

NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

**U.S. STRATEGIC NUCLEAR POLICY
AND FORCE STRUCTURE:
THREE ANALYTICAL APPROACHES**

by

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December 1999

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REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE December 1999		3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE U.S. STRATEGIC NUCLEAR POLICY AND FORCE STRUCTURE: THREE ANALYTICAL APPROACHES			5. FUNDING NUMBERS	
6. AUTHOR(S) Wagner, Russell H.				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) Since the end of the Cold War, the United States and Russia have made significant strides in reducing their nuclear arsenals. While the current political climate is significantly less tense than during the Cold War era, Russia is still the only country capable of destroying the United States. This thesis examines the current requirements shaping U.S. nuclear strategy, policy, and force structure in the three leading U.S. schools of thought (de-alerting, bilateral negotiations, and national missile defense). Additionally, the thesis evaluates the implications for the U.S. nuclear posture in the policy recommendations advanced by these schools. Each school proposes distinct solutions regarding strategic force structure based on its interpretation of the requirements at hand. The thesis concludes that de-alerting, theater and national ballistic missile defense, and bilateral negotiations schools of thought will continue to influence, both short-term and long-term, U.S. nuclear policy and force structure.				
14. SUBJECT TERMS Russian Nuclear Command and Control, De-alerting, National/Theater Ballistic Missile Defense (NMD) (TMD) START Treaty, Strategic Nuclear Policy and Force Structure.			15. NUMBER OF PAGES 138	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std.

239-18

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THREE ANALYTICAL APPROACHES**

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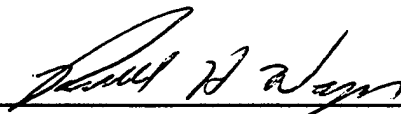
Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF ARTS IN NATIONAL SECURITY AFFAIRS

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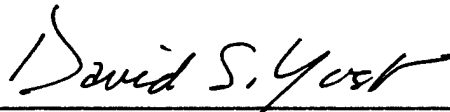
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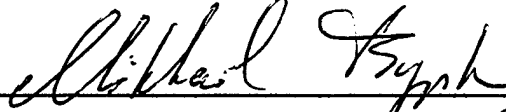


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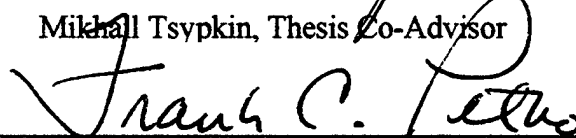
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ABSTRACT

Since the end of the Cold War, the United States and Russia have made significant strides in reducing their nuclear arsenals. While the current political climate is significantly less tense than during the Cold War era, Russia is still the only country capable of destroying the United States.

This thesis examines the current requirements shaping U.S. nuclear strategy, policy, and force structure in the three leading U.S. schools of thought (de-alerting, bilateral negotiations, and national missile defense). Additionally, the thesis evaluates the implications for the U.S. nuclear posture in the policy recommendations advanced by these schools. Each school proposes distinct solutions regarding strategic force structure based on its interpretation of the requirements at hand.

The thesis concludes that de-alerting, theater and national ballistic missile defense, and bilateral negotiations schools of thought will continue to influence, both short-term and long-term, U.S. nuclear policy and force structure.

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EXECUTIVE SUMMARY

During the Cold War, there was a wide consensus that the United States needed a large nuclear arsenal for deterring Soviet aggression. Nuclear disarmament was not a realistic option, given the competitive and often hostile political relationship that constituted the Cold War. However, the fall of the Soviet Union brought with it pressures for rapid reductions in nuclear weapons.

The three leading schools of thought about strategic nuclear policy in the United States (de-alerting, bilateral negotiations, and national missile defense) propose distinct solutions regarding strategic force structure based on their interpretations of the requirements shaping U.S. nuclear strategy and policy. Each school views the primary threat to the United States from a slightly different perspective. Their views of changing world threats directly influence their proposed policy and force structure recommendations.

De-alerters argue that the United States should structure its nuclear security policy and force posture around a single axis, Russian strategic nuclear command and control. According to the de-alerters, the biggest threat resides in the possibility of an accidental or unauthorized launch of a Russian strategic nuclear weapon. To remedy this threat, the de-alerters suggest de-alerting the entire U.S. strategic nuclear force, with the hope that Russia will follow suit. However, de-alerting the entire force would have a severe impact on force readiness and reliability, profoundly undermine deterrence, generate serious strategic instabilities, and introduce safety uncertainties.

In contrast, the proponents of bilateral negotiations and National Missile Defense (NMD) advise taking into account worldwide military capabilities when structuring U.S. security policy and force planning. The bilateral negotiations and NMD schools acknowledge the fact that Russia's command and control is deteriorating, but suggest that the possibility of an accidental or unauthorized launch is extremely remote and highly

exaggerated by the de-alerting school. The bilateral negotiations and NMD schools see the greatest threat to the United States coming from nuclear weapons and other weapons of mass destruction. To face this threat, the NMD school advocates building national and theater missile defenses.

Proponents of the bilateral negotiations school argue that the best way to reduce strategic nuclear forces, maintain a deterrence force, reduce nuclear weapons proliferation, and meet the growing threat of nuclear, biological and chemical weapons (also known as weapons of mass destruction), is through a robust system of negotiated and verifiable arms control agreements. The bilateral negotiations school advocates retaining strategic nuclear weapons (albeit a smaller force) to provide the deterrent required against rogue nations that might consider launching any weapon of mass destruction against the United States. However, they believe that the force structure of the United States should be tied to bilateral agreements with Russia and that both sides should downsize in parity under stringent, verifiable, and regulated regimes.

Although it is in the interests of the United States, Russia, and the rest of the world to further reduce nuclear weapons, the United States will not make any dramatic changes to its nuclear policy or force structure beyond START III in the foreseeable future. The United States will maintain a strategic force as the ultimate assurance against the gravest threats.

The United States and Russia will continue to possess nuclear weapons for the foreseeable future. Under this assumption, the de-alerting, theater and national ballistic missile defense, and bilateral negotiations schools of thought will continue to influence, both short-term and long-term, U.S. nuclear policy and force structure. Bilateral negotiations may exert the biggest influence as America and Russia reduce their arsenals in parity.

NMD will also continue to influence U.S. nuclear policy and force structure. As technology advances, America may gain confidence in its ability to protect its citizens, its troops, and its allies from WMD threats. With this confidence, America may become less dependent on nuclear deterrence and more disposed to rely on a smaller and more flexible nuclear force.

Nuclear forces provide the "ultimate insurance" that U.S. national security strategy calls for. Wholesale de-alerting is not advisable at any time in the foreseeable future, but partial de-alerting could play a significant role within a negotiated arms reduction regime, particularly for forces scheduled for de-activation and/or elimination. NMD will have limited influence over America's nuclear policy and force structure in the short term. However, as technology advances, NMD is likely to play a more significant role in the long term. The United States will continue to pursue bilateral arms reductions with Russia in the short term and may pursue multilateral arms reductions with Russia and other nuclear powers in the long term. America's strategic nuclear forces will probably be reduced in time, but this reduction will be conducted under the auspices of slow, deliberate, verifiable, and controlled negotiated regimes, bilateral and/or multilateral.

ACKNOWLEDGMENTS

I wish to thank my thesis advisors, Dr. David Yost and Dr. Mikhail Tsympkin, for their continuous support, guidance, encouragement, and instruction. They set the example among their peers. Their insightful comments and corrections measurably improved the quality of this thesis.

Most importantly, I would like to thank my wife, Donna, whose encouragement, love, and support enabled me to achieve this goal.

Finally, I would like to thank my son, Jason. Our golf games allowed me to relax and measurably improved my quality of life.

I. INTRODUCTION

A. STRATEGIC SETTING

For more than forty years the towering presence of nuclear forces testified dramatically to the deep political and ideological conflict between the United States and the Soviet Union. Strategic and tactical nuclear weapons were dispersed around the globe, carried on a host of land, sea, and airborne platforms, poised to launch by the thousands on a moment's notice, and loaded with enough power to inflict apocalyptic devastation within an hour of their unleashing.¹ War was to be prevented, among other means, by ensuring that the opposing forces each carried the threat of retaliation with enough survivable destructive and credible force to override any potential gain from striking first. The United States and Soviet defense establishments deployed forces capable of massive retaliation against tens of thousands of enemy targets. They shortened the fuse on the arsenals, providing the capability to launch a retaliatory strike within minutes from a detected enemy missile liftoff and arrival.² In short, the Cold War foes pursued assured second-strike deterrence postures by building nuclear capabilities that could undertake large-scale, massive retaliation as well as much more limited strike options.

Since the late 1980's, the United States has made dramatic progress in developing a more positive relationship, both militarily and politically, with Russia. This relationship has included efforts to reduce the nuclear threat. The United States and

¹ John Steinbruner, "Safety First: The Transformation of Nuclear Weapons Operations," Paper Prepared for the Common Security Forum, October 1993.

² Bruce G. Blair, *Global Zero Alert for Nuclear Forces*, Brookings Institution, Washington D.C., 1995. 1.

