPT review conferences and discussions during the CTBT negotiations, nuclear dialogues among the five will be almost unprecedented. In their meetings, the Permanent Five should be mindful of the 13 principles and proposals recommended by the 2000 NPT Review Conference – several of which (for

8 Ibid.
example, a treaty banning nuclear-weapon tests) the Bush administration has rejected though the Clinton administration had agreed to them in 2000. In addition, bilateral discussions between the United States and China on nuclear-weapon issues should be established and regularly scheduled. Further, at some stage and in some manner India, Pakistan and Israel should join the joint enterprise since each possesses nuclear weapons. In addition, important non-nuclear-weapon states, such as Canada, Germany, Japan, South Africa, Egypt, Argentina and Brazil, must also be included if the long-term effort is to be successful.

Measures additional to the points in the Hoover plan are clearly important, especially to many non-nuclear-weapon countries such as these. They could include, for example, an agreement prohibiting the use of nuclear weapons against countries not having them (negative security agreement) and a no-first-use agreement. The vision of the Hoover plan properly depends on continued U.S. leadership coupled with unprecedented cooperation with and among other states. Needless to say, this will be a tall order but we believe prospects could be enhanced by realistic, partial first steps led by the United States and Russia.

V. Fleshing Out the Hoover Plan’s Specific Steps

We applaud the Hoover approach. In concept it is similar to the first stage of the 1962 U.S. proposal for general and complete disarmament described earlier, and thoughtful proposals made subsequently by states and non-state actors. It proposes useful, “act now,” specific agreements with a long-term goal of nuclear disarmament. But given what we believe is the uniqueness of the Hoover plan – its four nationally respected American “realist” sponsors with the vision of a world free of nuclear weapons in the post-Cold War world – we focus on the need for its further development.

A. Strategic Weapons: Increased Warning Time and Substantial Reductions

These first two points in the Hoover plan should be considered together. They apply, first and foremost, to the Russian and U.S. “trids” consisting of: (i) land-based ICBMs (intercontinental ballistic missiles), (ii) SLBMs (submarine-launched ballistic missiles), and (iii) long-range heavy nuclear bombers, including in all cases the nuclear warheads attributable to each delivery vehicle. Hundreds of U.S. and Russian strategic missiles are kept fully armed, fueled and targeted, ready to fly out of their tubes or silos as soon as they receive short computer signals. As of February 2007, the total number of warheads ready for immediate firing is about 2,500, divided fairly evenly between the U.S and Russian forces. The accidental, unauthorized or mistaken use of these weapons continue to raise the most acute warning-time issues, including the threat of mistaken “retaliation” by Russia or the United States by systems launched on warning. Removing the hair trigger from these strategic weapons is an urgent priority that has not been dealt with by the United States or Russia.

One of the leading American experts has suggested a two-phase plan – the first, near-term and unilateral, would involve technical fixes of missiles in place so they could not be immediately fired, while the second would involve removing the warheads from the missiles.

9 Some of the most important principles that the Bush administration has not accepted are: number (1), the early entry into force of the CTBT; number (6), an unequivocal undertaking by nuclear-weapon states to eliminate their nuclear arsenals eventually; and number (9), steps by the nuclear-weapon states toward nuclear disarmament including unilateral nuclear reductions, transparency on nuclear-weapons capabilities, a diminishing role for nuclear weapons in security policies; and participation in due course in devising and agreeing to processes leading to complete nuclear disarmament. See 2000 Review Conference of the Parties to the Treaty on Non-Proliferation of Nuclear Weapons, “Final Document,” NPT/CONF.2000/Part I, Art. VI, par. 15, paragraph numbers 6, 7, and 9 on p. 13.

10 This would include the 2006 WMDC (Weapons of Mass Destruction Commission) report, “Weapons of Terror: Freeing the World of Nuclear, Biological and Chemical Arms,” and the three previous independent international commission reports; the current Middle Powers Initiative; and NGO undertakings such as the current three-to-five year program of the World Security Institute, “The Compact to Eliminate Nuclear Weapons.”


