Nuclear Policy without an Adversary

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U.S. Planning for the Post-Soviet Era

U.S. nuclear policy at the beginning of 1992 was still designed to confront a malign, risk-taking superpower adversary intent on gaining control of Western Europe. But, even though the Soviet nuclear force of over 10,000 strategic warheads had not disappeared, an adversary resembling this description no longer existed. In fundamental ways the world had changed, demanding a fundamental reevaluation of U.S. strategic nuclear forces and strategy. The United States has now proposed the first basic changes in U.S. strategic nuclear forces, but the strategy that these forces must support, and how and why it differs from America's Cold War strategy, have yet to be articulated. That is one of the purposes of this article.¹

The world has changed so fundamentally that radical alternatives to our current nuclear world of mutual vulnerability, in which both the United States and Russia can virtually annihiliated one another's societies, may now be on the table. The end of the Cold War and the dissolution of the Soviet Union are making these alternative worlds—defense dominance, nuclear disarmament, and U.S. nuclear superiority—appear more feasible by increasing both the prospects for extensive cooperation and the U.S. ability to win an arms race with Russia.

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I wish to thank Owen Coté, David Glaser, Mitchell Horowitz, and Stephen Van Evera for their helpful comments.

1. President Bush's January 28, 1992, "State of the Union" speech announced important changes to U.S. nuclear policy, including cancellation of modernization programs and an ambitious arms control proposal. "Text of Bush's Message: Heating Up the Economy, and Looking Beyond," New York Times, January 29, 1992, p. 16. This article was written and was already in press prior to Bush's speech, so for the most part it does not reflect these changes. They are, however, consistent with the policies called for in this article, and in it I explain why such changes will increase U.S. security.

In this article I use "Russia" to refer to whatever major power emerges from the former Soviet Union; it could therefore include more than the Russian republic, if the recently formed Commonwealth of Independent States (CIS) or some successor develops and sustains a coherent military and foreign policy.

International Security, Spring 1992 (Vol. 16, No. 4)
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It is often assumed that moving to any of these alternatives would be desirable because it would essentially eliminate the vulnerability of U.S. society to massive nuclear attack. Regaining nuclear superiority would, in addition, provide the United States with the benefits of global hegemony. However, the desirability of these worlds has rarely been analyzed. My assessment in the first section, below, is that, even if they were feasible, U.S. security is likely to be greater in a well-managed world of mutual vulnerability.

Given the conclusion that, over the long term, U.S. security will be greater in a world of mutual vulnerability, what strategy should the United States adopt in that world? The United States has long had a counterforce strategy, heavily oriented toward large attack options for destroying Soviet nuclear forces. The Bush administration has yet to reassess this strategy, even though the end of the Cold War radically alters the foundations on which it was built.

In the second section, I assess the case for maintaining a counterforce strategy by evaluating how strong the Cold War arguments were for counterforce, and how the end of the Cold War affects these arguments. I come to the conclusion that the United States has had the wrong nuclear strategy for over two decades, and that the end of the Cold War makes it even less appropriate. The United States should shift to a flexible countervalue strategy, rejecting its current counterforce strategy. Because the Cold War arguments for counterforce were weak, the case for rejecting counterforce is robust across a wide range of potential scenarios for the future of East-West relations. If we expect good relations to continue, the case for a fundamental revision of U.S. nuclear strategy is even stronger.

Choosing a countervalue strategy would guide many force structure decisions, but leave other questions unanswered. Of the latter, first and most important on the current agenda is whether to deploy limited ballistic missile defenses (BMD) for protection against accidental and unauthorized Russian attack and future Third World threats. This issue has become more salient

as the dissolution of the Soviet Union has raised fears of such attacks; partly in reaction, the Bush administration and Congress have increased their support for deployment of limited BMD. At the same time, this is an issue of great moment because starting down the BMD route would risk undermining the U.S. ability to accomplish important goals of a countervevalue strategy, as well as complicating its arms control policies. Therefore, although the need to defend against these threats may indeed have increased, I argue in the third section that the United States should reject BMD deployments that risk generating Russian insecurity and straining U.S.-Russian relations.

A second question left unanswered by a shift to a countervevalue strategy is how large U.S. strategic nuclear forces should be. In the concluding section I review these issues, and conclude that very deep cuts are possible, and that the United States should pursue them energetically. Rejecting counterforce requirements will clear the way.

DOES THE UNITED STATES STILL NEED A NUCLEAR DETERRENT?

Before proceeding with this analysis, I should address a preliminary issue: Some may wonder whether the United States still needs a policy of nuclear deterrence against Russia or the other republics of the new Commonwealth of Independent States (CIS). In striking contrast to its Cold War attitudes, Russia is now interested in joining Western institutions, including eventually NATO. Why should the United States not entirely discount Russian military potential, especially its nuclear capability, just as we appear to do with France and Britain? The answer is that although the geopolitical changes of the past few years have been truly revolutionary, such a total transformation of U.S. policy would be at best premature.

Russia is just beginning to develop a new domestic order and a new foreign policy. Who will be in power in a few years and, more important, what their primary goals will be, are hard to predict with any confidence. Although a

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3. A third question is how diversified the U.S. nuclear force should be. Specifically, should the United States shift from a triad to a dyad? Although it is an important issue for the future, I do not address this question here because, given the current policy agenda, it is less pressing than the other two.

A cooperative relationship with the West may be most likely, an adversarial relationship is also possible in a variety of plausible scenarios. For example, Western fears might be provoked if Russia imposed martial law to manage domestic chaos; if it attacked Ukraine to protect the Russian minority population there; or if the Russian military retained the offensive policies bred during the Cold War. On the other hand, Russian fears might be prompted by a Western decision to provide security guarantees to Central European countries. This could in turn provoke a Russian military buildup that would strain Russia's relations with the West. Thus, although it now seems unlikely, the United States should recognize the possibility that Russia will again be an adversary. Consequently, the following analysis starts from the assumption that the United States continues to require a nuclear deterrent. The challenge facing the United States is to design a nuclear strategy that meets its requirements for deterrence while also increasing the prospects for avoiding adversarial relations with Russia.

I also assume that Russia believes that the end of the Cold War has not eliminated its need for a nuclear deterrent. Mirroring U.S. concerns, Russia will almost certainly conclude that its security policy should recognize the possibility of renewed adversarial relations with the West. In this case, assuming that the United States and other Western powers retain nuclear weapons, Russia will want to maintain a nuclear deterrent. Far less certain are the size and composition of the nuclear force Russia will find necessary to insure its security. My working assumption is that Russia will want to retain at least an assured destruction capability if the United States has such a capability.

5. A second issue concerns which republics of the CIS will have long-range nuclear arsenals. It now appears likely that Russia will remain interested in retaining a large strategic nuclear arsenal and that the other nuclear republics either will retire their nuclear forces or place them under joint control with Russia. Francis X. Clines, "Joint Command Is Planned for Atom Arms," New York Times, December 31, 1991, p. 8. My analysis in this article, except where otherwise noted, is based on this assumption.

6. An alternative possibility, that Russia would be willing to trade its nuclear arsenal for Western economic assistance, is explored in Kurt M. Campbell, Ashton B. Carter, Steven E. Miller, and Charles A. Zraket, Soviet Nuclear Fission: Control of the Nuclear Arsenal in a Disintegrating Soviet Union (Cambridge, Mass.: Harvard Center for Science and International Affairs, 1991), pp. 49-58.

Are the Alternatives to a World of Mutual Vulnerability Desirable?

This section analyzes the desirability of the alternatives to our current world of mutual vulnerability—a world in which both the United States and Russia possess nuclear arsenals capable of virtually annihilating each other. Reducing the vulnerability of American society has generally been considered desirable, but was infeasible during the Cold War. Now the end of the Cold War is making escape from this vulnerability appear more feasible. But before committing itself to this objective, the United States needs to analyze the desirability of such a transformation—would it in fact increase U.S. security?

Three alternatives to our current world of mutual high vulnerability are especially important: defense dominance—both countries are protected from annihilation by highly effective strategic defenses; U.S. superiority—strategic defenses and counterforce protect the United States, while it maintains its ability to annihilate Russia; and nuclear disarmament—arms control agreements, requiring near-total cuts in nuclear forces, protect both countries.

Most analysts have tended simply to assume that the United States would be more secure in one of the alternative worlds. They focus on a single criterion for evaluating U.S. security—the damage U.S. society would suffer in a war—but overlook other criteria for measuring U.S. security, specifically those criteria that measure the likelihood of war. As I demonstrate below, the effect of this incomplete analysis is to bias these comparisons against a world of mutual vulnerability. In the limited debate that has occurred, analysts have tended to argue past each other. Focusing on desirability, proponents argued that the low probability of reaching alternative worlds should not count heavily against them, since U.S. security would be greatly increased. In contrast, opponents focused on feasibility, stressing the exceedingly poor prospects for escaping mutual vulnerability.

Since it was impossible to prove that alternative worlds would always remain infeasible, presumptions about their desirability have influenced U.S. policy. We can see this effect in Cold War debates. Support for the Strategic Defense Initiative (SDI) stemmed largely from the belief that reaching its ambitious goals for protecting U.S. society would provide enormous benefits. Even some analysts who had grave doubts about the feasibility of perfect or near-perfect strategic defenses believed that their potential benefits justified extensive research and development. Calls for regaining U.S. superiority provide another example. Proponents of superiority played a prominent role in the public and expert debates of the 1970s and 1980s over counterforce
and strategic defense, even though these proponents were relatively few in number and their analysis never provided a serious basis for believing that superiority might be feasible.8

Finally, although this is rarely explicit, much of the broad interest in using arms control to reduce the size of superpower forces appears to have been linked to the presumed desirability of disarmament. Why would reductions increase U.S. security if the vulnerability of U.S. society were not thereby reduced? Proponents rarely addressed this basic question. Many may have seen reductions as a necessary step toward near or complete nuclear disarmament. Interest in disarmament also underpinned calls for a transition that would coordinate the reduction of strategic offensive forces and the buildup of ballistic missile defenses.9 This route to reducing the vulnerability of U.S. society has far more in common with disarmament than with mutual highly effective defenses, since its feasibility depends primarily on cooperation, not on technology.

The end of the Cold War is likely to make these alternative worlds appear more feasible and, therefore, to increase the importance of beliefs about their desirability. Most obvious, if Russian policies continue to progress in ways that alleviate Western concerns about a return to Cold War-style competition, we are likely to see increasing American interest in negotiating disarmament and in coordinating the deployment of defenses that would protect both countries.10 On the other hand, reversals in Russia’s domestic or foreign policy that seriously strained its relations with the West could fuel interest in regaining American superiority. Unlike the Soviet Union during the Cold War, an economically crippled and technologically inferior Russia could appear incapable of competing effectively in an arms race. Although the Bush administration has reduced the objectives of SDI, emphasizing protection against limited strikes, it has left open the possibility of more ambitious, although unspecified, objectives. A U.S. decision to pursue such objectives “would ultimately require consideration of the status of Soviet military

power, and in particular Soviet strategic capabilities, and of political developments in the Soviet Union.”11 Moreover, even without such a reversal in Russian policy, doubts about depending indefinitely on deterrence are likely to generate continued interest in technological solutions to U.S. societal vulnerability.

