

The Case for Unilateral Nuclear Force Reductions

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The Case for Unilateral Nuclear Force Reductions

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ABSTRACT

Since the end of the Cold War, the United States (U.S.) and Russia have made great strides in reducing their nuclear arsenals. The Strategic Arms Reduction Treaty (START) I reduced accountable strategic warheads by over 50%. In 1991, the Bush administration made bold unilateral policy changes, eliminating many forms of non-strategic nuclear weapons and placing all others into storage. These unilateral U.S. moves were quickly met with similar Russian initiatives. However, the pace of reductions has slowed over the last three years. Although signed by Presidents Bush and Yeltsin in 1993 and ratified by Congress in 1996, the Russian legislature has, for political reasons, failed to ratify the START II treaty. In addition, Congress passed legislation in 1997 that prohibits the Department of Defense (DoD) from reducing its strategic nuclear forces below START I levels in an attempt to influence Russian ratification.

This paper will examine the national security implications of a unilateral reduction of U.S. nuclear forces below START I levels. First, U.S. nuclear policy and strategy will be examined. Complete nuclear disarmament is not in the best interests of the U.S. given the current world political order; instead, nuclear weapons and nuclear deterrence will continue to be a vital part of U.S. national security today and in the near future. Second, the effect of unilateral reductions on nuclear deterrence will be examined, concluding that the U.S. does not need to maintain a strict parity of nuclear forces with Russia in order to maintain a capable, credible nuclear deterrent posture. Next, this paper will address the potential effects of unilateral nuclear reductions on other areas of national security and international relations. This paper concludes with a recommendation that Congress repeal its restrictive legislation and allow the DoD to unilaterally reduce strategic nuclear forces below START I levels.

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CHAPTER 1

INTRODUCTION

Since the end of the Cold War, the United States (U.S.) and Russia have made great strides in reducing their nuclear arsenals and reducing the risks of nuclear war. The Strategic Arms Reduction Treaty (START) I was signed in 1991 and entered into force in 1994 with ratification by the legislative branches of both nations. START I reductions are scheduled to be fully implemented by 2001. They will result in roughly a 50% reduction in strategic nuclear weapons (from approximately 12,000 to 6,000 accountable strategic warheads in the case of the U.S.) and a numerical parity of strategic nuclear forces between the U.S. and Russia.¹

In addition to the START I treaty reductions, both nations have taken other steps to further reduce the threat of nuclear confrontation. In late 1991, President Bush announced widespread unilateral measures. The U.S. pledged to no longer develop new nuclear weapons. All non-strategic nuclear weapons were removed from the Army and Marine Corps ground units and Navy surface ships. The remaining non-strategic nuclear weapons (employed from USN submarines and USAF aircraft) were placed into storage. President Bush also deactivated 450 Intercontinental Ballistic Missiles (ICBMs) and took the entire strategic bomber fleet off of its 15 minute alert status. Similar nuclear arms reduction measures were announced in Russia shortly after the U.S. moves. Later in 1993, Presidents Clinton and Yeltsin agreed not to target ICBMs on alert at each other's territory.²

Presidents Bush and Yeltsin signed the second nuclear arms reduction treaty, START II, in January 1993. This treaty, if ratified, will result in a further reduction of strategic nuclear weapons from START I levels, resulting in roughly 3,000 - 3,500 strategic warheads each, and

eliminate multiple independently targeted re-entry vehicle (MIRV) warheads on ICBMs. However, the pace of progress in treaty negotiations has slowed down over the last three years. Although Congress ratified START II in 1996, passage has been stalled in the Russian lower legislative body, the Duma. Just when it appeared that the Duma was moving toward ratification in December 1998, discussion was again postponed, this time in protest of U.S. and British air strikes on Iraq after Iraqi non-compliance with the United Nations inspection teams. Prospects for a favorable vote in the spring of 1999 were dealt a further blow when the Clinton Administration one month later announced its decision to move ahead with a national ballistic missile defense system. In response to this action, Alexei Pedberiozkin, a member of the Duma, stated that "certainly it will make ratification of START II impossible."³ It is clear that ratification of START II by Russia has become a political issue whose outcome is being linked to other foreign policy issues. The Duma is using the ratification of START II as a political tool in an effort to exert leverage on the U.S. and gain concessions in other policy areas. The political nature becomes more evident when one takes into account widespread reports that Russia itself has already fallen below START I levels due to the deteriorating state of its economy.⁴

Not to be left out of the action, Congress further politicized the issue by passing legislation in 1997 restricting the DoD from reducing its strategic forces below START I levels until the Russian parliament ratified START II. Many members of Congress and the administration believed this legislation would give the U.S. leverage with Russia and help speed up the ratification process. Unfortunately, this effort at prodding along the ratification process has proven to be a failure, as the lack of progress in ratifying START II over the past two years

has proven. Furthermore, this delay in the ratification of START II has forced the delay of formal negotiations on START III (further reductions down to 2,000 warheads each).⁵