Russia have become more open with each other, exchanging information that used to be held secret for national security reasons. Now public databases include information about various types of American and Russian ballistic missiles and nuclear warheads, their general characteristics, location, design bureaus and production facilities. Regular mutual inspections of military bases, testing ranges, and industrial enterprises have been conducted. However, even with the increased open exchange of information and inspections, the Russians have not been as forthcoming as the Americans, notably within the NATO-Russian Permanent Joint Council.³ At the same time, secrecy still surrounds the Russian and American nuclear command and control arrangements. Whereas America enjoys good cooperation with the United Kingdom, and to some extent with France, there is practically no cooperation in this field between Russia and the United States, or between Russia and other nuclear powers. Russia's command and control systems and concepts continue to be guarded as national security secrets. Experts in nuclear command and control from the United States and Russian governments generally do not meet and problems are not discussed in depth, although some U.S. officials such as CINCSTRATCOM have met with their Russian counterparts.⁴

During the Cold War, there was a wide consensus that the United States needed a large nuclear arsenal for deterring Soviet aggression. Nuclear disarmament was not a realistic option, given the competitive and often hostile political relationship that constituted the Cold War, even though the threats posed by nuclear weapons were

³ David S. Yost, *NATO Transformed: The Alliance's New Roles in International Security*, (Washington: United States Institute of Peace, 1998), 145.

⁴ Eugene E. Habiger, General, USAF, Commander in Chief, U.S. Strategic Command, Prepared Statement Before the Hearing of the Strategic Forces Subcommittee of the Senate Armed Services Committee: Strategic Nuclear Policy, March 31, 1998, 28.

recognized to be great.⁵ With the elimination of the geopolitical competition that fuelled the nuclear arms race, broad-based sustained interest in various proposed nuclear disarmament methods has grown significantly.

The geopolitical revolution that dissolved the Soviet Union and defused the confrontation between the nuclear superpowers may have also strained Russia's ability to maintain firm control over its far-flung nuclear arsenal.⁶ As the nuclear command and control system of the former Soviet Union comes under unprecedented stress, interpretations of Russia's nuclear command and control have shaped the policy prescriptions favored by differing schools of thought in the United States. The long-standing Soviet practice of maintaining large quantities of dispersed nuclear weapons in a launch-ready configuration, continued by Russia since the collapse of the USSR in 1991, has given rise to varying interpretations of the implications for U.S. nuclear policy. These interpretations merit careful analysis, precisely because of their implications for U.S. nuclear policy and U.S. national security. Depending in part on their assessments of Russian nuclear command and control, weapons of mass destruction, and the growing nuclear threat, policy advocates in the United States propose unilateral de-alerting, with hopes that it will become bilateral; de-alerting only in the context of gradual bilateral deactivation through negotiated arms reduction agreements; or no de-alerting at all, with support for National/Ballistic Missile Defense (NMD/BMD) capabilities and other improvements in America's strategic posture.

⁵ Charles L. Glaser, "The Flawed Case for nuclear Disarmament," *Survival*, London, Spring 1998, 113.

⁶ Blair, *Global Zero Alert for Nuclear Forces*, 14.

The end of the Cold War brought with it pressures for rapid reductions in nuclear weapons. With START II not yet ratified by the Russian Duma (despite U.S. ratification of START II in January 1996), some arms control advocates are unhappy with the slow process of bilateral disarmament procedures. They criticize the process of negotiating arms control agreements as being too slow and hampered by the necessity of ratification by the Russian Duma and U.S. Senate. They are calling not only for deeper cuts beyond the goals set out for START III at the March 1997 U.S. - Russian Summit at Helsinki, but also to de-alert U.S. nuclear forces.⁷

Another school of thought sees a growing threat from weapons of mass destruction and calls for a U.S. national ballistic missile defense system. Such concepts have acquired greater attention due to the decisions by American and Russian officials not to move their nuclear doctrines (concerning the U.S.-Russian strategic relationship) away from mutual vulnerability, despite the political and military thaw since the end of the Cold War.⁸

This thesis examines the current influences (including interpretations of Russian strategic nuclear command and control, weapons of mass destruction, and the growing nuclear threat) shaping U.S. nuclear strategy, policy, and force structure in the three leading U.S. schools of thought (de-alerting, bilateral deactivation, and national missile defense). Additionally, the thesis evaluates the implications for U.S. nuclear security in the policy recommendations advanced by these schools. Each school of

⁷ For example, one proposed method of de-alerting calls for the United States to take all ICBMs off alert by removing their warheads and storing them separately from the missile, so that it would take days, weeks, or months before the United States could reassemble and launch the missile.

⁸ The United States and Russia still maintain over 5,000 deployed strategic nuclear weapons, each ready to launch within minutes (via ICBMs and SSBNs) after receiving National Command Authority orders.

thought proposes different solutions regarding strategic force structure based on its interpretation of the requirements for U.S. nuclear strategy and policy. Each proposed solution could have a direct or indirect effect on structuring or restructuring America's nuclear security policy and arsenal. Policy makers should be fully aware of the proposed solutions and their possible effects on U.S. nuclear security policy.

Strategic nuclear command, control, communications, and intelligence are established terms within the intelligence field that need be defined for this thesis. *Command* is the system for making a decision on delivering a nuclear strike and for executing this decision. *Control* is the system for preventing unsanctioned use of nuclear weapons. *Communications* is the system for ensuring the passage of the decision on employing nuclear weapons from the decision-making level to the level of execution. Intelligence supports all the above elements with capabilities for collecting and analyzing information related to decisions on employing nuclear weapons. The communications element expands with the inclusion of intelligence. The system must support the passage of a decision, as well as indications and warning, ensuring that the National Command Authority both maintains control of and has the ability to launch nuclear weapons.⁹

In this thesis, *nuclear command and control* is used as a shorthand to encompass all the aforementioned systems and capabilities (such as early warning, chain of command, positive control, and negative control) and doctrine (such as policy on launch procedures for launch on warning and/or launch under attack) that are closely related to all nuclear command and control arrangements.

⁹ "Strategic Nuclear Forces Battle Management System: Assessment of Present Status," *Moscow Voprosy Bezopasnosti*, FBIS, 15 November 1998.

De-alerting is another term that needs to be defined for this thesis. De-alerting measures are intended to increase the amount of time between a decision to launch a nuclear attack and the actual launch. De-alerting measures include the removal of warheads, guidance modules or launch codes, the disabling of silo covers, or any method that increases the amount of time it takes to launch a strategic nuclear weapon.

B. METHODOLOGY

This thesis is based on an analytical survey of primary and secondary sources concerning the requirements and constraints shaping U.S. nuclear strategy and policy in the three leading schools of thought (de-alerting, bilateral negotiations, and ballistic/national missile defense). Additionally, interviews were conducted with leading representatives of each school of thought. This thesis analyzes each school's proposed solutions and their implications for U.S. nuclear strategy and policy. The arguments for the feasibility and desirability of each school's recommendations are analyzed and critically evaluated.

C. THESIS ORGANIZATION

Chapter II describes the current requirements and constraints shaping U.S. nuclear strategy, policy, and force structure. Chapter III critically analyses the de-alerting school of thought along with its proposed solutions and the implications for U.S. nuclear strategy and policy. Chapter IV critically examines the National/Ballistic Missile Defense (NMD/BMD) school of thought and presents its recommended solutions and their implications for U.S. nuclear strategy and policy. Chapter V critically evaluates the

bilateral deactivation policy (START) that the current administration supports. Chapter VI critically assesses and compares the three schools of thought and offers conclusions about the importance of these schools for U.S. nuclear strategy, policy, and force structure.

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II. U.S. NUCLEAR POLICY REQUIREMENTS

A. INTRODUCTION

Since the end of the Cold War, nuclear issues have gained surprising prominence in national and international deliberations. There have been pressures by disarmament advocates to draw down the number of nuclear weapons in both the United States and Russian arsenals. According to the de-alerting school, the foundation of America's current nuclear policy must be changed for one simple reason:

Russia is weak. The premise of our current nuclear policy, carried over from the Cold War, is that we must contain and deter a strong and aggressive adversary. But Russia possesses neither the will nor the ability to pursue imperial designs. We need to recognize that the nuclear threat to American security today stems from Russian weakness, not strength, and that deterring a cold-blooded deliberate attack is not our biggest challenge.... Far fewer U.S. strategic weapons than currently deployed would provide ample deterrence under any plausible conditions of U.S. - Russian tension. The nuclear risks we face instead stem from the political, economic, and military weakness of Russia.¹⁰

De-alerters also state that Russia's conventional forces are no longer capable of protecting Russia and have become even more vulnerable to U.S. conventional and nuclear forces.

Russian strategic forces and command centers have become very vulnerable, posing a potential risk of unnerving Russia in a crisis. Russia's weak conventional forces can no longer perform the traditional defense mission of protecting Russian territory. Into this vacuum has rushed a growing Russian reliance on nuclear weapons... To make matters worse, the nuclear forces themselves are less secure. Budget shortages among other problems prevent Russia from dispersing its weapons into the

¹⁰ Bruce G. Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, *Federal News Service*, March 31, 1998, 16.

sanctuaries of the oceans and forests. In their present configuration, Russian forces could not ride out an attack. Russia today in fact faces far stronger pressures and incentives to "use or lose" its strategic nuclear arsenal than at any time since the early 1960s.¹¹

Whereas the United States enjoyed a single, focused threat during the Cold War, today the strategic environment is changing. Where once the Soviet Union consumed the majority of the U.S. strategic focus, the threats are now evolving and the targets are changing. Russia, however, continues to play an important role in shaping U.S. nuclear policy. David S. Yost points out that "continued uncertainties about Russia's future have bolstered arguments for upholding NATO's [and America's] established nuclear policy."¹² He also recognizes that the strategic environment is changing:

Even with a smaller arsenal than at present, Russia is still likely to remain a risky strategic unknown well into the future. The Indian and Pakistani nuclear-weapon tests in May 1998 have also led some observers to forecast a fundamental erosion of the nuclear non-proliferation regime, with the likelihood that new nuclear powers will emerge.... the basic strategic reality is that there are now seven declared nuclear powers, where once there were five.¹³

According to the de-alerters, Russia's rapid reaction posture carries a significant risk that a nuclear weapon could be fired on the basis of a false warning.