12 Calculations made by Bruce G. Blair, July 2007, documented in e-mail communication with authors.
in a verifiable manner. In each case the de-alerting could be reversed in hours, days or weeks, but the hair triggers would no longer be in place. The individual weapons could remain widely dispersed, assuring a continued high degree of confidence in the integrity of the deterrent forces. We believe the two-phase plan has much to commend, but the next president in office in 2009 will assuredly want bipartisan support from congressional leaders before implementing it.

With respect to reductions, we urge an initial target, for both Russia and the United States, of no more than 500 strategic warheads associated with de-alerted forces (ICBMs, SLBMs and bombers) of each country. These reductions should be made by 2012 (BMD issues will have to be addressed at the same time). This is a variant of the proposal made by two participants of the Hoover Conference in 2006, Sidney Drell and James Goodby, spelled out in detail in their excellent 2005 report.

We have combined their two stages into a single stage with all the systems de-alerted. The remaining forces could be widely deployed and without any multiplex independently targeted re-entry vehicles (MIRVs), which would seem both unnecessary and inappropriate in a world moving toward zero nuclear weapons.

To replace the Moscow Treaty (SORT), we suggest a new U.S.-Russian treaty with sharp reductions of deployed strategic weapons, all of which would be de-alerted, no later than 2012. This could help establish the leadership and credibility of the two leading nuclear-weapon states in seeking to realize important arms-reduction and non-proliferation principles agreed at the 2000 NPT Review Conference. A new treaty should of course provide for the disassembly of the excess warheads, de-weaponization of the fissile materials, and the destruction of the excess strategic delivery vehicles (and many of their launchers), with the deployed but de-alerted weapons serving as the hedge factor in the event of backsliding by others. The treaty should provide verification adequate to provide assurances of compliance not just to the American and Russian governments but to the rest of the world. Because of the obvious linkage between deep U.S.-Russian reductions and the actions of other nuclear-weapon states, the entry into force of the new U.S.-Russian treaty could be conditioned on positive responsive steps by the three other recognized nuclear-weapon states.

The nuclear weapons of France and the United Kingdom (estimated at 348 and 200, respectively), should be de-alerted and the deployed systems significantly reduced by 2012. In the case of China, which has only 20 liquid-fueled ICBMs capable of reaching targets in the United States (and which are already de-alerted with the warheads separate from the missiles) and one missile-armed submarine that never leaves port, a commitment not to significantly increase the number of its strategic weapons while modernizing its forces

“...the total number of [U.S. and Russian] warheads ready for immediate firing is about 2,500, divided fairly evenly between U.S. and Russian forces.”


14 This is in line with recommendations made by Blair, in the “De-Alerting,” presentation cited in note 13.

15 The Hoover plan does not mention ballistic missile defense (BMD). We see little prospect of Russian agreement to deep reductions below 1,000 deployed strategic warheads unless the United States foregoes deployment of the strategic BMD engagement radar and the interceptors in the Czech Republic and Poland, respectively. Perhaps the best short-term solution would be for Congress not to fund any such deployments, which would have been banned if the ABM Treaty were still in effect. BMD is discussed later in this article.

16 Sidney D. Drell and James E. Goodby, What Are Nuclear Weapons For? (Arms Control Association, 2005).

17 See “Final Document: 2000 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons,” Part I, Art. VI, par. 15, no. 7. This document called, among other things, for early entry into force of START II, and negotiation of START III, while strengthening the ABM Treaty “as a cornerstone of strategic stability and as a basis for further reductions of strategic offensive systems...” It asked for an “unequivocal undertaking by the nuclear-weapon states to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament...” The Bush administration has taken positions that are inconsistent with these promises agreed to by the Clinton administration, including withdrawing from the ABM Treaty in 2002. The Russians then rejected START II.

18 The current START I Treaty, with its extensive verification provisions, expires in December 2009. It will probably be necessary to extend it for several years until a replacement treaty is negotiated and ratified.
“... we urge an initial target for both Russia and the United States of no more than 500 strategic warheads associated with de-alerted forces.”

would probably be a critical commitment by 2012.¹⁹ We believe actions by France, the UK and China could be carried out unilaterally (but of course transparently) as a consequence of frequent discussions among the Permanent Five.

