CHAPTER 15 Creating the Conditions for a World without Nuclear Weapons

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Introduction

The global nuclear challenge has changed dramatically over the past two decades. The bipolarity of the US-Soviet nuclear standoff during the Cold War has given way to a multilateral and, in some ways, more chaotic and perhaps more dangerous structure comprising nine states that possess nuclear weapons, several of which are situated in regions where

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intense regional rivalries exist. A factor almost completely absent in the middle years of the twentieth century is prominent today: the devolution of state authority to institutions and organizations, including terrorist groups, that can wield great power for either good or malign purposes. As a result, the odds of a nuclear weapon being used today are greater than during the Cold War, even if the prospect of a civilization-ending nuclear exchange between the United States and Russia has been dramatically reduced.

This problem led four Cold War statesmen—George Shultz, William Perry, Henry Kissinger, and Sam Nunn—to call for the elimination of the nuclear threat. The use of nuclear weapons is a real possibility. Yet the solidarity of nations needed to deal with this threat is not evident. This chapter outlines an approach for creating the conditions for a world without nuclear weapons. It centers on a global coalition of nations taking national initiatives to move the world back from the nuclear precipice by means of a long-term work plan. On the part of all nations engaged in this joint enterprise, there should be tangible, convincing commitments to near-term actions, agreed among the relevant nations, regionally as well as on the global level. These should be carried out at a brisk pace.

The political leadership in some nuclear-armed states won't initially be prepared to endorse the concept of a world without nuclear weapons. This is especially the case with those locked in fierce regional rivalries. But a gradual process of nuclear reductions combined with confidencebuilding measures—and progress in resolving regional security issues could create, over time, a new consensus. This process would be a key element of a joint enterprise.

A joint enterprise as discussed in this chapter would be an effort by nations, launched at the summit level and conducted over a long period of time, to control the destructive nuclear forces that threaten to overwhelm

^{1.} The nine states that currently possess nuclear weapons are the United States, Russia, Britain, France, China, India, Pakistan, North Korea, and Israel (which has not publicly acknowledged having nuclear arms).

them. The nuclear dimension is not the only element of the global trends that have been re-shaping the international system, but it remains perhaps the most deadly. It highlights several related international security challenges that also must be addressed more or less concurrently.

Steadiness of purpose over time will be required—not an easy thing to do. But this kind of persistence has been shown by many nations in recent history. It was shown by the United States during the more than four decades of the Cold War. This new struggle would become the defining hallmark of this era, which is still called "post-Cold War" because it has few defining features of its own.

Current international mechanisms necessary to create the conditions for a world without nuclear weapons are not adequate to do the job. Tinkering with the existing machinery will not magically make things possible that were not before. But some improvements in the way nations seek to build a safer global security environment would help. This will require leadership from the top on the part of several nations.

Shultz, Perry, Kissinger, and Nunn recognized in their five successive Wall Street Journal articles² that in focusing on nuclear weapons they were also bringing other big issues to the fore: the nature of deterrence, mitigation of regional conflicts, conventional force imbalances, safeguards for civilian nuclear power programs, and a variety of issues involving transparency of state behavior and international governance. They understood that nations are motivated and unified by visions of a brighter future, so they stressed the need for an overarching vision—the vision of a world without nuclear weapons.

The advice they offered in their first Wall Street Journal article was "first and foremost . . . 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." The article identified ambitious steps to "lay the groundwork for a world free of the nuclear threat." These included reducing substantially the size of nuclear forces in all states that

^{2.} http://www.nuclearsecurityproject.org/publications/wall-street-journal-op-eds.

possess them and eliminating short-range nuclear weapons designed to be forward-deployed. The idea was that nations desiring to enter into a joint enterprise should be willing to sign on to the goal and to a series of steps that could be achieved via a sequence of agreements negotiated over time. That would, in turn, create the conditions for a world without nuclear weapons. This chapter describes a framework for seeking to make that objective a reality.

Conditions for a World without Nuclear Weapons

Creating the conditions for a world without nuclear weapons would require at least four developments.

- 1. The commitment of some nuclear-armed states might begin the process, but moving toward zero eventually will require a readiness on the part of all states with nuclear weapons to reduce and ultimately eliminate their nuclear arms.
- 2. New and strengthened verification measures would provide confidence that any nuclear cheating would be detected. A serious analysis of verification mechanisms for a world without nuclear weapons would be needed in order to demonstrate their feasibility.
- 3. An enforcement mechanism with teeth would dissuade both states that have nuclear weapons and those that do not from cheating on agreements. The mechanism would have to respond rapidly and effectively if violations occurred.
- 4. A changed international security framework would allow states to conclude that they could defend their vital interests through nonnuclear means.

Moreover, the key territorial and other interstate disputes that motivate states to acquire and maintain nuclear weapons in the first place must be resolved or at least mitigated. At the least, it would be important to gain acceptance by the contending states that nuclear arms will not help them resolve their disputes. Global agreements will have to be supplemented by regional agreements that will take into account specific conditions existing in each of those regions. Standards for effective verification of regional agreements would be a matter of international concern.