The risk of a horrible mistake is only growing with the widening political and economic turmoil in Russia. The loss of the former Soviet Union radar installations that are outside Russia's current borders has left significant gaps in the country's early warning network, making Russian fingers on the button ever more jittery.¹⁴

¹¹ Ibid., 16.

¹² David S. Yost, *The US and Nuclear Deterrence in Europe*, Adelphia Paper 326, Oxford University Press Inc, New York, March 1999, 7.

¹³ Ibid., 7-8.

¹⁴ Tim Zimmermann, "How to Avert Accidental War: Take Nuclear Arsenals off Hair-Trigger Alert," *U.S. News & World Report*, Washington D.C., December 29 1997-January 5, 1998, 72.

The breakup of the Soviet Union increased this risk by politically dismembering some elements of the missile attack early warning system. The susceptibility of Russian nuclear forces to accidental, unauthorized, or mistaken launch has been growing since the end of the Cold War. Senator Tom Daschle, a South Dakota Democrat, has stated that, "My biggest concern is the instability of Russian forces today.... There are still a significant number of nuclear weapons that could be [fired at the United States] under mistaken circumstances."¹⁵

A policy calling for a first strike or launch-on-warning attack designed to disarm the other side could lead to accidents because it requires quick judgments and induces the Russian command to prepare its decaying and accident-prone forces to fire on warning.¹⁶ According to de-alerting advocates Dan Plesch and Lutz Hagar,

The dangers of a high-alert status are clear. The decline in the Russian command-and-control system increases the risk of technical malfunctions and early-warning system failures. The continued, unnecessary reliance on high-alert status increases the danger of inadvertent or accidental use of nuclear weapons, with disastrous consequences.¹⁷

With the Cold War over, de-alerters argue, such dangers between friendly countries should be eliminated.

Proponents of negotiating bilateral arms control measures state that it is important to consider all evidence regarding Russian command and control before reaching the conclusion that there is a significant danger of an unwarranted, unauthorized, or

¹⁵ Daschle quoted in Tim Zimmermann, "How to Avert Accidental War: Take Nuclear Arsenals off Hair-Trigger Alert," 71.

¹⁶ Jeremy Stone and Paul Warnke, "De-MIRV Submarines," *The Moscow Times*, January 24, 1998.

¹⁷ Dan Plesch and Lutz Hagar, "Take Nuclear Weapons Off Alert," *The Christian Science Monitor*, August 13, 1997, 20.

accidental launch and that the United States should change its nuclear policy. The basic fact is that the de-alerters focus on a single issue, their belief that de-alerting U.S. ICBMs and SLBMs would resolve potential problems associated with Russian nuclear command and control. U.S. nuclear policy must, however, take into account all the various factors likely to affect Western security interests when shaping the U.S. nuclear posture; and no one factor should be considered in isolation. These factors include the persistent uncertainties over Russia's command and control system, but also encompass other nuclear weapons states (such as China) and the growing proliferation of weapons of mass destruction, including nuclear arms.

B. CHARACTERIZATIONS OF RUSSIAN NUCLEAR COMMAND AND CONTROL SYSTEM

De-alerters view Russia's command and control of its nuclear forces as unreliable.

According to the de-alerters,

Since the end of the Cold War, Russia's nuclear command and control system has steadily deteriorated. Aging nuclear communications and computer networks are malfunctioning more frequently, and deficient early warning satellites and ground radar are more prone to reporting false alarms.¹⁸

De-alerters fear that Russian nuclear weapons could be launched almost instantaneously, leading to an unwarranted, unauthorized or accidental launch or, more ominously, to a large-scale attack on the basis of failures in the early warning system. They frequently refer to the 25 January 1995 incident involving a Russian alert response to a research rocket fired from Norway, an incident that sparked strong concerns that nuclear war

¹⁸ Lachlan Forrow, Bruce Blair, Ira Helfrad, George Lewis, et al., "Accidental Nuclear War—A post-Cold War Assessment," *The New England Journal of Medicine*, April 30, 1998, 1328.

could result from a misinterpretation or misunderstanding in Moscow. A warning related to the U.S./Norwegian scientific rocket led to the activation, for the first time, of the Russian "nuclear suitcases" carried by the top Russian officials and initiated an emergency nuclear-decision-making conference involving the leaders and their top nuclear advisors.¹⁹ According to Representative W. Curtis Weldon, R-PA, Chairman of the Strategic Security Subcommittee on Research and Development, "that incident revealed not only a communications breakdown, but the fact that the Russian radar system is no longer robust enough to discriminate between a civilian rocket launch and an offensive attack."²⁰ Peter Pry described the incident as "the single most dangerous moment of the nuclear missile age."²¹

De-alerters also cite Igor Rodionov, who was the Russian Defense Minister when he asserted on 6 February 1997, "No one today can guarantee the reliability of our control systems... if the shortage of funds persists ... Russia may soon approach a threshold beyond which its missiles and nuclear systems will become uncontrollable."²² De-alerters view the Russian command and control system as posing imminent dangers to the United States and contend that U.S. nuclear policy must change to meet this danger. For de-alerters, "the risk of a mistaken or unauthorized nuclear launch is greater now than at any time during the Cold War."²³

¹⁹ Ibid., 1329.

²⁰ James Kitfield, "Don't get MAD, get De-alerted," *National Journal*, Washington, January 3, 1998, 32.

²¹ Pry quoted in David Hoffman, "Shattered Shield: Decline of Russia's Nuclear Forces," *Washington Post Foreign Service*, March 15, 1998, A1.

²² Hoffman, "Shattered Shield: Decline of Russia's Nuclear Forces," A1.

²³ Kitfield, 32.

However, opponents of de-alerting view President Yeltsin's order regarding the U.S./Norwegian research rocket as an example of how the nuclear command and control system is designed to work. A missile firing was observed and the Russian National Command Authority stepped up readiness in the event that it was an actual attack. The suspected attack was continuously monitored, determined not to be a threat, and the command and control system stood down. Opponents of de-alerting also point out that the United States and Russia have established communication networks that enable them to raise questions and seek clarification should there be any unexplained activity that appears threatening.²⁴

According to Kathleen Bailey, Russia currently has an on-going effort to modernize its nuclear command and control and its strategic "submarines reportedly no longer have the ability to launch without receipt of enabling information from the General Staff."²⁵ Additionally, we must examine what Russian leaders are saying about their command and control. Rodionov's statement about the shortage of funds and Russia possibly losing control of its nuclear weapons "appears to have been motivated, at least in part, by a desire to increase the amount of U.S. funding to Russia"²⁶ (and the amount of funding to the Ministry of Defense). Moreover, high-level Russian officials immediately repudiated Rodionov's statement. The Strategic Rocket Forces Commander at the time, who is now Defense Minister, Igor Sergeyev, stated that "Russia's command and control

²⁴ Kathleen C. Bailey and Franklin D. Barish, "De-Alerting of U.S. Nuclear Forces: A Critical Appraisal," *Comparative Strategy*, New York, January 1999, 3.

²⁵ Kathleen Bailey, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, *Federal News Service*, March 31, 1998, 14.

²⁶ *Ibid.*, 14.

system was not on the verge of failure.”²⁷ President Yeltsin and Prime Minister Chernomyrdin supported his remarks. In March 1997, Rodionov himself “declared that the Russian nuclear forces are ‘reliable and stable’ and excluded ‘the possibility of unusual situations’.” During his trip to the United States later that year (1997), Rodionov “reassured the U.S. that the Russian command and control system was not a problem.”²⁸ In August 1997, Major General Vladimir Dvorkin, of the Fourth Central Research Institute (Strategic Rocket Forces) of the Russian Ministry of Defense, speaking at the U.S. Naval Postgraduate School, made the following points:

- A. Russia does not rely principally on launch-on-warning, but rather on the survivability of its mobile forces.
- B. The U.S. view of Russian command and control systems vulnerabilities is erroneous.
- C. Russia’s command and control is very centralized and there is no possibility that “underlings” can gain control.
- D. The Russian early warning systems are multi-layered.
- E. Russia maintains positive and negative hardware controls on tactical nuclear systems that prevent their misuse.

He closed with the remark that the United States should do a better job of understanding and analyzing the complexity and competence of the Russian nuclear command and control system.²⁹

²⁷ Igor Sergeyev quoted in Bailey, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 14.

²⁸ Rodionov quoted in Bailey, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 14.

²⁹ Vladimihief quoted in Bailey, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 14.

However, Dr. Mikhail Tsypkin, professor of Russian studies at the Naval Postgraduate School, states that,

We do not know whether the Russian SNF [Strategic Nuclear Forces] has a launch-on-warning or launch-under-attack posture. Maj. General Vladimir Dvorkin ... says that the emphasis on survivability of the ground-based ICBMs, especially the investment in mobile ICBMs is a solid indicator of Russia's moving away from a launch-on-warning to launch-under-attack posture, but does not state directly that such a shift has indeed occurred.³⁰

De-alerting advocates also cite Russia's growing economic and personnel problems as additional indications of its deteriorating and unreliable nuclear command and control system, notably in comparison with America's nuclear personnel reliability program. Between 1975 and 1990, "66,000 [American] military personnel involved in the operational aspects of U.S. nuclear forces were removed from their positions."³¹ Tim Weiner reports that "Russia's once elite nuclear weapons commands are suffering housing and food shortages, low pay, budget cuts, deteriorating discipline, desertion, and suicides."³² Tim Zimmermann contends that "Morale in the military also has plummeted as a result of chronic food and housing shortages."³³ De-alerters hold that the budget cuts have reduced the training of nuclear commanders and thus their proficiency in operating nuclear weapons safely.³⁴ De-alerters state that "Russia is in an economic free fall that threatens the coherence of the central state and the ability of the government to

³⁰ Mikhail Tsypkin, "Military Reform and Strategic Forces of the Russian Federation," *Journal of European Security*, forthcoming.

