

# DEBATING DISARMAMENT

## Interpreting Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons

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*The author offers a close analysis of Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the treaty's only article dealing with disarmament, focusing upon both its text and negotiating history, and assesses its applicability as a standard for judging treaty compliance. The author critiques comments on Article VI made by the International Court of Justice in a 1996 case as legally ill founded and conceptually incoherent as a compliance yardstick. The only interpretation of Article VI consistent with its text and history, the author argues, is that it—as it says—merely requires all states to pursue negotiations in good faith; specific disarmament steps are not required. Claims that the 2000 NPT Review Conference imposed new legal obligations for disarmament or altered the meaning of Article VI are found to be mistaken; although the conference could theoretically have adopted interpretive criteria for understanding the meaning of Article VI, it did not in fact do so. Applying his Article VI compliance standard to the case of U.S. compliance, and comparing modern circumstances with those during the Cold War, the author also describes what he says is an excellent U.S. record of Article VI compliance.*

**KEYWORDS:** Nuclear weapons; Nonproliferation regime; Article VI; International Court of Justice; Disarmament; Treaty on the Non-Proliferation of Nuclear Weapons

In discussions of compliance with the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), it is often alleged or insinuated that the United States is in violation of its obligations under NPT Article VI to undertake nuclear disarmament.<sup>1</sup> Such arguments are worth addressing not only on their own merits, because confusion about a treaty's obligations is seldom a good idea, but especially because such claims seem increasingly to be employed as excuses for why other states party to the NPT should not be expected to live up to what are clearly the core provisions of the treaty: those pertaining to nonproliferation. Confusion over Article VI, therefore, should be seen as a significant danger, for it can undercut the integrity of the nuclear nonproliferation regime upon which the international community places no small reliance in helping maintain peace and security. This article aims to clarify the meaning of Article VI, dispel erroneous conclusions related to its disarmament obligations, elucidate the record of U.S. compliance, and help lay the foundation for a more productive international discussion of how nonproliferation and disarmament issues can be addressed.

*Nonproliferation Review*, Vol. 14, No. 3, November 2007

ISSN 1073-6700 print/ISSN 1746-1766 online/07/030401-28

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DOI: 10.1080/10736700701611720

## THE PLAIN MEANING OF ARTICLE VI

One of the more persistent confusions regarding Article VI is the myth that the July 1996 advisory opinion of the International Court of Justice (ICJ), on the “Legality of the Threat or Use of Nuclear Weapons,” shows that Article VI specifically requires each nuclear weapons–possessing state party to disarm.<sup>2</sup> First of all, the ICJ advisory opinion does not *quite* say this. The court’s opinion claimed that there “exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control.”<sup>3</sup> Second, one should remember that ICJ advisory opinions are not binding on states: they are, to state the obvious, merely advisory.

Third, the question of the meaning of Article VI was not actually before the court, making that portion of its opinion, as Judge Stephen Schwebel observed, a mere “*dictum*.”<sup>4</sup> The ICJ had originally been asked by the World Health Assembly to render an advisory opinion on the question: “Would the use of nuclear weapons by a State in war or other armed conflict be a breach of its obligations under international law including the WHO [World Health Organization] Constitution?”<sup>5</sup> But the court determined that because the issue lay outside the WHO’s scope, the question had been improperly asked.<sup>6</sup> The U.N. General Assembly, however, had also requested that the ICJ render an advisory opinion on essentially the same question: “Is the threat or use of nuclear weapons in any circumstance permitted under international law?”<sup>7</sup> The court accepted this second attempt to pose the question. In neither case, however, was the meaning of Article VI something that the ICJ was formally asked to consider.

In the Anglo-American tradition, *obiter dictum* refers to a comment made in a legal opinion on matters not actually raised in the case at hand. As comments on extraneous matters, *dicta* generally are regarded as having minimal authority or value as precedent. The ICJ’s comments on Article VI are clearly such. Worse still, because the court was not asked to give any advice on Article VI, its pronouncement on the subject may in fact have been *ultra vires*—beyond its powers. After all, the ICJ is only authorized to give an advisory opinion upon request from a properly authorized body.<sup>8</sup> The ICJ’s statute also requires that “questions upon which the advisory opinion of the Court is asked shall be laid before the Court by means of a written request containing an exact statement of the question upon which an opinion is required.”<sup>9</sup> Since no one had actually asked the ICJ to interpret Article VI, its eagerness to pronounce upon the subject may have led it to exceed its authority.

Moreover, a close analysis reveals that Article VI is in fact more subtle than the mythology suggests, though one might not know it from reading the ICJ’s comments. The ICJ’s opinion declared that Article VI does not impose merely an obligation of conduct—to undertake what Article VI calls “negotiations in good faith on effective measures relating to cessation of the nuclear arms race, upon nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.” Instead, the court suggested, Article VI also imposes “an obligation to achieve a precise *result*—nuclear disarmament in all its aspects—by adopting a particular course of conduct, namely, the pursuit of negotiations on the matter in good faith” (emphasis

added).<sup>10</sup> Article VI thus created, the court claimed, a “twofold obligation to pursue *and to conclude* negotiations” (emphasis added).<sup>11</sup> But there are grounds to question the court’s comments in this regard, especially to the extent that one wishes to derive anything useful from it as a guide to state behavior.

### Making Sense of the Text

Setting aside the abovementioned procedural defects in the ICJ opinion, it is by no means obvious that the court’s assertion of a “twofold obligation” under Article VI is either correct or of any real use for compliance analysis purposes. This is worth exploring because the meaning of Article VI deserves deeper thought than the ICJ gave to this question, which was not raised, properly argued, or fully considered.

#### *To Negotiate “and Conclude”?*

To assess the meaning of Article VI, it is essential to begin with the text itself, which states: “Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.”

On its face, therefore, the only inarguable requirement of Article VI is for all states party to *pursue negotiations in good faith* toward three specified ends: (1) ending the nuclear arms race at an early date; (2) achieving nuclear disarmament; and (3) achieving a treaty on general and complete disarmament.

To begin with, it is not immediately obvious that the ICJ’s “twofold” obligation stands the test of logic. Certainly, the drafters of the NPT knew perfectly well how to state legal requirements clearly. Articles I and II of the NPT—its core nonproliferation obligations—are quite unambiguous: nuclear weapon states “undertake not to” help others acquire nuclear weapons, and non-weapon states “undertake not to” acquire them. And Article III is quite clear that each non-nuclear weapon state “undertakes to accept” nuclear safeguards and that specific procedures and safeguards “shall be” accepted and followed. It is thus curious that if the drafters of the NPT really meant “shall pursue *and shall conclude* negotiations,” they found it impossible to say so.

More broadly, the phrasing that *is* in Article VI actually cuts against the ICJ’s interpretation; the language about negotiations needing to be “pursue[d] . . . in good faith” clearly leaves open the possibility that such negotiations might not take place, let alone succeed. It would hardly have been difficult for the drafters (as a matter of grammar and syntax, at least) to require the engagement in or conclusion of negotiations. But to specify instead merely the *pursuit* of negotiation in good faith acknowledges the reality that a party may honestly try, but fail—perhaps through no fault of its own, such as in the event of a failure of good faith by other parties—to bring about a meaningful negotiation or agreement. The ICJ’s reading of Article VI would find its drafters, therefore, not only to have been unable to find words to express their real intention, but also to have (accidentally?) chosen language that suggests the contrary. To my eye, the only defensible

reading is that Article VI, as it says, merely requires states to pursue negotiations in good faith.

### *Reading the Treaty as a Whole*

This reading of Article VI gains further strength when one remembers that Article VI is not the only portion of the NPT that deals with disarmament. The treaty's preamble also discusses the issue, and it does so in terms that amplify the points made above about the clear meaning of Article VI. In the sections of the preamble that explicitly discuss disarmament, the states party to the NPT all

[d]eclar[e] their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament,

and that they

[d]esir[e] to further the easing of international tension and the strengthening of trust between States in order to facilitate the cessation of the manufacture of nuclear weapons, the liquidation of all their existing stockpiles, and the elimination from national arsenals of nuclear weapons and the means of their delivery pursuant to a Treaty on general and complete disarmament under strict and effective international control.<sup>12</sup>

The focus in the first of these paragraphs upon the parties' *intention* to move toward disarmament—rather than upon some legal *obligation* or even any understanding that such steps will inevitably occur—obviously fits better with Article VI's textual emphasis on good faith pursuit than with the ICJ's claim that there exists an implicit obligation "to conclude" disarmament agreements. But the second of these two preambular paragraphs goes even further, making clear that steps toward nuclear disarmament—specifically, ending the manufacture of nuclear weapons and eliminating nuclear weapons and delivery systems—are envisioned as occurring *pursuant* (rather than prior) to a treaty on general and complete disarmament. Significantly, because such measures are not described as steps expected *before* such an overall disarmament agreement is reached, this language undercuts the idea that nuclear weapon states' failure to agree on total nuclear disarmament in advance of such a general treaty constitutes noncompliance.<sup>13</sup>

Moreover, this second paragraph also seems to envision significant steps toward "the easing of international tension and the strengthening of trust between States" as prerequisites for achieving *any* of the disarmament goals discussed in the NPT. Easing tensions is described as desirable "in order to facilitate" disarmament, not the other way around. (Nor is there any suggestion that these are independent variables.) This sequencing is important in clarifying that the disarmament burden falls not only on the nuclear weapon states, but also on the international community, which the preamble envisions as having a responsibility to help create the conditions that would make nuclear disarmament—and indeed, *general* disarmament—possible.

Finally, by noting that "the elimination from national arsenals of nuclear weapons" is expected *pursuant to* a general disarmament treaty, the preamble also undercuts any

suggestion that the treaty requires nuclear weapon states to bring their stockpiles to zero *before* the final achievement of general disarmament. And Article VI in no way contradicts this, for its phrasing only speaks of “an early date” when referring to the end of the nuclear arms race. (Nuclear disarmament and general disarmament are both indicated as goals in Article VI, but without specifying any timing.) Of course, nothing in the NPT *prohibits* nuclear elimination prior to general disarmament, and many states party would doubtless welcome such a step. (The United States is one of them: U.S. officials, for instance, have declared that “it might even be said that no country would be happier than the United States were it possible . . . to make nuclear weapons—and indeed all WMD [weapons of mass destruction]—permanently vanish from the world tomorrow morning.”)<sup>14</sup> But nothing makes this mandatory.

### *The Negotiating History of Article VI*

It is also worth exploring the negotiating history of this portion of the treaty, for it underlines these points and further refutes the ICJ’s reading.

