



Overcoming Nuclear Dangers

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In January 2007 the *Bulletin of Atomic Scientists* moved the hands of its famous Doomsday Clock two minutes closer to midnight, in recognition of the growing danger from nuclear weapons. Public concerns about the nuclear peril have focused primarily on the spread of the bomb to other countries—North Korea, Pakistan, India, and perhaps Iran—and the terrifying prospect that Al Qaeda might acquire such weapons. The nuclear danger, however, is not only “out there,” it also exists in the policies of the United States and Russia, which continue to maintain thousands of nuclear weapons on hair-trigger alert. In the 1990s Russia abandoned its traditional policy of “no-first-use” of nuclear weapons. Since then it has resumed the production of nuclear missiles and is replacing aging Cold War weapons systems. In the 1990s, US policymakers developed a new doctrine of counterproliferation that called for the possible use of nuclear weapons against governments and nonstate actors seeking to develop mass destruction capability.¹ Nuclear weapons were to be used not merely to deter but to strike first against threats posed by weapons of mass destruction. To back up this continued and even increased reliance on nuclear weapons, the US government recently announced a multibillion dollar modernization of its vast bomb-making complex. The Bush administration is seeking to build new nuclear production facilities and wants to develop “reliable replacement” warheads, although Congress so far has been reluctant to fund new weapons development. Washington is also deploying missile defenses on Russia’s border, prompting Moscow to suspend its participation in a crucial arms control agreement that limits conventional forces in Europe.

While nuclear dangers and East-West rivalries are on the rise, recent months have brought glimmers of hope for a denuclearized future. Under international inspection, North Korea shut down its plutonium production facilities in July 2007, fulfilling an earlier agreement to halt nuclear production in exchange for supplies of fuel oil and promises to normalize diplomatic and economic relations with the United States. Perhaps the most remarkable sign of hope came in January 2007, when former Secretaries of State George Shultz and Henry Kissinger joined with former Senator Sam Nunn and former Secretary of Defense William Perry in issuing a statement, published in *The Wall Street Journal*, calling for “a world free of nuclear weapons.” The statement gave unprecedented legitimacy to the goal of nuclear disarmament. It also laid the foundation for a new national and international debate on limiting the nuclear danger through the systematic reduction and eventual elimination of nuclear weapons.

This paper is a contribution to that debate. It begins by examining the current nuclear danger in more detail, probing the sources of instability that are driving proliferation and continued reliance on nuclear weapons. It reviews the use of carrots-and-sticks diplomacy to settle proliferation disputes, with special attention to Libya, North Korea, and Iran. It explores the link between denuclearizing particular states or regions and the broader challenge of universal disarmament. It traces the evolving political legitimacy and technical feasibility of nuclear weapons abolition, looking at the recommendations of several prominent commissions and statements from the 1990s to the present. The paper concludes with

suggestions for realizing a future free of nuclear weapons through enhanced security and initiatives to reduce international tensions.

Causes for Concern

The growing nuclear danger stems not only from the proliferation of nuclear capabilities to unstable regimes but also from the continuing dilemma of “loose nukes” in and around the former Soviet Union. In Russia and other former Soviet republics, the deadly detritus of the Cold War is irresistible to would-be nuclear smugglers. Hundreds of tons of bomb-grade materials remain under less-than-secure conditions. In Pakistan, the head of that country’s nuclear program, Dr. A. Q. Khan, operated a worldwide nuclear supply chain that peddled nuclear wares across the globe until it was shut down in 2004. The Khan network provided technology and weapons designs to Libya, North Korea, Iran, and perhaps others—the full extent of the vast smuggling effort has never been publicly revealed. Pakistan tested its own nuclear weapons in 1998, following the lead of India, and the two countries since then have steadily expanded their arsenals and delivery systems. Looming over all these developments is the fear of a “deadly nexus” between proliferation and terrorism—that nuclear weapons will fall into the hands of Al Qaeda. Documents found in Afghanistan after the US invasion revealed Osama bin Laden’s desire to obtain weapons of mass destruction.² International Atomic Energy Agency (IAEA) chief Mohamed ElBaradei told Norwegian television in 2005 that Al Qaeda is actively seeking to acquire a nuclear weapon.³ The July 2007 comprehensive report of US intelligence agencies judged that “Al Qaeda will continue to try to acquire and employ chemical, biological, radiological, or nuclear material in attacks and would not hesitate to use them.”⁴

The world has entered what Jonathan Schell describes as the “second nuclear era,” an era in which the nuclear danger has become more diffuse and unpredictable.⁵ The new nuclear danger differs substantially from that of the Cold War era. The risk of an all-out nuclear holocaust between East and West destroying all life on the planet has diminished, but the danger of actual nuclear weapons use has increased. At a meeting of a National Academy of Sciences panel in 2004, former Defense Secretary Perry said, “I have never been as worried as I am now that a nuclear bomb will be detonated in an American city. I fear that we are racing towards an unprecedented catastro-

phe.”⁶ The risk of a nuclear device actually exploding in a city somewhere is arguably greater now than during the Cold War, and is likely to become even greater in the years ahead.