These are demanding requirements, which lead some people to conclude that a world without nuclear weapons is unattainable. It could turn out that they are right. But a failure to try amounts to acceptance of the current nuclear reality—and of the growing risk of the use of nuclear weapons with unpredictable consequences for mankind.

A joint enterprise process to create the conditions for a world without nuclear weapons could contribute to a broader effort to design and build the political and economic institutions that would succeed the post-World War II order. There is a guestion, of course—which would be resolvable only as events unfold and at the highest level of governments—as to how much progress on a new global security environment is needed to advance the goal of a world without nuclear weapons. But lack of progress in one area should not prevent progress in others, and progress in one area may create conditions that would promote progress in others.

Essential Features of a Joint Enterprise

The five articles written by Shultz, Perry, Kissinger, and Nunn imply that the elements of a joint enterprise could, and almost certainly must, develop at their own speeds and on their own merits in multiple channels. Some efforts would deal with nuclear arms reductions, some with regional conflicts, some with ancillary agreements such as conventional forces, and some with civil nuclear power.

A joint enterprise designed to create the conditions for a world without nuclear weapons will provide the conceptual glue to hold together these

multiple endeavors as they advance toward that goal. It must be launched and overseen at the summit level: nothing less could hold all these disparate elements together and make possible the necessary collective decisions at critical junctures.

One such critical juncture noted in the March 7, 2011, article would be the "inherent limit to US and Russian reductions if other nuclear weapons states build up their inventories or if new nuclear powers emerge." This security dilemma means that, as Russia and the United States continue their reductions process, at some point other states possessing nuclear weapons must at least freeze their nuclear arsenals in place. Meanwhile, all states that do not possess nuclear weapons should take steps that will demonstrate their intention to refrain from acquiring them. The relationship is clearly a summit-level judgment.

As suggested in the five WSJ articles, a joint enterprise based on the principle of shared responsibility would contain some features that directly affect nuclear weapons reductions and some that would be necessary to create and sustain the conditions for a world without nuclear weapons. In that first category are the following features.

- 1. A joint enterprise should have a goal: achieving a world without nuclear weapons.
- 2. Whereas a joint enterprise might be launched with the participation of just some nuclear weapons states, its membership must include, at some stage in the process, all of the states possessing nuclear weapons, not just the five—the United States, Russia, Great Britain, France, and China recognized in the Non-Proliferation Treaty (NPT).
- 3. Its membership should also include states not possessing nuclear weapons, especially those with advanced civil nuclear capabilities or otherwise in a position to contribute to preventing the spread of new nuclear weapons capabilities, such as Sweden and Japan.

- 4. As appropriate to their individual circumstances, members of a joint enterprise should negotiate and implement a program consisting of a series of separate, verifiable agreements that, by reducing the numbers and roles of nuclear weapons, would lay the groundwork for a world free of the nuclear threat.
- 5. The joint enterprise must aim at developing verification measures commensurate with increasingly deeper reductions of nuclear arms down to zero. These measures must be sufficient also to satisfy participants in a joint enterprise who may not be directly participating in such measures.
- 6. The joint enterprise will ultimately require an enforcement mechanism that would dissuade states from cheating on their obligations and that would respond rapidly and effectively to any cheating.

In the second category are the following additional features, which could perhaps be taken under the umbrella of a joint enterprise:

- 1. Mechanisms for mitigating or resolving regional disputes and conflicts that promote nuclear proliferation.
- 2. Ancillary agreements, such as limits on conventional forces and steps that reduce tensions over missile defenses.
- 3. Agreements and actions to tighten controls over nuclear materials globally, including more effective monitoring and internationalizing of some aspects of the nuclear fuel cycle.

To repeat: it is clear that a joint enterprise having these features must carry out its work through several channels, not in just one all-embracing forum. To have any realistic chance of succeeding, a joint enterprise must become the long-term, sustained business of heads of states and governments.

Principles and Process

In their essay published in the Wall Street Journal on January 4, 2007, the four statesmen asked, "Can a worldwide consensus be forged that defines a series of practical steps leading to major reductions in the nuclear danger?" The answer was not obvious—not then, not now. Shultz has called the present era "the Age of Diplomacy," and so it must be if nation-states are to get control not only of the nuclear threat but of all the global forces that are threatening to overwhelm them. In the nuclear arena, as the possessors of 90 percent or more of the world's nuclear weapons, the United States and Russia must lead. That means both championing the goal and actively promoting the steps it takes to get there: to think of the goal of a world without nuclear weapons as a compass guiding day-to-day decisions, not just an ideal. To develop traction, some diplomatic mechanisms must be created that will encourage many nations to rally around this standard—the United States in the role of lonely champion of the goal would quickly become a quixotic figure.

If the primary political objective is to achieve a world without nuclear weapons, then some diplomatic mechanisms must be found that will encourage many nations to sign up. The only such mechanism that exists today is the United Nations itself. Although it is not well-suited to negotiating, the United Nations can be a mechanism for recording and endorsing declaratory policies published by individual members. The Permanent Five members of the Security Council (all of whom possess nuclear weapons) also are beginning to act as a catalyst for broader support for key nuclear constraints.