The U.S. is now faced with a choice: (1) either continue to await the ratification process in Russia before further reductions or (2) unilaterally reduce its nuclear forces below START I force levels. The costs of maintaining our forces at START I levels are high. It is estimated that it will cost the U.S. more than 5 billion dollars to extend the service life of the four older Trident submarines (refuel the nuclear reactors and install new D-5 missiles) scheduled to be decommissioned beginning in 1999 as part of the anticipated START II force reductions.⁶

This is an enormous price to pay for forces that may not be needed. However, before deciding that unilateral reductions are the correct step, it is necessary to analyze not just the cost of these weapons but the effects of unilateral reductions on national security, both now and in the future. This paper will present such an analysis, first addressing U.S. nuclear policy and strategy in the new-world order. Second, the effect of unilateral reductions on maintaining a capable, credible nuclear deterrent will be examined. Finally, the effect of unilateral reductions on other aspects of national security and international relations will be thoroughly examined.

CHAPTER 2

THE ROLE OF NUCLEAR WEAPONS IN U.S. SECURITY STRATEGY

The end of the Cold War and the easing of tensions between Russia and the U.S. have brought on a renewed debate concerning the future role of nuclear weapons in U.S. security policy. Would the U.S., and the world, be a safer place if nuclear weapons were completely abolished? Can nuclear weapons deter conventional attacks? Can nuclear weapons deter the use of other weapons of mass destruction (WMD), specifically chemical or biological weapons, during a major theater war? Should the U.S. adopt a strict "no first use" policy? These issues will be examined by first critiquing the nuclear disarmament arguments and then analyzing current U.S. nuclear strategy.

The Argument Against Nuclear Abolition

The nuclear abolition movement has gained support over the last few years with the release of many reports and statements in favor of complete nuclear disarmament. The most prominent of these are the *Canberra Commission Report*, an in-depth report sponsored by the government of Australia to develop ideas and proposals to achieve a total nuclear free world, and a statement in favor of complete disarmament signed by 58 former U.S. and foreign military officers, to include Gen. Charles A. Homer (USAF, Ret., former Commander, Coalition Air Forces during Desert Storm), and Gen. John R. Gavin, (USA, Ret., former Supreme Allied Commander, Europe). While there are many varying proposals for nuclear disarmament, they all share some common key assumptions: (1) that nuclear weapons have no military utility other than deterring the use of other nuclear weapons, (2) that a disarmament plan would be verifiable, and (3) that other nations could also be persuaded to disarm.⁷

First, the abolitionists argue that nuclear weapons have no military utility other than to prevent nuclear war. They argue they are too destructive to attack precise targets on the battlefield without causing huge collateral damage and death. Further, they argue that even a limited use of nuclear weapons risks escalation to even greater levels of use and ultimately to nuclear holocaust. Since the only real role of nuclear weapons is to deter the use of other nuclear weapons, the weapons would not be needed if they were totally abolished. However, this argument goes directly against experience gained over the last 50 years. The threat of use of non-strategic nuclear weapons to defend Western Europe from a superior conventional Warsaw Pact force was a key factor in preventing a third world war in Europe. Now that the conventional tables have been turned, Russia has begun placing a greater emphasis on non-strategic nuclear weapons to protect its territorial integrity against a conventional attack, disavowing its long standing no-first-use policy to allow it to escalate to a nuclear response if directly threatened by superior conventional forces. The military utility of nuclear weapons in deterring the use of other WMD, specifically chemical or biological weapons, was demonstrated during the 1991 Persian Gulf War.

"This point has been confirmed by different senior Iraqi officials on different occasions. For example, Iraqi Foreign Minister at the time of the Gulf War, Tariq Aziz, has stated that Iraq was deterred from using its WMD during the war because Saddam Hussein interpreted Washington's various threats of grievous retaliation as meaning nuclear retaliation. Tariq Aziz's explanation has been corroborated by a senior Iraqi defector, General Wafia Al Sammarai, former head of Iraqi military intelligence."⁸

The vague U.S. nuclear threat seems to have had a very desirable deterrent effect in keeping the Gulf War conflict from escalating to the realm of WMD.

Second, the abolitionists argue that a disarmament structure would be verifiable and enforceable. They argue that the political and technological means are now available to detect a

nuclear cheater and collectively punish him. The current case of Iraq clearly contradicts this argument. Although deemed in compliance with its non-proliferation commitment before the Gulf War, the United Nations (UN) was stunned to discover the extent of Saddam Hussein's nuclear weapons facilities after the war. Even after eight years of intrusive inspections, it is widely felt that the best the UN can achieve in Iraq is to delay the development of nuclear weapons in the hope that a change in the leadership will ultimately solve the problem. In today's world it is hard to imagine a similar inspection regiment being applied to Russia, China, the U.S., or even a rogue nation such as North Korea that has not been forced into compliance due to resorting to and losing a war. And even if inspection was allowed, what about civilian nuclear reactors and nuclear fuels, nuclear scientists, nuclear knowledge, and nuclear physics research? Knowledge of nuclear weapons and the technology for their manufacture can not be dis-invented. A rogue nation that could build even a few nuclear weapons would enjoy a huge advantage in a world totally disarmed.⁹