Problems With Recent US Responses

Nonproliferation is said to be a top security priority for the United States, but the Bush administration and Congress have not backed up their rhetoric with effective action. The Cooperative Threat Reduction program, founded in the 1990s by Senators Sam Nunn and Richard Lugar to secure loose nukes in the former Soviet Union, remains underfunded. In 2001, shortly before the 9/11 terrorist attacks, the independent Baker-Cutler Commission said that the theft of weapons of mass destruction or diversion of weapons-related materials is “the most urgent unmet national security threat” to the United States.⁷ The commission recommended a tripling of funds for dismantling former Soviet warheads and securing nuclear sites in Russia, but the White House and Congress have not acted.

The US government claims that the Khan smuggling ring in Pakistan has been shut down, but only a few of those involved in the network have been jailed. Khan himself received a pardon from Pakistani President Pervez Musharraf (who called him “my friend” and a “hero of the nation”) and remains under a loose and comfortable version of house arrest. London’s prestigious Institute for International Security Studies recently expressed concerns that the Khan nuclear supply network could be reactivated.⁸ Washington has been reluctant to apply pressure on Musharraf over the Khan affair because of its past support for and dependence on the Pakistani military. Nor have pressures been applied on Pakistan and India to halt their nuclear buildups. In the case of India, the United States is going in the opposite direction and is making arrangements to supply New Delhi with nuclear fuel, contrary to all previous US nonproliferation laws. The nuclear deal will make it easier for India to continue building nuclear weapons and has prompted Pakistan to vow to seek a similar arrangement.

Much of the current nuclear discourse in Washington focuses on Iran, which is steadily expanding its nuclear capabilities. If Iran continues to make progress in mastering the technology of uranium enrichment, it could have a bomb within four to ten years, according to for-

mer US Director of National Intelligence John Negroponte.⁹ European countries, the United States, and the UN Security Council have offered incentives and exerted pressure on Iran to suspend its uranium enrichment program, but Tehran so far has refused to yield. In Israel the prospect of an Iranian bomb raises fears of an atomic holocaust and poses an existential threat. Some Israelis, including Reserve General Oded Tira, the former artillery chief, have called for military strikes to prevent Iran from developing the bomb.¹⁰ Israel is itself a nuclear power, with an estimated arsenal of 400 nuclear weapons and highly sophisticated delivery systems.¹¹ In the United States, Norman Podhoretz has argued for bombing Iran to protect Israel and counter the aggressive ambitions of Iranian President Mahmoud Ahmadinejad.¹² A military conflict over Iran's nuclear program would be extremely dangerous, perhaps involving the United States and triggering a wider nuclear and military confrontation in the region and beyond. The development of nuclear weapons in Iran also strikes fear in the hearts of conservative Sunni government leaders and might prompt Saudi Arabia, Egypt, and other countries to reconsider their nonnuclear status, sparking a nuclear arms race to complicate the region's already troubled political relations.

The North Korean bomb adds to the global danger. North Korea declared itself a nuclear weapon state in 2005 and tested a small nuclear explosive in 2006. Nuclear weapons are now in the hands of a fanatical and heavily militarized regime. Pyongyang has reportedly generated sufficient weapons-grade plutonium to produce an estimated seven to nine bombs.¹³ It is also developing missile systems capable of striking neighboring countries. If the North Korean nuclear danger were to expand further, pressures would mount in Japan and perhaps also in South Korea and Taiwan to develop corresponding nuclear capabilities. The countries in the region are already engaged in a conventional arms buildup and could quickly develop nuclear weapons if they made the political decision to do so. The July 2007 nuclear shutdown and the subsequent "disablement" talks in North Korea have halted the production of additional plutonium for new bombs but have not yet addressed existing nuclear weapons or the possible presence of a uranium enrichment program. These critical questions will be the

subject of future negotiations, which are likely to prove difficult and protracted.