B. Eliminating Short-Range Nuclear Weapons that are Forward Deployed

The Soviet Union (now Russia) and the United States have negotiated off and on about their strategic and their intermediate-range nuclear weapons since the late 1950s. In 1991 they each began important unilateral actions on some of their tactical nuclear systems (the United States, for instance, removed all its ground-based and surface sea-based nuclear weapons worldwide), but they have not yet begun to negotiate seriously about reducing other tactical nuclear weapons. Estimates suggest that the United States now has about 1,100 tactical nuclear weapons (including 480 bombs for allied fighter-bombers deployed on the territories of NATO allies in Europe). Estimates also suggest that Russia has somewhere between 3,000 and 6,000 tactical nuclear weapons (in many forms, including warheads for short-range, land-based missiles).²⁰ When it comes to elimination of short-range tactical weapons, the focus will inevitably be on (1) the transparent removal of the nuclear bombs and warheads from forward deployment areas, (2) with the follow-on dismantlement of the warheads and bombs (and support infrastructure), and, (3) at a minimum, the reconfiguration of the delivery systems from their nuclear roles.

On the U.S. side, NATO will have to participate in decisions to eliminate forward-deployed, tactical weapons since the 480 U.S. nuclear bombs are deployed with allied forces in six countries in Europe. Russia, for its part, will have to decide whether it is prepared to negotiate on tactical nuclear systems worldwide or only in Europe. Clearly China will have an intense interest in Russia’s decision and Russia will, of course, be interested in China’s response. China will be keeping an eye on India which will be watching Pakistan. The question of eliminating U.S. and Russian tactical nuclear weapons that are forward deployed needs to be studied carefully in the context of other states with nuclear weapons. Further, what “forward deployment” and “tactical” mean needs definition. The involvement or at least direct interest of other countries makes the issues more complex than U.S.-Russian bilateral negotiations. Verification issues will have to explore new ground.


The entry into force of the CTBT remains one of the most pressing international issues if the NPT is to be preserved and strengthened. In the United States, the CTBT is first and foremost a domestic political issue because of the Senate’s 1999 failure to provide the necessary votes to give its advice and consent to ratification of the treaty. Given subsequent statements against ratification of the CTBT by Bush and members of his administration, a major effort to achieve ratification will have to await the inauguration of a new president in January 2009. Fortunately, an excellent report by a former chairman of the Joint Chiefs of Staff provides a roadmap for the next president and Senate to follow in

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¹⁹ The recent independent task force report of the Council on Foreign Relations (Carla A. Hills and Dennis C. Blair, chairs), “U.S.-China Relations: An Affirmative Agenda, A Responsible Course,” April 2007, confirms China “is preparing to deploy a road-mobile, solid-fueled, nuclear-tipped” ICBM “to replace its aging twenty liquid-fueled ICBMs, providing for the first time a credible, secure second-strike capability” (50). It recommends an expanded security dialogue short of formal arms control talks that the task force believes unrealistic for many reasons (84-85).


“NATO will have to participate in decisions to eliminate forward deployed tactical weapons since the 480 U.S. nuclear bombs are deployed with allied forces in six countries in Europe.”

providing for U.S. ratification of the CTBT.21 One of his recommendations that has been followed so far by the Bush administration is that the United States continues its moratorium on nuclear-weapon tests.

U.S. ratification will not by itself bring the treaty into effect since that requires ratification by many other states. Besides the United States, the nine which must ratify but have not include China, North Korea, India, Pakistan and Israel. They may be hard to persuade. But the refusal of the U.S. Senate to give its consent to ratification in 1999, after the United States had been a leader in the negotiation of the treaty, gave those that were reluctant to ratify a ready excuse for not doing so. Recently, the United States proposed that India give up such tests as a condition of a nuclear assistance agreement with the United States, but India did not accept this proposal. The agreement, now completed, faces difficulty before the U.S. Congress and perhaps elsewhere. The next U.S. administration should renew the CTBT condition on nuclear assistance to India and also focus on bringing China, Pakistan, Israel and North Korea into the CTBT at the time of the U.S. ratification.