Finally, the abolition argument also hinges on the fact that other nations can be persuaded to disarm. They ignore the views and actions of other key nations and assume that all nations would follow the U.S. lead if we announced a disarmament program. Nuclear weapons have taken on even greater significance to Russia in the post Cold War environment for two reasons. First, with its economy deteriorating and its conventional military forces in decline, Russia's nuclear arsenal is its key to international prestige and great power status in world politics. Second, as already mentioned, Russia's nuclear forces now serve to guarantee its national security and territorial integrity against a hostile NATO or Chinese conventional military threat. Similarly, China and France, and to a lesser extent Great Britain, use nuclear weapons to enhance

their world political power and to guarantee national sovereignty. Any attempts at complete disarmament would involve not just bi-lateral agreements between the U.S. and Russia, but multilateral agreements between all nuclear and quasi-nuclear states. Currently, it is hard enough for the U.S. and Russia to proceed with a bilateral nuclear arms agreement, let alone reach a multi-lateral agreement between the U.S., Russia, China, Britain, France, India, Pakistan, Israel, Iraq, Iran, and North Korea. Each nation has its own agenda and its own national security reason for possessing or wanting to possess nuclear weapons. Still, abolitionists argue that the world has changed, that globalization, collective security, and interdependence now allow for such international cooperation. Unfortunately, these views do not reflect the current reality. Nuclear reductions did not bring about the end of the Cold War. Nuclear reductions occurred only after the end of the Cold War. Similarly, nuclear disarmament could only come about after world politics have been transformed to a truly collective, peaceful, interdependent society. With the ongoing conflicts in Bosnia, Kosovo, Africa, North Korea, and Iraq just to name a few, the world has not reached such an idealistic, utopian status yet. The goal of complete nuclear disarmament is a worthwhile cause, but unfortunately it is a concept whose time has not yet arrived. It therefore follows that nuclear weapons will continue to be a part of the international security system. Agreements to reduce nuclear arsenals are good, but only up to the point that strategic stability is not threatened.¹⁰

Current U.S. Nuclear Strategy

Recent policy reviews of U.S. nuclear strategy, the 1994 *Nuclear Posture Review* (NPR) and the 1997 *Report of the Quadrennial Defense Review* (QDR) both recognize the continuing

importance of nuclear weapons in ensuring security and stability in the current international environment. The QDR states that:

"... the United States must retain strategic nuclear forces sufficient to deter any hostile foreign leadership with access to nuclear weapons from acting against our vital interests and to convince such a leadership that seeking a nuclear advantage would be futile. Thus, for the foreseeable future, the United States will continue to need a reliable and flexible nuclear deterrent—survivable against the most aggressive attack...We believe these goals can be achieved at lower force levels."¹¹

In November 1997, President Clinton further expanded on his new nuclear policy by issuing Presidential Decision Directive (PDD) #60, Nuclear Weapons Policy Guidance. In this document, and his 1998 National Security Strategy, he charts a course away from previous war winning nuclear strategies and focuses on nuclear deterrence, placing the greatest value on being able to land a final blow that guarantees devastating consequences to an aggressor. This new U.S. nuclear policy contains the following important principles:

1. Primary focus on deterring nuclear war rather than winning a protracted nuclear exchange.
2. Use of nuclear weapons to deter the use of other WMD.
3. Emphasis on survivability of nuclear systems to endure a preemptive attack and still respond at overwhelming levels.
4. Maintenance of a triad of forces to convince hostile nations that seeking any advantage would be futile.
5. Use of nuclear weapons as a hedge against an uncertain future, a security guarantee to our allies, and a disincentive to others to develop / acquire their own nuclear weapons.
6. Denouncement of a launch on warning strategy.
7. Denouncement of a no first use policy.¹²

This U.S. nuclear policy takes into account the dangers inherent with complete nuclear

disarmament while recognizing the need to reduce the size of the current nuclear arsenal to the minimum needed to achieve national security objectives. It also addresses the national security objective of the non-proliferation of nuclear weapons to additional nation-states. Experience during the Cold War and since has shown that nuclear proliferation is not out of control despite the recent addition of India and Pakistan to the nuclear club. Rogue states, such as Iraq or North Korea, would seek to develop WMD for their own purposes regardless of U.S. nuclear policies. Furthermore, maintaining the U.S. nuclear umbrella over our allies will continue to discourage allies, such as Japan and Germany, from developing their own nuclear weapons.¹³

CHAPTER 3

IS NUCLEAR PARITY WITH RUSSIA

A NECESSITY FOR NUCLEAR DETERRENCE?

Given the U.S. nuclear deterrence strategy as outlined previously, the next issue to address is whether the U.S. can unilaterally reduce the size of its strategic nuclear forces and still retain its deterrent capability. Inherent in such a proposition would be the abandonment of the concept that nuclear parity is a necessity for nuclear deterrence and for strategic stability between the U.S. and Russia.