³¹ Forrow, Blair, Helfnad, Lewis, et al., 1327.

³² Tim Weiner, "Russia's Disarray Brings a Nuclear Risk to the U.S.," *The New York Times*, April 30, 1998.

³³ Zimmermann, 72.

³⁴ Forrow, Blair, Helfnad, Lewis, et al., 1327.

control its arsenal of nuclear, chemical, and biological weapons.”³⁵ They claim that

the Russian economy is so weak that expenditures on maintaining physical security have declined to dangerously, and Russian federal control over nuclear weapons is so lax that there is even the possibility that nuclear weapons will be sold illicitly.³⁶

According to the de-alerters, these conditions can only lead to further deterioration in Russia’s control of its nuclear weapons. However, the opponents to de-alerting would disagree. Despite Russia’s collapsing economy, Moscow has continued to advance its military programs.

During this decade, even as some Russian workers were going unpaid, Moscow continued construction of a massive network of underground command-and-control bunkers [in the Ural mountains], deployed a new, mobile “Topol-M” [the SS-27] intercontinental missile, commissioned a new aircraft carrier [the *Admiral Kuznetsov*] and nuclear cruiser [the *Peter the Great*], refitted its Typhoon Class submarines to accommodate SS-N-24/26 missiles, began a stealth-fighter program and built a fifth-generation Borei Class ballistic missile submarine.³⁷

Opponents of de-alerting have also pointed to the care that Russian officials have taken since 1995 to communicate more clearly Russian nuclear doctrine and related policies. These transparency measures have included two very important visits by the then Commander of the U.S. Strategic Command, Gen. Eugene Habiger, to Russia. His second trip, in June 1998, included his successor, Admiral Richard Mies. These visits included unprecedented observations of several nuclear storage sites, revealing that “Russian measures to prevent unauthorized access and use are comprehensive and

³⁵ Mortimer B. Zuckerman, *U.S. News & World Report*, Washington, February 8, 1999, 68.

³⁶ Reported in Bailey and Barish, 4.

³⁷ Roger W. Robinson, “Don’t Bail Out a Belligerent Russia,” *Wall Street Journal*, New York, August 28, 1998, A10. The Borei Class ballistic missile submarine is currently under construction and not projected to be operational until 2005.

effective.”³⁸ Gen. Habiger’s overall impression was that Russian nuclear weapons security is “excellent.” Gen. Habiger reported that, “Like the United States, Russia uses a variety of measures at different sites: fences with sensors, heavy doors weighing several tons each, and anti-terrorist commando groups.”³⁹

Gen. Habiger observed that Russia relies more extensively on personnel in that, “in our country it takes two people to gain access to nuclear weapon’s critical components. In Russia, it takes three people.”⁴⁰ He also observed that Russian personnel working with nuclear weapons have a low turnover rate and have been specially trained in the subject areas. Both of these measures lead to competence and stability in the nuclear security force. Furthermore, they were well paid. Unlike much of Russia’s armed forces, those who secure the nuclear weapons continue to live in closed cities with assured amenities and regularly receive base pay plus 25 percent. In Gen. Habiger’s view, “these measures are as effective as those used in the United States.”⁴¹ Gen. Habiger testified before Congress, “I’m confident in the safety, reliability, and security of the strategic command and control elements within Russia.”⁴²

³⁸ Habiger quoted in Bailey and Barish, 4.

³⁹ Habiger, Prepared Statement Before the Hearing of the Strategic Forces Subcommittee, 35.

⁴⁰ Ibid., 35.

⁴¹ Habiger quoted in Bailey and Barish, 4.

⁴² Habiger, Prepared Statement Before the Hearing of the Strategic Forces Subcommittee, 28.

Russia's missile attack early warning system, a key aspect of its nuclear deterrence posture, is deteriorating; and some experts say it is disintegrating.⁴³ The loss of the former Soviet radar installations that are outside Russia's current borders has left significant gaps in Russia's early warning network. According to David Hoffman,

The threat of retaliation requires accurate early warning; and without it, Russian decision-makers would be blindfolded... the growing gaps in the area covered by Russia's early warning satellites have increased the risk of serious miscalculation.⁴⁴

Moscow is currently unable to replace the array of satellites it needs to monitor potential launches from U.S. missile silos and submarines. Without these satellites, Theodore A. Postol, a professor at MIT, contends, "Russia has no space-based early warning against the most potent threat its land-based forces face, the U.S. Trident submarine-launched ballistic missiles." Russia's ground-based early warning radar system has also been degraded because many installations that were built on the Soviet periphery are now closed and have not been replaced. Postol points out that "There are large parts of the Russian forces that could be attacked from the Gulf of Alaska and would be destroyed without Russia even knowing an attack was underway."⁴⁵ With the growing gaps in early warning coverage, de-alerters have been quick to point out the increased risk of a mistaken nuclear launch. Russian commanders have less time to evaluate the early warning data and to make a decision to launch. This leaves what de-

⁴³ David Hoffman, "Russia's Missile Defense Eroding: Gaps in Early-Warning Satellite Coverage Raise Risk of Launch Error," *Washington Post*, February 10, 1999, A01.

⁴⁴ Ibid., A01.

⁴⁵ Postol quoted in Hoffman, "Russia's Missile Defense Eroding: Gaps in Early-Warning Satellite Coverage Raise Risk of Launch Error," A01.

alerters refer to as a "jittery Russian finger on the nuclear button."⁴⁶ Bruce Blair contends that Russia "is losing its ability to distinguish between real and imaginary threats. The United States could be the big loser in this situation."⁴⁷

Opponents of de-alerting view Russia's early warning system through a totally different lens. They point out that Russian military experts continue to openly discuss their nation's early warning capabilities and problems. In July 1998, the Russian Strategic Rocket Forces Commander, Gen. Vladimir Yakovlev, stated that "the missile attack early warning system (MAWS) is somewhat disadvantaged by the impending closure of the MAWS station in Skrunde, Latvia, but that there were compensations planned." He noted that "a new station was being built in Baranovichi, Byelorussia, and that the stations in Mukachevo, Gabal, Balkash, and Sevastopol, as well as those in Eastern Russia, remained in service and therefore 'the situation is not dangerous'."⁴⁸

The United States is presently considering sharing data from its missile warning system to alert Russia to missile launches worldwide.⁴⁹ Opponents of de-alerting call for measures like these to answer the problem of Russian command and control, instead of de-alerting U.S. nuclear forces. However, proponents of de-alerting, such as U.S. Senate Minority Leader Tom Daschle, argue that "even though the administration's initiative to share early warning data with Russia is a good first step, it does nothing to bolster Russia's ability to collect and assess its own data." Daschle stated that,

⁴⁶ Zimmermann, 72.

⁴⁷ Blair quoted in Hoffman, "Russia's Missile Defense Eroding: Gaps in Early-Warning Satellite Coverage Raise Risk of Launch Error," A01.

⁴⁸ Indirect discourse of Yakovlev quoted in Bailey and Barish, 3.

⁴⁹ Michael R. Gordon, "U.S. to Use Its Missile Warning System to Alert Russians to Launchings Worldwide," *New York Times*, 2 September 1998, A11.

If anything, our concerns about Russia's early warning system, command and control system and the morale of the people assigned to operate these systems have only grown. The initiative [shared early warning] gives Russia access to U.S. early warning data, [but] it does nothing to improve Moscow's own early warning capability and does not fully address the underlying weaknesses in Russia's early warning.⁵⁰

However, Russia has several initiatives underway to reform the command and control of their Strategic Rocket Forces (SRF). According to Mikhail Tsyarkin, "By the end of 1997, Sergeyev [Minister of Defense] succeeded in merging the Space Forces and the Missile Early Warning System (MEWS) with the SRF." Russia also has plans of

establishing a joint command for the yet-to-be created Strategic Deterrence Forces, which would be constituted by the Strategic Rocket Forces, strategic nuclear elements of the Navy (SSBNs) and of the Air Force (long-range bombers), as well as by the 12th Chief Directorate of the ministry of Defense, responsible for the design, production and custody of all nuclear weapons.⁵¹

Marshal Sergeyev explained the change in the following way:

On the one hand, this will enable us to exercise tougher control over nuclear missile technology and to prevent its proliferation. And on the other hand, it will conform to Russia's doctrine which puts the emphasis on the strategic deterrent forces as the main factor in containing a wide-scale aggression against Russia in conditions of [military] reform.⁵²

According to Col. Gen. Vladimir Yakovlev, Commander-in-Chief of the Strategic Rocket Forces, the proposed joint command would "strengthen security against sabotage or

⁵⁰ Daschle quoted in "Early Warning Plan with Russia Falls Short", *Aerospace Daily*, September 24, 1998, 487.

⁵¹ Mikhail Tsyarkin, "Military Reform and Strategic Forces of the Russian Federation," *Journal of European Security*, forthcoming.