American architect Louis Sullivan's dictum, "form follows function," is relevant here: before deciding how nuclear constraints should be negotiated, or otherwise put into effect, it would be wise to consider some principles that can be followed in creating new diplomatic mechanisms.

The first principle of a joint enterprise, of course, almost by its definition, is that it should be global in scope. But unless regional rivalries and conflicts are somehow brought under control, a joint enterprise will be limited in what it can achieve.

And so a second principle in considering how new diplomatic mechanisms might encourage nuclear restraint consists of *dealing with regional disputes*. This, too, was foreshadowed in the *Wall Street Journal* essays.

A third imperative is to *link further progress in US-Russian reductions* in nuclear warheads with concrete, specific steps of nuclear constraints by other nations. Many of these were listed in the *Wall Street Journal* articles, but adequate diplomatic mechanisms for dealing with these do not exist. A joint enterprise will have to be built by finding a way to encourage such steps. Declaratory policies may be one way to achieve this, in addition to establishing more effective negotiating mechanisms. For example, initially some nuclear weapons states might undertake unilateral political commitments not to increase their nuclear weapons numbers so long as the United States and Russia are reducing theirs.

A fourth imperative in moving from a limited partnership to a broad coalition of nations would be to find a way to cooperate more effectively in realizing the benefits of civil nuclear power while removing the breakout potential of civil nuclear programs that takes nations to the point where fabricating nuclear weapons is only a brief step from an advanced civil power program.

Shultz, Perry, Kissinger, and Nunn saw US-Russian leadership as critical to the success of the project. But they also stressed on January 15, 2008, the need to involve states that do not possess nuclear weapons: "In parallel with these steps by the US and Russia, the dialogue must broaden on an international scale, including non-nuclear as well as nuclear nations." This recognized, among other things, that civil nuclear power operations should be included in the agenda of a joint enterprise.

In the *Wall Street Journal* of March 7, 2011, they argued that "ensuring that nuclear materials are protected globally . . . is a top priority." In this area, the Obama administration's creation of the Nuclear Security Summit process in 2010 has, in effect, already created a joint enterprise in one important area of a new global security commons. While that process has

made progress, the president in June 2013 wisely announced his intention to extend it by proposing a 2016 summit in the United States.

The joint enterprise process could be launched with the participation of just some nuclear-armed states. It ultimately, however, will require broader participation, including all states possessing nuclear weapons; indeed, the participation of all nations ultimately would be sought. What criteria should govern the membership at the beginning? The smaller the number of participants, the more workable the forum. But states that are not in on the takeoff may be reluctant to participate in the landing. Certain states—even if not nuclear-armed states—will need to be engaged early on to secure their ultimate buy-in to the goal as well as to the successive implementing agreements required to achieve it.

Part of the answer to this question would come from private consultations that the United States and Russia and other nuclear-armed states involved in launching the joint enterprise process would conduct with other "relevant states." The UN Security Council Permanent Five states and India, Pakistan, and Israel should be invited to join the process. The Democratic People's Republic of Korea and Iran should be involved at some point in the process after they have made convincing responses to proposals that have been put before them by the international community regarding their current nuclear programs.

A major role should be assigned to those states that renounced nuclear weapons or weapons programs and those whose advanced civil nuclear capabilities would permit them to build nuclear weapons within a very few years. This would include Argentina, Belarus, Brazil, Canada, Germany, Japan, Kazakhstan, South Africa, South Korea, Sweden, and Ukraine. Representatives of the non-aligned movement, such as Indonesia, might be added. Just this group would come close to two dozen. To provide a sustained sense of direction, a smaller and continuously operating "contact group" or "friends of the joint enterprise" would have to be established.

A direct approach to zero that has been proposed in the past is a nuclear weapons convention (NWC) modeled on the chemical and biological weapons conventions. An NWC has broad support among states that do not possess nuclear weapons and nongovernmental organizations, but not among nuclear-armed states. Although some kind of a legally binding document would likely be required to achieve a world without nuclear weapons, seeking one now seems highly premature—in part because the conditions noted above for a world without nuclear weapons have not been achieved and an NWC by itself likely would not achieve them.

The Present Approach

In the years since the advent of the nuclear age in 1945, efforts to control nuclear weapons have evolved into a system of diplomacy with clearly defined characteristics. Major reductions in nuclear arsenals have been the exclusive province of the United States and the Soviet Union/Russia. Limits or constraints on a nation's freedom of action regarding testing, development, transfer, or deployment of nuclear weapons have been the province of groups of nations, ranging in size from the United Nations, to the sixty-five members of the UN Conference on Disarmament in Geneva, to small ad hoc groups such as the Six-Party Talks on North Korea's nuclear weapons program. Russia and the United States are members of each of the groups just listed but not of the groups of nations that have negotiated on nuclear-weapons-free zones in Latin America, Africa, the South Pacific, Southeast Asia, and Central Asia. The United States and Russia, as well as China, Britain, and France, are, however, relevant to those groups as signatories of protocols that show that the nuclear weapons states support and respect the obligations undertaken by participants in nuclear-weapons-free zones.