In reviewing the American Cold War experience as a whole, the cyclic nature of U.S. perceptions of the U.S./U.S.S.R. nuclear balance becomes apparent. The U.S. began the Cold War with an absolute supremacy in the nuclear arena by virtue of its monopoly on nuclear weapons. This U.S. monopoly ended with the testing of the first Soviet nuclear device five years earlier than expected. This event shocked America and produced enough doubt to launch its first buildup phase to ensure numerical superiority. This period of a strategy of "Massive Retaliation" with numerically superior forces ended with the launch of the Sputnik I spacecraft and the false but widely believed perception of an inferior position, the so called "missile gap." Following another rapid build-up to re-establish numerical superiority (though a much smaller superiority than the previous period), the up and down cycles dampened out to rough numerical parity, the acceptance of a "Mutually Assured Destruction" strategy, and a continual nuclear arms race. Even as late as the 1980s, Ronald Reagan played on the public's perception of the U.S. falling behind in the nuclear arms race during his successful campaign for the presidency. This

American fear of being second best in the nuclear arena was a false perception, but nevertheless has been deeply engrained in the public's psyche and will be difficult to overcome.¹⁴

To analyze whether the U.S. can unilaterally reduce its nuclear forces and abandon a strict numerical parity with its only nuclear peer competitor, Russia, this section will address the following issues. Deterrence theory will be addressed first followed by an examination of the triad of U.S. strategic nuclear forces. Next, an MIT study will be discussed to quantify the number of nuclear detonations needed to deal an overwhelming retaliatory blow to an industrial society. Finally, two potential U.S. force sizes, one a START II force of roughly 3,000 warheads and one a START III force of roughly 2,000 warheads, will be analyzed to see if they have the necessary retaliatory capability to inflict such an "overwhelming" blow.

U.S. nuclear strategy is designed to deter many potential hostile actions. However, the gravest threat, the one that threatens the very survival of the United States as a free, independent, sovereign nation, is a massive, pre-emptive, surprise nuclear attack on the U.S. mainland. Such a scenario is the worst case against which we will analyze the survivability of our forces and their ability to deal a devastating retaliatory strike. But before discussing specific force proposals, one must first review the basics of deterrence theory.

Deterrence Theory

Deterrence, whether in the context of nuclear weapons or a street fight, is the ability to discourage or prevent the actions of another. The fundamentals of military deterrence have not changed for centuries. To deter an enemy action, the deterrent threat must be both capable (the enemy must believe one possesses the forces required to carry out the threatened action) and

credible (the enemy must believe one possesses the will to respond or follow through with the threatened action). Said another way,

"deterrence means transmitting a basically simple message....if you attack me, I will resist; I will go on resisting until you stop or until my strength fails; and if it is the latter, my strength will not fail before I have inflicted on you damage so heavy that you will be much worse off at the end than if you had never started; so do not start"¹⁵

Deterrence works because of the real capability to back up a threat with action. Action in this case requires a nuclear force structure capable of being successfully employed (to include detailed employment plans and well trained, combat ready crews) and the credible national will to use those forces to retaliate if attacked.

Cold War declarative nuclear policies combined two elements of deterrence: retaliation and denial. Retaliation promised an unacceptable level of punishment in response to nuclear or conventional aggression in Western Europe. Denial promised the ability of the U.S. to deny the Soviet Union's ability to achieve its objectives, through such means as air defenses, civil defense measures, and a capability to target and destroy remaining Soviet conventional and nuclear military capabilities. The current political debate over a limited U.S. National Missile Defense System is an attempt to deter small nuclear powers through denial of the ability to land a warhead on U.S. territory. Such a system, however, could not totally deter a Russian attack through denial because they have enough warheads to overwhelm the proposed limited defensive system. A retaliatory capability is still needed to deter Russian hostile nuclear actions.

Nuclear Triad

A key principle of current U.S. strategy is the emphasis on a triad of survivable weapons systems, capable as a whole of enduring a preemptive attack and still responding at

overwhelming levels. The nuclear triad consists of Intercontinental Ballistic Missiles (ICBMs), Sea Launched Ballistic Missiles (SLBMs), and manned bombers (B-2 and B-52) carrying Air Launched Cruise Missiles (ALCMs) and gravity nuclear bombs. Each element of the triad contains its own particular strengths and weaknesses. The bomber force has the most flexibility, can be recalled, and can be placed on various stages of alert depending on the level of tension. Bombers are highly survivable during alert or while airborne but are vulnerable at other times. The bomber force is expensive but also has inherent conventional capabilities, making it even more versatile. The ICBM force possesses high accuracy, the most reliable communications and immediate responsiveness, and the lowest cost. However, the current ICBM force is vulnerable to many of the new, highly accurate Russian missiles due to its fixed sites. Mobile ICBMs (of which the U.S. currently has none) retain most of the advantages of fixed ICBMs with a much lower vulnerability to attack, though at a higher cost. SLBMs, when deployed at sea, are the most survivable with the shortest time of flight to impact. Like ICBMs, the current generation D-5 SLBM is highly accurate. SLBMs, however, have less reliable communications, are expensive to operate, have lower alert rates, and are vulnerable while in port. ICBMs and SLBMs can be configured with either a single warhead or with multiple warheads (multiple, independently targeted reentry vehicles, or MIRVs).¹⁷

The diversity of these forces contributes to overall deterrence by complicating Soviet offensive and defensive force planning requirements and increasing the chances of survival of some form of nuclear retaliatory capabilities. In addition, maintaining the triad of forces provides a hedge against the possibility of a technological breakthrough that would put one

element at increased risk. The added cost of maintaining all three legs of the triad is well worth the added survivability of the total nuclear force.