The development of the North Korean bomb was a disaster that did not have to happen. When the Bush administration came into office, North Korea had enough plutonium for only one or two bombs. In 1994 it had agreed to freeze its nuclear program and accept on-site international monitoring. That agreement was partially successful, contrary to what some in Washington subsequently claimed. During most of the 1990s the North Korean nuclear program remained under inspected lockdown. When that agreement began to unravel after 1998, the Clinton administration negotiated a new arrangement in its final months in office to halt North Korea's missile tests and nuclear weapons development, in exchange for a US commitment to normalize economic and diplomatic relations. The Bush administration, however, refused to carry on the negotiations. The White House rejected direct talks with Pyongyang and labeled the regime part of the "axis of evil." It also cut off energy supplies that had been provided under the previous agreement. The North responded by resuming plutonium production, while also declaring its continued willingness to give up its nuclear weapons, in exchange for a US commitment to normalize diplomatic and economic relations. It was not until 2006 that Washington took up Pyongyang's offer and again became serious about engaging in direct talks to reach a negotiated settlement. In the meantime Pyongyang acquired the ability to produce several additional bombs.

The Sword, the Shield, and the Pen

The Bush administration's strategy for responding to proliferation dangers has been to apply coercive pressure on selected countries. In 2002 the White House unveiled a new national security strategy, vowing to utilize military force preventively to guard against hostile regimes acquiring weapons of mass destruction and passing them on to terrorist groups.¹⁴ This so-called "Bush doctrine" served as the principal justification for the US-led invasion of Iraq, which Jonathan Schell ironically termed *war for disarmament*. The fiasco in Iraq has discredited the preventive war strategy, but the wider damage caused by the administration's policies persists.

The Bush doctrine has had the unintended effect of accelerating proliferation. The attack on Iraq

only hardened the nuclear ambitions of Iran and North Korea. It sent a clear message: Don't wait to get the bomb if you want to avoid Saddam Hussein's fate. The war also contributed to regional and global insecurities, exacerbating the very conditions that often impel countries to seek greater military and nuclear capability. Far from constraining the spread of nuclear weapons, the administration's militarized policies have worsened the nuclear danger.

Effective Alternatives to US "Selective Coercion"

The current US strategy of selective coercion is fundamentally flawed. Reducing the nuclear danger requires a universal, consistent opposition to all forms of weapons development, and a willingness to engage in direct bargaining with states that may seek to develop such weapons. Nonproliferation successes in the past have resulted not from military pressures but from diplomacy and carrots-and-sticks bargaining. The elimination of Saddam Hussein's weapons program in the 1990s resulted not from US bombing but from a decade of UN disarmament inspections backed up by vigorous diplomacy and an effective international ban on weapons-related imports. South Africa, Ukraine, Brazil, Argentina, and other nuclear aspirants were persuaded to give up the bomb in previous decades through diplomacy, security assurances, and economic engagement.

The case of Libya illustrates the advantages of diplomatic over military approaches. In the 1980s the Reagan administration reacted to Libyan terrorist attacks by launching military strikes and bombing Libyan Leader Muammar Qaddafi's residence in Tripoli. Libya retaliated soon afterward by sending terrorist agents to down Pan Am Flight 103 over Lockerbie, Scotland, and French UTA Flight 772 over Niger. The United States and France responded by taking the case to the United Nations and winning Security Council support for targeted sanctions. The combination of sanctions and multilateral diplomacy eventually succeeded in convincing Libya to turn over the bombing suspects to an international tribunal. It also persuaded Libya to halt its support of terrorist activities. The US State Department's 1996 report on global terrorism stated flatly: "Terrorism by Libya has been sharply reduced by UN sanctions."¹⁵

Negotiations between Washington and Libya continued into 2000 and beyond, as the US demanded a halt to Tripoli's unconventional weapons programs. In late 2003 the Qaddafi regime agreed to abandon the development of weapons of mass destruction, in exchange for the lifting of US sanctions and the normalization of diplomatic relations. At the time Bush administration officials attributed Qaddafi's turnaround to what Representative Tom Lantos termed the *pedagogic value* of the war in Iraq. US officials directly involved in the bargaining with Libya, however, told a different story. The agreement with Tripoli resulted from years of carrots-and-sticks diplomacy and had nothing to do with developments in Iraq or the threat of war.¹⁶

A similar formula of direct US engagement is needed now to address the nuclear standoff with Iran. Because Tehran is still several years away from acquiring nuclear weapons capability, there is no need to panic. Ample time is available to craft an effective diplomatic strategy. As long as Iran remains a part of the Non-Proliferation Treaty (NPT), international inspectors will continue to have access to Iranian nuclear facilities and can report on nonproliferation violations. A key goal of US and international policy therefore should be to keep Iran within the NPT system, while developing a successful strategy for persuading Tehran to abandon any nuclear weapons ambitions. This can be achieved through a judicious combination of sanctions and incentives.

The European Union's three major states—Germany, Great Britain, and France—have taken the lead in offering inducements to encourage Iran to shut down its uranium enrichment program. In August 2005 and then again in June 2006 the "EU-3" pledged substantial assistance to Iran in exchange for a halt to enrichment. The June 2006 offer included an affirmation of Iran's inalienable right to peaceful nuclear energy, assistance in building state-of-the-art light water nuclear reactors, guarantees of a secure supply of enriched uranium as reactor fuel, membership in the World Trade Organization, and an end to certain US sanctions to allow Iran to purchase agriculture appliances and Boeing aircraft parts. Tehran rejected these offers, but European officials have maintained diplomatic dialogue in the hope that, as economic and political pressures mount, Iranian officials might see the benefit of compromise and accept limitations on their enrichment program.