The patterns of activities in these various forums vary. The Review Conference that monitors implementation of the NPT holds sessions every five years. Holding regularly scheduled sessions several times each year is the practice at the Conference on Disarmament in Geneva. Negotiations aimed at achieving specific objectives, like New START, the 2010 US-Russia Strategic Arms Reduction Treaty, proceed at a steady and fairly intensive pace and then conclude until a new round of negotiations is agreed upon.

Since the end of the Cold War, now nearly a quarter of a century ago, much of the urgency has gone out of the quest for nuclear arms reductions. There are reasons for this that are unrelated to the system currently in place to conduct negotiations on nuclear weapons. Some are related to the dramatic reductions in US and Soviet/Russian nuclear arsenals since 1991, some to public perceptions that a nuclear attack is no longer a serious possibility, and some to other preoccupations in the nuclear arena.

In the immediate aftermath of the breakup of the Soviet Union, Washington focused on preventing loss of control of weapons and fissile materials that Russia and the newly independent republics of the former Soviet Union had inherited from that recently defunct state. The Clinton administration enjoyed considerable success in this area. In contrast, during this same period, Moscow and Washington sparred fruitlessly over the framework for a new strategic arms reduction treaty and the question of how US ballistic missile defense efforts would be controlled, if at all.

The Bush administration withdrew from the 1972 Anti-Ballistic Missile. (ABM) Treaty but put in place a series of instruments to deal with illicit traffic in fissile materials—the Proliferation Security Initiative (PSI), UN Security Council Resolution 1540, the Global Initiative to Combat Nuclear Terrorism, and the Global Nuclear Energy Partnership (GNEP), among them. A Strategic Offensive Reductions Treaty (SORT) was concluded in 2002 between Russia and the United States, which focused on limiting operationally deployed strategic warheads. Bilateral consultative mechanisms also were put in place at the same time but were sparingly used.

The Obama administration returned to negotiations with Russia on strategic arms in 2009 and produced the New START Treaty, which entered into force in February 2011. A consultative mechanism to oversee implementation was established. The administration has also used the UN

Security Council to rally support for the idea of a world without nuclear weapons. As previously noted, an innovative new forum was established, the Nuclear Security Summit, in which forty-seven heads of states or governments participated in 2010. Its mission was to tighten controls over fissile materials. Thus, a joint enterprise has been created that is a useful precedent for the future. A second meeting in Seoul, South Korea, was held in March 2012 and a third in the Netherlands in March 2014, with one more planned for the United States in 2016.

For the past few decades, the periodic meetings of the Review Conferences of the Non-Proliferation Treaty have been the center of the most controversial and intense debates about the future of civil nuclear power, nuclear disarmament, and nuclear nonproliferation. In those conferences, the question of how viable the basic bargain of the NPT really is has come to a head. That bargain—which envisaged nuclear disarmament by the nuclear weapons states, in return for which other states would not acquire nuclear weapons but would have access to civil nuclear technology—has been challenged by the non-nuclear weapons states. They argue that the five recognized nuclear weapons states have not done enough to disarm and that nuclear technology useful for civil nuclear power is being denied to the non-nuclear weapons states. The nuclear weapons states, in turn, complain that the obligations not to acquire nuclear weapons are being challenged by proliferant countries such as North Korea and Iran.

The heat generated by these conferences has been insufficient to propel the negotiating process forward. But they do pose sets of objectives that furnish a means of measuring progress and pointing to the desired direction of travel.

Not yet in the mode of a negotiating forum, but potentially so, are recent meetings of the nuclear-armed permanent members of the UN Security Council. They have dealt with verification experiences and are beginning to expand into the issue of cutting off the production of fissile material for use in weapons, including discussions with other countries.

Their statement, issued on July 1, 2011, declared that they intended to "renew their efforts with other relevant partners to promote such negotiations."

Finally, it must be said that treaties are not usually the mechanisms chosen to reflect decisions of governments. Most decisions that lead to new nuclear weapons postures by those nations that possess them are reflected in national policies, national defense budgets, and orders to various elements of national governments. That is how President George W. Bush intended to set the US nuclear arsenal at 1,700 to 2,200 operationally deployed strategic warheads. Only the insistence of Russian President Vladimir Putin led to the Strategic Offensive Reductions Treaty in May 2002, which codified the already-made US decision.

President George H. W. Bush practiced the non-treaty approach in order to induce the Soviet government under Mikhail Gorbachev in 1991 and then the Russian government under Boris Yeltsin in 1992 to reduce the number of nuclear weapons and consolidate in Russia the nuclear warheads from bases in the other republics of the Soviet Union as it collapsed into fifteen independent states. Bush announced that the United States would remove its tactical nuclear weapons from most forward bases and take other steps unilaterally, including the removal of warheads from missiles scheduled for elimination under the START I Treaty. Gorbachev and Yeltsin responded by announcing their own unilateral decisions to reduce tactical nuclear warheads and other nuclear weapons. This method is managed without the benefit of a negotiating forum and could be used by several states—not just two—to enhance the safety of nuclear weapons and provide policymakers with more time for decisions.