Quantifying "Overwhelming" Retaliation: 1987 MIT Study

Attempting to quantify the concept of overwhelming retaliation is a challenging proposition, because overwhelming destruction to one person/nation may be acceptable damage to another. For the U.S., the threat of even just one nuclear detonation on U.S. territory may be enough to deter the risk of initiating a nuclear exchange. Another state may feel the losses associated with a small number of nuclear detonations acceptable to achieve some greater objective. The point at which the losses become unacceptable to a nation's leadership will no doubt vary with the situation.

A useful study for attempting to quantify the overall effects on an industrial nation of multiple nuclear detonations was accomplished at MIT in 1987 by a group under Dr. Kosta Tsipis. Employing a computer model of the U.S. economy, this group evaluated the effects, of various attacks of various systems and found the U.S. was particularly vulnerable to an attack on the liquid fuel system. The simulation showed that when the sources of liquid fuel (such as harbors, oil fields, and refineries) and the distribution network (such as pipelines and control centers) were targeted with 239 nuclear detonations, the results were catastrophic. With even the most optimistic of assumptions concerning the recovery effort, 60% of the U.S. population died within two years and the economy returned to only 40% of its pre-attack level after six years. Besides death from the nuclear effects (blast, thermal energy, and radiation), a large proportion of people starved in the immediate aftermath due to a complete breakdown of the country's transportation network. Additional effects are hard to quantify. Civil society may completely

disintegrate; the lack of a transportation network may cause the nation to divide into regional, agrarian economies with new political frameworks. The massive number of deaths and the prolonged struggle for basic survival and recovery would leave a lingering psychological trauma for the nation as a whole. In such a scenario, it seems clear that those 239 detonations would constitute an overwhelming level of destruction for the U.S.¹⁸

Clearly the MIT study is just one computer model and its 239 detonations should not be taken as the definitive number of warheads needed now or in the future. The key point is that, for a large industrial nation like the U.S., the number of detonations, if targeted properly on the key national economic systems, is probably somewhere in the range of a few hundred. Would Russia be similarly vulnerable? It is larger geographically and therefore its economy is even more dependent on its transportation system than the U.S. Russian industry is less developed but more concentrated in certain areas. Exactly what to target, liquid fuel, coal, transportation, etc., is beyond the scope of this paper. Nevertheless, it is logical to deduce that being able to detonate 200 — 300 nuclear weapons within Russia on a suitable critical system would have similar catastrophic effects as above. It is not unreasonable to assume that China, though a much more agrarian society, would also suffer catastrophic damage from a similar number of detonations. And it easily follows that smaller nations would be vulnerable to a smaller number of detonations. Two key points emerge from this analysis. First, a retaliatory force that can target 200 — 300 critical aimpoints is enough to ensure overwhelming damage. Second, U.S. retaliatory targeting should focus not on military installations, not on population centers, but on those vital national systems that would crush an enemy's ability to function as an integrated society.¹⁹

Analysis of the Retaliatory Capabilities of Reduced U.S. Nuclear Forces

The last step in this section is to analyze different U.S. force sizes to see if they can achieve the above level of overwhelming retaliatory capabilities after the worst case scenario, a preemptive strike by a vastly superior nuclear force represented by a Russian nuclear force maintained at START I levels. The U.S. force levels analyzed will be a START II representative force and a START III representative force. The START II force (as postulated in the 1994 NPR) consists of 500 single warhead ICBMs, 14 nuclear submarines with 24 SLBMs (each with 5xMIRVs), and 86 bombers (66xB-52s carrying 8xALCMs each and 20xB-2s carrying 20 gravity bombs each) for a total of 3,108 accountable strategic warheads.²⁰ The START III force consists of 140 single warhead ICBMs, 14 nuclear submarines with 24 SLBMs (each with 4xMIRVs), and 40 bombers (24xB-52s carrying 8xALCMs each and 16xB-2s carrying 20 gravity bombs each) for a total of 1,996 accountable strategic warheads.²¹ For the SLBM force, it will be assumed that the submarine force is equally divided between those at sea and those in port.

The following assumptions have been made in calculating retaliatory capabilities of the above forces after a surprise preemptive strike (see Table 1). First, using current U.S. policy, the U.S. will ride out the attack and not launch on warning. Second, taking the inherent survivability of each system into account along with uncontrollable factors, such as equipment malfunctions, weather, and the fog/friction of war, it was assumed that a massive, coordinated surprise first strike by Russia could destroy 90% of the fixed ICBMs and SLBMs in port, 50% of the bomber force (assuming some increased tensions leading to a resumption of placing bombers on alert