With a substantial incentive offer on the table but no progress toward compliance, international diplomats decided in late 2006 to apply calibrated pressure through targeted sanctions. In December 2006, the UN Security Council imposed an assets freeze and travel ban on designated persons and entities and banned exports to Iran of items related to its nuclear and ballistic missile programs (Resolution 1737). In March 2007 the council adopted further measures designating additional persons and entities for the assets freeze and travel ban and banning exports of arms from Iran (Resolution 1747). These measures, along with continued comprehensive US sanctions and selective restrictions imposed by the European Union, have had a chilling effect on foreign investment in Iran and are creating greater economic uncertainty in the country. Whether these pressures will be sufficient to induce a change in policy remains to be seen.

The key to a diplomatic solution in Iran may be direct engagement by the United States.¹⁷ The multilateral talks between the European powers and Iran have been useful, but the United States is the major player in this dispute. Washington has the most at stake because of Iran's ability to influence the fate of US military missions in neighboring Iraq and Afghanistan. Washington also holds most of the diplomatic cards and can offer far more substantial economic and diplomatic inducements. As in the North Korea case, Washington could offer Tehran a lifting of economic sanctions and the normalization of diplomatic relations, in exchange for binding agreements to refrain from nuclear weapons development.

In addition to sweetening the incentive offers to Iran, international diplomats may need to reconsider their insistence on a total shutdown of all uranium enrichment activities. Washington and its partners are rightly concerned that the development of an industrial-scale enrichment program will create the capacity to produce highly enriched uranium for weapons. Iranian leaders have been adamant in demanding the right to acquire enrichment capability, while asserting that the program is only for peaceful purposes and that they are willing to allow intrusive international inspection. Tehran has suggested the creation of an international consortium to produce enriched uranium on Iranian soil, and has pledged to allow additional, more rigorous monitoring arrangements to guard against military diversion of the resulting fuel.

So far European and US diplomats have rejected this approach. Allowing even a strictly controlled enrichment program would be a risky strategy, since no monitoring system is absolutely fool-proof. Nonetheless such an arrangement could be an initial step toward easing the current standoff and improving political relations. The long-term goal would remain a completely nuclear-free Iran, as part of a regional nuclear-free security zone, but this will take additional time, and might only become possible as political and security relationships within the region and between Iran and the West improve.

Universality

The security concerns of countries like Libya, North Korea, and Iran cannot be treated in isolation. They are linked to regional and global security dynamics.¹⁸ The disarmament of North Korea is tied to broader security concerns in the region and internationally. Iran will be more likely to accept rigorous nonproliferation standards if it sees progress toward denuclearization across the region. The goal of a Middle East zone free of weapons of mass destruction has been affirmed many times in international declarations and Security Council resolutions. The Gulf War ceasefire resolution that mandated the disarmament of Iraq (Resolution 687, 1991) described the elimination of Iraq's deadly weapons as the first step toward the creation in the Middle East of a zone free of weapons of mass destruction. Subsequent Security Council resolutions on Iraq reaffirmed this goal, in recognition of the link between disarmament in any single country and broader security arrangements.

The challenge of nonproliferation ultimately depends on global disarmament.¹⁹ The NPT was conceived as a grand bargain in which the nations of the world (189 are now signatories) agreed not to develop nuclear weapons, in exchange for a pledge from the acknowledged nuclear weapons states to disarm. That agreement is now under challenge because of the actions of North Korea and Iran, and the refusal of the nuclear states to honor their disarmament pledges.

Nonproliferation can only be successful if it is universal. Washington's "do as I say, not as I do" approach is about as credible as preaching temperance from a bar stool. If the United States wants to succeed in preventing other countries from acquiring the bomb, it must be

prepared to reduce and eventually end its own reliance on nuclear weapons. The United States has vowed several times in major international conferences that it will proceed toward disarmament. In 1995, as a condition for the indefinite extension of the NPT, the United States and other nuclear states promised the “determined pursuit by the nuclear-weapon States of systematic and progressive efforts to reduce nuclear weapons globally, with the ultimate goal of eliminating those weapons.”²⁰ At the NPT conference in 2000 they reiterated these pledges with an “unequivocal undertaking by the nuclear weapons states to accomplish the total elimination of their nuclear arsenals.”²¹ The United States and Russia have reduced strategic nuclear weapons by more than two-thirds since the end of the Cold War, but neither country has begun planning for the eventual elimination of these weapons.