Analysis of whether the United States would be more secure in the alternative worlds should be evaluated by applying the same criteria that are commonly applied to a world of mutual vulnerability, including: the U.S. ability to deter premeditated attacks; crisis stability, which measures both countries’ incentives to strike preemptively in a crisis; arms race stability, which measures the U.S. ability to maintain necessary military capabilities in the face of a Russian arms buildup; and the damage the United States would suffer if war occurs. In addition, we should consider the international political consequences of moving to the proposed alternative world—will it improve or instead strain U.S.-Russian relations?

Although a thorough analysis is beyond the scope of this article, considering just the political consequences is sufficient to raise serious doubts about the conventional wisdom that suggests the United States would enjoy much greater security in the alternative worlds.12 The conventional wisdom overlooks both important advantages of mutual vulnerability and significant shortcomings of the alternatives.

In a world of mutual vulnerability, both the United States and Russia can meet their key deterrent requirements without posing a serious threat to each other’s deterrent forces. Moreover, at least until recently both countries could maintain high confidence in their deterrent capabilities because, if necessary, they could afford diversified, redundant retaliatory capabilities. Understood from this angle, a world of mutual vulnerability enables both countries to enjoy a reasonably high level of security from external threats, which in turn contributes to peace by eliminating pressures for competitive foreign and military policies that can generate crises and lead to war.

These advantages are greatest when the United States faces a country whose expansionist behavior is motivated primarily by insecurity. In contrast, deployment of nuclear capabilities by expansionist states motivated by other

objectives—such as greed, religious or ideological disputes, or the desire to settle historical scores—is less likely to bring peace by reducing sources of conflict, and may instead embolden states to pursue their own objectives. Thus, the argument that nuclear retaliatory capabilities will moderate Russian behavior—a country that I believe will be motivated largely by insecurity—does not support the conclusion that a greedy expansionist power such as Iraq would be less dangerous if it acquired a large, survivable nuclear capability.

The worlds of defense-dominance and U.S. superiority lack the important advantage of providing both countries with a high degree of confidence in their security. In a world of mutual perfect or near-perfect defenses, both the United States and Russia might well fear falling into military inferiority, since small changes in military capability would matter a great deal. The United States would worry that an economically revived Russia could gain a significant military advantage by acquiring the ability to penetrate U.S. defenses with a relatively small number of weapons, and vice versa. Protecting against the possibility of a Russian breakthrough would require the United States to pursue threatening breakthroughs of its own. In short, compared to a world of mutual vulnerability, a world of highly effective defenses is likely to lack arms race stability.

This lack of arms race stability might not create dangers as long as Russia’s relations with the West remain very good. However, given the uncertainties about Russia’s political evolution, counting on non-adversarial relations is imprudent. If other issues strain political relations, the lack of robust deterrent capabilities is likely to fuel intense military competition and insecurity, even if both countries have no desire to acquire military advantages.

Making matters worse, a world of near-perfect defenses is likely to suffer a variety of military shortcomings that are not found, or are not excessive, in today’s world. For example, the lack of arms race stability increases the frequency of “strategic windows”—periods of rising and falling strategic advantage—which if combined with competition and insecurity are likely to create pressures for preventive war. In addition, this world of highly effective defenses could lack crisis stability, especially if the defenses are vulnerable to a preemptive attack.

While U.S. superiority would not create some of these dangers for the United States, since it is likely to decay back into parity in the form of mutual vulnerability, U.S. superiority could greatly increase Russian insecurity, creating incentives for provocative Russian behavior. We should not overlook
the role that nuclear weapons may have played in ending the Cold War: by providing security, nuclear retaliatory capabilities reduced the Soviet need to control Eastern Europe as a buffer zone against conventional attack. The risks of removing this security must be weighed against the deterrent benefits of superiority.

The deterrent benefits of nuclear superiority are relatively small. During the Cold War, even though the United States was highly vulnerable to Soviet nuclear attack, the possibility of U.S. escalation to strategic nuclear attacks if NATO failed to thwart a massive Soviet conventional attack against Western Europe contributed significantly to deterrence of such an attack. Combined with NATO's conventional and theater nuclear capabilities, strategic nuclear forces provided the United States with a highly effective deterrent. Since the Soviets were already deterred, regaining superiority would have added little to the effectiveness of the U.S. deterrent.

Superiority would be even less valuable now. The Warsaw Pact and the Soviet Union have dissolved, greatly reducing the conventional military capability facing Western Europe. If fully implemented, the Conventional Forces in Europe (CFE) Treaty will reduce it further. Although Russia and the new Commonwealth are likely eventually to regain economic health, the withdrawal of forces from Central Europe will significantly reduce the potential threat they pose to Western Europe.13 Given its limited deterrent benefits, U.S. superiority would probably reduce U.S. security overall by damaging U.S.-Russian relations. There may now be a temptation to exploit Russian weakness to increase near-term U.S. security. However, the United States does this at the risk of creating dangers further down the road.14

Two types of political changes could, however, increase the value of superiority. First, superiority would be more valuable if the United States decides to offer very ambitious security guarantees that are hard to accomplish. For example, extending deterrence to Ukraine would be difficult since American or Western credibility might be hard to establish and conventional forces based in Western Europe might be inadequate. American nuclear superiority might help overcome these shortcomings. Second, superiority would also be more attractive if future Russian leaders, or other nuclear

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republics that evolve from the former Soviet Union, are extremely hard to deter—bent on challenging U.S. interests and willing to accept enormous risks to achieve their objectives.

However, even in these cases we need to consider the potential political costs of superiority. For example, American superiority that generates Russian insecurity and fears of Western expansion could create incentives for Russia to assert military control over Ukraine. If so, then U.S. superiority might be self-defeating. Moreover, the dangers of nuclear superiority suggest that the United States should avoid extending commitments that would increase its need for superiority.

The case against disarmament is rather different. Disarmament and near-disarmament would almost certainly be feasible only if U.S.-Russian relations improved so radically that the possibility of future conflict were virtually eliminated. Even the most carefully designed disarmament plans would require this kind of confidence, because falling behind in a rearmament race could pose a dire threat to U.S. security. But once the possibility of conflict is so reduced, disarmament does little if anything to increase U.S. security. Once U.S.-Russian relations progress to the point where the United States sees Russian nuclear forces in essentially the same benign light that it now sees British and French long-range forces, U.S. security would hardly be increased by agreeing to get rid of nuclear weapons. Crises would be extremely rare and relatively easy to resolve, thereby virtually eliminating the conditions under which the Russians might choose to employ their nuclear forces, and for that matter their conventional forces, against U.S. interests.

In many ways, therefore, disarmament confuses the problem with its solution. The real problem is a political one that is best solved by political means: the United States should pursue policies that further improve and preserve U.S.-Russian relations. Disarmament would actually tend to hinder achievement of this objective. In a disarmed world, U.S. security would be more sensitive to relatively small changes in Russian forces than it would be in a world of mutual vulnerability. Consequently, except in the unlikely case in which the United States is no longer at all concerned about Russian military capabilities, in a disarmed world the United States will be inclined to be warier of Russian intentions, thus undermining the political goal of improved relations.

In sum, because the alternatives are not preferable to a world of mutual vulnerability, the United States should reject policies designed to increase the probability of eventual escape from mutual vulnerability. This does not
necessarily preclude research, development, and limited deployment of strategic defenses, relaxation of the constraints imposed by the ABM Treaty, and negotiated reductions in U.S. and Russian nuclear forces. However, these policies would have to be supported entirely by other strategic and political rationales. Moreover, it should count against these policies if they would increase U.S. enthusiasm for escaping mutual vulnerability or increase Russian fears that this was a U.S. objective. Consequently, for example, if the United States decides to deploy a limited ballistic missile defense (discussed in more detail below), it should go to great lengths to make clear that this is not a first step toward more extensive defenses. If that is impossible, because limited defenses generate American domestic support for more extensive defenses, or because Russia cannot be reasonably convinced of America’s limited objectives, this is a powerful argument against deploying limited ballistic missile defenses.

The preceding assessment does omit one danger that favors all of the alternative worlds over a world of mutual vulnerability—the possibility of unauthorized nuclear attack resulting from political instability in Russia. This possibility is now generating increasing concern. The advantages offered by mutual vulnerability pertain to times of “normal” international relations, in which international conflict stems primarily from some combination of international insecurity and expansionist intentions. These advantages can do little to alleviate the danger of unauthorized attack, which has an entirely different source. It is at least arguable, therefore, that if these alternative worlds were immediately feasible, the United States should accept their protection against nuclear attack to get through this potentially dangerous period of Russian instability, even though over the longer term the alternatives could create dangers of their own. However, for better or worse, the alternatives will almost certainly be unavailable in time to protect against this danger.

**Nuclear Strategy in a World of Mutual Vulnerability**

Given that a world of mutual vulnerability has these advantages, the United States should reject all efforts to escape it for the foreseeable future. What nuclear strategy will maximize U.S. security in a world of mutual societal vulnerability (often referred to as MAD, referring to the capability for mutual assured destruction)? The United States has long had a counterforce strat-

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15. There has been extensive debate and criticism of U.S. nuclear strategy in a world of mutual...
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...one heavily oriented toward destroying Soviet nuclear forces. In broad terms, the basic alternative is a countervalue strategy—one that relies primarily on threats against value targets (economic, industrial, or population targets). In addition, U.S. nuclear strategy could include “counter-conventional” options, that is, options for attacking Russian conventional forces. (I use “counterforce” to refer narrowly to counter-nuclear, not including counter-conventional, targeting.)

As of the beginning of 1992, there was no indication that the United States had changed its nuclear strategy in response to the end of the Cold War. Recent revisions of the U.S. nuclear warplan, which are said to have reduced the number of potential targets by thousands, did not result from a basic change in U.S. nuclear strategy. Rather, they reportedly reflect “exempting Eastern Europe from U.S. nuclear attack” and “anticipated cuts of some Soviet conventional arms under a 1990 East-West treaty [CFE], improvements in the accuracy of U.S. warheads and better knowledge of Soviet military vulnerabilities,” but only “slight modifications to nuclear attack options drawn up from Reagan’s guidance.”

President Bush’s September 1991 unilateral initiatives—including removing strategic bombers from alert, and canceling mobile missile programs and a new bomber-delivered short-range attack missile—merely adjust the ways in which the United States will im...