New Diplomatic Mechanisms

Could new diplomatic mechanisms help to make creating the conditions for a world without nuclear weapons a truly joint enterprise? That's not a foregone conclusion. But it is conceivable that one or more new

mechanisms could perform this role, and these possibilities should be explored. An organizational home ultimately will be necessary to buttress and support the diplomacy of individual nations and provide at least loose coordination for efforts that may take place in a variety of forums (e.g., bilateral negotiations, the United Nations, the Nuclear Security Summit process, the International Atomic Energy Agency). No nation by itself has the solution to the question of how to move from general theory to practical methods of forming a joint enterprise. It can be found only by a coalition of nations committed to creating the conditions for a world without nuclear weapons.

In their most recent Wall Street Journal article, on March 5, 2013, Shultz, Perry, Kissinger, and Nunn suggested a "coalition of the willing" to establish long-term goals and near-term actions. Several coalitions of the willing, including the Proliferation Security Initiative and the Nuclear Security Summits, have been created in recent years and have had considerable success in reducing nuclear risks. A new coalition could have the advantage of lacking an overt connection to institutions and agreements that have had their legitimacy questioned by many states, including India, Pakistan, and Israel. Moreover, while a coalition invariably involves the need to find a "lowest common denominator" process that moves no faster than the most recalcitrant participant, finding a lowest common denominator may be more possible with a less-than-universal group of states.

The process of creating an ad hoc coalition would presumably begin with informal high-level consultations to find a group of like-minded world leaders. Such a group, drawing participants from the countries suggested earlier, would ideally be small enough to be agile, but large enough to allow for sufficient diversity in order to command legitimacy. At a summit-level meeting, the leaders could issue a communiqué and work plan (see below). Just as importantly, they could also commit to giving personal attention to some of the more immediate blocks in the road to zero, such as the Iranian nuclear crisis and the impasse over negotiation of a fissile material cutoff treaty. At an appropriate time, the joint

enterprise might also engage regional security organizations that support the objective of creating the conditions for a world without nuclear arms.

Clearly, to reach zero (or to get anywhere near it), a universal process would eventually be needed. The coalition, therefore, would seek to gradually add new members and to formalize the process (much as the Proliferation Security Initiative has done). To facilitate further expansion, participants could, at an early stage, consider developing a statement of principles that new members would commit to upholding.

Initial Actions

The purpose of convening a meeting of heads of state or government would be to demonstrate the commitment of a sizable coalition of nations to creating the conditions for a world without nuclear weapons. The commitment would necessarily be codified in a written statement released to the public after the deliberations. Many variations on such a statement are imaginable. At the end of this chapter are a draft communiqué and work plan modeled after those issued by the Nuclear Security Summit held in Washington in 2010. Perhaps it should go without saying that skillful diplomacy would have to be deployed to produce such a document (or documents) that would present more than one nation's view of the world.

Participants in the joint enterprise might bring to the initial summit their national commitments to take immediate action to begin creating the conditions for a world without nuclear weapons. The implementation of national nuclear initiatives, examples of which are shown at the end of this chapter and which would constitute an attachment to the work plan, would be the first test of whether the joint enterprise was beginning to take off. Many of these individual national actions likely could not be exactly reciprocated, because exact analogues are not available. The important factor would be the overall balance between national actions taken by participants in the joint enterprise. Participants might bring additional national actions to review summits that might be held every two years.

Long-Term Agenda

A joint enterprise is a multifaceted movement proceeding over many years or decades in different forums in different parts of the world. It would be nothing less than an effort to construct a safer global security environment and could fit into a broader effort to build institutions to succeed those created after World War II, which built the foundations for peace, freedom, and prosperity in that era.³

The agreement of a coalition of the willing to a set of priorities for actions to be taken by nations that accept those commitments is just the beginning of a very complex undertaking. One of the most important features of any type of agreement that might emerge from a joint enterprise summit would be a provision that requires periodic review summits. An illustration of such a provision is contained in the draft work plan text, calling for reviews every other year—at the summit level to sustain high-level attention—and the establishment of a contact group to function in an oversight role between review meetings.

Oversight of all the activities that might be identified as potential elements of a joint enterprise would be, at best, a means of keeping governments—both those participating in the process and the majority of states, who initially would be outside of the process—informed of progress in each of these elements. Assuring the fulfillment of agreements would be another matter altogether, dependent in large measure on whether the joint enterprise gains a public identity, public support, and a sense of momentum. The early years of implementing the type of program shown in the attached model documents would be absolutely critical.

^{3. &}quot;So there's this fractured world . . . we have to come to grips with that and try to put it back together again . . . if we can create a world free of nuclear weapons . . . or as you make progress toward doing that, you are making progress toward rebuilding a security and economic commons." George P. Shultz, July 25, 2012.

Ancillary Agreements

A focus on nuclear issues alone can only go so far in creating conditions for a world without nuclear weapons. Nuclear weapons do not exist in a vacuum, and progress toward zero will require other agreements, some of them relating to international governance.