TABLE I

Calculation of U.S. Retaliatory Capabilities²²

<u>U.S. Forces at START II levels</u>				
U.S. Weapons Surviving a Preemptive Strike				
<u>Number/Type</u>	<u>% Attrition</u>	<u># Surviving</u>		
500 ICBM	90%	50		
840 SLBM at sea	25%	630		
840 SLBM in port	90%	84		
928 Bomber Warheads	50%	464		
Total U.S. Weapons Surviving		1228		
Attrition of the Surviving Warheads in a retaliatory attack				
<u>Number/Type</u>	<u>Friction</u>	<u># Surviving</u>	<u>Defenses</u>	<u># on Target</u>
50 ICBM	10%	45	70%	14
630 SLBM at sea	10%	567	70%	170
84 SLBM in port	10%	76	70%	23
464 Bomber Warheads	10%	418	30%	292
Total U.S. Retaliatory Weapons Detonated on Target				499

<u>U.S. Forces at START III levels</u>				
U.S. Weapons Surviving a Preemptive Strike				
<u>Number/Type</u>	<u>% Attrition</u>	<u># Surviving</u>		
140 ICBM	90%	14		
672 SLBM at sea	25%	504		
672 SLBM in port	90%	67		
512 Bomber Warheads	50%	256		
Total U.S. Weapons Surviving		841		
Attrition of the Surviving Warheads in a retaliatory attack				
<u>Number/Type</u>	<u>Friction</u>	<u># Surviving</u>	<u>Defenses</u>	<u># on Target</u>
14 ICBM	10%	13	70%	4
504 SLBM at sea	10%	454	70%	136
67 SLBM in port	10%	60	70%	18
256 Bomber Warheads	10%	230	30%	161
Total U.S. Retaliatory Weapons Detonated on Target				319

status prior to the preemptive strike), and 25% of the SLBMs at sea. For the U.S. retaliatory strike, it was assumed that 10% of all launches would be unsuccessful due to malfunction, weather, or fog/friction, 70% of the ballistic missiles would be unsuccessful due to Ballistic Missile Defenses, and 30% of the Bombers will be unsuccessful due to Anti-Aircraft Defenses. These numbers represent an absolute worst case future scenario. Currently, Russia is unable to maintain the readiness of its nuclear forces due to severe economic problems and its ability to coordinate a massive first strike is doubtful. These numbers also assume a robust enemy national ballistic missile defense system being in place, something that currently does not exist.

Finally, these numbers assume that the U.S. maintains adequate and reliable command, control, communications, and intelligence (C³I) systems that can survive a nuclear attack, assist in assessing the damage to the U.S. nuclear forces, and coordinate the U.S. retaliatory attack. Both the NPR and the QDR recognized the importance of nuclear C³I systems in assuring deterrence. The NPR addressed numerous issues in this area and recommended the continued funding of critical programs, such as the procurement of six nuclear hardened MILSTAR communications satellites. The continued funding of U.S. Strategic Command (a unified command tasked solely with a strategic nuclear mission) and the Cheyenne Mountain C³I complex shows U.S. resolve to maintain the "highly confident, constitutional command and control" of nuclear forces necessary for nuclear deterrence, even in the post Cold War era.²³

These assumptions are extremely pessimistic, but still show that the U.S. would retain a capable, survivable retaliatory capability of over 300 detonations even with the smaller START III force, enough to guarantee "overwhelming" damage that would be unacceptable to any potential hostile nation.²⁴

In summary, given the current world order, the complete abolition of nuclear weapons is seen as an impossible goal for the near future. Nuclear weapons will continue to play a crucial role in international politics and the national security of the United States. Current U.S. nuclear policy emphasizes a survivable retaliatory response to deter not only nuclear attacks but to restrain war itself. Using the MIT study on the effects of nuclear detonations on the U.S. economy, it was extrapolated that similar levels of unacceptable destruction would occur in any potential hostile nation at similar or lower numbers. Finally, simulated nuclear preemptive strikes were simulated on U.S. nuclear forces sized at START II and START III, showing that even using extremely pessimistic assumptions, enough U.S. weapons would survive the attack and be able to inflict "overwhelming" destruction on any potential enemy during a retaliatory attack. Therefore, the U.S. can unilaterally reduce its forces below START I levels, abandon the idea of the necessity for numerical parity, and still maintain a capable, credible nuclear deterrent force.

CHAPTER 4

CONSEQUENCES OF U.S. UNILATERAL REDUCTIONS

International relations and national security are not one-dimensional subjects. Every action in one area is bound to have consequences in a myriad of other areas. Abandoning the notions of 'nuclear parity with Russia' and 'reductions only through arms control agreements' would be a major shift in U.S. policy. It is important to make sure such a policy would not produce severe negative reactions in other areas of foreign policy or national security. This section will consider the implications of unilateral nuclear reductions on the areas of nuclear stability, future arms control negotiations, proliferation of WMD, deterrence of the use of chemical and biological weapons, prevention of international terrorism, international prestige, and national public approval.