⁵² As cited in Mikhail Tsyarkin, "Military Reform and Strategic Forces of the Russian Federation," *Journal of European Security*, forthcoming.

unauthorized use by improving the efficiency with which missile launch warning information is moved and orders are transmitted.”⁵³

In fact, advocates of bilateral deactivation state that Russia has numerous controls in place to prevent the accidental or unauthorized launch of nuclear weapons. Nuclear weapons, both in the United States and Russia, require a series of steps not only to issue the order to fire, but also to execute the order.⁵⁴ For example, according to Kathleen Bailey and Franklin Barish,

instruction codes to issue a command to fire U.S. nuclear weapons are kept in a safe. To open the safe requires that an order from the Commander-in-Chief (or his successor) must be received and decoded. Two individuals, each with complementary components of the combination or key to the safe then must participate in opening it. In Russia, there are three individuals. A single person can not do the action, nor can it be done by only two people with the key; others must be aware and complicit in the action. The weapons themselves also have codes or mechanical devices that must be implemented or activated correctly to enable the nuclear weapon to be fired.⁵⁵

In Gen. Habiger’s view, “the threat of an accidental or unauthorized launch of a Russian nuclear weapon may be overstated.” Gen. Habiger observed that “any one of the Russian nuclear command centers, from the national level down to the unit level, can inhibit the launch of an intercontinental ballistic missile.”⁵⁶ While there is always room for improvement in any nation’s command and control capabilities, care must be taken to avoid concluding erroneously that there exists a “hair-trigger” danger.⁵⁷ Even if there

⁵³ Yakovlev quoted in Mann, “Nuclear Risks mount in Besieged Russia,” 61.

⁵⁴ Bailey and Barish, 4.

⁵⁵ Ibid., 4.

⁵⁶ Habiger quoted in Kathleen Bailey, “De-alerting Nukes Would Imperil U.S. Security” *Wall Street Journal*, January 20, 1998, A18.

⁵⁷ Habiger, Prepared Statement for the Hearing of the Strategic Forces Subcommittee, 28.

exists a command and control problem within the Russian nuclear forces, there are better ways to address the problem than de-alerting the remainder of America's nuclear forces, the ICBM and SLBM legs of the triad; for this step would be detrimental to U.S. national security.⁵⁸ The dialogue and exchange of information on command and control should probably be continued and enhanced, involving multiple levels of the U.S. and Russian nuclear force structure. Some observers think this information should include procedures for control, doctrine, technologies, information sharing, advance notice of missile firings, and other related issues.

C. THE GROWING NUCLEAR THREAT AND WEAPONS OF MASS DESTRUCTION

In contrast, opponents of de-alerting do not expect other powers to be as cooperative as anticipated by de-alerters. Concerned about other problems for America's nuclear posture, problems distinct from uncertainties about Russia's early warning and command and control system, they advise taking into account worldwide military capabilities and global dangers, along with the multiple roles and missions of U.S. nuclear forces, when structuring U.S. nuclear policy and force planning.

Although U.S. relations with Russia are now relaxed, the United States "must continue to take Russia's nuclear capabilities, not just its intent, into account" when formulating U.S. security policy.⁵⁹ There remains a current and "emerging nuclear,

⁵⁸ Bailey and Barish, 11.

⁵⁹ Kathleen Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, *Federal News Service*, March 31, 1998, 60.

chemical, and biological threat that requires an effective U.S. nuclear deterrent.”⁶⁰ Since the end of the Cold War, Russia has increased its reliance on nuclear weapons and continues to improve its nuclear arsenal and delivery systems. In her testimony before the Strategic Forces Subcommittee of the United States Senate Armed Services Committee, Kathleen Bailey made the following points:

1. Russia has a large, functioning nuclear weapons production complex; the United States does not. And, we have no way to verify that there are no undeclared stockpiles in Russia.
2. It [Russia] continues to maintain several thousand tactical nuclear weapons, at a time when NATO has made dramatic reductions in this class of nuclear forces.
3. Giant, deeply buried, underground nuclear-related complexes in Yamantau and Kosvinskiy Mountains... continue to be constructed at great cost [a time when Russia's economic situation remains highly questionable].
4. Russia continues to test nuclear-related weapons. In 1996, Russia conducted some sort of nuclear or nuclear-related tests at Novaya Zemlya, and perhaps others since.
5. Russia continues its remanufacturing of existing warheads and is currently building new designs. Initial units of the SS-X-27, a reportedly highly accurate and reliable mobile ICBM, have already been deployed. A new SSBN and SLBM are under development.
6. Russia announced that it would no longer adhere to a nuclear no-first-use doctrine.⁶¹

The United States does not know how many nuclear warheads the Soviets built or the size of Russia's current stockpile, nor does it have a way to determine these numbers. If Russia were to hide some of its stockpile and declare a lesser number, currently there

⁶⁰Ibid., 59.

⁶¹ Bailey, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 7.

are no existing technical means capable of detecting the discrepancy or locating the hidden nuclear warheads. According to Kathleen Bailey, "The wide range of error possible in estimating Russian nuclear warheads was highlighted in 1993, when Minatom director Viktor Mikhailov stated that the Russian arsenal peaked at 45,000 warheads in the mid 1980s. This was 12,000 more than estimated by the United States."⁶²

The problem of undeclared weapons stockpiles is complicated by the fact that "Russia claims to have been destroying thousands of nuclear warheads per year since the end of the Cold War." Yet, the United States has no means of verifying these claims. Even if Russia did dismantle the weapons, the United States has no way of verifying that it did not manufacture new ones using either recycled or new special nuclear materials. Detection of undeclared nuclear material is also problematic. Currently the United States does not have the technology to allow it to determine with confidence the exact amount of nuclear material the Soviet Union produced during the Cold War or how much Russia has produced since. Even with highly intrusive inspections and monitoring equipment, it could be impossible to find materials not only because there is no way to pinpoint where to look, but also because materials could be secretly transported. The United States has recently witnessed all of these problems with the United Nations Special Commission inspections in Iraq. Estimates could be based on plutonium and highly enriched uranium production records, but discrepancies would be difficult to resolve and uncertainties could be significant. For example, according to the Lawrence Livermore National

⁶² Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 62.

Laboratory, "Russian plutonium production up to 1996 has been estimated to be 145 tonnes. A 20% error, 25 tonnes, could reasonably be expected. This could correspond to primary fuel for as many as 5000 warheads."⁶³

Proponents of bilateral deactivation and national missile defense (NMD) point out that there are also numerous asymmetries between U.S. and Russian nuclear materials and warhead production capabilities. Russia currently has a large, functional infrastructure with extensive redundancies and is maintaining this complex despite its high financial cost during a period of economic turmoil. According to Kathleen Bailey, there are multiple production facilities in Russia, "four of which are major plants the size of the U.S. Pantex facility, that can produce thousands of warheads per year." These production facilities include not only the capability for manufacturing fissile material components and other weapons parts, but also for final assembly.⁶⁴ Russia thus has a functioning capability that would allow it to rapidly reconstitute a nuclear force in any breakout scenario.

By comparison, the United States has no facilities or infrastructure ready to manufacture many key materials and components for nuclear weapons. According to Lawrence Livermore National Laboratory, the United States currently has no facility capable of producing plutonium pits. The United States plans to begin pit production at Los Alamos National Laboratory by 2003, but the facility will only produce about 20 pits per year compared to the Russian capacity of thousands per year. The U.S. objective is

⁶³ Ibid., 62-63.

⁶⁴ Ibid., 63.

only to maintain the existing stockpile. Thus the United States will not have the capacity to undertake large-scale production should there be a future Russian break out from treaty constraints.⁶⁵

The proponents of bilateral deactivation and NMD have also been correct in pointing out that Russia is not the only potential danger lurking in the world. In July 1998 the Rumsfeld Commission reported that

A number of countries with regional ambitions do not welcome the U.S. role as a stabilizing power in their regions and have not accepted it passively. Because of their ambitions, they want to place restraints on the U.S. capability to project power or influence into their regions. They see the acquisition of missile and WMD technology as a way of doing so.⁶⁶

China has not been a highly salient threat to the United States, partly because China lacks delivery systems and warheads in numbers comparable to those of the United States. However, "the threat presented by the Chinese arsenal is increasing."⁶⁷

According to Kathleen Bailey,

The threat from its current arsenal is mostly on missiles with ranges that cannot reach the US mainland, but it also has some silo-based 12,000-km DF-5 missiles that can. China is estimated to have 300 to 400 nuclear warheads and is making progress on miniaturization and reliability. China is also modernizing its ballistic missiles. In this, it is reported to have received help from Russian scientists as well as Ukraine, which have SS-25 mobile missile technology.⁶⁸

⁶⁵ Ibid., 63.

⁶⁶ Donald H. Rumsfeld, Chairman, "Executive Summary of the Report of the Commission to Assess the Ballistic Missile Threat to the United States," July 15, 1998, 8.

⁶⁷ Bailey, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 7.

⁶⁸ Ibid., 8.

China has also been developing the mobile DF-31 ICBM missiles with an estimated range of 8000 km. According to the Rumsfeld Commission,

China also poses a threat to the U.S. as a significant proliferator of ballistic missiles, weapons of mass destruction, and enabling technologies. It has carried out extensive transfers to Iran's solid-fueled ballistic missile program. It has supplied Pakistan with a design for a nuclear weapon and additional nuclear weapons assistance. It has even transferred complete ballistic missile systems to Saudi Arabia (the 3,100-km-range CSS-2) and Pakistan (the 350-km-range M-11).⁶⁹

North Korea continues to be another potential threat to U.S. security, especially since there is a U.S.-South Korea defense treaty and over 32 thousand Americans are stationed in the Republic of Korea. North Korea is suspected of separating weapons grade plutonium and still retains that fissile material, in direct violation of the Nuclear Non-Proliferation Treaty.⁷⁰ According to the Rumsfeld Commission,

North Korea maintains an active WMD program, including a nuclear weapons program. It is known that North Korea diverted material in the late 1980s for at least one or possibly two weapons. North Korea's ongoing nuclear program activity raises the possibility that it could produce additional nuclear weapons. North Korea also possesses biological weapons production and dispensing technology, including the capability to deploy chemical or biological warheads on missiles.⁷¹

Furthermore, with its myriad of tunnels and underground facilities, North Korea may have undeclared plutonium production facilities. North Korea possesses Scud missiles that can reach South Korea and Japan and has developed the Nodong 1, a missile with a range of 1000 to 1300 km. North Korea is currently developing longer range missiles, including the Taepodong I and Taepodong 2. The former is estimated to have

⁶⁹ Rumsfeld, 10-11.