D. Raising International Standards for Preventing Terrorists from Acquiring Nuclear Weapons

The Hoover plan calls for the provision of “the highest possible standards of security for all stocks of weapons, weapons-usable plutonium, and highly-enriched uranium everywhere in the world.” A lot of work has been done to improve security at many sites, but much more is needed.22 The Nunn-Lugar plan for strengthening security for nuclear materials in the former Soviet Union began the major U.S. effort in 1993. The U.S. General Accountability Office concluded in 2007 that, despite DOD and DOE’s spending over a billion dollars each year for security upgrades at nuclear sites in Russia and other countries of the former Soviet Union since the program began, there is still much to be done in that area of the world. And, in many other countries with nuclear reactors and nuclear materials, there has been less effort to secure the reactors and materials from terrorists.

The Convention on Physical Protection of Nuclear Materials did not, initially, call for international standards for protecting nuclear materials within any of the many countries having them. (It provided standards only for materials in international transport.) The domestic protection standards used in practice therefore varied a great deal around the world. In 2004, this convention was amended to establish international requirements for domestic protection, but the standards agreed upon were mostly discretionary and no international enforcement mechanism was provided. The amendment says that each state’s domestic standards “should be based on the state’s current evaluation of the threat.”23 In other words, if the government officials responsible for administering the state’s protection standards don’t believe the nuclear facilities they oversee are threatened by thieves or terrorists, they do not have to do anything more to protect them no matter what experts from other countries might believe.

In 2004, the UN Security Council issued a broad resolution to inhibit the proliferation of nuclear, chemical and biological weapons. Among other things, Resolution 1540 declared that: “all states … shall …

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[d]evelop and maintain appropriate effective physical protection measures ...” for nuclear materials.24 No definition of “appropriate effective physical protection measures” was provided. But, at least, the standard for each country was not based upon that country’s “current evaluation of the threat” as was the case with the amendment to the Convention on Physical Protection quoted above. Whether the UN Security Council will be able to enforce such a physical protection standard remains to be seen. A 2005 nuclear terrorism treaty approved by the UN General Assembly (with the support of the United States) calls upon nations to adopt legislation providing that unlawful possession of a nuclear device or radioactive material “with intent to cause death or serious bodily injury” or “substantial damage to property or the environment” is a criminal offense.25 It has been signed by the United States but has not yet gone into effect. It is another of the several new measures intended to deal with nuclear terrorism.

Since 2002 a subcommittee of the Security Council has been attempting to find out from each state what sort of protection it provides. A wealth of information has been obtained, but what the actual effect of the Council’s resolution has been to raise standards for protection of nuclear materials from thieves and terrorists is unclear. The existence of the UN Security Council subcommittee is a very important new step. The standards for physical protection outlined above provide a great deal of discretion to states to decide what their own dangers are, what protection standards if any they should adopt, and what steps they should take to enforce their state-adopted standards. Some states concluded in the past that their nuclear materials (for example, highly enriched uranium used in university research reactors) did not threaten anyone and did not require much protection from thieves or terrorists. To persuade these and other states to provide adequate protection is essential. To enlighten them as to what the dangers may be and to persuade them to take greater precautions against terrorist threats, we recommend that the Security Council subcommittee be renewed every two years and that it continue ascertaining what physical protection steps states are actually taking and what the Security Council should do to require greater protection where needed. A detailed public report should be provided by the subcommittee to the council summarizing what has and has not been done by states to provide effective security for their nuclear materials.