Nuclear stability and security is a key concept in reducing the risk of deterrence failing due to miscalculations or misperceptions. Putting multiple warheads on fixed ICBMs was a very cost-effective method of increasing a nation's nuclear arsenal, but in the end it produced a destabilizing effect, especially during a crisis. Each MIRVed ICBM now became a more valuable target with its multiple warheads. Preempting with a first strike would allow one warhead to target and destroy several warheads, leading to a more favorable force ratio after the attack than before. If war were inevitable, the temptation to attack first would be great.²⁵ Would unilateral reductions or a feeling of numerical inferiority cause a similar destabilizing effect? The answer depends on the size and type of the reductions. With modest reductions and continuance of the triad structure, stability would increase by reducing Russian fears of a massive U.S. preemptive first strike. More radical reduction below some threshold (the low

hundreds for sure) or abandoning the concept of a triad would have a destabilizing influence.

Lower numbers would be less survivable, more susceptible to destructive technological advances, and create doubt as to their capabilities to inflict overwhelming damage.

How would unilateral reductions affect future START negotiations? In 1997, Congress passed legislation prohibiting the DoD from reducing its nuclear force structure below START I levels until the Russian legislature ratified the START II treaty. This action was intended to positively influence Russian ratification. Since then, the treaty has continued to languish, most recently being pushed aside in protest of the December 1998 U.S. air strikes against Iraq. The Duma realizes that ratification of START II is important to U.S. policy makers, and so they are using the process as a political tool to voice their protest of U.S. actions in other areas of foreign policy. If the U.S. unilaterally reduced its nuclear forces, Duma ratification could no longer be used as a political tool. Such action would take away Russian leverage over the issue of ratification and might even have the effect of jump starting the treaty process itself by helping to disassociate treaty ratification from other international issues (such as Iraq). Unilateral reductions may also allow negotiating teams to pass over START II and begin work on START III right now. While these positive effects are a possibility, albeit a remote one, the fact remains that there are no negative effects on negotiating future arms control agreements for the U.S. Other issues, such as the U.S. policy on the deployment of a National Missile Defense System, will have a much greater effect on the future of U.S./Russian arms control treaties than a unilateral reduction in forces would have.

Would unilateral reductions have any adverse effects on U.S. efforts to stem the proliferation of all forms of WMD? Hostile, rouge nations, such as Iraq or North Korea, seek to

obtain WMD for their own national security reasons; U.S. actions as they pertain to strategic nuclear offensive forces will have no effect, either positive or negative, on their internal calculations to develop/acquire WMD, In relation to friendly nations (Germany and Japan in particular), modest unilateral reductions would have no negative implications on friendly non-proliferation when combined with a continuance of the current policies of extending the U.S. nuclear security umbrella and the overseas stationing of U.S. military personnel.²⁶

The ability to deter the use of chemical or biological WMD during a major theater war or small scale contingency operation is based not on large numbers of strategic nuclear warheads but on maintaining a credible capability to respond at a proportional nuclear level to a chemical or biological attack. Maintaining the capability (through force structure, training, and planning) to employ non-strategic nuclear weapons and demonstrating the national resolve to use that capability are the key issues in this aspect of nuclear deterrence. Unilateral reductions of strategic systems will have no impact on this area of U.S. nuclear policy.

Could unilateral reductions increase the risk of a terrorist group acquiring nuclear weapons and using them? From the standpoint that fewer numbers of nuclear weapons would be easier to safeguard; all reductions are a positive trend. Additional positive effects in this area could be realized if a portion of the money saved by reducing the U.S. nuclear force structure was used to increase the funding of the Nunn-Lugar Cooperative Threat Reduction initiatives to assist Russia in protecting its nuclear stockpiles and materials.

Would modestly reducing our strategic arsenal and accepting a position of numerical inferiority decrease the international status and prestige of the United States, even assuming that Russia economically and politically could support a numerically superior force? No. To the

contrary, a unilateral U.S. action would actually increase the moral standing of the U.S. in the world community. U.S. international prestige does not rely on its nuclear forces; its strong, free-market economy, its support for democracy, and superior conventional forces make it the leader of the free world. Unilateral reductions would also allow Russia to make a virtue out of a necessity and save face by ratifying the START II agreement and reducing its nuclear forces to the levels that its sluggish economy is forcing it to accept.

Finally, could any U.S. administration sell unilateral reductions and the acceptance of a numerical inferiority to Congress and the American people? The perception that the U.S. should never have fewer nuclear weapons than Russia has been ingrained over the last 50 years and will be difficult to change. However, a proper campaign of perception control, focusing on the survivability of the remaining warheads, would focus the debate on the issues and not on old, Cold War attitudes and perceptions. In fact, recent surveys show that 69% of the American public favor eliminating or reducing nuclear weapons. This support cuts across party lines (76% Democrats and 65% Republicans), regions, and gender. In addition, 58% are in favor of reducing the U.S. nuclear arsenal down to a few hundred. This broad public support indicates that the American public is ready to support unilateral reductions.²⁷

CHAPTER 5

CONCLUSIONS: ABANDON NUCLEAR PARITY AND UNILATERALLY REDUCE U.S. STRATEGIC NUCLEAR FORCES NOW

Despite the collapse of the Soviet Union and the end of the Cold War, strategic nuclear weapons still pose a significant Threat, arguably perhaps the only threat, to the survival of the U.S. as a sovereign nation. Nuclear abolition is an honorable and worthwhile future objective, but the international environment has not progressed to the point where abolition is possible. On the other hand, while deterring nuclear aggression and nuclear coercion remains vital to U.S. national security, the current U.S. strategic nuclear force structure is overkill. In the words of Senator Bob Kerrey (D-Neb), "our maintenance of a nuclear arsenal larger than we need provokes Russia to maintain one larger than she can control."²⁸ In a time of increasing pressures to reduce military spending, maintaining a nuclear force structure that is larger than needed is a waste of resources.