*Early Discussions of Disarmament.* The nuclear weapon states, before and after agreement on the NPT text, stated repeatedly that their ultimate objective was nuclear disarmament—and also the “general and complete disarmament” described in Article VI.<sup>15</sup> As described in 1968 by William Foster, head of the U.S. Arms Control and Disarmament Agency (ACDA), the United States saw the NPT as only an intermediate objective. As Foster put it, the treaty was “not an end in itself and it is generally recognized that further progress is necessary in controlling and limiting armaments. Indeed, the treaty obligates us to pursue negotiations on other disarmament measures.”<sup>16</sup>

As U.S. diplomats explained in 1962, the United States supported general and complete disarmament as the only way to achieve the final elimination of nuclear weapons, reasoning that no nuclear weapon state would give up its nuclear deterrent without having confidence in potential aggressors’ disarmament.<sup>17</sup>

*No “Linkage” of Disarmament and Nonproliferation.* But holding disarmament as the ultimate goal did not mean that either the United States or the Soviet Union supported a nonproliferation treaty that entailed specific disarmament obligations—though some non-aligned nations, including Nigeria and India, proposed such linkage in the early 1960s.<sup>18</sup> U.S. and Soviet negotiators insisted that it was best not formally to link disarmament and nonproliferation measures, for fear that such a connection would jeopardize chances of achieving either objective.<sup>19</sup> In 1965, at the UN Eighteen-Nation Disarmament Committee (ENDC), India, Sweden, and others urged that nonproliferation be linked to nuclear disarmament measures.

The ENDC passed a resolution calling for general and complete disarmament and for a nonproliferation treaty “giving close attention to the various suggestions that the agreement could be facilitated by adopting a programme of certain related measures.”<sup>20</sup> The United States supported this resolution, but on the basis of its explicit understanding that reference to such related measures did *not* imply a package deal. The Soviet

ambassador also said that the ENDC should not make nonproliferation “dependent on the solution of a whole series of other complex problems”—a message that the Soviets repeated in the UN First Committee in 1965, pointing out that such linkage would complicate negotiations.<sup>21</sup> Accordingly, most UN members agreed to give special priority to nonproliferation.<sup>22</sup> Rather than require actual disarmament steps in the draft treaty, the United States suggested that it include provisions for review after a certain period of time, which would give states party the chance to act on any “wide concern” they might have that the treaty “should be accompanied by progress to halt and reduce rising nuclear stocks.”<sup>23</sup>

Some countries, such as India and the then-United Arab Republic (UAR), still pushed for a tight linkage between nonproliferation and disarmament, including reductions of existing nuclear weapons stocks, but this effort failed.<sup>24</sup> Even the rest of the eight “non-aligned” members of the ENDC (the so-called Non-Aligned Eight) did not support their position.<sup>25</sup> Consequently, when in September 1965 the Non-Aligned Eight issued a joint memorandum calling for a nonproliferation treaty as a step toward the ultimate goal of general and complete disarmament, the memorandum omitted any call for making specific disarmament steps a treaty requirement. Instead, the joint memo said only that a nonproliferation treaty should be “coupled with or followed by tangible steps to halt the nuclear arms race and to limit, reduce and eliminate the stocks of nuclear weapons and means of their delivery” (emphasis added).<sup>26</sup> The Eight submitted a draft resolution to the UN First Committee in 1965 that said that a nonproliferation treaty should be merely “a step towards the achievement of general and complete disarmament and, more particularly, nuclear disarmament” (emphasis added).<sup>27</sup>

Reflecting the clear understanding that the draft treaty would not require specific disarmament steps, India’s Ambassador V.C. Trivedi declared in 1965 that the Non-Aligned Eight believed that a nonproliferation treaty should be *accompanied* by measures to stop the nuclear arms race. He clarified, however, that they were not asking for disarmament as part of the treaty. Rather, he explained, the Eight were merely of the view that “certain measures, integral and organic to the spread of nuclear weapons, must be taken.”<sup>28</sup> As a result, although both the UAR and Burma called for a treaty article to require certain disarmament steps, this effort went nowhere.<sup>29</sup>

*Finalizing Article VI.* Canada (and other states) advocated in 1967 what in effect became the compromise solution. Pursuant to this approach, rather than requiring anything concrete, the draft treaty would reflect the *intention* of the nuclear weapon states to move toward nuclear disarmament. Canada suggested that the treaty express “a clear and compelling declaration of intent to embark on the process of nuclear arms control.”<sup>30</sup> Apparently inspired by this initiative, the new draft treaty introduced by the United States and Soviet Union in 1967 had a preamble declaring the parties’ intent to end the nuclear arms race and facilitate nuclear disarmament pursuant to a treaty on general and complete disarmament under international control.<sup>31</sup>

Most non-nuclear ENDC members still wanted more than this, leading Mexico to propose an article pursuant to which the parties would “pursue negotiations in good faith” toward a number of specific objectives.<sup>32</sup> Mexico’s phrasing about “negotiations in

good faith," shorn of its references to specific disarmament objectives but wedded to the British- and Canadian-inspired focus upon general disarmament objectives as reflected in the preamble, constituted the genesis of today's Article VI.<sup>33</sup>

A revised draft nonproliferation treaty submitted in January 1968 by the United States and Soviet Union, in their capacities as ENDC co-chairs, included a new disarmament article—Article VI—that spoke to good faith negotiations on disarmament, stopping the nuclear arms race, and a treaty on general and complete disarmament.<sup>34</sup> Amid Soviet and U.S. warnings that insistence on formal linkage to disarmament measures could jeopardize agreement on the treaty, no further progress was made by ENDC members that wanted Article VI to require concrete steps.<sup>35</sup> Article VI took its final form after a slight textual modification, and the current phrasing of the article was agreed and added to the draft treaty on March 11, 1968.<sup>36</sup>

The negotiating record could hardly be clearer, therefore, that specific disarmament steps are *not* required by Article VI. As noted by U.S. negotiator Gerard Smith, Article VI "does not require us to *achieve* any disarmament agreement, since it is obviously impossible to predict the exact nature and results of such negotiations" (emphasis added).<sup>37</sup>

### The Breadth of Article VI

But let us temporarily set aside the specific issue of nuclear disarmament and remind ourselves of how broad Article VI really is. It requires *all* states party to pursue good faith negotiations on ending the nuclear arms race at an early date, nuclear disarmament, and a treaty on general and complete disarmament. This breadth has potentially interesting implications for compliance analysis.

To wit, it stands to reason that, if the United States is in noncompliance with its Article VI obligations, as some commentators allege, many other states party must also be noncompliant. While all states party to the NPT are obliged to pursue good faith negotiations toward the three goals, it is simultaneously the case that some governments (perhaps indeed most of them) are not involved in *any* such efforts. Through the prism of Article VI read as a whole, therefore, the problem of noncompliance might seem endemic if the same standard were applied to other countries as is applied to the United States. Indeed, if anything, far more progress has been made by the United States (and Russia) on the specifically nuclear aspects of Article VI than its critics have made on the other aspects.

All other things being equal, of course, there would presumably be little utility in insisting that non-nuclear weapon states undertake negotiations with each other on ending the nuclear arms race and achieving nuclear disarmament. (If they are not engaged in a nuclear arms race and have no such weapons to give up, what would be the point?) Nevertheless, at the very least, one should perhaps censure the entire international community, on Article VI grounds, for its inadequate efforts to pursue good faith negotiations aimed at achieving "a treaty on general and complete disarmament under strict and effective international control." (Alternatively, one could understand Article VI—particularly in light of its negotiating history—as more an aspirational provision than one with which strict compliance was expected.)

But we should not leave the issue of specifically nuclear “arms race” and “disarmament” obligations so quickly, for even non-nuclear states party may in fact have a duty under Article VI to pursue negotiations on “effective measures” to end nuclear arms races and to achieve disarmament—even though they own no such weapons. One of the most significant threats to international peace and security today comes precisely from the emergence—or potential emergence—of *new* nuclear arms races. In recent times, for instance, the world has witnessed provocative North Korean actions including a nuclear weapon test and ballistic missile launches designed to intimidate its neighbors. Meanwhile, Iran has been pursuing uranium enrichment and ballistic missile delivery capabilities as fast as it can, while its president seems to nurse apocalyptic religious sympathies and fulminates about wiping Israel “off the map.”

It would be hard to imagine clearer cases of NPT noncompliance: North Korea continued its weapons program and presumably built its first nuclear weapon while still an NPT state party, and Iran remains an NPT party, despite its Article III and International Atomic Energy Agency (IAEA) safeguards violations and its clandestine weapons program (an Article II violation). In both cases, these reckless, lawless programs threaten to ignite or entrench *regional* nuclear arms races that will surely have the gravest potential consequences for international peace and security. (A more advanced nuclear arms race between two non-NPT members in South Asia technically presents no NPT compliance problems—neither India nor Pakistan ever signed the NPT. Still, it constitutes a great challenge to regional stability and is a potential source of catastrophic conflagration.)

From this perspective, one can thus discern a conceptual link between Articles I and II of the NPT, its core nonproliferation commitments, and Article VI. A duty to pursue negotiations in good faith on effective measures to end the nuclear arms race entails a duty to help stop new arms races from beginning—and this entails prompt and vigorous attention to fighting nuclear proliferation. (Moreover, in a problem clearly foreseen by Canada that is hinted at in the treaty preamble, if non-nuclear weapon states party to the NPT are unwilling to try to stop nuclear proliferation and prevent new nuclear arms races, how much can they complain that the five nuclear weapon states recognized under the NPT’s Article IX are not more willing to abandon the weapons so many others seem hell-bent on acquiring?)<sup>38</sup> Rather than treating any lack of disarmament progress as an excuse to avoid responsibility for enforcing Articles I, II, and III, NPT parties with a deep, clear-eyed concern for the integrity of Article VI should instead treat nonproliferation enforcement with special seriousness.

### What Article VI Is . . . And Isn’t

The negotiating history makes quite clear that the plain language of Article VI is no accident and that its meaning is precise: all states party are required to pursue good faith negotiations toward the article’s stated goals, but they are not legally required—and could not reasonably *be* legally required—to conclude such negotiations. Arguments that Article VI should require concrete disarmament steps of the nuclear weapon states, and efforts to enumerate specific mandatory steps, were rejected.



As noted, the provisions of Article VI were written to identify disarmament as the ultimate goal, but the treaty drafters clearly recognized—in some cases no doubt reluctantly—that *how* and *when* this goal was to be achieved could not be specified in the NPT itself. Several delegations that opposed specific disarmament requirements noted that recourse was to be found not in any part of Article VI, but rather in the treaty's provision for periodic Review Conferences, at which dissatisfaction with disarmament progress could be raised.<sup>39</sup>

The interpretation of Article VI offered in this paper is therefore the most obvious one as a matter of grammar and syntax. It leads to fewer contradictions, incoherencies, and ambiguities than other interpretations, and it is the most consistent with the NPT's negotiating history. This reading may not satisfy those for whom Article VI compliance assessment is no more than a political reflex, but it ought to satisfy serious lawyers. Alternative readings of Article VI (including, it would seem, that offered by the ICJ) that would claim obligations of specific performance with respect to disarmament therefore amount to little more than historical revisionism, attempting to impute to Article VI what its language does not contain and what its drafters did not intend.<sup>40</sup> Such alternative readings, therefore, should thus be seen as the mere political exhortations, or simply the misunderstandings, that they are. Our examination of the treaty's negotiating history, therefore, returns us to the compliance analysis touchstone of good faith effort to negotiate disarmament—reinforcing the deceptively simple formula advanced earlier that making this effort toward negotiating disarmament constitutes Article VI compliance and that its lack constitutes noncompliance. In light of the history of Article VI's development, it really could be no other way.