One of the more important ancillary agreements will deal with nonnuclear forces. Imbalances in conventional forces create tensions and can lead to pressures for nuclear offsets. The only way to deal with that problem is through regional negotiations of the type that took place in Europe in the 1980s and 1990s. These led to a treaty regime that limited conventional force deployments. Importantly, the talks also led to a series of confidence-building measures that were considered politically, but not legally, binding. They included:

- Exchange of information on organization, manpower, and weapons/equipment, including plans for deployments of weapons/ equipment
- Exchange of information on defense planning, including defense policy and doctrine and force plans
- Consultation and cooperation as regards unusual military activities and hazardous incidents
- Voluntary hosting of military visits
- Military-to-military contacts
- Joint military exercises and training to work on tasks of mutual interest
- Prior notification and observation of certain military activities, including an annual calendar of such activities
- Constraints on size and frequency of exercises and prohibition of any large unannounced exercises
- Inspections and evaluations
- Communications networks
- Annual implementation assessment meetings

For some years into the future in regions of the world outside of Europe, confidence-building measures like these would represent an extraordinary advance. They could be developed in small groups and could be politically, rather than legally, binding. Ultimately, of course, a legally binding treaty with an array of rigorous verification measures would be required to assure that conventional force limitations were properly observed.

Countries, in particular the United States and Russia, would have to reach understandings regarding missile defense in order to facilitate offensive nuclear arms reductions. In a world without nuclear weapons, missile defense could provide an important hedge against possible nuclear cheating. While the current gap between strategic offense and defense is so large that a treaty limiting missile defense is not needed, as the number of nuclear weapons is reduced, careful attention to missile defense and possible limitations thereon might be necessary and appropriate in order to avoid potentially destabilizing combinations of nuclear-armed ballistic missiles and missile defense interceptors.

Likewise, countries may have to take up other questions, such as the potential of long-range, precision-guided conventional weapons. Some countries fear that such weapons could carry out missions that previously required nuclear-armed systems.

Concluding Thoughts

As noted in chapter 2, Winston Churchill's last great speech in the House of Commons in 1955 is famous for his prophecy that "safety will be the sturdy child of terror, and survival the twin brother of annihilation." Usually forgotten is that nuclear deterrence was not a feature of international relations that Churchill wanted to last forever. In that last speech he said that he hoped for political change among nations so that nuclear deterrence would no longer be needed. The nuclear shadow over the earth should be removed as soon as conditions permitted. Ronald Reagan felt much the same way. He said so many times, publicly and privately.

Nearly three decades after Churchill spoke those words, Soviet dissident Andrei Sakharov suggested that the time had come to ask whether nuclear deterrence had not outlived its usefulness. In a letter from Gorky, published in July 1983, Sakharov said that ". . . nuclear deterrence is gradually turning into its own antithesis and becoming a dangerous remnant of the past."4 Now, more than three decades after those words were written, Sakharov's judgment needs to be elevated to the status of a crucial question for the survival of humanity.

By the early 1990s the Cold War had ended and the Soviet Union, whose nuclear weapons were the subject of Churchill's remarks about retaliation, had ceased to exist. Very likely this was even more political change than Churchill privately imagined in 1955. Yet two more decades have gone by since the end of the Cold War, and nuclear deterrence still has an almost mystical hold on many opinion-shapers around the world. The idea shapes force structures and dominates the thinking of security communities nearly everywhere. UN Secretary General Ban Ki-moon has said that "the doctrine of nuclear deterrence has proven to be contagious. This has made non-proliferation more difficult, which in turn raises new risks that nuclear weapons will be used."5

Perhaps the most important legacy of the Cold War is one we rarely think of: nuclear weapons were never used in war after 1945. Nuclear deterrence deserves a large measure of credit for that as well as for the absence of a major armed conflict directly between the United States and Soviet Union. But it is important to recall that at key points—the Cuban missile crisis, the Soviet misreading of the NATO "Able Archer" exercise, and times when computers gave false warnings—the world was awfully lucky. Can we perpetuate that legacy and good fortune indefinitely into the future—particularly if the number of nuclear weapons states continues to grow?

^{4.} Andrei Sakharov's letter from internal exile in Gorky, on the occasion of being presented the Leo Szilard Lectureship Award. For full text, see https://www.aip.org /history/sakharov/essay2.htm.

^{5.} Address to the East-West Institute, "The United Nations and Security in a Nuclear-Weapon-Free World," New York, October 24, 2008.

A further complication is that "deterrence" has been misinterpreted in recent years. It has come to be linked with nuclear weapons. It would be a huge mistake to perpetuate that misleading idea. Deterrence, through the threat of forceful actions, is an ancient and enduring concept. "Nuclear" is not an essential part of it. In a non-nuclear world, states would find non-nuclear ways to deter potential aggression. Fortunately, many leaders around the world share Churchill's and Reagan's judgment that a day might come—and should come—when nuclear deterrence will no longer be needed. And in that lies the hope that a joint enterprise can be created.