E. Uranium Enrichment and Plutonium Separation

President Eisenhower’s Atoms for Peace Program encouraged, and the NPT negotiators grudgingly accepted, that countries not having nuclear weapons may enrich uranium for peaceful purposes and separate plutonium from the spent fuel rods of reactors for the same purposes. Highly enriched uranium and separated plutonium are, of course, the essential materials for making nuclear weapons. Article IV of the NPT gives parties to the NPT the right to “develop research, production and use of nuclear energy for peaceful purposes without discrimination” and to “participate in, the fullest possible exchange of... information for the peaceful uses of nuclear energy.” This has been interpreted as providing a right to any non-nuclear-weapon NPT member to enrich uranium or to separate plutonium – as long as the enriched uranium and the separated plutonium remain under IAEA safeguards and are not used to make nuclear weapons.26 Yet, possession of enriched uranium or separated plutonium gives any country the most necessary and important ingredients for nuclear weapons. Iran has insisted upon its right to

“...the entry into force of the CTBT remains one of the most pressing international issues if the NPT is to be preserved and strengthened.”

25 International Convention for the Suppression of Nuclear Terrorism, approved by consensus by the UN General Assembly (United Nations 2005), Art. 2. The draft treaty contains many other provisions to inhibit and prevent nuclear terrorism. It has been signed by the United States but is not yet in force. It, of course, contains other provisions relevant to nuclear terrorism.

26 See, e.g., Multilateral Approaches to the Nuclear Fuel Cycle, Report to the IAEA of an Expert Group appointed by the Director General, IAEA Information Circular INFCIRC/640 (February 22, 2005), 96.
enrich uranium and separate plutonium, adding that it has no intention of making nuclear weapons. But with sufficient enriched uranium or separated plutonium, Iran could make nuclear weapons. And so could other non-nuclear-weapons states.

What should be done? Some have suggested amending the NPT to prohibit non-nuclear-weapon NPT members from separating plutonium and enriching uranium. However, that is not a politically realistic solution because so many non-aligned countries have peaceful nuclear facilities and would oppose such an amendment. The amendment would have to be approved by a majority of all the NPT’s 186 members including all P-5 nuclear-weapon states and all the members of the IAEA Board of Governors – which regularly includes non-aligned countries with peaceful nuclear facilities. Finally, any approved amendment would apply only to state parties that had ratified it.

The IAEA director-general convened a panel of nuclear experts from many countries to consider this and related problems. They did not recommend amending the NPT. Instead, they proposed multilateral facilities for uranium enrichment run by cooperating member countries that would police each other to assure that uranium was not enriched to high levels for use in nuclear weapons.27 We believe this is the most promising, politically realistic policy to be followed, but it will take years to implement.

F. Halting Production of Fissile Materials for Weapons Globally

World-wide cessation of the production of fissile nuclear materials for use in nuclear weapons, and the phasing out the use of highly-enriched uranium in civil commerce and in research reactors have long been thought to be urgent and necessary steps. Yet progress toward agreement on one long-standing proposal, a Fissile Materials Cut-off Treaty (FMCT), has stalled. To the surprise of many states participating in the talks on this subject at the Geneva disarmament conference, the United States called for an FMCT negotiation but argued against international inspection of the facilities that were to be shut down or otherwise regulated. Other countries have objected to this position and/or wanted the conference to put FMCT aside and turn to other issues.

The Conference on Disarmament has been unable to achieve a consensus on negotiating an FMCT, and formal negotiations have not started. The United States should recede from its blocking position on FMCT negotiations and abandon its present position against international verification measures for such a treaty. Again, this step of the Hoover plan will have to await a new U.S. president.

G. Resolving Regional Confrontations and Conflicts

This is the last specific step of the Hoover plan. It calls for “redoubling our efforts to resolve regional confrontations and conflicts that give rise to new nuclear powers.” It obviously includes both Iran and North Korea, where the Bush administration has recently begun to take positive steps after years of standing on the sidelines. The administration’s negotiating tactics with North Korea, reflected in the six-party agreement of Feb. 13, 2007, was a positive general step. While implementation of the first concrete measures to be taken by North Korea were delayed over an unrelated dispute, IAEA inspectors are back in North Korea and have confirmed that the Yongbyon reactor has been shut down. While more difficult steps

“We believe this [proposed multilateral facilities for uranium enrichment run by cooperating member countries] is the most promising, politically realistic policy to be followed, but it will take years to implement.”