⁷⁰ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 61.

⁷¹ Rumsfeld, 13.

an approximate range of 2000 km and the latter a range up to 10,000 km, making it capable of reaching the United States.⁷² Both could be operational by the year 2000 and both missiles have the potential to deliver nuclear, biological, or chemical payloads.

According to the Rumsfeld Commission,

North Korea also poses a major threat to American interests and potentially to the United States itself, because it is a major proliferator of the ballistic missile capabilities it possesses - missiles, technology, technicians, transporter-erector-launchers (TELs) and underground facility expertise - to other countries of missile proliferation concern.⁷³

India is an "emerging secondary nuclear power whose new government advocates making India a declared nuclear weapons state. India has had nuclear explosives capabilities since its 1974 test and has steadily been producing fissile materials."⁷⁴ It is estimated that India could already have more than 200 nuclear warheads and continues with its nuclear production programs. India has also developed an impressive ballistic missile delivery capability with its Agni missile carrying a 1000 kg payload to a range of 2500 km. India also successfully tested a low-earth and a polar satellite launch vehicle. The latter could be used as an ICBM carrying a 1000 kg payload.⁷⁵ According to the Rumsfeld Commission, "Since the Pakistani nuclear tests, India has announced its intention to increase its spending on missiles and nuclear weapons. India is in a position to supply material and technical assistance to others."⁷⁶

⁷² Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 61.

⁷³ Rumsfeld, 13.

⁷⁴ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 60.

⁷⁵ Ibid., 61.

⁷⁶ Rumsfeld, 16.

Iraq continues to surprise the United States with the advanced state of its weapons of mass destruction program and its intermediate range Scud missile derivatives. Prior to the 1990-1991 Gulf War, "Iraqi scientists were well on the way to having a workable nuclear weapons design."⁷⁷ Although the United Nations Special Commission has destroyed much of Iraq's infrastructure for making weapons of mass destruction and longer range missiles, Iraq continues to preserve much of its acquired technology and key items. According to the Rumsfeld Commission,

Iraq has maintained the skills and industrial capabilities needed to reconstitute its long range ballistic missile program. Once the UN-imposed controls are lifted, Iraq could mount a determined effort to acquire needed plant and equipment, whether directly or indirectly. Such an effort would allow Iraq to pose an ICBM threat to the United States within 10 years. Iraq also had a large chemical and biological weapons program prior to the war, and produced chemical and biological warheads for its missiles. Knowledge, personnel, and equipment related to WMD remain in Iraq, so that it could reconstitute these programs rapidly following the end of sanctions.⁷⁸

In addition to nuclear threats, there are chemical and biological weapons programs worldwide which must be considered in determining the direction of U.S. nuclear security policy and force structure. Russia has broken its political pledges to discontinue its chemical and biological weapons programs. While the "United States ceased its biological weapons program [in 1969], Moscow continued its program unabated," as was admitted by President Yeltsin in 1992.⁷⁹ According to Ken Alibek,

⁷⁷ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 60.

⁷⁸ Rumsfeld, 15.

⁷⁹ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 61.

Over a twenty-year period that began, ironically, with Moscow's endorsement of the Biological Weapons Convention in 1972, the Soviet Union built the largest and most advanced biological warfare establishment in the world. We were among 140 signatories of the convention, pledging "not to develop, produce, stockpile or otherwise acquire or retain" biological agents for offensive military purposes. At the same time, through our covert program, we stockpiled hundreds of tons of anthrax and dozens of tons of plague and smallpox near Moscow and other Russian cities for use against the United States and its Western allies.⁸⁰

Ken Alibek also stated that,

The threat of biological attack has increased as the knowledge developed in our [Soviet Union] labs – of lethal formulations that took our scientists years to discover – has spread to rogue regimes and terrorist groups. Bioweapons are no longer contained within the bipolar world of the Cold War. They are cheap, easy to make, and easy to use.⁸¹

Against these weapons, the United States has no in-kind retaliatory capability, and must therefore rely on nuclear weapons and other military capabilities to provide a deterrent. U.S. biological weapons were destroyed when the program was ended in 1969. The U.S. chemical weapons modernization program was abandoned. The remaining U.S. chemical arsenal is aging and quickly becoming undeliverable; and it is scheduled for total destruction. According to Kathleen Bailey, "Chemical and biological weapons are much less expensive and physically easier to develop and produce than nuclear weapons. Because they are virtually impossible to detect, we may not know all of the countries capable of delivering such weapons against the U.S."⁸² North Korea, Iraq, Iran, Libya, and others have chemical and/or biological weapons capabilities.

⁸⁰ Ken Alibek, *Biohazard*, Random House, New York, 1999, 10. The Soviet Union under President Gorbachev broke its pledge under the Biological Weapons Convention. Currently, the United States has no technical means to verify the status of Russia's biological and chemical weapons program.

⁸¹ *Ibid.*, 11.

⁸² Bailey, 61.

A key question facing the United States, which has foresworn both biological and chemical weapons, is how it should deter these threats. America's policy is ambiguous, as articulated by various officials. In 1996, William Perry, then Secretary of Defense, told the Congress,

For obvious reasons we choose not to specify in detail what responses we would make to a chemical attack. However, as we stated in the Gulf War, if any country were foolish enough to use chemical weapons against the United States, our response would be absolutely overwhelming and devastating.⁸³

Secretary Perry also publicly declared that,

[I]f some nation were to attack the United States with chemical weapons, then they would have to fear the consequences of a response from any weapon in our inventory... We are forswearing...chemical weapons ourselves.... [No] nation should feel that they can use chemical weapons against us without receiving a devastating response.⁸⁴

Other officials have sent similar signals regarding the role of U.S. nuclear deterrent. For example, Robert Bell, the senior director for defense policy at the US National Security council (NSC), discussed publicly in December 1997 whether U.S. policy is to use nuclear deterrence against chemical and biological threats. According to Bell, "if any nation uses weapons of mass destruction against the United States, it may 'forfeit' its protection from US nuclear attack under the 1995 pledge." Bell also stated, in the same context, that the Presidential Decision Directive of November 1997 reaffirms that

⁸³ Statement of William J. Perry, Secretary of Defense in Congress, Senate, Committee on Foreign Relations., *Convention on Chemical Weapons: Hearing Before the Committee on Foreign Relations*. 104th Congress, 2nd Session, 13, 21, and 28 March 1996, 121.

⁸⁴ Secretary of Defense William Perry, Remarks at the Air War College Conference "Nuclear Proliferation Issues," Maxwell Air Force Base, AL, 26 April 1996.

It is the policy of the United States, as restated in this PDD, not to use nuclear weapons first in a conflict unless the state attacking us, our allies, or our military forces is nuclear-capable or not in good standing under the NPT or an equivalent regime, or third, is attacking us in alliance with a nuclear capability.⁸⁵

According to America's *National Security Strategy for a New Century*,

Our nuclear deterrent posture is one of the most visible and important examples of how U.S. military capabilities can be used effectively to deter aggression and coercion.... Nuclear weapons serve as a hedge against an uncertain future, a guarantee of our security commitments to allies and a disincentive to those who would contemplate developing or otherwise acquiring their own nuclear weapons.⁸⁶

Deterrence is most effective when the potential aggressor understands that the retaliation will be swift and proportional. Because conventional responses may not always be possible or proportional, "the option to respond with nuclear weapons must be preserved and clearly communicated. If not, deterrence will be less effective."⁸⁷ According to proponents of bilateral deactivation proposals, de-alerted forces would not give the United States this option, and would therefore adversely affect U.S. national security.

D. CONCLUSION

De-alerters argue that the United States should structure its nuclear security policy and force posture around a single axis, Russian strategic nuclear command and control. In contrast, the proponents of bilateral deactivation and NMD advise taking into account worldwide military capabilities when structuring U.S. security policy and force planning.

⁸⁵ Robert Bell, quoted in R. Jeffrey Smith, "Clinton Directive Changes Strategy On Nuclear Arms," *Washington Post*, 7 December 1997, A1.

⁸⁶ President William Clinton, *A National Security Strategy for a New Century*, The White House, October 1998, 12.

⁸⁷ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 61.

In 1998 General Eugene Habiger, USAF, then Commander, United States Strategic Command, stated that,

Although, I think we [the United States] can do with fewer strategic nuclear forces than we have today, I believe that we have to proceed with caution in approaching the strategic force reductions and changes in our strategic posture....But this transformation must recognize the legitimate security needs of both Russia and the United States, and the fact that each country relies on its strategic nuclear forces for many reasons, not just to offset each other.⁸⁸

When determining the direction of U.S. national security policy, the United States must consider not only the likely threats that must be deterred, but also the breakout potential of other nations. Arms control measures that would take the U.S. nuclear arsenal to extremely low levels could greatly increase the incentives for other nations to cheat because opponents could then garner a tremendous advantage over the United States with only a small nuclear force. This principle applies not only to Russia and China, but also to India, Iraq, Libya, and North Korea; indeed, it applies to any nation with nuclear capability now or in the future. According to Dr. Keith B. Payne, President, National Institute for Public Policy, "Eliminating the credible threat of U.S. nuclear retaliation could easily mean the unexpected failure of deterrence."⁸⁹ Therefore, as the United States considers reducing the U.S. and Russian strategic nuclear arsenals, as proposed by the three leading schools of thought, de-alerting, bilateral negotiations, and national ballistic missile defense, it should consider the fact that the multipolar nuclear threat is growing, while other weapons of mass destruction continue to be proliferated. Deterrence is still a cornerstone of U.S. national security policy.