Draft Communiqué of the Summit Meeting of the Joint Enterprise

The following is the text of a draft communiqué that might be issued by summit leaders at their first meeting to launch a joint enterprise, modeled on the communiqué issued by the 2010 Nuclear Security Summit:

The world is now on the precipice of a new and dangerous nuclear era. The spread of nuclear weapons, nuclear know-how, and nuclear material, combined with national decisions to give more emphasis to nuclear weapons in defense plans, has brought us to a nuclear tipping point. A very real and increasing possibility exists that the deadliest weapons ever invented could be used in a state-to-state conflict or fall into the hands of non-state actors who would feel no political, ethical, or moral compunctions against their use. No historical experience with nuclear warfare underpins the calculations about nuclear use or nuclear deterrence. An unrestrained nuclear war could destroy in days civilized life as we know it. The steps being taken now to address this threat are not adequate to meet the danger.

A world free of nuclear weapons is like the top of a very tall mountain. We cannot see the top of the mountain; but we know that the

risks from continuing to go down the mountain are too real to ignore. It thus makes sense to begin to ascend the mountain, so that we can gain a better and clearer view of the safest routes to the top.

We recognize that the security of future generations will require responsible national actions now, and sustained and effective international cooperation in the future. We recognize that a clear statement of our ultimate goal is the only way to build the kind of international trust and broad cooperation that will unleash the creativity needed to build new institutional arrangements for verification and enforcement of compliance with agreements that will be required to effectively address today's threats. We call for a global joint enterprise to create the conditions for a world without nuclear weapons. We endorse setting the goal of a world free of nuclear weapons and we will work energetically on the actions required to achieve that goal.

Therefore, we affirm that:

- We will support the determination of the United Nations Security Council, as expressed in its Resolution 1887 of September 24, 2009, "to seek a safer world for all and to create the conditions for a world without nuclear weapons."
- To that end, we will carry out a systematic series of agreements supplemented by cooperative national actions undertaken by many states in the coming years to approach that goal in a timely, balanced, predictable, secure, verifiable, enforceable, and sustainable fashion.
- 3. We will ensure that incentives for the use of nuclear weapons, as well as the possibilities for accidental or unauthorized use, are reduced and eliminated in the process of reducing and eliminating nuclear weapons, and that all arrangements related to these agreements will be configured to increase security and strengthen international stability.

In sum, we have agreed that:

A world without nuclear weapons is desirable and that each of us henceforward is under an obligation to pursue it promptly and vigorously. We will do everything in our power to cooperate in creating the conditions necessary for the global elimination of all nuclear weapons.

Draft Work Plan

The following is the text of a draft work plan that might be issued by summit leaders at their first meeting to launch a joint enterprise, modeled on the work plan issued by the 2010 Nuclear Security Summit:6

- This work plan supports the communiqué of the Joint Enterprise Summit. To promote progress on sequential agreements referred to in the communiqué, the Participating States offer the national initiatives attached as Annex 1 to this document as examples of immediate steps that they will initiate to facilitate progress toward the elimination of nuclear weapons. The Participating States encourage all states to fulfill their contributions to this roster and to expand it.
- 2. All Participating States that have not yet done so should in the near future join the 1972 Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction; the

^{6.} The following ideas are similar to ideas put forward by David A. Koplow in "What Would Zero Look Like? A Treaty for the Abolition of Nuclear Weapons," Georgetown Journal of International Law 45, no. 3 (Spring 2014): 683-781. The ideas for both this chapter and his paper came out of roundtable discussions that the authors attended with Koplow in 2012.

- 1993 Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on their Destruction; and the 1996 Comprehensive Nuclear-Test-Ban Treaty. All Participating States will promote universal adherence and observance of these instruments.
- 3. All Participating States will support the development, implementation, and widespread acceptance of regional nuclear weapons-free-zone treaties and protocols attached thereto.
- 4. Russia and the United States will promptly and urgently enter into negotiations and conclude an agreement for the further reduction of their nuclear weapons below New START limits, with the goal of reducing their stockpiles of deployed and nondeployed strategic and non-strategic nuclear warheads by 50 percent.
- 5. Once Russia and the United States have reached the above agreement, each other Participating State that possesses nuclear weapons will cap at the current level the total number of its nuclear weapons and will undertake additional measures of transparency regarding its nuclear weapons programs.
- 6. Participating states will begin to explore verification measures that might be needed for further reductions, as addressed further in point no. 11.
- 7. Each Participating State that possesses nuclear weapons or an advanced civil or military nuclear program will contribute to the cooperative development of the conditions for the prohibition of nuclear weapons by undertaking the following actions:
 - a. Ceasing the production of fissile materials for use in weapons or in excess of civilian needs
 - b. Enhancing the effectiveness of secure international and domestic controls over fissile materials
 - c. Accepting and fully implementing the Additional Protocol with the International Atomic Energy Agency