Officials in the United States and other nuclear states dismiss nuclear abolition as a dangerous chimera, but technological progress and conceptual advances in international security have made disarmament a realistic possibility. Advancements in the physical sciences have enormously expanded the possibilities for monitoring and verifying weapons reduction and elimination. This has increased governments’ political confidence in the viability of disarmament. The UN experience in Iraq demonstrated the viability of international monitoring as a tool of disarmament. The intrusive on-site inspection mechanisms applied by UN officials in Iraq were highly effective in assuring the elimination of Saddam Hussein’s clandestine weapons programs. Through hundreds of on-site visits over the course of more than a decade, UN officials identified and ensured the dismantlement of Iraq’s nuclear, chemical, and biological weapons and the long-range ballistic missiles intended to deliver them.

The success of the UN mission in Iraq confirms that intrusive inspection can be a valuable tool in achieving disarmament. If weapons dismantlement could succeed in the difficult circumstances of a totalitarian regime reluctant to accept and determined to obstruct external monitoring, a more cooperative and consensual disarmament process certainly should be workable. The effectiveness of the UN weapons mission in Iraq indicates that the challenge of disarmament is not technical but political. The

means are available. The problem lies in mustering the political will to accept and employ those means.

The Emergence of Common, Global Principles and Tools for Disarmament

Throughout the nuclear age, prestigious governmental commissions have developed detailed proposals for disarmament. One of the most authoritative of these reports was that of the Canberra Commission, issued in 1996. Chaired by then Australian Foreign Minister Gareth Evans, the commission consisted of 17 members, including several former senior military commanders and defense officials, including General George Lee Butler, former commander in chief of US Strategic Command; retired Field Marshal Lord Carver, former chief of the British General Staff; Robert McNamara, former US Secretary of Defense; and Michel Rocard, former Prime Minister of France. Other members of the commission were longtime advocates of disarmament, such as Nobel Peace Prize winner Joseph Rotblatt and former Swedish disarmament ambassador Major Britt Theorin. Butler played a crucial role in building consensus within the commission and was the commission’s most prominent spokesperson in the following years. The political views of the commissioners varied widely, but they agreed on a concrete plan for a step-by-step process of reducing and eliminating nuclear weapons.

The Canberra Commission report concluded that “immediate and determined efforts need to be made to rid the world of nuclear weapons and the threat they pose to it.” The proposition that nuclear weapons can be retained in perpetuity and never be used, accidentally or by design, “defies credibility.” Reflecting the military experience of its authors, the report emphasized that nuclear weapons are too destructive and indiscriminate to achieve military objectives on the battlefield. The possession of nuclear weapons has not prevented wars involving the major powers. The only legitimate purpose of nuclear weapons is to deter their use by others and, therefore, if nations agreed to their elimination, there would be no need for such weapons.

The report emphasized both the opportunity created by the end of the Cold War and the urgency of taking action against the growing threat of possible acquisition of nuclear weapons by ter-

rorists. The elimination of nuclear weapons must be a global endeavor in which all states take part. It should proceed in a series of phased verifiable reductions that would allow states to satisfy themselves each step along the way that further movement toward elimination can be made safely and securely. The necessary first step is for the five nuclear weapons states to “commit themselves unequivocally to the elimination of nuclear weapons and agree to start work immediately on the practical steps and negotiations required for its achievement.”

The commission recommended the following specific steps:

- Taking nuclear weapons off alert.
- Removing warheads from delivery vehicles.
- Ending deployment of nonstrategic weapons.
- Ending nuclear testing.
- Negotiating further US-Russian reductions.
- Establishing no-first-use policies.
- Preventing horizontal proliferation.
- Strengthening verification arrangements.
- Halting the production of fissile material.²²

The Canberra Commission report prompted a number of follow-up efforts to examine and promote plans for the elimination of nuclear weapons. These included a 1997 study by the Stimson Center in Washington, DC, *An American Legacy: Building a Nuclear-Free World*, and a report that same year by the Committee on International Security and Arms Control of the National Academy of Sciences, *The Future of US Nuclear Weapons Policy*. Both acknowledged the work of the Canberra Commission and endorsed many of its proposals. In 1998 the Japan Institute of International Affairs, the Hiroshima Peace Institute, and the Japanese government created the Tokyo Forum on Nuclear Non-Proliferation and Disarmament, which released a report the following year that reiterated many of the recommendations of the Canberra Commission.