## JUDGING COMPLIANCE WITH ARTICLE VI

### The Illogic of the ICJ's Reading

The emphasis in Article VI upon "pursuing" negotiations also suggests a real problem in applying the ICJ's interpretation of that article to compliance assessments of *individual* states party to the NPT. Negotiation, after all, is something that involves attempts to reach agreed-upon understandings and some sort of exchange of value between two or more parties. The ultimate success of negotiations in achieving an agreement thus, by definition, does not depend solely upon the good faith of any single party. (In this respect, as the saying goes, it takes at least two to tango.) Accordingly, even if one might arguably find NPT states party somehow collectively in violation of their Article VI obligations on account of a failure to make (more) progress toward disarmament, it is far from clear that one could logically describe any particular state party as being noncompliant with Article VI by sole virtue of a failure—as the ICJ claimed Article VI requires—"to conclude" disarmament by means of good faith negotiations. Mere failure to conclude a negotiation is not something for which fault can necessarily be given to one specific party.

After all, if one party has pursued negotiations in good faith, but one (or more) of its negotiating partners has either refused negotiations or not pursued them in good faith,

there might well be no agreement. Yet how can one judge the good faith partner as noncompliant with Article VI? Unless the ICJ meant Article VI to require a state party to agree to *any* dubious arms control proposal that came along, or to reach a deal with negotiating partners who display bad faith—or, even more bizarrely, to require a state party to reach deals even if others to refuse to negotiate at all—the ICJ’s *dictum* about a supposed Article VI obligation to “conclude” negotiations is thus fundamentally incoherent as applied to *individual* compliance cases. (Moreover, would not the NPT be asking foolishness of any single state party to make its Article VI compliance contingent upon disarming, even if its rivals were not?)

Again, therefore, the better reading is not that of the ICJ. Instead, it stands to reason that if good faith efforts to move toward the ends described in Article VI have been pursued, a mere failure to disarm or to conclude negotiations on disarmament cannot *in itself* constitute Article VI noncompliance. Nor, because meaningful negotiations require the existence of serious negotiating partners—which is beyond the power of any single state always to ensure—can one necessarily find any single state party in noncompliance solely on the basis even of a complete lack of negotiations. That is the subtlety behind the seemingly simple language of Article VI: as the drafters put it quite clearly, Article VI requires that each state party “pursue”—not necessarily that they “conclude” or even “engage in”—good faith negotiations toward the goals of Article VI. This language is no accident.<sup>41</sup>

### *The Paradox of Negotiating versus Achieving*

What, then, is an NPT party required to do to comply with Article VI? Professional arms control negotiators or international lawyers who make a living by negotiating treaties might perhaps wish to require that all disarmament steps take the form of formally negotiated, legally binding instruments. However, Article VI also refers to “effective measures” on ending the nuclear arms race and on nuclear disarmament; only the clause on “general and complete disarmament” refers to a “treaty.” Certainly, it would seem perverse to *deny* Article VI compliance to states party that achieved nuclear disarmament by non-legally binding means, or by *non-negotiated* means—including unilateral reductions—even if negotiations were not pursued in connection therewith.

The Article VI test of good faith pursuit of negotiations exists plainly enough in the treaty’s text that it would seem semantically inescapable that negotiations must actually be *sought* to some degree, and sought in good faith. But the reasonable observer should bear in mind that there would be quite a difference between seeking negotiations in good faith but remaining in a spiraling arms race (which would represent compliance) and ending such a race without pursuing negotiations (which, technically, might not). In the real world, the latter is surely preferable. Perhaps the most reasonable thing that could be said about such a contrast, from a compliance perspective, is that achieving a non-negotiated end to an arms race would simply remove that issue from the Article VI agenda, thus taking it off the table and obviating any Article VI–driven need to “pursue” negotiations toward that end.

### *Compliance and Intent*

It is clear, however, that the only sensible reading of Article VI in compliance analysis must dismiss the ICJ's ill-considered *dictum* about "concluding" negotiations and retain as its touchstone only the element of good faith *effort* in pursuit of disarmament negotiations. If there is good faith effort toward negotiations, then there is compliance; if there is not, then there is noncompliance.

But this simple formula is really not that simple. Indeed, it conceals an enormous factual complexity that emerges as one undertakes compliance analysis of actual state behavior in a complex world. Coherent compliance analysis under Article VI requires that the analyst plunge into the necessarily subjective task of judging countries' seriousness about negotiations on the three elements of Article VI: cessation of the nuclear arms race; nuclear disarmament; and a treaty on general and complete disarmament. Most assessments will presumably turn upon detailed and case-specific factual analyses, and even the most astute of observers may not always agree on the meaning or significance of available information. Many instances—particularly where bad faith is alleged—will presumably also involve circumstantial evidence and require the interpretation of incomplete data in a contested political environment. (And data *are* likely to be incomplete; violators do not wish to be caught, and cheating accompanied by sophisticated denial and deception efforts must always be considered. In the Article VI context, for instance, what country would own up to negotiating in bad faith?) As in so much compliance analysis—including questions of nuclear weapons' purpose under Article II—Article VI analysts must be prepared to draw inferences as a reasonable observer.<sup>42</sup>

As a result, it may not be possible to provide a comprehensive list of compliance (or noncompliance) indicia. A country might show itself to be satisfying the requirement to "pursue negotiations in good faith on effective measures" in innumerable ways: unilateral measures that might catalyze reciprocity or a greater willingness to engage in negotiations among negotiating partners; bilateral or multilateral measures; steps to ease the international tensions that produce arms races and make it hard to reduce nuclear arsenals, and so forth. All such efforts should redound to the compliance credit of those NPT parties that pursue them. Conversely, there are doubtless many ways in which a country might demonstrate its *failure* to pursue these goals—or demonstrate its bad faith in their ostensible pursuit—and such actions should be held against their practitioners. Reasonable observers should avoid fetishism about compliance criteria and simply assess cases on the basis of the best information available.

### **The "13 Steps"**

Speaking of disarmament compliance fetishism, it is worth pausing here to discuss the "13 Steps" toward nuclear disarmament described in the Final Document of the 2000 NPT Review Conference, for they are often advanced as the definitive criteria by which Article VI compliance assessments should be made.<sup>43</sup> At least one observer, for instance, has described the 13 Steps as "the common interpretation of the NPT community of how

Article VI is meant to be fulfilled,” and has taken the nuclear weapon states to task for what he said was their “pathetic under-achievement” in following these steps.<sup>44</sup> Such arguments, which appear to have become something of an article of faith in the non-aligned and arms control–related nongovernmental organization (NGO) communities, deserve closer scrutiny.

In the first 14 paragraphs of the section of the 2000 Review Conference Final Document discussing Article VI of the NPT, the conference expressed a variety of general views about disarmament-related issues.<sup>45</sup> In the 15th paragraph, however, the conference declared that it “agrees on the following practical steps for the systematic and progressive efforts to implement Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons” and set forth a list of 13 such steps. These steps are the criteria by which some have asserted that Article VI compliance analysis must be undertaken.

To be sure, there would seem to be nothing wrong with using a country’s efforts toward implementing the 13 Steps as evidence of its good faith pursuit of Article VI objectives—and thus as information supporting a conclusion of compliance. The difficulty, however, comes with attempts to assert the obverse: that a country’s lack of commitment to all of these steps indicates *noncompliance*. This latter assertion is false.

The 13 Steps constitute a consensus of the governments represented at the 2000 Review Conference upon what they felt would be “practical steps” to “implement” Article VI. It would be absurd, however, to suggest that the steps constituted a legally binding obligation, a sort of *post hoc* gloss on or amendment to Article VI. Nothing in them purports to be a “subsequent agreement” within the meaning of Article 31(3) of the Vienna Convention on the Law of Treaties of the sort that might serve to shape the interpretation of legally binding provisions of the NPT, and nothing in the aspirational language of the 13 Steps—which were, moreover, contained in what claimed to be merely a “report”—suggests any intent to make them legally binding or change the meaning of Article VI.<sup>46</sup> (There is perhaps no reason that the 2000 Review Conference could *not* have agreed upon certain interpretive criteria for Article VI, but it did not do so.)

Moreover, the 13 Steps by their own terms in no way claim to be an exclusive list of the ways in which states party can satisfy their Article VI obligations. As described above, the conference merely set forth its view of “practical steps for the systematic and progressive efforts to implement Article VI.” Pursuing fulfillment of the 13 Steps might indeed be a way to demonstrate good faith efforts toward disarmament and thereby ensure good credentials as a compliant state party. And, more generally, states should be making an effort to achieve the “easing of international tension and the strengthening of trust between States” in order to facilitate disarmament efforts. There is, however, no suggestion that these particular steps are the *only* way that compliance can be demonstrated. The NPT states party agreed, at the time, that those particular steps were good policy, but they certainly did not agree that Article VI required them.

Indeed, it is not clear that all these steps would actually make sense as definitive compliance criteria for individual states party, even had they formally been declared as such. Some steps—for example, implementing START II, maintaining a nuclear explosive test moratorium, and putting excess military fissile material under IAEA safeguards—do

not apply to most NPT states party at all, of course. Moreover, few of the 13 Steps are phrased in a way that would be particularly useful as concrete guides to Article VI compliance assessment. (What, for instance, does it mean to place fissile material under IAEA controls “as soon as practicable”?)

Structurally, contextually, and grammatically, therefore, the 13 Steps amount to no more than any other political declaration by a convocation of national representatives: their statement of belief, at that time, regarding what would be best.<sup>47</sup> There is nothing wrong with such statements, of course, and they can no doubt contribute to international peace and security. (To the extent that they are good policy, they should be followed.) But one should not confuse such exhortations with legal obligations or mistake them for definitive treaty interpretive criteria.

A talismanic obsession with the steps as the *sine qua non* of Article VI compliance would do a disservice to serious compliance assessment. Indeed, it might even be said that such a reification of the “practical steps” suggested in the 2000 Final Document would break faith with Article VI, for it would surely be churlish to disqualify a country from compliance were it actually to advance the goals of Article VI by methods not contemplated (or agreed upon by consensus) at the 2000 Review Conference. Good faith pursuit of Article VI goals might perhaps take many forms, and fixation upon the 13 Steps should not prevent analysis of whatever facts are at hand.