- d. Exchanging data regarding the production and possession of fissile materials
- e. Participating in negotiations to create a comprehensive, legally binding treaty to regulate the production of fissile materials, including the institution of international control over facilities for the enrichment of fissile materials and for the storage of spent nuclear fuel and the establishment of an international fuel bank to be operated by the International Atomic Energy Agency
- 8. The Participating States possessing nuclear weapons will, as they reduce their nuclear forces, take steps to remove nuclear weapons from prompt launch status.
- 9. Subsequent to US-Russian agreement to each reduce their total nuclear warheads by 50 percent and agreement by each other Participating State to cap at the current level the total number of its nuclear weapons (see points no. 4 and no. 5 above), the Participating States possessing nuclear weapons will agree upon and implement, in a balanced and progressive fashion, deep reductions in the numbers of their deployed nuclear weapons and will disassemble the weapons. They may implement these reductions in stages. Any nuclear weapons removed from delivery systems will be stored under safeguards in conditions that would preclude them from being quickly and secretly restored to the delivery systems, and any nuclear weapons to be eliminated will be disassembled and their components will be irreversibly destroyed or stored under safeguards in conditions that would preclude them from being quickly and secretly reassembled.
- 10. In a final stage, the Participating States will enter negotiations to reduce their nuclear weapons stockpiles to zero. These negotiations will include all nuclear weapons, regardless of range, type, age, size, or status as deployed, non-deployed, retired, reserve, awaiting disassembly, or otherwise. These

- negotiations may proceed in stages, including via regional or other groups, as well as bilaterally and multilaterally.
- 11. In anticipation of the sequential stages outlined above, the Participating States will meet to discuss and develop a highly effective worldwide verification system to ensure adequate monitoring of compliance with the obligations regarding nuclear weapons. This verification system will include multiple components such as: national and multilateral technical means of verification; routine on-site inspection; submission of relevant data to a global data base; and challenge on-site inspection. The verification system will be sufficiently rigorous and intrusive that Participating States will have confidence in its ability to identify violations in sufficient time to enable them to mount an effective response.
- 12. In anticipation of the sequential stages outlined above, the Participating States will meet to discuss and develop a highly effective worldwide enforcement system to ensure an adequate response to any violation of the agreements. This enforcement system will include multiple components such as: diplomatic measures; resort to the institutions of international law; punitive economic measures; and military measures. The enforcement system will be sufficiently rigorous and powerful that Participating States will have confidence in its ability to deter violations, to punish violators, to negate the effects of any violation, and to ensure that violations do not result in military or other gains.
- 13. The leaders of the Participating States will continuously monitor progress in implementation of this communiqué and its work plan and will meet every other year beginning in 2016 to review its progress and to consider additional measures necessary to promote its objectives. Participating States (to be named later) will serve as a Contact Group, to facilitate accomplishment of these objectives. (Note: these might be the UN Security Council

Permanent Five plus nations such as Brazil, Kazakhstan, South Africa, Sweden, Ukraine, and others that have given up nuclear weapons or programs that might have led to them. Japan, as the only nation to have undergone a nuclear attack, should be a charter member.)

Draft Annex to the Work Plan

A draft annex to the above work plan that might be issued by summit leaders at their first meeting to launch a joint enterprise could include a list of national nuclear initiatives, steps announced by leaders at the summit.⁷ Examples of such national nuclear initiatives include:

- A declaration that fissile materials removed from nuclear weapons being eliminated will not be used to manufacture new types of nuclear weapons; that no newly produced fissile materials will be used in nuclear weapons; and that fissile material from or within civil nuclear programs will not be used to manufacture nuclear weapons
- · Declarations of national fissile materials holdings in accordance with an agreed standard format
- Acceptance by nuclear-armed states of transparency measures at all nuclear test sites and declarations that none of them will be the first to break the current moratoriums on nuclear testing
- A means of ensuring that targeting codes for nuclear weapons are altered or maintained to aim only at unpopulated ocean areas
- Elimination of the requirement for prompt launch from war plans
- A freeze at current levels on nuclear stockpiles

^{7.} Ibid.

- Invitations to third-country nuclear-armed states' officials to join actual or practice inspections conducted by the United States and Russia as observers
- Verified storage of nuclear weapons designated for dismantlement at specified storage sites within the territory of their possessors with the understanding that such weapons and the fissile materials they contain will not be re-introduced into the weapons stockpiles of their possessor or of any other entity
- Confirmed dismantlement of nuclear warheads excess to national security needs under conditions of irreversibility
- Voluntary acceptance on a trial basis of additional Open Skies sensors, both in countries where the Open Skies Treaty is now in force and in areas where cooperative aerial monitoring could contribute to confidence-building, such as where nuclearweapons-free zones are established
- Formation of a multilateral group of national experts with the assignment from governments of developing generic measures for monitoring and verifying warhead numbers and warhead elimination
- Formation of a multilateral group of national experts with the assignment from governments of developing generic measures for monitoring and verifying amounts of fissile material
- Formation of a multilateral group of national experts with the assignment from governments of developing enforcement measures and mechanisms for a world without nuclear weapons
- Formation of a multilateral group of national experts with the assignment from governments of developing rules for a world without nuclear weapons as regards (1) what former nucleararmed states might maintain temporarily as a hedge against cheating and (2) what nuclear materials might be allowed any state on a permanent basis
- Establishment of regional forums to promote security and cooperation

- Establishment of national commissions to record histories of their states' nuclear weapons programs and collection of supporting evidence (even if such evidence were kept classified for the time being, it would be an invaluable verification resource for the future)
- Agreement by the United States and Russia to provide each other annual declarations providing, for each key element of its missile defense system, the current numbers and the maximum numbers planned in each year over the next ten years, with advance notice of any changes in those numbers