16. A common argument against a countervalue strategy is that it is immoral to threaten and/or attack population centers. While possessing some merit, the issue is far more complex than these criticisms suggest. This question has received extensive attention. For useful observations, see Robert Jervis, The Meaning of the Nuclear Revolution (Ithaca: Cornell University Press, 1989), chap. 4; and Joseph S. Nye, Jr., Nuclear Ethics (New York: Free Press, 1986), chap. 7.

plement its current nuclear strategy, while leaving it essentially unchanged. Taking strategic systems off alert recognizes that a Russian "bolt from the blue" is now even less likely than the minuscule probability that haunted American planners during the 1970s and 1980s. Even so, U.S. plans will continue to hedge against this scenario by keeping thousands of nuclear warheads on ballistic missile submarines at sea. In the unlikely event of a major crisis, the pre-launch survivability of U.S. bombers can be restored by increasing their alert status. The same observations apply to the START (Strategic Arms Reduction Treaty) agreement—the reductions agreed to by the United States and Soviet Union will not require a basic shift in U.S. nuclear strategy, and this was not their objective.

In the Cold War debate over nuclear strategy, proponents offered a wide variety of arguments for counterforce, reflecting its central role in this debate. These arguments identified three categories of potential benefits: 1) limiting the damage the United States would suffer in an all-out war; 2) deterring attacks against U.S. allies, that is, extending deterrence; and 3) deterring attacks against the U.S. homeland. Arguments for targeting Soviet conventional forces with strategic nuclear weapons focused on extending deterrence.

The following discussion, which addresses some of the key arguments in each category, may have something of a Cold War feel to it. This is largely unavoidable since Cold War arguments still provide the rationale for current U.S. nuclear strategy; although new rationales may be appropriate, the United States has not yet adopted them. In addition, prudent planning for the possibility of adversarial relations demands that we consider military requirements that are unnecessary today but may nevertheless be important to maintain as a hedge against the possibility that conditions more like the Cold War might return.

THE DAMAGE-LIMITATION ARGUMENT FOR COUNTERFORCE

Limiting the damage the United States would suffer in an all-out war is the most obvious rationale for counterforce. During the Cold War the most telling

19. On the START provisions see International Institute for Strategic Studies (IISS), The Military Balance, 1991–1992 (London: Brassey's, 1991), pp. 216–220. As I note below, the initiatives that President Bush announced in his January 1992 State of the Union message are consistent with the types of changes that would accompany a shift in nuclear strategy, since the United States would be reducing or eliminating many of its most effective counterforce modernization programs.
20. Glaser, Analyzing Strategic Nuclear Policy, chap. 7, assesses the full range of arguments over counterforce.
argument against damage limitation was that it was essentially infeasible. It is possible, although not likely, that economic and political turmoil in Russia will improve U.S. prospects for marginally limiting damage. On the other hand, the end of the Cold War, by reducing the probability of all-out war, reduces the value of whatever marginal damage limitation capabilities the United States might acquire. The combined effect of the Soviet disintegration and the end of the Cold War on the feasibility of damage limitation is therefore mixed.

To limit damage the United States can deploy offensive counterforce—systems dedicated to destroying Russian strategic nuclear forces before they are launched. These include anti-submarine warfare (ASW) forces dedicated to attacking Russian ballistic missile submarines, and ballistic missiles and bombers dedicated to destroying hardened missile silos, mobile missiles, and command and control. The United States could back up these forces with strategic defenses—systems designed to destroy remaining Russian forces in flight. Thus, in terms of damage-limitation missions, area-wide strategic defenses—ballistic missile defenses and air defenses—complement offensive counterforce and should be considered a type of counterforce.

The role of damage limitation in U.S. declaratory doctrine varied over the course of the Cold War. It was most prominent during the 1960s. Since then official statements have focused attention on other counterforce missions.21 The United States, however, has not rejected efforts to limit damage, and through the 1980s both civilian and military leaders occasionally expressed some interest in it.22

The basic argument against pursuing damage limitation was that it was simply infeasible—the United States could not destroy enough of the Soviet nuclear arsenal and command and control system to provide significant protection to U.S. cities and industry. A variety of factors contributed to this conclusion: the enormous destructive potential of nuclear weapons; their relatively low cost, which made it possible for the Soviets to deploy a large and diversified force; the relatively small number of targets the Soviets needed to destroy to inflict “mortal damage” on U.S. society; and the importance Soviet leaders placed on maintaining massive retaliatory capabilities. The combination of these factors placed significant damage limitation beyond U.S. reach.23

23. For useful assessments of nuclear exchanges see Michael M. May, George F. Bing, and
In response, proponents argued that although the United States might suffer the gravest outcomes in an all-out nuclear war, significantly better outcomes were also possible. For example (although opponents assume the opposite), U.S. attacks against Soviet command and control might blunt Soviet retaliation, Soviet retaliation might not be primarily against cities, U.S. strategic ASW might be quite effective, and the Soviets might not launch their vulnerable forces on warning of U.S. attack. Proponents argued that overlooking these possibilities was misguided because nuclear war might occur and the United States should be prepared to do the best it could. Moreover, damage-limitation capabilities did not have to be highly effective to be desirable, since the alternative was absorbing a full Soviet attack, which would have been still more destructive.

It seems possible that under certain scenarios the disintegration of the Soviet Union could enable the United States to increase its damage-limitation capability. For example, Russian early warning capabilities might be compromised, since important radars are located in other republics. More serious shortcomings could result if economic weakness and competing priorities reduced Russia’s ability to maintain its system of missile warning satellites, ballistic missile submarines or mobile ICBMs. These problems would be multiplied if the growing economic crisis or a civil war shattered military discipline.

We must remember, however, that even if Russia suffers some combination of these effects, the enormous size of its nuclear force will probably continue to make significant damage limitation difficult for the United States to achieve. Although under certain conditions Russia might be willing to


25. If, however, other former Soviet republics inherited the long-range forces deployed on their territories, the United States would likely have better prospects for limiting damage from these arsenals, and therefore larger incentives for targeting these forces. Among factors contributing to this capability would be the lack of adequate warning capabilities and the smaller size of the arsenals, and in some cases the lack of highly survivable forces. Before deciding to target these new nuclear powers, the United States should also ask a political question: Is it plausible that these independent powers would be inclined to threaten U.S. interests and need to be deterred.
reduce the size of its force greatly, this is far less likely if U.S. counterforce would then reduce Russian confidence in its assured destruction capability. Russian force reductions are therefore unlikely to play a key role in increasing U.S. damage limitation capabilities. Moreover, in a variety of other scenarios Russia will be far better able to maintain its nuclear capabilities, leaving the United States with damage limitation capabilities comparable to those it possessed at the end of the Cold War.

However, three arguments, two from during the Cold War and a new one, suggest that the benefits of even an improved damage limitation capability are not worth pursuing. First, to limit damage, U.S. leaders would have to risk launching a massive first strike at a moment when all-out nuclear war might still be avoided. The complexity, magnitude, and novelty of military operations in the midst of a severe crisis or during a large-scale conventional war are more likely to create confusion than to foster the near-certainty required to launch a preemptive nuclear attack.

Second, the probability of a massive Russian attack is not independent of U.S. preparations for damage limitation. On the contrary, a Russian decision to launch a massive attack is more likely to result if preemptive pressures are created by U.S. damage-limitation capabilities. The Russians would have few if any other motivations for launching a massive attack.

Finally, the expected benefits of a damage limitation capability are reduced by the end of the Cold War, since the reduced probability of an all-out war reduces the value of being able to limit damage.

In summary, although Soviet disintegration might provide the United States with an opportunity to improve its damage limitation capability, the risks of a preemptive policy will remain large while the need for a damage limitation capability has been significantly reduced. Based solely on these arguments, the case against damage limitation remains strong, but the United States might want to postpone a final decision against it until the on-going transformation in the former Soviet Union clarifies whether significantly increased damage limitation capabilities are going to be feasible. However, a counterforce strategy brings other costs, discussed below, that make damage-limitation capabilities undesirable even if feasible.

by nuclear threats, or might they instead more closely resemble other European nuclear powers in their relations with the United States? Touching on this issue, the recent advisory panel report (see note 17 above) recommended that the United States should target “every reasonable adversary” around the globe with nuclear and non-nuclear weapons. Smith, “U.S. Urged to Cut 50% of A-Arms.”
THE EXTENDED-DETERRENCE ARGUMENT FOR COUNTERFORCE

Extending deterrence to Western European allies was a central objective of America's Cold War strategy. Strategic nuclear forces were an important component of NATO's flexible response doctrine, which included a U.S. threat to escalate to strategic nuclear use if it were losing a war in Europe. Since at least the mid-1970s, the key arguments for counterforce, in both the public debate and official U.S. declaratory doctrine, have held that extending deterrence required counterforce limited options. The end of the Cold War reduces the need for extending deterrence to Western Europe; as a result, the case for counterforce options is weakened.

However, whether the U.S. requirement for counterforce nuclear options has been eliminated altogether depends on answers to three questions. First, should the United States retain some capability for extending deterrence? Some analysts believe the answer is no, because U.S. interests in Europe are sufficiently small and/or insufficiently threatened to warrant maintaining the U.S. commitment to European security. The United States, they argue, should therefore sever its security ties to Europe, withdraw not only its strategic nuclear umbrella but also its conventional and theater nuclear forces, and plan not to return if war occurs.26

The opposing view is that war in Europe would threaten U.S. security because the United States is likely to join the conflict, as it has in the past, and because such a war could escalate to nuclear attacks against the U.S. homeland.27 Consequently, the United States should hedge against the possibility of a reversal in Russian policy by maintaining its commitment to Western European security.28 It is also possible, although not now likely, that the United States will eventually decide to extend deterrence to countries in

28. There are additional reasons for continuing to extend deterrence. Maintaining a security commitment to Europe is likely to increase somewhat the U.S. ability to influence European security and economic policies. The United States might also play a role in reducing fears that could develop in reaction to German power. In addition, the American nuclear umbrella might play a role in reducing future German interest in acquiring nuclear weapons. This last objective assumes that proliferation is undesirable, a point on which there is substantial disagreement.

Central Europe or possibly even to certain former Soviet republics. To make the strongest case for counterforce, I assume the United States chooses to retain the capability for extending deterrence in Europe.

The second question is: what role should strategic nuclear forces play in extending deterrence? The United States and its NATO allies could choose to rely entirely on conventional forces to deter Russian conventional attack against Western Europe, rejecting the current policy of threatening first use of nuclear weapons. This question of shifting to a no-first-use policy, which generated an extensive debate during the 1980s, has not been fully rejoined since the end of the Cold War. NATO, however, has officially stated its intention to continue relying on nuclear threats to deter conventional war. President Bush supported this position in his September 1991 announcement, explaining that while all American nuclear artillery shells and short-range ballistic missile warheads would be removed from Europe, the United States would “of course, insure that we preserve an effective air-delivered nuclear capability in Europe. This is essential to NATO’s security.” Again, to present the strongest case for counterforce, I assume that the United States continues to rely on strategic nuclear weapons to support its extended deterrence.