Weapons of Terror

In 2003, in the wake of intensive international attention to disarmament issues in Iraq, then-UN Under-Secretary-General for Disarmament Jayantha Dhanapala urged the creation of a new international commission to focus on the broader problem of weapons of mass destruction. The Swedish government agreed to organize the proposed commission and selected as its chair Hans

Blix, the former head of the International Atomic Energy Agency and former chief of the UN disarmament mission in Iraq. The Commission on Weapons of Mass Destruction issued its report in June 2006 under the provocative title *Weapons of Terror*. The “Blix report” proposed a world summit at the United Nations in New York to provide global leadership for the elimination of all weapons of mass destruction. In releasing the report, Blix made a special point of emphasizing that policies of unilateralism and preventive military action were counterproductive and had failed to stem the dangers of terrorism and weapons proliferation. He called for a renewed attention to international cooperation in reducing these threats. His report outlined a step-by-step process, accompanied by rigorous monitoring and strengthened cooperative security arrangements, for proceeding toward zero nuclear weapons.²³

The Blix Commission issued 60 recommendations, which in addition to outlining steps toward nuclear disarmament, proposed means of controlling biological and chemical weapons and toxins, limiting weapons delivery systems, preventing the weaponization of space, and strengthening the disarmament verification and enforcement role of the United Nations. The commission called on states to start preparing the process of outlawing nuclear weapons. The ultimate goal, as recommended by the 1997 National Academy of Sciences report, should be a treaty prohibiting all development, testing, or use of nuclear weapons.²⁴ The Blix Commission urged the existing nuclear weapons states to fulfill their NPT commitments to implement disarmament in conformity with principles of verification, irreversibility, and transparency. The Blix report urged states to abide by the UN Charter’s prohibition on the threat or use of force except in self-defense or as authorized by the Security Council. It called for a verified ban on the production of fissile materials, ratification of the Comprehensive Test Ban Treaty (CTBT), and the negotiation of a new strategic nuclear weapons reduction and dismantlement agreement between Russia and the United States.²⁵

The New Opportunity

The latest, most authoritative, and perhaps most politically momentous statement in support of denuclearization was the declaration published in *The Wall Street Journal* in January 2007. The call for “A World Free of Nuclear Weapons” by

eminent former national security officials caused heads to spin in Washington and in capital cities around the globe. Especially remarkable was the apparent conversion of Henry Kissinger, arch realist and architect of US Cold War nuclear deterrence policies. Kissinger joined fellow Republican George Shultz and the two senior Democrats, William Perry and Sam Nunn, in a bipartisan appeal for urgent global efforts to reduce and eliminate nuclear weapons. Joining the four *Wall Street Journal* authors in endorsing the statement were 17 former ambassadors and national security officials from both Republican and Democratic administrations, including senior CIA official John McLaughlin; Admiral William Crowe (US Navy, ret.); and former ambassadors Jack Matlock, James Goodby, and Thomas Graham Jr. These endorsements added weight to an already illustrious group. All agreed that the nuclear policies of the past are no longer valid, and that it is necessary now to chart a new path toward a weapons-free future.

The Wall Street Journal statement was born at an October 2006 conference at the Hoover Institution in California, where Shultz is affiliated. The consultation commemorated the 20th anniversary of the Reagan-Gorbachev summit at Reykjavik, Iceland, in 1986 when the two leaders came remarkably close to an agreement on the elimination of all nuclear weapons. The Reykjavik summit ended without settlement when Gorbachev demanded limits on missile defense testing and Reagan refused to compromise his cherished dream of a missile shield. The meeting nonetheless laid the groundwork for subsequent nuclear agreements that ended the Cold War. Many of Reagan's advisers had been shocked by his willingness to negotiate away nuclear weapons and were relieved that the summit ended without accord, but Shultz stood by the president and supported his disarmament vision. So did Max Kampelman, Reagan's senior disarmament negotiator. Kampelman and Shultz were the driving force in convening the 20th anniversary consultation at Hoover. Their goal was to revive Reagan's dream of a world without nuclear weapons.

As scholar Paul Lettow documents in his important book *Ronald Reagan and His Quest to Abolish Nuclear Weapons*,²⁶ Reagan was never comfortable with the dilemmas of nuclear deterrence—constant vulnerability to atomic destruc-

tion and a defense policy based on the threat of mass annihilation. Reagan spoke on numerous occasions of his desire to eliminate the threat of nuclear weapons, either through missile defenses (still unproven technologically) or through negotiated disarmament (as he proposed to Gorbachev at Reykjavik). It was this goal of a nuclear weapons-free future that the assembled former officials sought to uphold at the Hoover consultation, and which they articulated in *The Wall Street Journal* article.