27 See IAEA, Multilateral Approaches to the Nuclear Fuel Cycle, note 26 above, chap. 7.

28 After the announcement of the Six-Party Accord, North Korea failed to meet the Accord’s deadline for shutting down the reactor it uses to make plutonium for nuclear weapons. North Korea said that it had not received back, as promised, its $25 million that had been frozen (in response to efforts of the United States) in a Chinese-owned bank in Macao. With this stumbling block finally resolved, implementation began. This could eventually lead to significant regional changes. See Jay Solomon, “U.S. Studies Ways to Formally End the Korean War,” The Wall Street Journal, July 9, 2007, A1.
“In any event, negotiations with North Korea and Iran must be pursued and will take years to complete – with the likelihood that snarls will arise from time to time.”

starting with accounting for North Korea’s nuclear assets are scheduled to follow, there is a glimmer of potential far-reaching developments. Unfortunately, progress is not apparent in the efforts to prevent Iran from pursuing nuclear weapons, and U.S. participation remains indirect. In any event, negotiations with North Korea and Iran must be pursued and will take years to complete – with the likelihood that snarls will arise from time to time.

In the Middle East, there is no apparent possibility of Israeli participation in nuclear-weapon reduction efforts until there is an overall Israeli-Palestinian peace agreement. Further, the ultimate goal of a nuclear-weapon-free Middle East is understood differently by the Israelis and Palestinians. Finally, Iran’s nuclear efforts seem to have motivated Egypt, Jordan, Kuwait, Saudi Arabia, Syria, the United Arab Emirates and Yemen to consider acquiring nuclear reactors, quite possibly in an effort to begin learning enough about nuclear science in order, if necessary, to make nuclear weapons for themselves in the future.

The need for successful negotiations with both North Korea and Iran, and eventually with Israel, should be self evident. Direct bilateral U.S. discussions must be part of the diplomatic processes.

VI. Priority Issues Not Covered by the Hoover Plan

There are three far-reaching substantive issues not explicitly included in the Hoover plan that should be tackled if the United States is to assume the leadership role in controlling nuclear weapons that the plan urges:

A. Verification

The Bush administration continues to debunk verification, ignoring Ronald Reagan’s admonition, “trust but verify.” The Bush administration has often taken the position that verification is unnecessary for the United States because its intelligence facilities (e.g., satellite observation) are so good. It argued against verification for the Moscow Treaty, for amendments to the Biological Weapons Convention and for a proposed Fissile Material Cut-off Treaty. We believe careful work on various aspects of verification – bilateral and multilateral – is an urgent priority. U.S. efforts on this subject with experts from Livermore and Los Alamos National laboratories could be productive.

The negotiation of a Fissile Material Cut-off Treaty (FMCT), a treaty that requires a halt in the production of fissile nuclear material for nuclear weapons, is recommended by the Hoover plan. In our view, it should be given high priority. The Bush administration has insisted that a cut-off in production of fissile material could not be verified effectively, perhaps because to do so might require inspections in areas related to U.S. nuclear weapons development. Previous U.S. administrations, however, have supported negotiation of an FMCT with inspections to verify compliance. The United States should return to this position.

B. Ballistic Missile Defense (BMD)

We believe the Hoover conference in October 2007 must address explicitly the question of U.S. testing and deployment of strategic BMD while continuing to urge deep reductions and eventual elimination of ICBMs and SLBMs. The critical issue, in our judgment, is one of timing. We believe that once a zero level of deployed ICBMs and SLBMs is reached, then worldwide, cooperative strategic BMD might be an acceptable insurance policy against cheating, assuming that by then the technical capability of strategic BMD is proven and political agreement on many issues, including control and cost sharing, are reached. Before that is achieved, however, we believe deployment or even testing of advanced strategic BMD would frustrate moving toward a world free of nuclear weapons. This is a key lesson learned at the Reykjavik summit.

Several underlying points should be emphasized.