## WEAPON STATES AND DISARMAMENT: THE U.S. CASE

With this in mind, let us turn again to the issue of assessing compliance with Article VI by the first nuclear weapon state, as this is the locus of perhaps the most confusion of any disarmament-related matter. It is often confidently asserted in certain non-aligned and NGO circles that the United States has failed to live up to its disarmament obligations under Article VI—with certain observers arguing that the United States “ignores the commitment to reduce the military role of nuclear weapons” and has “adopted an irrational policy of elevating the role of nuclear weapons in its overall military strategy.”<sup>48</sup> Such allegations are serious, and should bear special scrutiny—though they do not stand up to it well.

To what extent can it be shown that the United States has failed with respect to Article VI? Notwithstanding the fact that the NPT does not require any specific disarmament measures or indeed require more than the *pursuit* of negotiations in good faith, what progress nonetheless has been made in stopping the superpowers’ nuclear arms race—as Article VI urges be done “at an early date”—and reducing nuclear armament levels? The answer is that the United States has made enormous progress, so much so that had someone predicted two decades ago that things would stand where they do today, that person might perhaps have been thought mad. It is this progress that should be borne in mind by any observer who is really serious about drawing conclusions about U.S. intentions under Article VI.

## Putting Things in Context: U.S. Cold War Nuclear Planning

Before discussing steps the United States has taken to end the nuclear arms race and reduce its nuclear arsenal, however, it is worth recalling just how frightening and dangerous the Cold War nuclear arms race was. It is one thing to recite, as U.S. diplomats do constantly, the litany of weapons reduced, delivery systems eliminated, and infrastructure destroyed since the end of the Cold War. Yet it is only by remembering the enormity of the horrifying specter of the superpowers' nuclear war capabilities and war planning that one can fully appreciate the extraordinary steps toward disarmament that have been undertaken in recent years. The following brief summary of Cold War nuclear war planning will serve as a reminder of what it has been possible to leave behind through good faith U.S. (and Russian) efforts.

Very little is publicly known of Soviet war planning during the Cold War, but thanks to the openness of American archives under the Freedom of Information Act (FOIA), a great deal has become known about U.S. strategic planning during much of the decades-long confrontation between democratic capitalism and totalitarian Communism.<sup>49</sup> A review of some of the academic work that has been done studying this subject is sobering indeed.<sup>50</sup>

The United States had an atomic target list as early as 1947 and began explicit contingency planning for atomic warfare with the Soviet Union in 1948 during the worsening Berlin crisis. At first, the number of U.S. nuclear weapons was quite limited, with only two weapons in the stockpile at the end of 1945. By July 1948, there were 50—but none of these weapons were actually assembled.<sup>51</sup>

That situation rapidly changed after the Soviet Union conducted its first test in August 1949, prompting the United States to expand uranium and plutonium production and look into thermonuclear weapons (the "hydrogen bomb"), tactical nuclear weapons, and tritium-"boosted" atomic devices.<sup>52</sup> The arms race was on, with both target lists and weapon numbers expanding rapidly. From a few dozen targets in 1948, the U.S. target list grew to more than 2,500 in 1960.<sup>53</sup>

By January 1953, efforts were under way to build eight new plutonium production reactors and two gaseous diffusion uranium enrichment plants. Accordingly, the U.S. stockpile reportedly soon grew from around 1,000 weapons in the summer of 1953 to more than 23,000 in 1961.<sup>54</sup> The U.S. arsenal is believed to have peaked at 32,500 weapons in 1967, while the Soviet arsenal peaked at 36,300 in 1980, by which point the U.S. stocks had been reduced to "only" 24,300.<sup>55</sup>

In 1948, it was estimated that a month-long U.S. bomber campaign against 70 Soviet cities with 133 atomic bombs would reduce Soviet industrial capacity by 30–40 percent and kill 2.7 million people.<sup>56</sup> Even as early as 1955, a Pentagon study estimated that the then-current U.S. war plan for an atomic offensive would, as one academic later summarized it, "destroy all Soviet atomic production capability, obliterate 118 out of 134 major cities, cause 60 million deaths, and 'virtually eliminate the Soviet bloc industrial capabilities, and preclude any significant recuperation for at least one year.'"<sup>57</sup> (Chillingly, it is worth remembering that at the time this particular war plan was drawn up, the

number of weapons in the U.S. arsenal was years, and thousands of warheads, short of its eventual Cold War peak.)<sup>58</sup>

The bureaucratic machinery of global nuclear war planning became enormous, creating what one academic described as “an American Schlieffen Plan” of terrifying proportions, rigidity, and automaticity.<sup>59</sup> In the first Single Integrated Operational Plan (SIOP) in 1960, for example, the Pentagon selected 2,600 separate installations in Warsaw Pact countries and China for attack, which translated into more than 1,000 “Designated Ground Zeros” (DGZs) for attack by nuclear weapons—including 151 urban-industrial targets. Even on short notice, it was envisioned that an “alert force” of 880 bombers and missiles would attack some 650 DGZs with more than 1,400 weapons and a total yield of 2,100 megatons.<sup>60</sup> With sufficient warning, the SIOP called for launching essentially the entire U.S. nuclear force, carrying 3,500 weapons with a yield of more than 7,800 megatons.<sup>61</sup> These numbers almost beggar belief: 7,800 megatons is the equivalent of 7.8 billion tons of TNT, or a staggering 520,000 times the explosive power of the atomic bomb that instantly obliterated Hiroshima in August 1945. Full execution of the 1961 nuclear war plan was estimated as likely to kill 285 million people in the Soviet Union and China.<sup>62</sup> Quite understandably, when briefed on this plan for the first time in November 1965, President Dwight D. Eisenhower told his naval aide that the briefing had “frighten[ed] the devil out of me.”<sup>63</sup>

Thankfully, U.S. nuclear war planning did not remain so draconian throughout the Cold War.<sup>64</sup> It is against this terrifying background, however, that we can really see what progress has been made—and how absurd it would be to suggest today that the United States has failed in its obligation to pursue in good faith an end to the arms race and to move toward disarmament.

## Disarmament Progress in Recent Years

### *Six Decades of Arms Control and Disarmament Negotiations*

The United States has sought to limit destructive nuclear arms race dynamics from its very first years of nuclear weapons possession, and these efforts in no way ceased upon its signing of the NPT in 1968.<sup>65</sup> Indeed, the very next year, the United States and Soviet Union began negotiating in the first Strategic Arms Limitation Talks (SALT), the first of six such negotiations with the Soviet Union and later Russia. By 1972, these discussions had produced the Anti-Ballistic Missile (ABM) Treaty and the SALT “Interim Agreement,” which capped U.S. and Soviet intercontinental ballistic missile (ICBM) forces. (The ABM Treaty terminated pursuant to its own provisions upon the 2001 U.S. withdrawal from it.<sup>66</sup> The fact that it was by then possible to move at all beyond Cold War “balance of terror” strategies and into a U.S.-Russian relationship that no longer required such measures is testimony to the superpowers’ success in ending the nuclear arms race—a key Article VI objective.) A second round of talks on SALT began in 1972, leading to a treaty signed in 1979. Ratification of SALT II foundered upon the Soviet invasion of Afghanistan, but until 1986, both sides pledged to adhere to its limits anyway.

President Ronald Reagan called for and began a new round of talks with the Soviets, this time consisting not of "limitations" but actual "reductions." These talks culminated in the signing of the Intermediate-Range Nuclear Forces (INF) Treaty in 1987, which eliminated an entire class of ground-launched ballistic and cruise missiles.<sup>67</sup> In 1991, President George H.W. Bush signed the first Strategic Arms Reduction Treaty (START I), and the United States and Soviet Union agreed to notably reduce deployed strategic arsenals and subject these limits to a bilateral verification regime.

In 1991, the United States also announced that it would unilaterally eliminate its nuclear artillery shells and short-range nuclear ballistic missile warheads, and that it would remove all nonstrategic nuclear warheads from surface ships, attack submarines, and land-based naval aircraft. The purpose, as explained by Bush, was to permit Russia to do likewise—each power unilaterally reducing the threat it posed to the other as a demonstration of good faith and commitment to peace.<sup>68</sup> Soviet Premier Mikhail Gorbachev announced similar reductions; these collective unilateral reductions became known as the Presidential Nuclear Initiatives (PNIs).<sup>69</sup>

A second round of START talks began in 1992, resulting in a treaty signed in 1993 between President Bush and Russian President Boris Yeltsin. Under START II, the superpowers' deployed strategic arsenals were to be reduced further, with additional destruction of nuclear delivery vehicles. (The U.S. Senate gave advice and consent to ratification of START II, but it has not entered into force due to objections made by the Russian Duma. Accordingly, negotiations on a third START, the framework for which was established in 1997, never began.) The most recent treaty between the nuclear superpowers, and the first actually to address warhead numbers directly, was signed in 2002 between Presidents George W. Bush and Vladimir Putin and entered into force on June 1, 2003. Under this agreement, the Strategic Offensive Reductions Treaty (SORT), known generally as the Moscow Treaty, both countries will reduce their strategic arsenals to between 1,700 and 2,200 operational warheads each by the year 2012.

It is also worth remembering that the Comprehensive Nuclear-Test-Ban Treaty (CTBT) was negotiated beginning in 1993 and opened for signature in 1996. To be sure, there is virtually no chance that this treaty will ever come into force because one of its requirements—that every one of 44 specified countries ratify the agreement—is unlikely to be met. Nevertheless, to the extent that Article VI of the NPT calls for disarmament-related negotiations, the CTBT is presumably not irrelevant to the U.S. compliance record. (Nor, it should be added, was the Senate's defeat of CTBT ratification in 1999 the only thing that has prevented the treaty from coming into force.<sup>70</sup> Eight other of the required 44 countries have declined to sign and/or ratify the treaty, and since these include North Korea, India, Iran, Israel, Pakistan, and China, no reasonable observer expects to see a CTBT any time soon.) As far as the U.S. record is concerned, moreover, Washington continues to observe a moratorium on nuclear testing that it imposed in 1992, well before the CTBT's negotiation.

Nor has the United States stopped trying to negotiate disarmament-related treaties. In May 2006, the United States introduced a draft Fissile Material Cutoff Treaty (FMCT) at the UN Conference on Disarmament (CD) in Geneva, becoming the first country to do so and thereby both providing a concrete goal for the CD and giving that organization the



opportunity to pull itself out of years of stalemate and inactivity. (The United States does not support the original negotiating mandate for such a treaty, which required it to be “internationally and effectively verifiable,” an objective U.S. officials view as unachievable, but Washington has voiced strong support for moving promptly to FMCT negotiations at the CD.)<sup>71</sup>

All of this must be borne in mind when attempting to assess whether the United States has been “pursu[ing] negotiations in good faith” on effective measures relating to ending the arms race “at an early date,” nuclear disarmament, and general and complete disarmament.