The statement boldly called for US leadership in “reversing reliance on nuclear weapons globally...and ultimately ending them as a threat to the world.” This will require rekindling the vision shared by Reagan and Gorbachev and forging a worldwide consensus on practical steps toward realizing that vision. The first and foremost task, Shultz and his colleagues argued, 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.”²⁷ The statement offered a series of steps to lay the groundwork for a world free of nuclear weapons:

- Taking deployed nuclear weapons off hair-trigger alert status.
- Continuing to reduce substantially the nuclear arsenals of all states that currently possess them.
- Eliminating forward-deployed short-range nuclear weapons.
- Initiating a bipartisan process within the United States Senate to achieve ratification of the Comprehensive Test Ban Treaty.
- Securing all stocks of weapons-usable plutonium and highly enriched uranium everywhere in the world.
- Getting control of the uranium enrichment process and establishing a system of guaranteed supply of reactor fuel for states without enrichment technology.
- Halting the production of fissile material for weapons globally and ending the use of highly enriched uranium in commercial and research facilities.

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

These “urgent steps” parallel the recommendations of the Canberra and Blix Commissions on how to reduce and eliminate nuclear weapons. They represent a now widely accepted international consensus among the world’s preeminent nuclear policy experts and former officials on the technical, military, and political requirements for nuclear disarmament. They confirm the feasibility of a step-by-step process, accompanied by evermore rigorous levels of technical verification and security assurance, to end reliance on nuclear weapons.

Disarmament and Security: Political and Technical Challenges

The goal of eliminating nuclear weapons faces profound technical and political challenges. It is obvious that nuclear weapons cannot be un-invented. The materials, technologies, and scientific know-how to manufacture nuclear weapons will remain a permanent fixture of the human experience. Even after the weapons themselves are gone, the scientific knowledge and equipment necessary for their creation will remain. The risk that rogue actors might seek to “break out” and redevelop nuclear weapons can never be eliminated. Permanent vigilance is the price humankind must pay for having developed these weapons.

Because of this reality, the 1997 National Academy of Sciences report recommended the use of the term *prohibit* rather than *abolish*. The term *prohibit* is preferable because it does not imply that nuclear weapons can ever be eliminated. The report called for consideration of a global prohibition of nuclear weapons, and emphasized the need for realism in assessing the challenges of disarmament.²⁸ A prohibition agreement implies a legal commitment and an enforcement duty. Such an agreement would explicitly outlaw the possession and use of nuclear weapons. It would universalize the denuclearization process and impose an obligation on all states, nuclear and nonnuclear alike, to renounce reliance on nuclear weapons. It would signify the determination of nations to break their dependence on nuclear weapons without qualification or reservation, and to rely entirely on other means for achieving security.

As Jonathan Schell wrote in *The Gift of Time*, it is necessary to distinguish the technical from the

political dimensions of prohibiting nuclear weapons. At the technical level, the capability to develop nuclear weapons will always exist, but latent nuclear potential is very different from actual nuclear capability. As Schell wrote, “it is unquestionably possible, through technical means, to turn something that is a nuclear weapon into a collection of materials that plainly is not.”²⁹ It is technically feasible to dismantle nuclear weapons and to establish systems of scientific monitoring, verification, and control to reach a point of zero nuclear weapons.

The greater challenge is reaching what Schell termed *political zero*: that stage of political relations at which nations have neither the desire nor the need to possess such weapons. Schell defined *political zero* as the “complete disavowal by political authorities of the intention to use nuclear weapons, in any circumstances”—a condition in which countries never think of acquiring or using nuclear weapons because they feel secure in their political relations with other states. The development and strengthening of cooperative political relationships is thus an essential requirement for creating the mutual political confidence, the political zero, which would allow nations to end their reliance on nuclear weapons.

The realist political philosopher Hans Morgenthau famously observed, “[people] do not fight because they have arms. They have arms because they deem it necessary to fight.” Preventing the spread of weapons is inextricably linked to the larger challenge of enhancing security and preventing armed conflict. The proliferation of weapons is a symptom of a deeper malady, and to cure it we must also treat the underlying disease. Disarmament efforts will not succeed if political relations among nations are more confrontational than cooperative. Disarmament is a dynamic process, not an absolute end state. It is an essential part of the strategy for peace and must be accompanied by a wide range of other security measures to enhance cooperation and build stronger structures of international cooperation and conflict resolution.

The way in which the Cold War ended confirms the link between disarmament and improved political relations. The East-West arms race ended not through protracted negotiations but through a rapid improvement in political relations between the two blocs. When a reform-minded and more

trustworthy Soviet leadership came to power in 1985, and Reagan and other Western leaders recognized the advantages of accepting Soviet concessions, the icy political relations of previous decades quickly warmed. When political trust and understanding improved, the vast apparatus of ideological hostility that had been built up more than 40 years disappeared with breathtaking speed. Dramatic arms reductions that few would have considered conceivable a few years before followed in rapid succession. All of this was made possible by a reduction of tensions and improvement in East-West political relations. Disarmament negotiations contributed to this process by providing a framework for political bargaining and tension reduction, but the revolutionary initiatives of Gorbachev were the decisive factor in reducing political tensions and ending the Cold War.