It is time for the U.S. to stop hedging and begin leading in the area of nuclear reductions. It is time for the U.S. to abandon its policy of proceeding with reductions only through a slow, laborious, and recently highly politicized arms control treaty process. It is time for the U.S. to take the initiative and unilaterally reduce its nuclear force structure to roughly 2,000 strategic nuclear warheads. These warheads would continue to be spread out amongst the existing triad of delivery systems to ensure survivability of enough warheads to inflict massive damage to any nation. These reductions will still leave the U.S. with a capable, credible, and sufficient nuclear deterrent against Russia, China, and other hostile / rouge nations. These unilateral reductions will free up 5 billion dollars that could be spent on other areas, such as domestic programs,

military readiness, a national missile defense system, or increases in Nunn-Lugar funding for increased security of Russian nuclear warheads, or given back to the taxpayers through tax cuts. In addition, these unilateral reductions will enhance U.S. national security and increase its moral standing in the international environment.

NOTES

¹Institute for Strategic Studies, *1998 Strategic Assessment, Engaging Power for Peace* (Washington, DC: National Defense University, 1998), 186-188.

²Gen. Eugene B. Habiger, USAF, "Deterrence in a New Security Environment," *Strategic Forum*, no. 109 (Washington D.C.: Institute for National Strategic Studies, April 1997), 2; and Walter Pincus, "Re-Read his Lips: Reduce Arms Now," *Washington Post*, 11 October 1998, Sec. C1.

³David Hoffman, "Russia says START II is Imperiled," *Washington Post*, 22 Jan 99, Sec. A16.

⁴Hoffman, Sec. A16.

⁵Steven Lee Myers, "Pentagon ready to Shrink Arsenal of Nuclear Bombs," *New York Times*, 23 Nov 1998, Sec. A1.

⁶Meyer, A1

⁷Keith B. Payne, "The Case against Nuclear Abolition and for Nuclear Deterrence," *Comparative Strategy*, Vol. 17 Issue 1 (January—March 1998), 20-34.

⁸Payne, 19-21, 31.

⁹Payne, 3 3-34.

¹⁰Payne, 27-30.

¹¹Department of Defense, *Report of the Quadrennial Defense Review* (Washington, DC: May 1997), 10.

¹²The White House, *A National Security Strategy for a New Century* (Washington, DC: October 1998), 12; and Kevin D. Johnson, "Russia, the United States, and Nuclear Proliferation," *The Land Warfare Papers*, No 30 (September 1998), 11-12.

¹³Payne, 7-8, 14-15, 26.

¹⁴Richard Smoke, *National Security and the Nuclear Dilemma* (New York: McGraw-Hill, 1993), 318-321.

¹⁵Michael Quinlan, "Thinking Deterrence Through," in *Nuclear Arms Ethics Strategy Politics*, Ed. James R. Woolsey (San Francisco, CA: Institute for Contemporary Studies, 1984), 55.

¹⁶Robert Joseph and Ronald Lehman, *U.S. Nuclear Policy in the 21st Century*, Study Executive Report (Washington, DC: Institute for Strategic Studies, July 1998). 5-6; and Kevin D. Johnson, 11-12.

¹⁷Brent Scowcroft, "Understanding the U.S. Strategic Arsenal," in *Nuclear Arms Ethics Strategy Politics*, Ed. James R. Woolsey (San Francisco, CA: Institute for Contemporary Studies, 1984), 69-70.

¹⁸Stansfield Turner, *Caging the Nuclear Genie* (Boulder, CO: Westview Press, 1997), 35-40, 135-144.

¹⁹Turner, 3 5-40.

²⁰U.S. Congress, Senate, Senate Armed Forces Committee, *Nuclear Posture Review*, Hearings, 103rd Congress, 2nd Session, 22 September 1994, Y4.AR 5/3:S.HRG.103-870, 13-15.

²¹ Johnson, 26.

²² Concept from Stansfield Turner, Appendix C, 145-149.

²³ U.S. Congress, *Nuclear Posture Review*, 17-19; Department of Defense, *QDR*, 10; and Bruce A. Smith, "In Orbit," *Aviation Week and Space Technology*, 12 April 1999, 17.

²⁴ Turner, 88-90 and 145-149.

²⁵ Scowcroft, 76-77.

²⁶ Payne, 7-8, 14-15, 26.

²⁷ Hemy L. Stimson Center, *Public Attitudes on Nuclear Weapons: An Opportunity for Leadership* (Washington D.C., 1998), 9-11, 17-21.

²⁸ Walter Pincus, "Kerrey: U.S. Should Cut Nuclear Arms Unilaterally," *Washington Post*, 17 November 1998, Sec. A13.

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