⁸⁸ Habiger, Prepared Statement for the Hearing of the Strategic Forces Subcommittee, 22-23.

⁸⁹ Keith B. Payne, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, *Federal News Service*, March 31, 1998, 42.

III. DE-ALERTING SCHOOL

A. INTRODUCTION

Although there is clearly some interest in de-alerting, especially in non-governmental organizations in the United States, the concept has been strongly resisted by the military establishments of nuclear weapon powers. Opponents in the United States judge that the proposed de-alerting measures would create risks and instabilities threatening to U.S. national security. The opposition in the United States also arises from the belief that successful deterrence depends in part on the ability to respond with a prompt and effective attack against assets highly valued by an adversary.

De-alerting measures are intended to increase the amount of time between a decision to launch a nuclear attack and the actual launch. De-alerting seeks to reduce operational readiness by extending the time between making a decision to launch and actually being able to launch the weapon.⁹⁰ The general idea is that "the more time the sides require to mount massive nuclear attacks, the less danger of inadvertent conflict."⁹¹ De-alerting measures include the removal of warheads, guidance modules, or launch codes, or the disabling of silo covers. In contrast, opponents of de-alerting call for the gradual, controlled, bilateral de-activation of nuclear delivery systems. De-activation is defined as the removal from the alert force of those delivery systems that have been slated for destruction under bilateral arms control agreements. It is the removal of

⁹⁰ Jack Mendleson, "The U.S.-Russian Strategic Arms Control Agenda," *Arms Control Today*, November/December 1997, 12.

⁹¹ "U.S. - Low Tech Nuclear Disarmament," *Periscope Daily Defense News Capsules*, United Communications Group, February 20, 1998.

delivery systems from operational service. For example, in 1991, President Bush removed from alert 450 Minuteman II ICBMs that were due to be eliminated under START I.⁹² START II calls for the de-activation and elimination of more nuclear delivery systems, and the terms of reference for START III discussed at Helsinki in March 1997 envisage further bilateral U.S.- Russian reductions.

According to the de-alerters, even if the United States and Russia agree to continue further reductions in nuclear arms, such as START II and START III, the greatest danger – a mistaken or unauthorized launch – would only decline slightly and slowly.⁹³ For de-alerters, “the arms control process is moving so slow as to become almost irrelevant” and the United States should re-energize it by immediately moving to de-alert U.S. nuclear forces. De-alerters note that thousands of U.S. and Russian nuclear weapons are still maintained at a high level of launch readiness. The de-alerters like to refer to this as a “hair-trigger” launch posture.⁹⁴ According to the de-alerters,

The time has come for the United States and Russia to negotiate the next step in falling back from the preparedness for instant missile war, something that would make it more time-consuming for each side to put its warheads into action, something that eases the hair-trigger position.⁹⁵

De-alerting methods are advocated as the remedy for reducing the dangers presumed to be inherent in these high levels of alert.

⁹² Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 64.

⁹³ Frank von Hippel, “De-Alerting,” *Bulletin of the Atomic Scientists*, Chicago, May/June 1997, 35.

⁹⁴ Kitfield, 33-32.

⁹⁵ Editorial, “Take the U.S. and Russia Back Another Step from the Nuclear Brink,” *The Buffalo News*, December 28, 1997, 2H.

De-alerters also view measures such as a potential national ballistic missile defense system as possibly causing further deterioration in Russian nuclear command and control. Russia's declining conventional military posture has caused Russia to increase its reliance on nuclear weapons, as laid out in the military doctrine it issued in 1993. De-alerters state that,

As long as Russia continues to rely on nuclear missiles for deterrence, it will react strongly to U.S. deployment of a national missile defense system that could, in principle if not reality, reduce the effectiveness of its deterrent... U.S. deployment of a national ballistic missile defense system would create incentives for Russia to refuse to adopt de-alerting measures and keep its missiles on launch-on-warning status. But such a decision, combined with a weak command-and-control system, could increase the probability of an accidental or unauthorized attack on the United States.⁹⁶

De-alerters question the wisdom of current U.S. policy that maintains deterrence as its predominant concern. According to Bruce Blair, one of the most prominent de-alerters,

while Russia relies more on nuclear weapons and on launching them on warning, its nuclear control is steadily deteriorating in physical, organizational, and human terms. All the trends pertinent to the functioning of Russian's nuclear command and early warning system are negative, and I strongly doubt whether it can endure the stress and strain indefinitely. The susceptibility of Russian nuclear forces to accidental, unauthorized or mistaken launch has been growing since the end of the Cold War. These adverse developments call into serious dispute the wisdom of our current policy in which deterrence is the predominant concern. Deterrence is not the problem. Restructuring our posture and forces to fortify deterrence would misdiagnose the threat; in fact this response would only aggravate the dangers described earlier. The right approach would be to revise our strategic policy so that it strikes a better

⁹⁶ Lisbeth Gronlund and David Wright, "What They Didn't Do," *Bulletin of the Atomic Scientists*, Chicago, November/December 1998, 50.

balance between deterrence, reassurance, and operational safety. Our biggest challenges are to reduce the "use or lose" pressure on the Russian strategic arsenal, and to prevent its accidental, unauthorized or mistaken launch.⁹⁷

According to the de-alerters, Russia's nuclear forces are declining below parity with the United States, and this could create a possible Cold War arms race environment.

aging Russian nuclear forces are heading into a tailspin that, coupled with an economic depression that severely limits the production of new weapons, could leave Russia with fewer than 1,000 weapons at the end of 2007 and as few as 500 weapons at the end of 2012. START II and III ceilings are thus unrealistic for Russia, and if Russia slides into numerical inferiority, then our relationship will suffer. The missile and bomber "gaps" and "windows of vulnerability" that once afflicted our relations could re-surface with a vengeance, both in bilateral politics and in Russian domestic politics. A growing disparity would likely buoy Russian nationalists who would revive nuclear tensions and reintroduce Cold-war style politics into our relations.⁹⁸

De-alerters state that "Thousands of Russian and American nuclear weapons remain on hair-trigger alerts, despite the end of the cold war."⁹⁹ They also contend that "land-based missiles are on hair-trigger alert, which makes for a dicey situation during times of tension."¹⁰⁰ To meet these inherent dangers, de-alerters argue that Russia and the United States should take their nuclear weapons off alert, so that they cannot be launched on short notice. By extending the time needed to prepare nuclear weapons for launch, proponents of "de-alerting" would hope to accomplish multiple feats:

⁹⁷ Bruce G. Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, *Federal News Service*, March 31, 1998, 17.

⁹⁸ *Ibid.*, 16.

⁹⁹ Tim Weiner, "Russia's Disarray Brings a Nuclear Risk to the U.S.," *The New York Times*, April 30, 1998, 13.

¹⁰⁰ Mike Moore, "Dropping the Ball," *Bulletin of the Atomic Scientists*, March 1998, No.2, Vol. 54, 2.

1. Russian nuclear weapons would be taken off [what Bruce Blair calls] their dangerous "hair-trigger" posture, thereby reducing their susceptibility to inadvertent or illicit use. Russian forces would require hours, days, or weeks to get ready for launch. This would increase the margin of safety against many scenarios, ranging from the temporary loss of legitimate civilian control over Russian weapons to the generation of false alarms in their early warning system.

2. Rectify the current imbalance between Russian and U.S. strategic capabilities, which undermines crisis stability. America's security depends on a calm Russian finger on the nuclear trigger. De-alerting could reassure Russia if the U.S. threat of sudden attack were removed by lengthening the fuse on our forces from the current minutes to many hours or longer.

3. De-emphasize the numerical inequality favoring the United States, a development that could de-rail arms control and sour political/ military relations. Projecting Russia's nuclear nosedive, if we intend to preserve the principle of numerical equality, then we need to fast forward START, lower the ceiling to 1,000 weapons or below, and immediately bring Britain, France, and China into the nuclear negotiations. De-alerting would help compensate for Russia's slide into numerical inferiority by greatly reducing the operational significance of this imbalance.

4. De-alerting would also strike a better balance between deterrence and operational safety. Nuclear safety should be the centerpiece of our nuclear agenda. Keeping thousands of nuclear weapons poised for immediate launch poses an inherent danger whose alleviation carries overriding priority regardless of the strength or weakness of Russian nuclear control. De-alerting would ensure that electronic or computer malfunctions could not trigger a nuclear accident.

5. De-alerting would strike a better balance between deterrence and reassurance. While nuclear deterrence is resilient enough, Russia desperately needs to be reassured that its security is resilient. Given the dramatic decline of Russia's military and its geostrategic vulnerability along its borders, security is not easily given or received. Even though de-alerting our nuclear arsenals would scarcely fortify Russian confidence in its ability to handle conventional attacks or wean Russia off its over reliance on nuclear weapons for security, it would nonetheless represent a reassuring gesture on America's part that would at least alleviate the stark vulnerability of Russian nuclear forces.¹⁰¹

¹⁰¹ Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 18.