The Role of Positive Unilateralism in Jump-Starting Multilateral Initiatives

If the ending of the Cold War confirmed key principles of political realism, it also vindicated one of the core beliefs of the disarmament movement—that unilateral initiatives can reduce tensions and spur mutual arms reduction. The concept of unilateral initiatives has solid grounding in political theory and practice. Political scientist Hedley Bull noted that the most significant acts of disarmament tend to occur spontaneously (and often unilaterally) in response to periods of detente and a lowering of political pressures.³⁰ Cooperation theorists have long emphasized the power of positive reciprocity. The most stable basis for cooperation is the simple tit-for-tat process, in which one party responds in kind to the gestures of the other.³¹ In two-player game theory experiments, cooperative gestures always generate the most favorable outcomes for both parties. American political scientist Charles Osgood highlighted the role of unilateral initiatives in his famous Graduated Reciprocation in Tension-reduction (GRIT) strategy.³² Unilateral initiatives can play a constructive role in lowering hostilities and paving the way for more cooperative political relations.

The peace initiatives of Gorbachev were a spectacular enactment of the Osgood strategy, a kind of “super-GRIT.”³³ Soon after taking office, Gorbachev ordered a halt to Soviet underground nuclear testing. This bold initiative, coinciding with the 40th anniversary of the atomic bombing

of Hiroshima, placed enormous pressure on the Reagan administration and the West. Peace movements in the United States and Europe seized upon the Soviet gesture to lobby intensively for a reciprocal response. The Reagan administration initially rebuffed the Soviet gestures, but soon after the Reykjavik summit, as Gorbachev made evermore significant concessions, Washington finally said “yes” to Moscow’s “da.” Disarmament initiatives and strategic concessions from the Soviet Union proved decisive in easing political tensions and reducing the dangers of the East-West nuclear standoff.

A further example of positive reciprocity occurred a few years later, when President George H. W. Bush announced the unilateral demobilization of US tactical nuclear weapons from ships and submarines and the removal and dismantlement of nuclear artillery and short-range missiles in Europe.³⁴ This bold initiative in September 1991 was promptly reciprocated by Gorbachev, who announced a similar and even more sweeping withdrawal and dismantlement of tactical nuclear weapons from Soviet land forces and naval vessels.³⁵ These reciprocal reductions resulted in the largest single act of denuclearization in history, removing some 12,500 nuclear weapons from deployment.³⁶

Contrary to the conventional wisdom, unilateral initiatives proved highly effective in reducing the nuclear danger. The benefits of such initiatives would be even greater if they were made legally binding and were accompanied by verification and data-sharing arrangements. The greatest advances for peace occur when political leaders make conciliatory gestures that reduce tensions and prompt reciprocation. Citizen movements play a decisive supporting role when they create a political climate that encourages these initiatives.

These historical points are important for the current debate about strategies for reducing the nuclear danger and achieving progress toward disarmament. Shultz and his coauthors are correct in emphasizing the need to reduce local and regional political tensions that prompt the desire to acquire greater weaponry. It will not be possible to achieve a nuclear-weapons-free zone in the Middle East, for example, without a serious regional peace process centered on a just settlement between Israel and the Palestinians. Negotiating a US-Russian agreement for further

nuclear reduction will require both sides to give greater attention to maintaining and improving their overall political relations. Convincing Iran and other states to forgo the nuclear option will require strenuous efforts to build political trust and address legitimate concerns for security. It is hard for a country to persuade a country to give up the bomb when it resorts to military threats and invades and occupies its neighbors. If the United States wishes to dissuade Iran and other countries from acquiring nuclear weapons, it should work to improve political relations with those countries.³⁷ To reduce global nuclear threats, the United States should lead by example and reduce its own stockpiles. American leaders could borrow a leaf from Gorbachev, or from the first President Bush, by ending nuclear modernization programs and announcing further US nuclear reductions, inviting other nations to join in a global process. This would be the surest and most effective way to move the world closer to the goal of eliminating nuclear weapons dangers.

Achieving these ambitious objectives obviously will take considerable time and require a transformation in political thinking. It will require increased public awareness and citizen involvement in addressing nuclear weapons dangers. During the 1980s a wave of social and moral concern swept across the United States and Europe as people demanded an end to the nuclear arms race. Millions of citizens raised their voices to oppose the nuclear danger. Religious bodies such as the US Catholic Conference of Bishops contributed significantly to that debate by issuing statements and pastoral letters condemning the immorality of nuclear weapons and urging political leaders to proceed toward progressive disarmament. It is time now to rekindle citizen awareness of the nuclear peril, and of the opportunities for a safer world, and to demand that our political leaders take action to achieve a world without nuclear weapons.

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