The third question, therefore, is: given continuing reliance on strategic nuclear weapons, does the United States require counterforce or counterconventional options to enhance extended deterrence? During the Cold War, proponents of counterforce generated a wide variety of arguments, the relative importance of which shifted over time. The most prominent argument incorporates two propositions: 1) options for less-than-all-out nuclear attack (limited nuclear options, or LNOs) are required to enhance extended deterrence, since threats to escalate to all-out war are not credible; and, 2) LNOs require counterforce options, since countervalue threats are not credible.

While most analysts accepted the first proposition, they disagreed over the second, debating how much LNOs added to deterrence. Many believed that limited options enhanced deterrence relatively little, because the threat of massive countervalue damage was so potent, but even among these ana-

lysts, few concluded that U.S. leaders should have only a single unlimited retaliatory option. Therefore, without resolving the debate over the importance of LNOs, the pivotal question becomes: should counterforce or counter-conventional options be among the options short of all-out nuclear war that are available to U.S. leaders?

COUNTERFORCE OPTIONS FOR EXTENDING DETERRENCE. In theory at least, threatening to employ LNOs is more credible than threatening all-out war because LNOs would preserve Russian incentives for restraint. Russian leaders, recognizing that the United States expects Russian restraint and therefore less costly retaliation, would find U.S. threats more credible.\textsuperscript{32} The LNO approach to increasing U.S. credibility by limiting the costs of a nuclear war is fundamentally different from one that calls on counterforce for highly effective damage limitation, which is now essentially infeasible.

The United States can have a broad array of LNOs even if it targets only Russian value targets: economic, industrial, or population centers. Although all Russian cities are vulnerable, American attacks against Russian value targets need not be all-out, unlimited attacks. At one end of this countervalue spectrum are pure demonstration attacks, which inflict no damage but communicate U.S. willingness to escalate further. Still on this side of the spectrum, more damaging countervalue attacks could be made against isolated industrial facilities, a small town, or even a small city. Without minimizing the horror of attacks against people, we should acknowledge that there is a vast difference between these attacks and a full-scale attack against major Russian population centers. A need for limited nuclear options does not, therefore, lead immediately to a requirement for limited counterforce or counter-conventional options.

In a world of mutual vulnerability, limited nuclear options should be designed to do two things. The first is to increase the credibility of U.S. threats by preserving Russian incentives for restraint. As we have just seen, preserving these incentives does not require counterforce. Second, limited nuclear options should provide the United States with the ability to inflict costs on Russia. Obviously, counterforce is unnecessary for threatening costs.

In other words, counterforce is unnecessary because the deterrent capabilities it offers can be fully provided by a spectrum of countervalue options. For example, it is true that counterforce options might be useful for intra-

\textsuperscript{32} The classic discussion of these issues is Thomas C. Schelling, \textit{Arms and Influence} (New Haven: Yale University Press, 1966).
war bargaining—employing a limited counterforce option would increase the risk of Russian attacks against the United States and would therefore communicate U.S. resolve. But counterforce accomplishes this in essentially the same way as limited countervalue attacks would—by crossing the nuclear threshold and inflicting costs on Russia. The costs result from what is usually considered the “collateral damage”—damage inflicted on Russian society while trying to destroy Russian forces. In this case, however, inflicting this damage is the real purpose of the attack; targeting Russian nuclear forces is simply a misleading disguise.

**Counter-conventional options for extending deterrence.** The case for threatening limited strategic nuclear attacks against Russian or CIS conventional forces, although similar in many respects, differs from the argument for counterforce (that is, counter-nuclear) LNOs in one key respect. Unlike destroying strategic nuclear forces, destroying Russian conventional forces could reduce the Russian ability to fight a conventional war, and thereby contribute to deterrence. These LNOs would be more attractive if there are a small number of critical conventional targets, since the United States could then achieve militarily significant results with a small and, therefore, potentially less escalatory attack. Some proponents suggest that key components of Russian internal lines of communication would constitute such a target set, enabling the West to destroy Russian power projection capabilities.

Counter-conventional LNOs might further enhance deterrence by increasing the credibility of U.S. threats to employ limited nuclear options. Threatening counter-conventional attacks might be more credible than threatening other LNOs, precisely because their military value could convince Russian leaders that the United States had a compelling reason to escalate. Since the bargaining and denial components of counter-conventional options could not be separated, the United States could threaten to use nuclear attacks for denial, knowing full well that the Russians understood these attacks would increase the probability of escalation to a far more damaging war.

Employing nuclear weapons is one way, but not the best way, to accomplish conventional denial missions. Relying on conventional weapons provides greater credibility, better prospects for timely use, and lower risks of

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Russian escalation. However, if the United States and its Western European allies were unable to deploy adequate conventional forces (which seems unlikely following the dissolution of the Soviet Union), they could rely on strategic nuclear forces to compensate for this shortfall.  

But we need to weigh these potential benefits against the risks. Russian leaders might be more likely to misinterpret the signal that the United States is sending with a counter-conventional option, seeing it as primarily a military measure, when the United States was trying to demonstrate its resolve to escalate still further if necessary. This misunderstanding could encourage the Russians to keep fighting, whereas a better understanding of the U.S. decision to raise the stakes would generate greater pressure to terminate the war. U.S. objectives would therefore be better served by a limited counter-value attack that carries a less ambiguous message.

A second potential shortcoming of counter-conventional LNOs is that U.S. decisionmakers might fail to distinguish in their own minds between the denial and the bargaining uses of LNOs and, as a result, escalate when they should not. Although employing a counter-conventional option might improve U.S. prospects on the battlefield, the more important issue will almost certainly be whether launching a limited nuclear attack enhances America’s prospects for terminating the war on acceptable terms. If employing an LNO increases the probability of further Soviet escalation instead of increasing Soviet willingness to make concessions, then escalating would probably be ill-advised, even if doing so would improve U.S. prospects on the battlefield. The danger is that U.S. leaders, in the midst of a large conventional war, might focus on the benefits of destroying Russian nuclear forces and therefore escalate when the risks are unwarranted.

Overall, there does not appear to be an overwhelming case for or against planning some counter-conventional options. Conclusions on this issue have important implications for the nuclear warplans, but the implications for U.S. force requirements will probably be small, since counter-conventional options of interest are unlikely to require very large numbers of weapons. If any

34. A complete assessment of the denial value of counter-conventional options would consider the increased probability of Russian nuclear use and its effect on NATO battlefield capabilities.  
35. On this issue see Schelling, Arms and Influence, pp. 181–184.  
special systems are required, they would be relatively low-yield weapons
designed for reduced collateral damage.

In sum, even after making assumptions quite favorable to counterforce,
including some which the end of the Cold War has seriously weakened, we
find that the United States does not require counterforce for extending de-
terrence. A flexible countervalue capability is probably sufficient. The United
States might also want some small counter-conventional options.

THE ARGUMENT FOR COUNTERFORCE TO DETER ATTACKS AGAINST
THE U.S. HOMELAND
Cold War proponents of counterforce offered an array of arguments holding
that the United States required second-strike counterforce to deter Soviet
counterforce attacks against the U.S. homeland. These included arguments
that second-strike counterforce was necessary for retaliating in kind to a
Soviet counterforce attack, for restoring the ratio of surviving forces, and for
defeating a damage-limitation campaign in which the Soviet Union launched
successive large attacks against U.S. forces. But these arguments suffered
serious shortcomings during the Cold War, and the end of the Cold War
further weakens them by eliminating whatever political incentives might
have encouraged Soviet leaders to launch such a risky self-destructive attack.

The basic problem with these arguments is that, even accepting their
assumptions about the requirements for deterring a Russian attack, the
United States could satisfy them without counterforce. Increasing the surviv-
ability of U.S. forces, which also has other merits, would eliminate the
hypothesized Russian motivation for attacking.

To illustrate this, consider the case for restoring the ratio of forces. Pro-
ponents of counterforce worried that the Soviets could launch a massive
counterforce attack that would shift the ratio of surviving forces, leaving
the United States more vulnerable to coercion. During the 1970s and 80s, the so-
called “Nitze scenario” focused attention on this possibility.37 To avoid this
danger, counterforce proponents prescribed second-strike counterforce to
enable the United States to redress the ratio of forces. However, if U.S. forces
were highly survivable, a Soviet counterforce attack would consume more
forces than it destroyed and, therefore, could not favorably shift the ratio of

surviving forces. For similar reasons, increasing the survivability of U.S. forces can eliminate the dangers identified by the other arguments for second-strike counterforce.

The case for second-strike counterforce is weaker still, because many of the assumptions proponents used to build their arguments are open to serious challenge. For example, arguments for restoring the ratio of forces assume that the ratio of forces matters. However, when both countries have massive retaliatory capabilities, force ratios have little if any significance, because ratios do not reflect the countries' abilities to influence the outcome of an all-out war—to inflict or to limit damage.38

Finally, the end of the Cold War further weakens the case. Scenarios in which Soviet leaders launched massive counterforce attacks to gain coercive advantages in a limited nuclear war deserved consideration only if Soviet leaders were extremely risk-accepting and bent on achieving global hegemonic objectives. This was exceedingly unlikely even during the Cold War, and Russian leaders certainly do not fit this description today.

THE COSTS OF COUNTERFORCE
The preceding arguments suggest that counterforce provided at most small benefits during the Cold War and that its benefits are even smaller today. But if counterforce brings no dangers, there might nevertheless be a case for maintaining the current U.S. strategy as a hedge against Russian misunderstanding of basic nuclear logic and against extremely risky Russian behavior. In fact, however, an extensive counterforce arsenal carries strategic and political costs that outweigh the benefits of hedging, and increase the economic costs of U.S. strategic nuclear forces. The strategic costs of counterforce are somewhat smaller than they were during the Cold War, since they arise during crises, which are now less likely. On the other hand, avoiding the political costs is probably now more important, since they could fuel renewed tensions and play a role in regenerating adversarial relations.

The most common argument against counterforce is that it reduces crisis stability. If both countries have large counterforce arsenals, then both will prefer to attack first instead of being attacked first. In a severe crisis, the fear that one's adversary will launch first could justify a preemptive strike. However, when both countries have very large survivable forces, counterforce

38. For an extended discussion of this issue, see Jervis, The Illogic of American Nuclear Strategy.
should not have this effect: damage-limitation capabilities are so small that the risks of preemption are never warranted; even the ability to destroy large numbers of the adversary’s weapons does not create significant incentives to attack first.\footnote{This assumes that command and control is sufficiently survivable to launch a countervalue retaliatory strike. On the adequacy of U.S. command and control for this mission see Ashton B. Carter, “Assessing Command System Vulnerability,” in Carter, John D. Steinbruner, and Charles A. Zraket, eds., \textit{Managing Nuclear Operations} (Washington, D.C.: Brookings, 1987).} Thus, this standard argument—that counterforce reduces crisis stability—does not currently apply, because both sides have extensive survivable forces.