“We believe careful work on various aspects of verification – bilateral and multilateral – is an urgent priority.”

First, there are fundamental differences between strategic BMD and battlefield or theatre systems, at least for the United States and Russia. (“Tactical” can be “strategic” for Israel, India and Pakistan because of the very short distances involved.) Second, since the 1950s the United States has sought an effective strategic BMD, but none has proven out. Third, air-based and space-based BMD interceptors raise particularly sensitive issues that were first discussed between the United States and Russia (then the Soviet Union) in the 1970s, with the development, testing and deployment banned in the ABM Treaty. In the current era, the United States will have to decide whether it values deep reductions, with the goal of eventual elimination, of strategic ballistic nuclear missiles more than continuing its quest for a strategic BMD system that so far has proven technically unachievable. Advanced U.S. programs for tests of air-based interceptors and a space-based test bed would raise this issue directly if they were to be funded by Congress. The United States continues to justify its current ground-based strategic BMD programs based on its stated intent (the European and Asian programs are directed at Iran and North Korea, not Russia and China), while Russia and China are certain to continue to focus on unconstrained U.S. capabilities. In past arms control treaties on offensive and defensive systems, the United States wisely focused on capabilities.

If the United States were to seek to deploy a limited ground-based missile defense system designed to counter a few Iranian missiles, then a cooperative program with agreed limits might be feasible, but would involve discussions and probably explicit agreement with Russia – which seems quite unrealistic at the moment. China is not likely to agree to any Asia-oriented, U.S. strategic BMD, given the very low number of warheads on its ICBMs capable of reaching targets in the United States (currently 20), if any such defense could effectively counter its strategic missiles. It is not clear whether the Chinese view the ground-based interceptors currently (and planned to be) deployed in Alaska (40) and California (4), ostensibly against North Korea, as having such a capability. This is one of many issues that must be explored by the United States with China.

C. Second, Third and Additional Stages

As noted earlier, the October 2007 follow-on conference planned at Hoover will have commissioned papers on proposals described in general terms or implied in the Hoover plan as published in the Wall Street Journal and, of course, some feedback from discussions prior to and at the conference. In addition to fleshing out details, the October 2007 conferees can suggest fundamental revisions or additions if necessary. An important additional subject would be to begin to develop, admittedly in general terms and without any fixed time schedule, a three or more stage plan which, when implemented, would lead to the eventual elimination (prohibition) of all nuclear weapons. Rather than suggesting complete second, third or more stages, we believe the better approach is to frame issues, technical as well as political, that must be addressed at subsequent stages. This could be linked to an analysis of reversibility and enforcement, two subjects of vital importance as nuclear weapons are in the process of being reduced toward zero. These could be important subjects for the third (international) Hoover conference to be held in 2008.

30 “Missile Defense Five Years After the ABM Treaty,” Arms Control Today, June 2007, 30-34, contains a concise analysis of the five current U.S. interceptor programs, as well as a summary of the views of supporters and critics of BMD.

31 The current U.S. system is particularly vulnerable to countermeasures including decoys, and includes reliance on some space-based sensors in addition to its sea- and ground-based radars. China’s view on preventing an arms race in space has been clear for years, but the United States has refused to formally discuss, let alone negotiate. See Lewis, note 4 above, 171-192, and appendices A-E.

32 We note the excellent report, The Future of U.S. Nuclear Weapons Policy, issued by the National Academy of Sciences in 1997. This report (85-96) uses the word “prohibition” of nuclear weapons rather than their “elimination” or “abolition.” Its views are persuasive, but for simplicity we have used the word “elimination” in this article.
VII. Reorganizing the U.S. Government

A. An Agency for Nonproliferation (ANP)

The U.S. Arms Control and Disarmament Agency (ACDA) was created by Congress during the Kennedy administration. It was taken over by the State Department during the Clinton administration by congressional mandate. ACDA has effectively disappeared. We believe an executive branch agency like ACDA, which we call here the Agency for Non-Proliferation (ANP), an agency that is semi-independent of the State Department but reports directly both to the secretary of state and to the president, should be created by Congress. Its overseers should be the president, the president’s national security adviser and the secretary of state, not an assistant secretary or an undersecretary of state. ANP should have a broad mandate and a sufficient staff of experts to deal within the government on the political, scientific and legal aspects of international negotiations to reduce and eliminate nuclear and other major weapons, and then to deal with other governments in these negotiations.