### *Negotiated and Unilateral Nuclear Arms Reductions*

The U.S. record has not been limited to merely pursuing good faith negotiations. Through both negotiated and unilateral moves, the United States has amassed a record of concrete results. U.S. officials have produced a raft of materials documenting their successes in various respects, though space precludes a detailed account here.<sup>72</sup> Nevertheless, it bears mentioning that the United States has dismantled more than 13,000 nuclear weapons since 1988 and continues to do so in order to meet its Moscow Treaty target of 1,700–2,200 operationally deployed strategic nuclear warheads in 2012.<sup>73</sup> By then, the United States will have removed about 80 percent of the strategic nuclear warheads it possessed in 1991. More than 1,000 strategic missiles and 450 ICBM silos have also been eliminated, including the last MX “Peacekeeper” missile in September 2005. Pursuant to the U.S. PNIs, some 3,000 nonstrategic nuclear weapons have been dismantled; the last U.S. nuclear artillery shell was dismantled in 2003. The Bush administration announced recently that it will also eliminate some 400 advanced cruise missiles currently deployed with its B-52 fleet.<sup>74</sup>

Moreover, the United States has not enriched uranium for nuclear explosive purposes since 1964, has not produced plutonium for such uses since 1988, and has observed a moratorium on nuclear testing since 1992. The United States is also reducing its own weapons-related stockpile of fissile materials. (As U.S. weapons are removed from operationally deployed status, many—albeit a still-classified number—are being dismantled. In November 2005, for instance, the United States announced it would remove an additional 200 metric tons of highly enriched uranium [HEU] from its nuclear weapons programs. According to IAEA figures, this will amount to removing the equivalent of 8,000 nuclear warheads.)<sup>75</sup> Although the U.S. nuclear weapons infrastructure has shrunk markedly since its peak, the Department of Energy plans to reduce it further as part of the recently announced Complex 2030 program.<sup>76</sup> The United States has also spent billions to help Russia shut down its last plutonium production reactors, upgrade security at and shrink the size of its nuclear weapons complex, and provide funding for more than 60,000 former Soviet nuclear weapons scientists now involved in peaceful commercial work. Moreover, the United States has agreed to purchase 500 metric tons of HEU from Russia’s military stocks to be down-blended into low-enriched uranium and sold for commercial use in the United States. Some 250 metric tons of this total has already been down-blended, with the effect that some 10 percent of the electricity consumed in the

United States comes from former Soviet weapons material. The United States is also cooperating with Russia on a joint program to turn 68 metric tons of plutonium (half of it from Russia) into mixed-oxide reactor fuel. Based upon IAEA figures, these various U.S.-Russian initiatives should account for enough material to make 24,500 nuclear weapons.

Even were such progress to stop tomorrow (which it will not) this is a remarkable record. Already before the 2002 Moscow Treaty, U.S.-Soviet and -Russian arms control agreements had reduced the superpowers' strategic offensive force levels to the equivalent of U.S. levels in the mid-1950s and Soviet levels in the mid-1960s.<sup>77</sup> The Moscow Treaty, which will limit U.S. and Russian operational strategic nuclear warheads to 1,700–2,200 for each side, will amplify this contrast. Superpower negotiations and the end of the Cold War have moved disarmament so far that the clock has now been turned back, in effect, to a point years *before* the signing of the NPT. Whether or not all of these steps were required by Article VI, it is inarguable that enormous steps have been taken to end the nuclear arms race between the superpowers and to vastly reduce their nuclear arsenals—a clear demonstration of U.S. good faith in these regards.

(Some critics of the United States have suggested that the post-Cold War nuclear reductions are not really “disarmament” because they simply represent adaptations to changed circumstances. Such an argument does not bear serious scrutiny. There is nothing in the NPT to support such an interpretation, and in fact these criticisms demonstrate ignorance of the treaty's preamble, which emphasizes the need to ease tension and strengthen trust among nations *in order to facilitate* disarmament. Far from dismissing disarmament successes achieved as result of changed circumstances, in other words, the preamble makes clear that it is precisely such changes that the international community should be seeking in order to make further disarmament possible.)

### *Reducing Reliance upon Nuclear Weapons*

Nor are these developments merely about remarkable changes in raw numbers, for U.S. nuclear *thinking* has also been changing in important ways. In 1994, the congressionally mandated Nuclear Posture Review (NPR) emphasized the movement of U.S. nuclear weapons policy to a post-Cold War structure, one in which the United States undertook to try to lead the way toward much smaller nuclear arsenals. That NPR made clear that the United States would “retain strategic nuclear forces sufficient to deter any future hostile foreign leadership with access to strategic nuclear forces from acting against our vital interests and to convince it that seeking a nuclear advantage would be futile.” Nevertheless, it noted that “nuclear capabilities are now a far smaller part of the routine U.S. international presence,” observed that “major reductions in U.S. nuclear weapons are already underway, confirming the U.S. commitment to a smaller international role for nuclear weapons,” and declared that the significant reductions already undertaken “help set an example of decreasing dependence on nuclear weapons for military purposes.” Among the ways in which efforts were under way to decrease this dependence, the NPR noted, was the development of better means to target proliferators in *non-nuclear* ways. “Having the conventional capability to respond to WMD threat or use,” the report stated,

"further reduces U.S. dependence on nuclear weapons."<sup>78</sup> Since the end of the Cold War, as the head of Sandia National Laboratories once put it, the U.S. and Russian approach to nuclear weapons planning "no longer focuses on the question of *how many weapons are enough?*" but rather takes "a more cautious stance in considering the flip side of the question, *how few are enough?*"<sup>79</sup>

Much of this long-standing U.S. effort to reduce nuclear forces and reliance on nuclear weapons in military doctrine has been explicitly understood to be within the framework of NPT Article VI. The 1994 NPR, for example, declared that one of its purposes was "to demonstrate American leadership by reducing the role of nuclear weapons in U.S. security." According to the review, "the combination of the large negotiated reductions embodied in the START I and START II treaties and the further unilateral reductions recommended by the NPR makes tangible the U.S. commitment to Article 6 of the NPT."<sup>80</sup>

Shortly after taking office, President George W. Bush declared the need for a "new framework" and for "new concepts for deterrence" that would reflect post-Cold War realities in which "today's Russia is not our enemy." Bush proclaimed that

This new framework must encourage still further cuts in nuclear weapons. Nuclear weapons still have a vital role to play in our security and that of our allies. We can, and will, change the size, the composition, the character of our nuclear forces in a way that reflects the reality that the Cold War is over. I am committed to achieving a credible deterrent with the lowest possible number of nuclear weapons consistent with our national security needs, including our obligations to our allies. My goal is to move quickly to reduce nuclear forces. The United States will lead by example to achieve our interests and the interests for peace in the world.<sup>81</sup>

One result of this effort was the Moscow Treaty, but another was a new Nuclear Posture Review in 2001.

The Bush administration's 2001 NPR moved U.S. nuclear planning even more emphatically away from a Cold War-style focus on deterring the rival superpower and more toward ensuring that the national leadership possessed a diverse range of tools, both nuclear and conventional, to support the development of tailored deterrent strategies against a diverse range of potential adversaries. Reflecting continued U.S. desires to deemphasize the threat and potential use of nuclear weapons, the 2001 NPR explicitly introduced non-nuclear weaponry into the calculus of strategic deterrence by advocating the development of a "New Triad" that included "both nuclear and non-nuclear" offensive strike systems. The traditional nuclear armory of "ICBMs, SLBMs [submarine-launched ballistic missiles], bombers, and nuclear weapons," declared the 2001 NPR, would remain important, but it would be "integrated with new *non-nuclear* strategic capabilities that strengthen the credibility of our offensive deterrence" (emphasis added).<sup>82</sup> In this respect, it might be said that the Bush administration's NPR marked a significant watershed, in that from that point U.S. doctrine envisioned all strategic deterrence—and not just deterrence of proliferators, as mentioned in the 1994 NPR—in terms that, for the first time since 1945, did *not* revolve exclusively around nuclear weapons.

*Where Next?*

Where precisely these developments lead next is, of course, difficult to predict—just as it was when Article VI was drafted. With luck, in the merciful absence of the Soviet Union's expansionist ideology, even contemporary Russia's resurgent authoritarianism, foreign policy chest-beating, rollback of democratization, and resumed central control over major sectors of the economy seem unlikely to engender a return to a Cold War–style nuclear face-off with the United States. Nor is China's growing nuclear arsenal presently in any danger of sparking a nuclear arms race with the United States—though such a development is not inconceivable in the longer term, and China's ongoing strategic buildup does present serious (if under-remarked) Article VI problems.

The future U.S.-Russian strategic relationship is therefore likely to be very different than its past. According to the head of one of the U.S. nuclear weapons laboratories, writing early in the first term of President George W. Bush,

the U.S. and Russia no longer appear to place nuclear arms limitations at the top of their priority lists, more than likely because of an increasingly shared view that war between the two is far less likely than during the Cold War Era. . . . [Consequently,] each side now devotes more effort in seeking ways in which they might move to a new relationship as "strategic partners."<sup>83</sup>

It remains to be seen whether U.S. and Russian interlocutors will be able to reach agreement on explicit parameters for a new strategic relationship to supplant or succeed the START framework (which expires in 2009) or the Moscow Treaty (which expires in 2012). If they do, however, such a relationship may not much resemble Cold War–style arms control, with its adversarial process and rigidly codified force limits.

It is at least conceivable that the future U.S.-Russia nuclear disarmament relationship might consist, in formal terms, of only the reciprocal exchange of various sorts of transparency and confidence-building measures (CBMs), each measure contributing to one party's understanding of the other's force posture and intentions, and facilitating an evolving context of mutual comprehension in which each party will make its own procurement decisions in light of a (hopefully) lessening perceived threat.

It is, at least, clear that the United States *hopes* that such measures will be part of its future relationship with Moscow. As early as 2002, in fact, a U.S.-Russian "Joint Declaration" stressed that "openness" and "predictability" were important parts of their new post–Cold War relationship.<sup>84</sup> And in September 2006, the State Department announced that then-U.S. Under Secretary of State for Arms Control and International Security Robert Joseph and Russian Deputy Foreign Minister Sergei Kislyak had begun a "strategic dialogue" in Washington. This dialogue, it was declared, would cover "a broad range of security challenges" but would specifically include "transparency and confidence-building measures in U.S. and Russian nuclear force postures."<sup>85</sup> U.S. officials appear to feel that pursuing a rich, ongoing dialogue on multiple security issues, coupled with transparency and CBMs, is more appropriate to the current strategic situation than the pursuit of further Cold War–style arms control agreements.