However, counterforce would reduce crisis stability if U.S. or Russian leaders failed to appreciate fully the essential infeasibility of significant damage-limitation. Although there would not be “real” incentives to attack first, misunderstandings of the benefits of destroying the adversary’s forces might suggest that there are benefits to attacking first.

Concern about this type of misunderstanding is not merely hypothetical. Quite the contrary, U.S. nuclear strategy has its roots in damage limitation, U.S. forces are still heavily dedicated to counterforce targeting, and U.S. leaders have not explicitly rejected an interest in marginal damage limitation. Moreover, even if American counterforce forces do not reflect an interest in damage limitation, during a severe crisis U.S. leaders might be tempted to risk a preemptive attack. Or, even if the United States was not planning to launch first, U.S. counterforce capabilities could reduce Russian confidence in American restraint. Thus Russian leaders might, correctly or incorrectly, anticipate U.S. preemption and decide to launch a preemptive damage-limitation attack of their own.

A second danger is that U.S. counterforce could increase the probability of accidental escalation. During a crisis, the vulnerability of both countries’ command and control systems is likely to generate pressures to shift to higher levels of alert, thereby increasing the probability of accidental escalation.\footnote{See for example, John D. Steinbruner, “Nuclear Decapitation,” \textit{Foreign Policy}, No. 45 (Winter 1981–82), pp. 16–28.} Counterforce could further increase this danger. An extensive U.S. counterforce arsenal pressures Russia to shift to high alert earlier in a crisis, increasing the time during which an accident—for example, incorrect information about a U.S. nuclear attack—might occur. In addition, by convincing Russian leaders that the United States plans to launch a massive counterforce attack, U.S. counterforce capabilities might increase Russian willingness to launch
on warning in response to ambiguous indicators of U.S. preparation for attack.

Furthermore, a counterforce strategy increases pressures for the United States to launch on warning, bringing with it the dangers associated with hasty decisions. Although a Russian attack against U.S. forces and command and control would almost certainly leave the United States with massive countervalue capabilities, it would significantly reduce the U.S. ability to destroy Russian military targets. Thus, unlike a countervalue strategy, a counterforce strategy pressures the United States to respond quickly.41

A third danger is that continued U.S. counterforce policies could generate negative political consequences, especially if the United States tries to enhance its damage limitation capabilities. Although the United States sees its counterforce as necessary for deterrence, Russian leaders are likely to see American counterforce as a threat to their security. As a result, counterforce could be a source of tension that encourages Russian policies that reduce U.S. security.

Concern about the potential negative political consequences of U.S. military policy may seem unwarranted now that the Cold War has ended. However, it would be short-sighted to assume that military policy will no longer be a factor in Russia's relations with the West. Rather, if there are periods in which U.S.–Russian relations sour, military policy is likely once again to play an important role in exacerbating or moderating tensions. Each country might use the other's military forces as a basis for inferring malign intentions.42

Russian leaders are more likely to impute malign intentions from American counterforce weapons than from countervalue weapons. U.S. counterforce threatens capabilities that Soviet leaders believed were necessary for deterrence and that Russian leaders are also likely to find necessary. In contrast, U.S. countervalue forces leave the Russian deterrent unthreatened, while satisfying America's requirements of deterrence.43 Even if U.S. counterforce

42. The potential for divergent perceptions is highlighted by contrasting views of recent arms control negotiations. Apparently, even Soviet moderates believed that U.S. policies were insensitive to Soviet security concerns and designed to take advantage of Soviet weaknesses. For example, Andrei Kortunov, “The End of Traditional Arms Control and the New American Role in International Security,” America's Changing Role in the World, Adelphi Paper No. 256 (London: IISS, Winter 1990/91), p. 64, argued that “the feeling that Gorbachev has been pushed into a corner by the U.S. will undoubtedly colour Soviet attitudes toward the treaty.”
is too ineffective to jeopardize Russian retaliatory capabilities, U.S. efforts to hold Russian forces at risk are likely to communicate a desire to undermine Russian deterrent capabilities. The United States long viewed Soviet counterforce this way, continuing to do so even after relations had warmed. Thus, we have little reason to expect that, if relations became more adversarial, Russian perceptions of U.S. counterforce forces would be radically different.

U.S. counterforce might negatively influence the Russian domestic debate, lending support to hardliners who hold a more malign image of the United States while weakening the position of moderates such as the “new thinkers” who argued that quite limited countervalue capabilities were sufficient for deterrence. A U.S. move away from counterforce policies could strengthen the prospects for positive changes in Russian strategy.

In summary, even during the Cold War the risks of a counterforce strategy exceeded its scant benefits. With the Cold War over and Western deterrent requirements greatly reduced, the costs of counterforce make the case against it stronger than ever.

**IMPLICATIONS OF THE CASE AGAINST COUNTERFORCE**

Implications for U.S. force requirements and arms control policy follow directly from the case against counterforce. First, the United States should revise the civilian guidance that directs the development of U.S. nuclear warplans. Revising the nuclear employment guidance documents is an important step, because as long as this guidance calls for the United States to be able to inflict high levels of damage against Russian strategic nuclear forces, proponents of extensive counterforce capabilities will be able to support their position by referring to official U.S. requirements.

Second, the United States should move toward a force posture that avoids threatening Soviet strategic nuclear forces. It should cancel modernization programs that are aimed primarily at enhancing counterforce capabilities and should reduce its most capable counterforce systems. These include ballistic

44. For example, focusing on the counterforce potential of Soviet heavy intercontinental ballistic missiles, Paul Nitze argued that “as long as these missiles exist, their great destructive capability will poison our political and military relations with the Soviet Union.” Paul H. Nitze, “America: An Honest Broker,” *Foreign Affairs*, Vol. 69, No. 4 (Fall 1990), p. 8.

missiles that have the highest probability of destroying hardened Soviet targets, like the MX ICBM and the Trident II submarine-launched ballistic missile.\textsuperscript{46} The United States does not require a penetrating strategic bomber, like the B-2 Stealth bomber, to perform strategic nuclear missions. The capabilities it might provide, beyond those already available from stand-off bombers that launch cruise missiles—hunting for mobile missiles and launching efficient follow-on attacks against fixed targets—are unnecessary. In addition, the United States should not deploy additional systems that are required primarily for performing strategic ASW missions and should forgo forward submarine operations in the Russian bastion. This raises serious doubts about whether the United States requires the Seawolf, the next generation of attack submarine.\textsuperscript{47}

Finally, U.S. arms control policy should give its highest priority to reducing Russian counterforce capabilities. Large reductions in Russian counterforce would require a change in Soviet doctrine that will increase U.S. security. In addition, Soviet willingness to forgo counterforce is likely to support U.S. proponents of a shift to a countervalue doctrine, by eliminating the Cold War argument that American counterforce was required to match Soviet counterforce. Useful arms control measures include the reduction or elimination of vulnerable MIRVed ICBMs, which was recently proposed by President Bush.\textsuperscript{48} banning the testing of depressed-trajectory SLBM launches,

\textsuperscript{46} On these missiles see Congressional Budget Office (CBO), \textit{Trident II Missiles: Capability, Costs, and Alternatives} (Washington, D.C.: U.S. GPO, July 1986). It may be impractical to replace Trident IIs with less accurate missiles. One possibility might be to deploy the Trident II only with its small warhead, which would reduce its countersilo capability. President Bush’s January 1992 announcement that the United States would halt production of new warheads for the Trident II means that the United States will essentially be following this policy. The United States has produced approximately 400 of these W-88 warheads, enough for two Trident missile submarines, assuming that each Trident II missile is loaded with eight W-88s. R. Jeffrey Smith, “U.S. to Halt H-Bomb Production,” \textit{Washington Post}, January 25, 1992, p. 1. In addition, the 1992 State of the Union message included Bush’s proposal to eliminate the MX and reduce Minuteman to a single-warhead missile, and to reduce the number of submarine weapons and nuclear bombers in exchange for elimination of Soviet MIRVed land-based missiles. “Text of Bush’s Message.”

\textsuperscript{47} On the Seawolf program see Ronald O’Rourke, “Seawolf or SSN-21 Nuclear Powered Attack Submarine,” Congressional Research Service (CRS) Issue Brief (Washington, D.C.: CRS, October 1, 1991. As part of the $50 billion reduction in the defense budget that Bush announced, the Seawolf program will be cancelled after completion of the first of these submarines, which is currently in production. John Lancaster and Barton Gellman, “Navy Subs, Big Army Programs Facing Ax,” \textit{Washington Post}, January 29, 1992, p. 12.

\textsuperscript{48} Although arms control is usually designed to reduce the threat posed by the adversary’s forces, the United States does not require arms control to reduce the counterforce effectiveness of Soviet MIRVs (multiple independently-targetable re-entry vehicles); a unilateral U.S. move to single-warhead missiles would accomplish this by making each U.S. target less lucrative.
since their short flight time threatens bomber survivability and critical command and control targets; reducing Soviet air defenses; and continuing to rely on the ABM Treaty, to provide meaningful limits on ballistic missile defenses. As discussed in this article’s closing section, reducing counterforce will make reducing the size of U.S. and Russian arsenals easier and safer.

The initiatives that President Bush set forward in his January 1992 State of the Union message and defense budget—including cancellation of further production of new larger-yield warheads for the Trident II missile, mutual agreed relinquishment of land-based MIRVed missiles, stopping production of the B-2, and cancelling further production of the Seawolf submarine—go a long way toward accomplishing the changes I recommend for U.S. force structure. However, these initiatives do not require a basic change in U.S. nuclear strategy, since the United States will retain the ability to threaten a wide array of Russian nuclear and command and control targets. The United States will also retain its fleet of attack submarines, which could be used for strategic anti-submarine warfare. Nevertheless, these initiatives will achieve much of what can be accomplished by changes in force structure, including essentially eliminating the potential political costs of continuing counterforce modernization. The United States should still shift to a flexible countervalue strategy, since the dangers of a counterforce strategy outlined above will not be entirely removed by these changes in U.S. and Russian nuclear forces; the United States should also move to bring its force structure still closer in line with the requirements of a flexible countervalue strategy.