The vision and steps of the Hoover plan could not be effectively pursued without dedicated leadership with direct and frequent access to the president. As was the case before Kennedy was elected, members of Congress could start now considering what form the legislation creating the new agency should take with the goal of enacting a bill the new president can sign into law as early as possible in 2009.33

B. Congressional Joint Committee

The Hoover plan would require long-term bipartisan support for decades. The U.S. constitutional system with frequent elections and its checks and balances will make this a difficult goal to achieve. But nuclear weapons represent a threat different from any others that the United States and the world face. In the 1940s, Congress created a joint congressional committee with members from both houses and an expert staff to monitor the executive branch’s Atomic Energy Commission (AEC), which Congress had created to take over the Manhattan Project. For many years, this joint committee played a very useful role in cooperation with the executive branch, a role that included both monitoring what the AEC was doing and helping it gain authorizations and appropriations from Congress. We recommend consideration of a similar arrangement for the future.

VIII. Looking Ahead and Abroad

An amended Hoover plan, if adopted by governments, would require extensive and continuing dialogue between the United States and other nations. Many of the nations that will be important to future negotiations have lost respect for U.S. leadership over recent years.34 Respect will have to be earned back, starting with the next president, whether a Republican or Democrat. In the interim, Shultz, Perry, Kissinger, Nunn and other American experts should explore both the initial steps of the Hoover plan as well as its vision in foreign capitals. Discussions could assure high-level attention and valuable feedback which could be very useful preparation for serious government-to-government negotiations.

IX. Conclusion

Implementation of the Hoover plan is, realistically, an undertaking for the new leaders who will be in office in Washington and Moscow in 2009. It is uncertain whether relations between the United States and

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33 In 1960, before Kennedy was elected, there was a major effort by NGOs to persuade Congress to create a Peace Agency, an important job of which would be to seek agreements to reduce and eliminate nuclear weapons. Many bills were introduced into the House and Senate to create such an agency. In 1961 after Kennedy became president, he appointed John J. McCloy as a special assistant to advise him on how his government should be organized to support arms control negotiations. We believe a similar effort by Congress would be in the national interest.

34 Helmut Schmidt, the former German chancellor, has written an important article supportive of the Hoover plan, but stressing that responsibilities are global, not solely those of the United States. He also criticizes some recent U.S. unilateral decisions and actions, including missile defenses close to Russia and China. See Helmut Schmidt, “Nuclear proliferation and missile defense: America must set a good example,” The Atlantic Times, April 2007, 3.
Europe) with Russia will have improved from their current post-Cold War low point (which includes the “suspension” of the Conventional forces in Europe [CFE] Treaty starting in mid-December 2007). Prior to 2009 the Bush administration is unlikely to change course on bilateral and multilateral efforts requiring mutuality of obligations, whether these efforts are to achieve a new agreement to succeed the Moscow (SORT) Treaty, ratification of the Comprehensive Test Ban Treaty (CTBT), or negotiation of a verifiable Fissile Material Cutoff Treaty (FMCT). Further, Congress does not have the capacity or constitutional power to take the lead in the preparation and negotiation of treaties and other international agreements such as these, and cannot force Bush to do so. Perhaps the most useful role for Congress (other than denying funding for defense programs that would be counter productive to reaching the goals of the Hoover plan) would be the spadework to create a new agency, ANP; a statute authorizing it could be enacted early in 2009. The establishment of a joint committee to oversee this work for the Congress should probably await the next Congress. A comprehensive plan as it emerges from the second and third Hoover conferences, together with parallel work being done by other groups in the United States and abroad, could be the basis for expedited decisions by the next president and Congress when they take office in 2009.

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