Such a new paradigm—one in which transparency measures would be valued less for their contribution to verifying compliance with force limits than for their contribution to mutual understanding in an evolving strategic relationship of *non*-adversaries—might indeed perplex old-school arms controllers. But such developments would represent, in a sense, a signal U.S. and Russian success in fulfilling Article VI's goal of ending the superpower nuclear arms race at an early date.<sup>86</sup>

Interestingly, such a U.S.-Russian future in transparency and CBMs—if it were indeed to develop—might have the further consequence of making it at least conceivable for other nuclear weapon states to be brought into the system. It would be hard to imagine opening up a system of adversarially negotiated Cold War–style force limits to third (or fourth, or fifth) parties, but it might be more possible to achieve such openness in a regime of transparency and CBMs. For the moment, there would seem to be little likelihood of this occurring, not only because the United States and Russia have yet to reach agreement on such a system, but also because it would require of China a degree of openness about its nuclear forces that is nowhere in evidence. (As the sole nuclear weapon state that is still building up its strategic arsenal, Article VI notwithstanding, China seems an unlikely candidate for such candor.) Nevertheless, British officials have now publicly suggested the desirability of such a step, and even the theoretical possibility of expanding transparency and CBMs to other weapon states ought to be attractive to all who sincerely wish, as the NPT's preamble urges, to lessen tensions and strengthen trust among nations in order to facilitate disarmament.<sup>87</sup>

But what of the rest of Article VI? Leaving aside the issue of “general and complete disarmament under strict and effective international control”—an Article VI goal the achievement of which sensible observers should not soon expect, or toward which *any* NPT state party seems to be making swift progress—the prospects for additional nuclear disarmament are intriguingly mixed. With respect to the follow-on Article VI goal of nuclear disarmament, as noted, there today may be relatively little interest in START-style arms control negotiating, even if force levels do continue to decline “naturally” in accordance both with changing threat perceptions facilitated by ongoing U.S.-Russian dialogue and CBMs, and with the development of innovative ways to meet deterrent needs with non-nuclear (or fewer nuclear) weapons. Nor does the world appear to be particularly close to achieving a “treaty on general and complete disarmament under strict and effective international control.”

Nevertheless, at least in the United States there may be some continuing interest in studying exactly what size nuclear force structures have to be in a 21st-century world of post–Cold War technology and post-START transparency and CBMs. Certain types of technological improvement, for example, make it possible to imagine at least some further reductions in the U.S. nuclear arsenal. Already, technological advances in non-nuclear weapons and deliberate changes in U.S. nuclear doctrine have reduced the role of nuclear weapons in U.S. strategy and war planning. As accuracy and warhead sophistication have improved, for instance, some targets that could previously presumably only be destroyed with a nuclear weapon may today be vulnerable to precision-guided conventional munitions.<sup>88</sup>

In keeping with its focus on integrating non-nuclear options into the calculus of strategic deterrence, the 2001 NPR noted that the Pentagon's Future Years Defense Plan included a number of initiatives designed to improve the military's ability to "hold at risk critical mobile targets," destroy hard and deeply buried targets, convert some ballistic missile submarines to carry long-range, conventionally armed cruise missiles, and develop new precision-strike options.<sup>89</sup> Accordingly, for example, efforts are today under way to develop ways of using ballistic missiles to deliver conventional weapons against special, high-priority targets in just minutes from thousands of miles away.<sup>90</sup> The 2001 NPR also raised the possibility of changes in U.S. nuclear weapon development based on strategic deterrent goals, calling for an "Advanced Concepts Initiative" (ACI) at the National Nuclear Security Administration (NNSA) to explore how U.S. deterrent needs could be better met in the future.<sup>91</sup> What precisely will come of this NNSA effort is not yet clear (though Congress defunded the ACI in 2004 and 2005), but to the extent that improvements in U.S. nuclear weapon designs can permit planners to fulfill deterrent needs with fewer weapons—for example, through being able with a Reliable Replacement Warhead (RRW) to maintain a less-redundant stockpile of workable weapons for long periods without the nuclear testing traditionally needed to validate reliability—U.S. war planners may be able to reduce stockpile numbers still further.<sup>92</sup> [See Ellen O. Tauscher's "Achieving Nuclear Balance," in this issue.]

Perhaps more importantly, it is also worth emphasizing that U.S. officials have recently been urging—and in fact, challenging—their foreign diplomatic counterparts to engage in serious discussions about what a post-nuclear-weapons world would actually look like. Most NPT states party profess commitment to the goal of eliminating nuclear weapons. There have been remarkably few practical discussions in NPT circles, however, of what sort of an international environment might be needed to make this step a realistic possibility, and the preamble's vague comments about lessening tensions and strengthening trust fall far short of a work plan.

As part of a series of papers released to the public in preparation for the 2007 NPT Preparatory Committee meeting, the United States suggested a number of things a future global security environment would have to achieve in order to make "zero" nuclear weapons both achievable and sustainable. The list of measures offered did not purport to be a complete list, but it included:

- further progress in easing tensions and building trust to help countries transcend the competitive military dynamics that have helped encourage reliance upon nuclear weapons;
- robust assurances of compliance with nuclear nonproliferation commitments, so that countries possessing nuclear weapons can contemplate giving them up without fear of being confronted by nuclear weapons-possessing violators;
- confidence that WMD-related trafficking networks have been eliminated and will not reconstitute, as well as firmer controls on the spread of enrichment and reprocessing technology;
- clear termination of all other programs for the development of WMD and their delivery systems (for example, chemical and biological weapons);

- means by which any remaining deterrent needs of the nuclear weapon states could be met in a non-nuclear fashion; and
- assurances against the development or reconstitution of nuclear weapons capabilities by means of “breakout” from a nuclear disarmament regime, including assurances that detected violations would be met vigorously and promptly, and that violators would be unable to realize any anticipated strategic gains from their violations.<sup>93</sup>

The U.S. papers released in early 2007 also talked candidly about the role of extended deterrence—that is, the “nuclear umbrella” extended by NPT nuclear weapon states to their friends and allies. Such deterrence, the United States argued, served both nonproliferation and disarmament interests, not only having been important to achieving some past incidents of nuclear weapons program “rollback,” but also by helping prevent new nuclear arms races today (*i.e.*, ones involving countries the strategic deterrent needs of which are currently met by close association with a nuclear weapon state, but which might feel the need to develop nuclear weapons if deprived of such a connection).<sup>94</sup>

Given that the total elimination of nuclear weapons, however desirable and earnestly pursued, will not be immediately achievable, runs the U.S. argument, responsible planning for disarmament must include not just continued efforts to reduce arsenals but also provision for managing nuclear weapons wisely—and in the interests of the NPT’s nonproliferation and disarmament objectives—until the day of their elimination arrives. As a result, the United States has suggested, *true* fidelity to the disarmament goals expressed in the NPT’s preamble and Article VI counsels reliance upon the very sorts of measures that are key elements of current U.S. nuclear policy today—namely, the provision of extended deterrence, the development and improvement of non-nuclear strategic deterrence, and the employment of sophisticated programs to ensure safety and reliability in nuclear stockpiles—until such time as nuclear weapons can finally be eliminated. U.S. officials have also repeatedly pointed out that the 13 Steps in the 2000 Final Document have not aged well, and in 2007 they offered a number of disarmament-related policy suggestions that they believe reflect today’s conditions and deserve the support of NPT states party. These suggestions, they argue, could contribute in practical and realistic ways to moving toward a world of zero nuclear weapons.<sup>95</sup> The reader may agree or disagree with these recent U.S. suggestions, but whether or not these positions succeed in overturning the conventional wisdom of the disarmament community still all too wedded to Cold War—era concepts and approaches, one cannot deny that the United States is today closely engaged in unprecedented discussions of how it might be possible to reach a world of “zero.”<sup>96</sup>

## CONCLUSION

All of this, then, should form the basis of a clarified record with respect to Article VI, one built on intellectual clarity about the treaty’s meaning, historical honesty about its origins, and open-eyed awareness of the remarkable progress that has been made in turning the superpowers’ Cold War nuclear force structures and war-planning scenarios into historical footnotes. When it comes to taking Article VI seriously, there may be much to criticize

around the world, including the efforts of some states party to the NPT to acquire or expand nuclear arsenals, the international community's failure to speak out more clearly and act more resolutely against NPT Article II violations that risk creating new nuclear arms race dynamics around the world, and the world's lack of progress on "general and complete disarmament" that the preamble suggests may be needed in order to permit nuclear weapon states' nuclear arsenals to actually reach zero. In light of the U.S. record of negotiations on arms control, disarmament, and nonproliferation issues and its track record of concrete results on Article VI issues, however, it would be unfair and inaccurate to extend any special Article VI compliance criticism to the United States.

Judging good faith in the pursuit of Article VI goals is necessarily a somewhat subjective task, but discussions of these issues deserve to be grounded in a solid and rigorous understanding both of Article VI itself and of all the facts relevant to the U.S. record. Unfortunately, past Article VI discussions have not always been built upon such a foundation. It is the hope of this author, however, that in the future these matters will be addressed more cogently.

## DISCLAIMER

The views expressed in this article are the author's own and do not necessarily represent those of the State Department or the U.S. government.

## NOTES

1. See United Nations, text of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), <[www.un.org/events/npt2005/npptreaty.html](http://www.un.org/events/npt2005/npptreaty.html)>.
2. ICJ, Advisory Opinion of July 8, 1996, on "Legality of the Threat or Use of Nuclear Weapons" (hereafter "ICJ Weapons Case"), <[www.icj-cij.org/docket/index.php?sum=498&code=unan&p1=3&p2=4&case=95&k=e1&p3=5](http://www.icj-cij.org/docket/index.php?sum=498&code=unan&p1=3&p2=4&case=95&k=e1&p3=5)>.
3. *Ibid.*, at Judgment F.
4. ICJ Weapons Case, Dissenting Opinion of Vice-President Schwebel, p. 37, <[www.icj-cij.org/docket/files/95/7515.pdf](http://www.icj-cij.org/docket/files/95/7515.pdf)>.
5. Request for Advisory Opinion, ICJ, May 14, 1993, pp. 2, 6.
6. ICJ, Order of July 8, 1996.
7. See Request for an Advisory Opinion, ICJ, December 15, 1994, pp. 2, 6, <[www.icj-cij.org/docket/files/95/7646.pdf](http://www.icj-cij.org/docket/files/95/7646.pdf)>.
8. Statute of the International Court of Justice, at Art. 65(1), <[www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0](http://www.icj-cij.org/documents/index.php?p1=4&p2=2&p3=0)>.
9. *Ibid.*, at Art. 65(2).
10. ICJ Weapons Case, at para. 99.
11. *Ibid.*, at para. 100.
12. NPT Preamble.
13. This interpretation is consistent with the U.S. position throughout the NPT negotiating process, so it would be unsurprising for it to have been reflected in the NPT treaty draft, jointly authored by the United States and Soviet Union, which first included preambular language on disarmament and provided the basic negotiating text for the final rounds of NPT talks in 1967–1968.
14. U.S. Special Representative for Nuclear Nonproliferation Christopher A. Ford, "A Work Plan for the 2010 Review Conference," remarks to the 2007 NPT Preparatory Committee meeting (April 30, 2007), <[www.state.gov/t/isn/rls/rm/84044.htm](http://www.state.gov/t/isn/rls/rm/84044.htm)>.