**Limited Ballistic Missile Defense**

The decision to reject a counterforce strategy guides many force structure decisions, but leaves open the question of whether the United States should deploy limited BMD—that is, BMD capable of performing useful missions, but incapable of reducing the damage from a full Soviet retaliatory attack. In contrast to the debate over BMD during the 1980s—which focused on deterring full-scale Soviet attacks and protecting the U.S. homeland against such attacks⁴⁹—current interest focuses on the U.S. ability to protect against quite

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limited attacks. In his January 1991 State of the Union message, President Bush refocused the Strategic Defense Initiative (SDI) program to provide “protection from limited ballistic missile strikes—whatever their sources.” More specifically, this BMD program would be dedicated to protecting the U.S. homeland from accidental and unauthorized Russian attacks, and attacks from new Third World nuclear and ballistic missile states. The August 1991 attempted coup and the dissolution of the Soviet Union that followed have increased concern about central control of the former Soviet Union’s nuclear weapons, including strategic systems.

The specific BMD system proposed by the administration was termed Global Protection Against Limited Strikes (GPALS). In addition to protecting the U.S. homeland, GPALS includes among its objectives protection of U.S. forces deployed overseas, and of U.S. friends and allies. GPALS would consist of three interrelated elements: 1) ground-based interceptors and radars for defending against theater ballistic missiles; 2) ground-based interceptors deployed in the United States, supported by space-based sensors, to protect the U.S. homeland against strategic ballistic missile attacks; and 3) spaced-based interceptors—“Brilliant Pebbles”—to be employed against both strategic and theater ballistic missiles. The administration estimates that GPALS would cost $46 billion—$10, $25 and $11 billion for these elements respectively. While now emphasizing limited objectives, the Bush administration has also left open the possibility of pursuing more extensive and effective defenses.

In a recent major decision, Congress directed the development of a treaty-compliant ground-based system to be deployed at Grand Forks, North Dakota, by 1996 and urged the president to begin negotiations for amending the ABM Treaty to allow the construction of five or six more sites. In addition, Congress provided $390 million for Brilliant Pebbles.

51. There appears to be agreement that control of long-range strategic systems in the former Soviet Union is better than control of short-range systems there. See Campbell, Carter, Miller, and Zraket, Soviet Nuclear Fission. Concern about loss of control of these short-range systems was a key motivation for the Bush administration’s unilateral decision to eliminate American short-range systems, which it was hoped would facilitate retirement of comparable Soviet systems. See Michael R. Gordon, “The Nuclear Specter,” New York Times, September 28, 1991, p. 1.
53. House Armed Services Committee, FY 92 Defense Authorization Act, “House-Senate Con-
Assessments of limited BMD must compare the benefits of such a system to its political, strategic, and economic costs. Benefits depend on the availability of alternative means of reducing the probability of limited ballistic missile attacks, since implementing alternatives would reduce the need for protecting the U.S. homeland. Assessments of the costs should consider how the United States can redesign its nuclear policy to reduce the political and strategic costs of proceeding with limited BMD.

The following discussion focuses entirely on the question of protecting the U.S. homeland. Theater ballistic missile defenses are not considered here because they would serve different purposes, and do not raise the same complications for U.S. nuclear strategy that limited BMD does.

FEASIBILITY

Three points suggest that some protection against limited attacks is more feasible than the much more ambitious objectives pursued by SDI in the 1980s.54

First, any reduction in the size of a small attack could reduce the costs to U.S. society. In contrast, only near-perfect defenses could begin to reduce the costs of a massive Russian attack. Second, limited BMD benefits from the technological progress derived from U.S. investments in SDI, including the development of non-nuclear kinetic energy interceptors that can destroy reentry vehicles from intercontinental ballistic missiles.55

Finally, at least with respect to Russia, the United States might not face a reactive threat. If confident that U.S. BMD would not eventually threaten necessary nuclear capabilities, Russia would have little reason to increase the ability of its missiles to penetrate U.S. BMD. By comparison, U.S. efforts to defend against large Russian attacks, because they might appear to challenge...
Russian retaliatory capabilities, would be far more likely to provoke Russian countermeasures and therefore to be ineffective.

It is not feasible, however, to provide protection for the entire continental United States within the constraints of the ABM Treaty. A treaty-constrained BMD system could not protect coastal targets from SLBMs launched from within thousands of kilometers of the U.S. shore. In addition, it appears that limited radar capabilities would leave much of the continental United States vulnerable to Russian ICBMs.56

WHAT BENEFITS MIGHT LIMITED BMD BRING?
The more difficult questions concern the expected benefits of deploying defenses against these attacks. We need to assess separately two basic types of cases—Russian and Third World attacks—because the arsenals in question and the motivations for using them are markedly different.

RUSSIA. The basic argument for deploying limited defenses against Russian accidental and unauthorized attacks is that these attacks are by their very nature undeterrable. Although they are probably still unlikely, we cannot be fully confident this type of attack will not occur. Thus, continues this argument, because even a very small nuclear attack on the U.S. homeland could inflict catastrophic damage, the United States should buy insurance against it.

The expected benefits of protecting against these attacks depend on their probability. Judging this probability is difficult, largely because of uncertainties about how the Russian command and control system will perform if Russia or the CIS suffers much greater political turmoil than it has to date, which could essentially destroy current lines of authority. The complexity of C3 (command, control, and communications) systems and limited Western knowledge of Russian C3 make it difficult to estimate the probability of undesired missiles launches. Available information suggests that the Soviet command and control system was well designed to minimize these dangers under normal political conditions. All Soviet long-range missiles are reported to have been protected by permissive action links (PALs)—electronic and/or

mechanical disabling devices—and by procedural safeguards.\textsuperscript{57} When the Soviet political system was stable, the probability of accidental or unauthorized launch of strategic ballistic missiles during peacetime was judged to be extremely low.\textsuperscript{58}

Nevertheless, uncertainties about the future stability of the political and military structure of the former Soviet Union are sufficient to reduce confidence in Russian/CIS control. It is unclear how effective these safeguards will continue to be if republics other than Russia keep long-range nuclear systems and the Commonwealth fails to develop joint arrangements for control, and especially if social and political disorder grow or civil war occurs.\textsuperscript{59} For example, Representative Les Aspin has asked if a rebel group might "gain access to the necessary codes through sympathetic contacts in the military."\textsuperscript{60}

Without dismissing the potential danger, we should note that if such a circumvention requires high-level cooperation from a variety of sources, then the probability of attack may be much lower than the probability of loss of control. In this case, the decision to launch an attack would not be made by a disgruntled missile officer, but rather by a coalition of high-level officials who are more likely to be deterred from attacking the United States, even if they have acquired the capability to do so. In addition, if control is gained by a coup of high-level officials, they are likely to be able to launch an attack that is sufficiently large to overwhelm any limited American defense. Thus, although limited BMD could provide some protection against certain types of loss of control, it might be unnecessary or ineffective in other, probably more likely, scenarios.

A second potential source of accidental and unauthorized Russian attacks lies in the dangers generated by a crisis. As discussed above, if war began to appear more likely, both the United States and Russia would increase the readiness of their nuclear forces, loosening some of the safeguards against


\textsuperscript{59} Campbell, Carter, Miller, and Zraket, Soviet Nuclear Fission.

\textsuperscript{60} Aspin, “A New Kind of Threat,” p. 6.
Unauthorized use and generating unpredictable interactions between their complex command and control systems. The dangers of false warning and time pressures would increase the probability of accidental attack,\(^{61}\) and the delegation of launch authority deeper into the command structure would increase the probability of unauthorized attack. Unlike the dangers created by political instability, however, these dangers existed during the Cold War. By making severe crises less likely, the end of the Cold War reduces them, and thus reduces the weight of this argument for limited BMD.

During a crisis the value of limited BMD would depend on the size of the Russian attack. For example, limited BMD would be ineffective if Russian leaders ordered massive retaliation based on incorrect warning of American attack, but could be more effective against smaller attacks that might result from predelegation of authority.

The United States might be able to reduce the probability of unauthorized and accidental Russian missile attacks through a variety of approaches, which would reduce the need for limited BMD. By shifting away from its counter-nuclear and counter-control strategy, the United States could reduce pressures for Russian leaders to move quickly to high alert and to predelegate launch authority. The risks during a crisis might be further reduced via arms control measures, e.g., placing devices in missile silos that transmit information about whether the missiles have been launched.\(^{62}\) President Bush has called for U.S.-Soviet discussions of command and control arrangements and how to improve them.\(^{63}\) Command destruct devices could be installed that would enable a country to respond to an accidental launch by destroying its own missiles.\(^{64}\)

In short, while the end of the Cold War has reduced the probability of certain types of accidental and unauthorized missile launches, domestic po-

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62. Suggesting this cooperative measure is the Committee on International Security and Arms Control, *The Future of the U.S.-Soviet Relationship*.
64. Frank von Hippel, et al., “How to Avoid Accidental Nuclear War,” *Bulletin of the Atomic Scientists*, Vol. 46, No. 5 (June 1990), p. 37; Bruce G. Blair and Henry W. Kendall, “Accidental Nuclear War,” *Scientific American*, December 1990, p. 62. However, Campbell, Carter, Miller, and Zraket, in *Soviet Nuclear Fission*, p. 44, conclude that, “the time and effort to install them are not commensurate with the urgency of the problem.” We should also recognize that this approach would offer little protection against launches resulting from high-level coups and certain types of loss of central control.
political turmoil has probably increased the future probability that the Russian or CIS government might lose control of some strategic nuclear weapons, which increases the probability of accidental or unauthorized attack. The United States can pursue a variety of approaches for reducing the probability of these attacks, but their possibility will not be totally eliminated. Thus, limited defenses could provide some benefits in the form of insurance against what is probably an extremely low probability event that would have potentially disastrous consequences. The costs are discussed below.

THIRD WORLD. The danger of Third World ballistic missile threats differs significantly from the Russian case. First, the threat does not yet exist. Beyond the countries that already have intercontinental-range ballistic missiles, only Japan, Israel, and India could gain the capability to strike the United States with ballistic missiles in the foreseeable future. Other countries will take much longer and must also acquire weapons of mass destruction to pose a truly worrisome threat.65 Second, unlike the Russian case, limited BMD would be intended to blunt deliberate attacks in addition to accidental or unauthorized attacks; this would make it useful in deterrent and protection roles that it would be incapable of playing against Russia.

Opponents of deploying limited BMD against Third World threats have argued that it will offer little or no benefit, even once the threat develops.66 First, a Third World country or terrorist organization that has acquired nuclear weapons or other weapons of mass destruction will be able to deliver them to the United States via a variety means that are less sophisticated, but as effective, as ballistic missiles, including aircraft, ships, and a variety of clandestine means. Second, a country (although maybe not a terrorist organization) is likely to be deterred by the U.S. ability to inflict devastating retaliation upon its homeland.

Both arguments are powerful, but limited defenses might still provide some benefits. The United States might face a leader so vengeful or irrational as


to be undeterrable. The lessons of the Gulf War will be invoked on both sides of this argument. The coalition’s inability to coerce Saddam Hussein to withdraw from Kuwait suggests the possibility of a leader willing to incur enormous costs even when facing virtually no prospect of achieving expansionist objectives. On the other hand, it can be argued that Iraq was deterred from employing chemical weapons because American weapons of mass destruction were an effective deterrent.67

Moreover, the argument about alternative delivery systems does not cover all of the possibly relevant scenarios. A country might have a variety of reasons for preferring not to clandestinely deploy weapons in the United States—fear that they might be discovered, the desire to preserve scarce weapons for use in other contingencies, etc. Once involved in a war, however, the United States might be able to control air and sea access to its homeland, thereby rendering ineffective the alternative means of delivery.

Although less discussed, a rather different line of argument identifies additional benefits of BMD and raises a variety of more complicated issues. Proponents argue that the most important danger posed by the proliferation of intercontinental ballistic missiles and weapons of mass destruction is that the United States will be deterred from protecting its foreign policy interests. They worry that to avoid being attacked by weapons of mass destruction the United States will forgo intervention when its foreign interests are threatened. Even if American leaders believe the probability of such an attack is quite low, they might nevertheless be unwilling to run the risks of escalation.68 Keith Payne argues that “merely by acquiring long-range ballistic missiles Third Parties could gain international prestige, constrain U.S. diplomacy, undermine U.S. security guarantees, and deter U.S. and allied power projection into local conflicts.”69

Although it is true that the United States would be more reluctant and selective about intervening, the magnitude of these costs and the benefits of limited BMD are easily exaggerated. When U.S. interests are large, the pos-

68. This argument has a direct analogy in the Cold War debate over U.S. nuclear strategy: a small probability of NATO escalation was probably more than sufficient to deter Soviet attacks on Western Europe. See, Jervis, The Illogic of American Nuclear Strategy.
sibility of escalation by a new nuclear state will do less to keep the United States out, especially given the prospect that the U.S. retaliatory capability will deter the potential escalation. In addition, limited BMD would only greatly increase U.S. willingness to intervene if the United States is confident in its ability to seal off all alternative means of delivery, once the war has begun, and in the effectiveness of its BMD. If the adversary’s weapons of mass destruction are a powerful deterrent to U.S. intervention, then being able to intercept some but not all of this arsenal is likely to leave the United States still facing a powerful deterrent.

Whether the United States requires limited BMD to protect against new nuclear threats will depend partly on the extent of proliferation. It can pursue a variety of policies for delaying, if not preventing, the dangers of proliferation. These include arms control and export controls designed to curb proliferation of ballistic missiles, nuclear weapons, and other weapons of mass destruction; security guarantees designed to reduce other countries’ need for these capabilities; economic sanctions designed to make this proliferation appear unattractive; and threats of preventive use of force to make proliferation appear too costly or infeasible.

While a combination of these policies probably has good prospects for slowing the proliferation of threats to the U.S. homeland, chances are they will not be completely effective against all states. As this becomes clear, the United States will have increasing incentives to deploy limited BMD to protect its homeland. Other possible responses to proliferation include preventive attacks to eliminate the threat, which would be politically acceptable only in the most dire cases, and preemptive attacks launched in the beginning stages of a conflict. These other approaches complement BMD, but unless they were perfect they would not eclipse its benefits. On the other hand, these other policies would also have to be considered since even perfect BMD would not protect the United States from alternative means of delivery.

Fortunately, the United States does not need to deploy limited BMD now to protect itself from still-emerging ballistic missile threats. It should pursue development programs that will enable it to respond in a timely fashion, if the dangers posed by continuing proliferation warrant deployment.

COSTS OF DEPLOYING BMD

The costs of insuring against accidental and unauthorized Russian or CIS attacks, and eventually Third World threats, must be compared to the benefits described above. The political costs of deploying limited BMD are potentially the most significant. We should not be overly confident that the U.S.-Russian relationship is well insulated from military policies that appear threatening to either side. As with offensive counterforce, especially if relations begin to sour, U.S. BMD that appears to challenge Russian retaliatory capabilities is likely to increase Russian insecurity, make Russian leaders more concerned about American intentions, and give Russian hardliners a larger say in the development of Russian defense policy.

Although these negative consequences may be hard to imagine today, decisions about BMD will influence nuclear force structures over more than two decades, long enough for many ups and downs in U.S.-Russian relations. Some proponents of BMD argue that U.S.-Russian relations have improved so thoroughly that U.S. BMD, even if quite capable, would not appear threatening to Russian leaders; in other words, all of this concern about arms racing reflects an inability to shed old Cold War ideas. But consider the opposite possibility—if Russia miraculously deployed highly effective defenses, is there a serious possibility that the United States would not believe its security jeopardized? Certainly not. It is reasonable to expect that the Russians would react similarly.

Russian insecurity would increase with the extent of U.S. BMD programs—including deployed systems, ability to quickly expand these systems, and research and development programs. Limited BMD should not strain U.S.-Russian relations so long as Russian leaders do not see a threat to their retaliatory capabilities, and remain confident that the United States has not set this as a long-term objective. Deploying 100 interceptors, as allowed by the ABM Treaty, should not therefore in and of itself be a problem.

However, deployments that go beyond those permitted by the ABM Treaty, requiring either its amendment or its abrogation, raise a variety of more complicated issues. There is nothing sacrosanct about the number of deployment sites and interceptors currently allowed by the Treaty. What is critical, however, is preserving the basic objective the ABM Treaty was designed to support—maintaining high confidence in retaliatory capabilities, to be achieved by each country’s agreement to forgo deployment of BMD for “defense of the territory of its country and not to provide a base for such a
Amendments that permit larger BMD deployments without jeopardizing confidence that this prohibition is being met preserve the essential features of the Treaty and are consistent with its political and strategic objectives. By contrast, amendments that shake this confidence undermine these objectives.

The recent congressional decision to begin negotiations to allow construction of five or six additional sites carries a variety of risks. The problem is not with the deployment of approximately 600 ground-based ballistic missile interceptors. Russian missile forces should be able to overwhelm such a defense. However, increasing the number of sites also allows for supporting systems, including large BMD radars, which would increase both countries' ability to expand their BMD deployments rapidly. This ability to "break out" of the amended treaty more rapidly could generate political tensions by raising Russian concern about U.S. intentions.

A second danger is that beginning negotiations could be a step toward abrogating the ABM Treaty. How will the United States respond if Russia refuses to accept the amendments the United States desires? Senator Sam Nunn has argued that, "should [Moscow] say nyet, there is no explicit or implicit commitment in the committee [renegotiation] proposal [that would require the U.S.] to abrogate the ABM Treaty." Nevertheless, once involved in negotiations, the United States is likely to be less willing to accept Russian constraints on American BMD deployments. Pressures to abrogate the Treaty could be fueled by recognition of current Russian weakness and a sense that Western aid should be rewarded by Russian concessions. Thus, starting into this negotiation carries risks that must be handled skillfully, since America's long-term political interests will be poorly served by a military competition that could accompany the complete loss of ABM Treaty constraints.

In addition, future Russian BMD deployments might be a source of American concern. Although the United States will be able to maintain high confidence in its retaliatory capabilities, Russian BMD and especially the increased Russian capability for breakout could fuel American concern about Russian intentions. We should not forget that a Soviet BMD infrastructure much smaller than would be allowed by an amended Treaty generated sub-

stantial discomfort in much of the national security community well into the 1980s. Although it may be hard to imagine today, the BMD activities of an economically revived Russia could have similar political consequences in the future.

The strategic costs for the United States and Russia of expanded, although still significantly constrained, BMD deployments need not be large. Except in the case of extended near-total Russian economic collapse, both countries should be able to maintain impressive capabilities for deterring premeditated attacks and maintaining crisis stability. Neither country should have great trouble maintaining retaliatory forces capable of overwhelming ground-based deployments on the scale currently being proposed. The size of ballistic missile forces required to maintain these capabilities may increase, reflecting expectations about the effectiveness of the opposing BMD and the need for a cushion against the adversary’s increased potential for BMD breakout. Consequently, expansion of BMD deployments is likely to raise the floor below which the countries are unwilling to reduce their offensive forces in future START negotiations. The strategic costs of raising this floor are not high, however, since, as discussed below, there are not great benefits in moving to smaller forces. It does nevertheless create a tradeoff that should be kept in mind, especially in light of the growing political interest in deep cuts.

The strategic consequences would be greater for America’s British and French allies since their ballistic forces are much smaller. Maintaining high confidence in their retaliatory capabilities could require expansion of these forces and delay their entry into arms reduction agreements.

IMPLICATIONS FOR DEPLOYING LIMITED BMD

The overall case for deploying limited BMD is not now strong. Given uncertainties about the very low probability of an accidental or unauthorized Russian attack, judging whether the limited insurance provided by a single BMD site justifies the economic costs is difficult. This deployment should not, however, generate significant strategic or political costs, so there is not an overwhelming case against proceeding. Deployments to counter emerging Third World threats are not now warranted, since these threats do not yet exist and alternative policies can delay, if not prevent, them.

Because pursuing more extensive BMD could bring significant political costs and some strategic costs, the case against proceeding with it is much stronger. U.S. decisions should be informed by an improved understanding
of the actual risks; close consultations with Russian or CIS authorities should be pursued both to better appreciate and to minimize the dangers of loss of control of strategic nuclear forces. In addition, the evolution of CIS political and military structures should play an important role in U.S. decisions. A key advantage of delaying expanded BMD during the on-going transformation of the former Soviet Union is that doing so will enhance long-term U.S. prospects for avoiding adversarial relations with a major power. The optimistic possibility is that Russia will stabilize over the next few years, eliminating this incentive for a U.S. decision to proceed with BMD. Once conditions stabilize, Russia will be better able to cooperate in the deployment of BMD against Third World threats, if they become necessary, without feeling that its weakness enabled the West to extract undesirable concessions.

However, more troubling outcomes are possible. Although the case for deploying extensive BMD would still not be strong, growing political turmoil and its effects on Russian command and control might eventually convince the United States that the deployment of more extensive ground-based systems is warranted. In preparation for this possibility, the United States should design its overall strategic nuclear policy to minimize the political costs of buying this insurance.