15. See *International Negotiations on the Treaty on the Nonproliferation of Nuclear Weapons* (Washington, DC: U.S. Arms Control and Disarmament Agency, 1969), pp. ix, xiv, 3–6.
16. *Ibid.*, p. iii. The reader will note Foster's failure to describe this obligation as being one of "negotiating and concluding" such negotiations.
17. *Ibid.* p. 7.
18. *Ibid.*, pp. 8, 15.
19. The United States, for instance, declared early in the NPT negotiating process that such elements should not be "inextricably linked." The negotiating parties, explained ACDA Director Foster, should accomplish as much as they could if they could not reach agreement on everything initially. *Ibid.*, p. 15.
20. *Ibid.*, p. 16.
21. *Ibid.*, pp. 16, 23–24. The United States also spoke up at the First Committee against such linkage.
22. *Ibid.*, p. x.
23. *Ibid.*, pp. 17–18. The United States and the Soviet Union repeatedly opposed linking disarmament and nonproliferation. Nevertheless, the United States said in 1965 that it supported measures to halt the arms race and repeated that at the contemplated review conference other parties would have the opportunity to evaluate how happy (or unhappy) they were with progress. *Ibid.*, pp. 45–46, 75. After the submission of a U.S.-Soviet draft treaty in August 1967, Foster repeated this argument. That year, United States repeated that it wished to make disarmament progress, and had made disarmament proposals, but that it would be a mistake to put specific measures into a treaty because it would jeopardize the chances of agreement. *Ibid.*, pp. 79–80.
24. Some, including Sweden, Brazil, Ethiopia, Mexico, and the UAR, also spoke in favor of including a nuclear test ban in the nonproliferation treaty. *Ibid.*, p. 44.
25. *Ibid.*, p. 20.
26. *Ibid.*; see also p. xi. The Non-Aligned Eight repeated this call in 1966. *Ibid.*, p. xiii.
27. This resolution was adopted by a 93–0 vote, with five abstainers. *Ibid.*, pp. 25, xi.
28. India preferred a tight, more specific linkage, including a ban on nuclear weapons production, but Trivedi made clear that the ENDC Eight were not urging that the treaty require this. *Ibid.*, pp. 43–44.
29. The UAR suggested an article to oblige nuclear weapon states to halt the nuclear arms race, reduce and eliminate nuclear weapons stocks and nuclear delivery vehicles, and to that end continue and expedite negotiations to reach agreement on suitable concrete measures in these regards. Burma seconded this call and proposed explicitly to link it to the treaty's contemplated review process. *Ibid.*, pp. 44–45.
30. *Ibid.*, pp. 75–85. The UAR promptly promised to introduce an article along these lines.
31. *Ibid.*, p. 86.
32. India, for instance, urged the addition of a separate article "affirming the solemn resolve of the nuclear weapon Powers to undertake meaningful measures of disarmament, particularly of nuclear disarmament." *Ibid.*, p. 86. On Mexico's proposal: *ibid.*, p. 87.
33. After Mexico's proposal, the Soviet Union spoke up again against linking nonproliferation and disarmament, though it noted that a nonproliferation treaty would help create favorable conditions for disarmament. *Ibid.*, pp. 88, 96, 106.
34. *Ibid.*, pp. 99–100.
35. Attempts to insert more specificity about disarmament, including efforts by West Germany and Spain, were unsuccessful. *Ibid.*, pp. 107–108. Canada agreed with the superpowers that linking disarmament agreements would indefinitely postpone agreeing a nonproliferation treaty. *Ibid.*, p. 122.
36. *Ibid.*, pp. 106–107. When the United States and Soviet Union resubmitted their draft, "at an early date" was added to Article VI, along with clarification that "disarmament" meant "nuclear disarmament." Preambular text was added on a comprehensive test ban, and a provision was added on Review Conferences. *Ibid.*, p. 113.
37. Hearing Before the Senate Committee on Armed Services, "Military Implications of the Treaty on the Non-Proliferation of Nuclear Weapons," February 27–28, 1969, at p. 121 (answer to question submitted by South Carolina Republican Senator Strom Thurmond).
38. General E.L.M. Burns, Canada's ENDC representative, who drafted the NPT, noted in 1968 that failing to agree on nonproliferation controls would *hurt* the chances of future disarmament by the weapon states. *International Negotiations on the Treaty on the Nonproliferation of Nuclear Weapons*, p. 122. The treaty recognizes as nuclear weapon states those countries that had exploded a nuclear device prior to January 1, 1967.

39. NPT, at Art. VIII(3). Pursuant to Art. X, a conference was convened in 1995 to decide whether to continue the NPT in force indefinitely; the NPT was accordingly made indefinite in duration.
40. One observer has suggested (even while admitting that NPT negotiating history shows that Article VI had been written so as to avoid "reference to any specific measures") that "this view of Article VI has been decisively rejected" by the ICJ in the 1996 opinion discussed above. See John Burroughs, "Nuclear Non-Proliferation Treaty Compliance," paper presented to the Institute for Energy and Environmental Research Conference on "Nuclear Dangers and the State of Security Treaties" (April 9, 2002), <[www.ieer.org/latest/npt02jb.html](http://www.ieer.org/latest/npt02jb.html)>. But the ICJ does not make international law, and does not have any binding power on any state except insofar as that state has agreed so to be bound. The ICJ cannot change Article VI in order to require things the treaty drafters clearly understood that it did not.
41. I use the terms "pursue" and "conclude" to mean, in effect, "seek to engage in" and "successfully end one's engagement in," respectively.
42. For a discussion of Articles II and III and IAEA safeguards compliance standards from the U.S. perspective, see Bureau of Verification and Compliance, "Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments," Part VI(E), August 2005, <[www.state.gov/t/vci/rls/rpt/51977.htm](http://www.state.gov/t/vci/rls/rpt/51977.htm)>.
43. 2000 NPT Review Conference, *Final Document*, May 20, 2000, <[www.fas.org/nuke/control/npt/docs/finaldoc.htm](http://www.fas.org/nuke/control/npt/docs/finaldoc.htm)>.
44. Harald Müller, "Farewell to Arms: What's Blocking Nuclear Disarmament?" *IAEA Bulletin* 46 (2004), <[www.iaea.org/Publications/Magazines/Bulletin/Bull462/farewell.html](http://www.iaea.org/Publications/Magazines/Bulletin/Bull462/farewell.html)>.
45. See 2000 Review Conference, *Final Document*, "Article VI and Eighth to Twelfth Preambular Paragraphs," Vol. 1, New York, 2000, pp. 13–15, <[daccessdds.un.org/doc/UNDOC/GEN/N00/453/64/PDF/N0045364.pdf?OpenElement](http://daccessdds.un.org/doc/UNDOC/GEN/N00/453/64/PDF/N0045364.pdf?OpenElement)>.
46. See Vienna Convention on the Law of Treaties (1969), at Art. 31(3) (providing, *inter alia*, that in interpreting treaties, "[t]here shall be taken into account, together with the context . . . any subsequent agreement between the parties regarding the interpretation of the treaty or the application of its provisions"), <[untreaty.un.org/ilc/texts/instruments/english/conventions/1\\_1\\_1969.pdf](http://untreaty.un.org/ilc/texts/instruments/english/conventions/1_1_1969.pdf)>.
47. As this author has noted elsewhere: "The nature of the [NPT] review process itself makes clear that Parties' expressions of policy agreement at meetings are *by their nature* neither intended nor expected necessarily to stand for all time. After all, were it possible for a group of nations to articulate views that would forever thereafter perfectly fit the challenges that would face the NPT in our complex world, there would have been no need for a review process in the first place." Christopher Ford, "The NPT Review Process and the Future of the Nuclear Nonproliferation Regime," Remarks to NPT Japan Seminar, Vienna, Austria, February 6, 2007, <[www.state.gov/t/isn/rls/rm/80156.htm](http://www.state.gov/t/isn/rls/rm/80156.htm)>.
48. John Burroughs, "Non-Proliferation Treaty Applies to Both North Korea and the United States," <[www.lcnp.org/pubs/BASpring03/article3.htm](http://www.lcnp.org/pubs/BASpring03/article3.htm)>; Burroughs, "Nuclear Non-Proliferation Treaty Compliance."
49. See, for example, Robert S. Norris, William M. Arkin, and William Burr, "Where They Were," *Bulletin of the Atomic Scientists* 55 (November/December 1999), p. 26, note 1; Hans M. Kristensen, "Nuclear Weapons in Europe: A Review of Post-Cold War Policy, Force Levels, and War Planning," February 2005, <[www.nrdc.org/nuclear/euro/euro.pdf#search=%22foia%20u.s.%20nuclear%20war%20planning%22](http://www.nrdc.org/nuclear/euro/euro.pdf#search=%22foia%20u.s.%20nuclear%20war%20planning%22)>, p. 24.
50. In my discussions of Cold War U.S. nuclear planning, I am greatly indebted to David Alan Rosenberg, whose assistance I had the good fortune to have in my recent treatment of certain aspects of U.S. strategic planning during the late Cold War. See Christopher A. Ford, *The Admirals' Advantage* (Annapolis, Maryland: U.S. Naval Institute Press, 2005), pp. 77–108; see also Christopher A. Ford and David A. Rosenberg, "The Naval Intelligence Underpinnings of Reagan's Maritime Strategy," *Journal of Strategic Studies* 28 (April 2005), pp. 379–409.
51. Richard Rhodes, *The Making of the Atomic Bomb* (New York: Simon & Schuster, 1988), p. 765; David Alan Rosenberg, "The Origins of Overkill: Nuclear Weapons and American Strategy, 1945–1960," *International Security* 7 (Spring 1983), pp. 3, 12–14.
52. Rhodes, *Making of the Atomic Bomb*, pp. 768–69.
53. Over time, planning came to include an amazing degree of redundancy, including (according to a 1957 study) up to 17 overlaps of blast radii on a single location. Rosenberg, "Origins of Overkill," pp. 15, 18, 22, 24–25, 50–51, 66.