Such a policy, focused on reducing Russian perceptions of threats to their retaliatory capabilities, should include the following components. First, U.S. declaratory policy should make clear that the United States does not harbor the long-term goal of obtaining highly effective strategic defenses or, more generally, significant damage-limitation capabilities, under any future political conditions. The United States should declare that limited American BMD is not the first step toward highly effective defenses against Russian forces, and that its future role will not expand beyond insuring against accidental and unauthorized attack. Second, to add credibility, U.S. technology policy must fully support this declaratory policy. The United States should forgo the development and testing of advanced BMD technologies, including space-based interceptors, that might eventually pose, or appear to pose, an increased threat to Russian retaliatory capabilities. Third, the United States should engage in discussions to clarify its obligations under the ABM Treaty, including committing itself to the “traditional” or “restrictive” interpretation of the Treaty.74

74. On these issues see Bunn, Foundation of the Future; and Antonia Handler Chayes and Paul Doty, eds., Defending Deterrence: Managing the ABM Treaty into the 21st Century (Washington,
Finally, U.S. nuclear strategy and arms control policy should be designed to reinforce America's commitment not to expand the purposes of its limited BMD. Rejecting the full range of offensive counterforce requirements would reduce whatever threat U.S. BMD might pose and would demonstrate U.S. willingness to forgo even marginal damage limitation. In arms reductions talks, the United States should not press Russia to reduce its forces to a level at which U.S. BMD might appear effective against dedicated attacks. In the Defense and Space Talks, the United States should stop advocating a transition toward highly effective defenses for both sides. This possibility should be put off at least until the still-distant future when political relations may be so completely improved that nuclear disarmament becomes politically feasible and strategic defenses would play at most a supporting role.

**Implications of a Shift Away from Counterforce for Force Size**

Decisions about strategy guide U.S. force requirements. As discussed above, shifting from a counterforce strategy essentially eliminates the U.S. need for prompt, highly accurate nuclear weapons, penetrating strategic bombers, and forces dedicated to strategic ASW missions. The shift to a flexible countervalue strategy, possibly supplemented by some counter-conventional options, also has implications for the size of the U.S. nuclear force. Even after reductions required by START, U.S. forces will be much larger than required to implement such a new strategy.75

Although they are worth pursuing, the benefits of reductions are not as great as generally assumed. Deeply cutting U.S. and Russian forces to well below START levels (which allow the United States to deploy over 10,000 warheads), to 2,000, for example, would not significantly reduce the cost the United States and Russia would suffer in an all-out war.76

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75. Cuts beyond START levels may also be possible without a basic change in U.S. strategy, although such cuts would be smaller. See George F. Bing, Michael M. May, and John D. Steinbruner, "Strategic Arsenals After START: The Implications of Deep Cuts," _International Security_, Vol. 13, No. 1 (Summer 1988), pp. 90–133.

A variety of other reasons have been offered for reducing force size. First, an unnecessarily large force wastes scarce resources. The savings could be quite substantial—possibly over $10 billion annually—resulting from both reduced operating costs and forgoing new forces that would replace old systems. Second, reducing force size may somewhat reduce the probability of accidental and unauthorized attack. However, the danger that central authorities will lose control of nuclear weapons is almost certainly much more sensitive to the quality of command and control than to the size of the total force, since a group determined to gain control of some nuclear weapons will focus on only a portion of the total force.

Third, reducing force size can bring political benefits. Based on purely strategic considerations, the shift from counterforce should provide essentially all of these political benefits, since independent of its size a force without counterforce capabilities does not threaten the adversary’s deterrent capability. Nevertheless, reductions are commonly understood to symbolize improved East-West relations and might, therefore, be politically valuable. Fourth, many analysts argue that reducing force size will help slow nuclear proliferation. This may be the case, if reductions reduce the prestige of being a nuclear power. However, if states are acquiring nuclear weapons to increase their security or to further expansionist foreign policy objectives, then reductions by the nuclear powers are likely to have little influence on proliferation. This should not be surprising, since retaining large, even if greatly reduced, arsenals does little to demonstrate that nuclear weapons cannot to contribute to security.

A final rationale may be the most interesting: both countries are unlikely to agree to deep reductions without increasing the overall survivability of their remaining forces. This principle is central to many studies of force reductions. Consequently, efforts to reduce force size are likely to further undermine counterforce strategies and to provide political support for rejecting them.

78. See for example, Feiveson and Hippel, "Beyond START"; and Committee on International Security and Arms Control, Future of the U.S. Soviet Nuclear Relationship.
79. From a different perspective, however, reductions could contribute to a case for counterforce: by eliminating redundant weapons, reductions actually increase the value of destroying those weapons that remain and of partially crippling command and control capabilities required for retaliation. This is precisely why increasing the survivability of retaliatory forces, and especially of C³, becomes more important.
There is tremendous room for reductions. A countervalue strategy requires the United States to be able to inflict “unacceptable costs” to deter premeditated Russian attacks. How much damage this requires depends on highly subjective assessments of the value that current and future Russian leaders will place on expansion and on the preservation of their society. Even during the Cold War, however, most American analysts believed that an assured destruction capability—the ability to destroy a large fraction of Soviet cities or industrial capability in retaliation—would inflict costs far greater than required for deterrence. Concerns focused on U.S. credibility, not the U.S. ability to inflict costs.80 Many analysts believed much smaller attacks—for example, destroying a small number of Soviet industrial targets or cities—would inflict costs that far outweighed any benefits the Soviets were pursuing and thus would be sufficient to deter.

The dramatic domestic political changes that fueled the dissolution of the Soviet Union and the improvements in U.S.-Russian relations mean that, even more than during the Cold War, deterring premeditated Russian attacks can be achieved with a force smaller than that required to inflict assured destruction. An assured destruction capability would require fewer than two thousand weapons, and possibly fewer than one thousand. This range depends on the yield of the weapons, their survivability and penetrability, and whether the United States is attacked by surprise or with warning. (As noted in the previous section, Russian deployment of limited BMD could significantly increase the number of weapons the United States requires to satisfy the assured destruction standard.)

Although almost certainly unnecessary for deterring premeditated attacks, an assured destruction capability does contribute significantly to crisis sta-

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80. Two notable exceptions developed during the 1970s, however. Some analysts, of whom Colin Gray was most prominent, argued that credibly threatening to destroy Soviet society might be insufficient to deter Soviet invasion of Western Europe; see, for example, Gray, “Nuclear Strategy: The Case for a Theory of Victory.” Second, starting in the late 1970s, official U.S. declaratory doctrine called for holding at risk what Soviet leaders were believed to value most, including military and leadership targets; deterring all-out war was thought to require threatening these targets, even when Soviet society was extremely vulnerable to retaliation. Although space does not here permit analysis of the argument for targeting leadership, it too was weak during the Cold War and has been further weakened by changes in the former Soviet Union. On the Cold War arguments against leadership targeting, see Robert J. Art, “Between Assured Destruction and Nuclear Victory: The Case for a ‘MAD-Plus’ Posture,” Ethics, Vol. 95, No. 3 (April 1985), p. 509; and Glaser, Analyzing Strategic Nuclear Policy, pp. 25–27, 236–238. The emergence of democratic governments in Russia and the other former republics further weakens the arguments that Russian leaders value their own lives so disproportionately that targeting them adds significantly to deterrence.
bility. Crisis stability will be high if Russian leaders believe that striking first will not reduce the costs of an all-out American attack. Unless its force is entirely survivable, the United States needs the ability to inflict retaliatory damage that is so high that Russian leaders see essentially no value in destroying vulnerable U.S. forces. An assured destruction capability goes a long way toward meeting this requirement by placing U.S. retaliatory capabilities on the “flat of the damage curve.” Reducing partially vulnerable forces to levels at which they are unable to inflict this level of retaliatory damage risks generating some crisis instability.

A large, diversified force—one possessing at least an assured destruction capability—also contributes to robustness, that is, to arms race stability. By providing forces beyond those required for deterring premeditated attacks and maintaining crisis stability, such a force makes U.S. capabilities less sensitive to expansion and improvement of Russian forces. Reducing U.S. forces to the lower limit required for an assured destruction capability could raise the question whether U.S. nuclear capabilities provided adequate arms race stability. If U.S. retaliatory capabilities were just large enough to eliminate Russian first-strike incentives, which could be the case when U.S. forces are just large enough to provide an assured destruction capability, then any increase in Russian offensive counterforce or strategic defense capabilities would raise doubts about the adequacy of U.S. capabilities. Probably more important, these changes could generate questions about Russian intentions. Maintaining a force that is larger and more diversified than the minimum required for an assured destruction capability would provide greater confidence in the future adequacy of U.S. capabilities.

Of course, reduced competition with Russia reduces the need for robustness. If the United States became increasingly confident that military competition will not resume, even with an economically recovered Russia, it would not need such a large buffer against technological breakthroughs and rapid growth in the Russian force. Among other changes, this would reduce the risks of moving from a strategic triad to a dyad. 81

In short, the United States can pursue deep cuts well beyond START levels, but attention to crisis stability and arms race stability suggests there is some danger in pressing down to the lower limit of assured destruction capabilities—to what is sometimes called a minimum deterrent. These dangers would

81. On this issue, see Glaser, Analyzing Strategic Nuclear Policy, chap. 8.
decrease if the United States became more confident that its relations with Russia will remain very good over the long term.

The arms control measures already recommended to reduce counterforce capabilities will facilitate force reductions by increasing the survivability of the remaining forces, thereby making reductions safer and increasing their feasibility. As force levels decline, certain measures that will be useful in near-term stages of reductions will have to give way to more extensive efforts to increase force survivability. For example, while deMIRVing ICBMs can contribute to increased force survivability, once the United States presses near or below the levels necessary for an assured destruction capability, these forces would be dangerously vulnerable. Although attacking a single-warhead missile would cost Russia at least one warhead, thereby resulting in an unfavorable warhead exchange, these targets could nevertheless be attractive if the Russians were preempting to limit damage. At this point in the reduction process, therefore, the United States would either have to deploy ICBMs in a survivable basing mode—mobile or deceptive basing—or decide to eliminate its ICBMs. In addition, minimizing both sides' ability to break out of reduction agreements will become an increasingly important dimension of arms control, especially if the countries decide to reduce the diversity of their strategic forces.

These and a variety of other complications would accompany arms control efforts designed to cut forces so deeply that the vulnerability of U.S. society would be significantly reduced. However, as discussed in the section on alternative worlds, the most serious barriers to near-disarmament are likely to be political, not strategic or technical. If East-West relations improve to the point that reducing societal vulnerability is possible, the prospects for developing technical solutions to the problems of crisis stability and rearmament may be manageable. Whether this disarmament route is desirable is, of course, another question. That question does not need to be answered now, however. Until that time arrives, the United States has an ambitious agenda to tackle. Revising its nuclear strategy and reducing counterforce systems deserve the highest priority.

82. At these low levels, U.S. forces will need what Ashton Carter has termed a "dumb rideout" capability: "their ability to retaliate should be effectively independent of warning or other information, independent of what other forces in other basing modes are doing, independent of time." Ashton B. Carter, "Emerging Themes in Nuclear Arms Control," in an issue entitled, "Arms Control: Thirty Years On," Daedalus, Vol. 120, No. 1 (Winter 1991), pp. 238. Maintaining such a capability may be impractical for cases in which the United States lacks strategic warning, but should be a high priority for cases in which it does receive strategic warning.