54. *Ibid.*, pp. 23, 66; David Alan Rosenberg, "Nuclear War Planning," in *The Laws of War: Constraints on Warfare in the Western World*, Michael Howard, et al., eds. (New Haven: Yale University Press, 1994).
55. David Alan Rosenberg, "The History of World War Three 1945–1990: A Conceptual Framework," in *On Cultural Ground: Essays in International History in Honor of Akira Iriye*, Robert David Johnson, ed. (Chicago: Imprint Publications, 1994), p. 206.
56. Rosenberg, "Nuclear War Planning."
57. Rosenberg, "Origins of Overkill," p. 39.
58. Nor does Soviet war planning appear to have been any less grim. Rosenberg, "The History of World War Three."
59. Rosenberg, "Nuclear War Planning," p. 175.
60. Rosenberg, "Origins of Overkill," p. 6.
61. Rosenberg, "The History of World War Three."
62. Rosenberg, "Nuclear War Planning."
63. Rosenberg, "Origins of Overkill," p. 8.
64. See, for example, Rosenberg, "Nuclear War Planning," p. 189; Ford, *Admirals' Advantage*, pp. 93–96.
65. For example, see the Baruch Plan, presented to the UN Atomic Energy Commission, June 14, 1946, <[www.atomicarchive.com/Docs/Deterrence/BaruchPlan.shtml](http://www.atomicarchive.com/Docs/Deterrence/BaruchPlan.shtml)>. See also, generally, Los Alamos National Laboratory (LANL), "Arms Control Treaties," <[www.lanl.gov/history/hbombon/treaties.shtml](http://www.lanl.gov/history/hbombon/treaties.shtml)>. This general account of U.S. arms control history is based on the convenient summary provided in *Arms Control Today* (June 2002), <[www.armscontrol.org/act/2002\\_06/factfilejune02.asp](http://www.armscontrol.org/act/2002_06/factfilejune02.asp)>, and "Arms Control Treaties," LANL.
66. Office of the Press Secretary, White House, "Announcement of Withdrawal from the ABM Treaty," December 13, 2001, <[www.dod.mil/acq/acic/treaties/abm/ABMwithdrawal.htm](http://www.dod.mil/acq/acic/treaties/abm/ABMwithdrawal.htm)>.
67. All former Soviet republics are party to the INF Treaty but most do not participate in treaty meetings or on-site inspections.
68. White House, "Presidential Initiative on Nuclear Arms," September 2, 1991, <[dosfan.lib.uic.edu/acda/factshee/wmd/nuclear/unilat/sandy.htm](http://dosfan.lib.uic.edu/acda/factshee/wmd/nuclear/unilat/sandy.htm)>.
69. See generally, Center for Arms Control and Nonproliferation, "Briefing Book on Tactical Nuclear Weapons," <[www.armscontrolcenter.org/archives/000169.html](http://www.armscontrolcenter.org/archives/000169.html)>.
70. The Senate voted against ratification, judging that the treaty was not sufficiently verifiable and that it could not be assured that the U.S. nuclear stockpile could be maintained reliably if testing were forever banned. See generally, e.g., *News Hour with Jim Lehrer*, "Rejection of the Treaty" (see especially comments of Senate Majority Leader Trent Lott, Republican of Mississippi), October 14, 1999, <[www.pbs.org/newshour/bb/congress/july-dec99/ctbt\\_10-14a.html](http://www.pbs.org/newshour/bb/congress/july-dec99/ctbt_10-14a.html)>.
71. See U.S. Government, texts of draft mandate for FMCT negotiations at the CD and draft Treaty on the Cessation of Production of Fissile Material for Use in Nuclear Weapons or for Other Explosive Devices (introduced May 18, 2006), <[www.state.gov/t/isn/rls/other/66902.htm](http://www.state.gov/t/isn/rls/other/66902.htm)>; see also Stephen Rademaker, "Rising to the Challenge of Effective Multilateralism," statement to the UN Conference on Disarmament, May 18, 2006, <[geneva.usmission.gov/Press2006/0518RademakerCDstatement.html](http://geneva.usmission.gov/Press2006/0518RademakerCDstatement.html)>.
72. For example, see, U.S. Government, "The Commitment of the United States of America to Article VI of the Treaty on the Nonproliferation of Nuclear Weapons," 2005; U.S. Mission to the United Nations, "Article VI: The U.S. Record of Compliance" (undated); Departments of State, Defense, and Energy, "An Assessment of the Impact of Repeal of the Prohibition of Low-Yield Warhead Development on the Ability of the United States to Achieve its Nonproliferation Objectives," March 2004, pp. 5–9; Stephen G. Rademaker, "U.S. Compliance with Article VI of the Nonproliferation Treaty (NPT)," remarks to an Arms Control Association panel, February 23, 2005, <[www.state.gov/t/ac/rls/rm/41786.htm](http://www.state.gov/t/ac/rls/rm/41786.htm)>; Stephen G. Rademaker, "NPT Article VI," address to the Third Session of the Preparatory Committee for the Third NPT Review Conference, May 23, 2004, <[www.state.gov/t/ac/rls/rm/2004/32294.htm](http://www.state.gov/t/ac/rls/rm/2004/32294.htm)>; Ambassador Jackie Wolcott Sanders, "How to Strengthen the NPT," *e-Journal USA* (March 2005), <[usinfo.state.gov/journals/itps/0305/ijpe/sanders.htm](http://usinfo.state.gov/journals/itps/0305/ijpe/sanders.htm)>; data on implementation of nonproliferation and threat reduction programs provided to the author by the National Nuclear Security Administration (NNSA), early 2007; Christopher A. Ford, State Department, "Disarmament, the United States, and the NPT," March 17, 2007, <[www.state.gov/t/isn/rls/other/81946.htm](http://www.state.gov/t/isn/rls/other/81946.htm)>. Unless otherwise noted, most of the information in this section comes from these documents.

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74. Ford, State Department, "Disarmament, the United States, and the NPT."
75. NNSA, "DOE to Remove 200 Metric Tons of Highly Enriched Uranium from U.S. Nuclear Weapons Stockpile," press release, November 7, 2005; see also Ford, "Disarmament, the United States, and the NPT."
76. NNSA, "NNSA Releases Report on Plans for Future of the Nuclear Weapons Complex," press release, February 2, 2007.
77. Rosenberg, "Nuclear War Planning."
78. Department of Defense (DOD), "1994 Nuclear Posture Review," <[www.fas.org/nuke/guide/usa/doctrine/dod/95\\_npr.htm](http://www.fas.org/nuke/guide/usa/doctrine/dod/95_npr.htm)>.
79. C. Paul Robinson, "Pursuing a New Nuclear Weapons Policy for the 21st Century," Sandia National Laboratories White Paper, March 22, 2001, <[www.sandia.gov/media/whitepaper/2001-04-Robinson.htm](http://www.sandia.gov/media/whitepaper/2001-04-Robinson.htm)>.
80. DOD, "1994 NPR."
81. George W. Bush, remarks at the National Defense University, May 1, 2001, <[www.whitehouse.gov/news/releases/2001/05/20010501-10.html](http://www.whitehouse.gov/news/releases/2001/05/20010501-10.html)>.
82. DOD, "2001 Nuclear Posture Review" (excerpts), December 31, 2001, <[www.globalsecurity.org/wmd/library/policy/dod/npr.htm](http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm)>; see also, for example, Keith B. Payne, "The Nuclear Posture Review: Setting the Record Straight," *Washington Quarterly* 28 (Summer 2005), pp. 140–142. The 2001 NPR also stressed the development of both active and passive defenses, including both ways of destroying ballistic missiles in flight.
83. Robinson, "Pursuing a New Nuclear Weapons Policy."
84. Joint Declaration by the United States and the Russian Federation, May 24, 2002, <[www.whitehouse.gov/news/releases/2002/05/20020524-2.html](http://www.whitehouse.gov/news/releases/2002/05/20020524-2.html)>.
85. Sean McCormack, State Department spokesman, "United States and Russia Pursue Strategic Security Dialogue," press statement, September 15, 2006, <[www.state.gov/r/pa/prs/ps/2006/72352.htm](http://www.state.gov/r/pa/prs/ps/2006/72352.htm)>.
86. See Christopher Ford, "Strengthening the Nonproliferation Regime," remarks at Wiston House, Wilton Park, United Kingdom, December 21, 2006, <[www.state.gov/t/isn/rls/rm/78454.htm](http://www.state.gov/t/isn/rls/rm/78454.htm)>.
87. U.K. Foreign Secretary Margaret Beckett, "A World Free of Nuclear Weapons?" remarks at the 2007 Carnegie International Nonproliferation Conference, Washington, DC, June 25, 2007 (suggesting extension of framework into "multilateral" nuclear weapon state–context), <[www.carnegieendowment.org/files/keynote.pdf](http://www.carnegieendowment.org/files/keynote.pdf)>.
88. Some of the most modern U.S. Tomahawk cruise missiles, for instance, were expected to use a conventional earth-penetrating warhead that could make them useful against the reinforced concrete covers of ICBM silos, a type of target traditionally reserved for nuclear weapon attack. See Qiu Yong, "Preliminary Study on the Threat of Precision Strike Conventional Weapons to Nuclear Weapons," report for the International Network of Engineers and Scientists Against Proliferation, <[www.inesap.org/bulletin17/bul17art17.htm](http://www.inesap.org/bulletin17/bul17art17.htm)>.
89. DOD, "2001 NPR," pp. 24–25.
90. See, for example, Elaine M. Grossman, "Air Force Proposes New Strike Missile," *InsideDefense.com*, April 8, 2006, <[www.military.com/features/0,15240,93616,00.html](http://www.military.com/features/0,15240,93616,00.html)>.
91. DOD, "2001 NPR," pp. 34–35.
92. See, for example, NNSA, "NNSA's Reliable Replacement Warhead (RRW) Program," fact sheet, May 2006, <[www.nnsa.doe.gov/docs/factsheets/2006/NA-06\\_FS03.pdf](http://www.nnsa.doe.gov/docs/factsheets/2006/NA-06_FS03.pdf)>.
93. Christopher Ford, "Achieving and Sustaining Nuclear Weapons Elimination," State Department, March 17, 2007, <[www.state.gov/t/isn/rls/other/81943.htm](http://www.state.gov/t/isn/rls/other/81943.htm)>; see also Ambassador Christina Rocca, "Creating the Conditions Necessary for Nuclear Disarmament," February 6, 2007, statement to the Conference on Disarmament.
94. Ford, "Achieving and Sustaining Nuclear Weapons Elimination."
95. Christopher Ford, "Facilitating Disarmament," State Department, March 17, 2007, <[www.state.gov/t/isn/rls/other/81949.htm](http://www.state.gov/t/isn/rls/other/81949.htm)>; Christopher Ford, "Procedure and Substance in the NPT Review Cycle: The Example of Nuclear Disarmament," March 17, 2007, <[www.state.gov/t/isn/rls/rm/81940.htm](http://www.state.gov/t/isn/rls/rm/81940.htm)>.
96. *Ibid.*