De-alerters also state that deliberately increasing the time needed to launch nuclear weapons would have an added benefit. According to Tim Zimmermann, "At a time when the START approach of shrinking the overall arsenal is under increasing attack in the Russian parliament, this [de-alerting] would introduce a new approach to arms control."¹⁰² Mike Moore asserts that "De-alerting would buy time in a crisis. If missiles on both sides are verifiably de-alerted, neither side would fear a disarming first strike."¹⁰³ Bruce Blair argues that

a sensible first step for President Clinton is to immediately de-alert long-range missiles slated for retirement under the stalled START II agreement. If President Yeltsin responds in kind, the two countries could engage in a virtual disarmament process that, over time, might eventually succeed in dismantling the nuclear balance of terror.¹⁰⁴

B. DE-ALERTING PROPOSED SOLUTIONS AND BENEFITS

De-alerters believe that by gradually adopting more elaborate and extensive measures that make re-alerting more time-consuming, the United States would ascend to a higher moral ground in its quest to dissuade other countries from going nuclear. They believe that de-alerting would create an international norm of operational safety that could be applied universally, to all nuclear states, making it a taboo for nations to keep nuclear weapons in a launch-ready configuration.¹⁰⁵ Paul C. Warnke suggests that "one way we might accomplish this [de-alerting] would be to peel away the strategic force

¹⁰² Zimmermann, 72.

¹⁰³ Moore, 2. However, verification is a problem that opponents of de-alerting point out. Verification issues are discussed later in this chapter.

¹⁰⁴ Blair quoted in Zimmermann, 72.

¹⁰⁵ Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 71.

onion until the warheads on minute-to-minute- alert are insufficient to permit the disarming attack option to be carried out without re-alerting.”¹⁰⁶ De-alerters are also quick to point out that there is a U.S. precedent for such unilateral action. In 1991, during the final months of the Soviet Union, President George Bush removed U.S. ground-launched tactical nuclear weapons from Europe and took the U.S. nuclear bomber force off high alert. Those steps were soon matched by Soviet President Mikhail S. Gorbachev.¹⁰⁷

De-alerters state that any blueprint for de-alerting U.S. nuclear forces should meet three criteria. De-alerting measures should:

1. Truly extend the launch preparation time.
2. Provide for adequate verification.
3. Preserve the invulnerability of a core deterrent force.¹⁰⁸

Bruce Blair has described the following hypothetical U.S. posture that (according to the de-alerters), would pass all three tests:

1. Immediately download to storage the warheads of the MX missiles (which will, in any event, be retired under START II).
2. Disable all 500 Minuteman III missiles by having their safety switches pinned open (as was done for the Minuteman IIs almost overnight in 1991). Then these missiles should be further immobilized as long as Russia reciprocates and immobilizes its silo-based forces. The options for this include removing the warheads, guidance batteries, or mechanisms for opening the silo lids. For a U.S. START III force of 300 Minuteman missiles, we should consider removing the warheads for all 300 missiles and placing them in nearby silos – one warhead to

¹⁰⁶ Warnke quoted in Casper W. Weinberger, “The Dangers of Denuclearization,” *Forbes*, New York, February 23, 1998, 38.

¹⁰⁷ Kitfield, 33.

¹⁰⁸ Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 72.

a silo – that would become available after retiring 200 Minuteman and 50 Peacekeeper missiles.

3. Remove to storage the warheads on the four Trident submarines that are to be retired under START III and reduce the number of warheads on each remaining submarine missile from eight to four.
4. Take the W88 warheads off the Trident II missiles, place them in storage and replace them with lower-yield W76 warheads.
5. Allow Russia to verify these actions by using some of their annual inspections permitted by the START I treaty, and accept a greater number of inspections if Russia will also do so.
6. Reduce from two-thirds to one-third the fraction of submarines at sea in peacetime. Those at sea would adopt a low level of alert. Their missile guidance sets would be kept off the missiles but onboard the submarines, and seals would be put on the missiles to allow for eventual inspection proving the missiles never went on high alert. (It would take the crews about three days to reinstall all 24 guidance sets on a Trident submarine's missiles.)
7. Lastly, the submarines would patrol many days out of range of Russian targets by, for instance, creating patrol areas in the Southern Hemisphere. The submarines could disclose their location one at a time on a periodic basis to verify their status.¹⁰⁹

Under the de-alerting proposal, three to five U.S. submarines carrying between 288 and 480 warheads would remain undetectable at sea, and the immobilized Minuteman III missiles could be destroyed only by a massive Russian attack on many hundreds of silos. According to Frank von Hippel,

Russia might keep a portion of its force survivable by keeping warheads on four submarines (for example, one Typhoon and three Delta IVs), one or two of which could be at sea at any time, and by keeping up to 20 percent of its mobile single-warhead ICBMs with warheads deployed outside their garrisons.¹¹⁰

¹⁰⁹ Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 72.

¹¹⁰ von Hippel, 35.

Unlike the silo-based ICBMs, with warheads removed, the submarines and mobile ICBMs deployed would not be in a "use-them-or-lose them" position because they would not be locatable. Therefore, "they could be kept in launch-unready status to further reduce the risk of accidental launch."¹¹¹ U.S. submarine-launched missiles are already kept in a de-alerted status while in port. It requires approximately 24 hours before all missiles on a Trident submarine can be brought to launch readiness status. Similarly, de-alerters suggest that "Russia might remove from each of its fielded mobile ICBMs a key component (such as the warhead or nose cone) and keep it concealed at a separate location in a truck, which would be allowed to rendezvous with the missile for re-mating only upon receipt of a coded emergency message."¹¹²

According to the de-alerters, the U.S. force would be fully de-alerted, and yet it would provide a secure deterrent force (with deployed SSBNs) whose survivability would not depend on the timely warning of a Russian violation of its de-alerting commitments.¹¹³ Consequently, if the Russians re-alerted, this would not offer them a significant advantage nor would it create strong pressures or incentives for the U.S. to re-alert its forces back to a launch-ready configuration. Bruce Blair testified that

It should be emphasized that the potential for Russian re-alerting in the future will decrease sharply because of the tailspin in delivery systems in store over the next decade. If a break-out problem exists, it will be a much larger headache for Russia than for the United States.¹¹⁴

¹¹¹ However, verification is a serious problem in several of the de-alerters proposals and will be addressed later in the thesis.

¹¹² von Hippel, 36.

¹¹³ Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 72.

¹¹⁴ Ibid., 72.

For the de-alerters,

This hypothetical U.S. posture would reassure Russia that its deterrent forces would no longer have to depend on quick launch for their survival. Russia could eliminate the 'hair trigger' on thousands of its weapons, and move to de-alert them systematically in parallel with the United States.

De-alerters also consider this posture to be a sufficient deterrent under all plausible conditions of U.S.-Russian tension. According to the de-alerters,

de-alerting would align our nuclear postures with the end of the Cold War, a long overdue adjustment. By ending the hair-trigger alert practices they carried over from the Cold War, the former adversaries can finally expunge the darkest suspicion from their political relationship and lay the groundwork for a truly productive partnership.¹¹⁵

De-alerters recognize that "a system of mutual notification, and explanation would also be required" so that if, at some point, Russia or the United States decided to redeploy some of the warheads, it could be done gradually so to avoid a destabilizing panic. To further protect against such panic-driven instability, de-alerters suggest that "at each stage of reduction, some portion of the nuclear-weapons systems could be deployed in a survivable manner [SSBN or mobile ICBMs] to insure that no 'bolt from the blue' could be destabilizing."¹¹⁶

According to its proponents, de-alerting would also lend leverage over other nuclear dangers lurking in the world. China is currently developing a modern strategic arsenal and will likely increase the launch readiness of its strategic missile force to match

¹¹⁵ Ibid., 72-73.

¹¹⁶ von Hippel, 35.

those of Russia and the United States. India also appears to be considering placing its nuclear weapons on a higher alert status, "a trend that would undermine crisis stability and increase the risk of an inadvertent launch."¹¹⁷

The proliferation of weapons of mass destruction continues to be a source of frustration and threat to the United States and its allies. According to the de-alerters, de-alerting would also address these concerns:

1. It [de-alerting] would preserve, for the foreseeable future the flexibility of the President in the matter of nuclear options. Nuclear weapons that have been taken off alert and effectively mothballed still exist. If a national emergency requires it, the weapons could be re-alerted in small or large numbers depending on the circumstances.¹¹⁸
2. It [de-alerting] would project, over the long run, the ultimate elimination of nuclear weapons, which in turn would strengthen American diplomacy in the area of non-proliferation. Standing down the weapons and lengthening the fuse on their possible use takes a long stride not only toward downgrading their importance, but also toward demonstrating our nation's interest in their eventual abolition.
3. It [de-alerting] would help create an international norm of operational safety that would apply universally, to all nuclear states, making it a taboo for any nation to keep nuclear forces in a launch-ready configuration. If the United States and Russia take all their weapons off alert, then pressure, and possibly sanctions, could be imposed on other countries that move toward adopting hair-trigger alert practices.
4. It [de-alerting] would create momentum for establishing an exact accounting and monitoring arrangement for nuclear warheads, which would also enhance their security against theft and diversion to rogue states and terrorists. De-alerting by removing warheads from missiles and aircraft imposes new requirements for verifying the status of the

¹¹⁷ Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 18.

¹¹⁸ This assumes the weapons would not be destroyed or damaged by enemy actions.

warhead stockpiles. The location and number of warheads in the inventories must become more transparent in order to ensure any re-alerting of forces would be detected in a timely fashion.¹¹⁹

However, the opponents of de-alerting view the process of re-alerting America's nuclear forces in a different light. In 1998, General Eugene Habiger, USAF, then Commander, United States Strategic Command, testified to Congress,

We [the United States] should understand that the very act of restoring de-alerted forces to a higher alert status, would be viewed as provocative and destabilizing.¹²⁰ Thus, de-alerting should be considered a permanent act of disarmament and we should not expect [or plan for] de-alerted forces to ever again deter aggression at any level.¹²¹

C. IMPLICATIONS OF DE-ALERTING FOR U.S. NUCLEAR AND SECURITY POLICIES: A CRITICAL ANALYSIS

The opponents of de-alerting see risks and dangers distinct from those perceived by the de-alerters. According to its opponents, de-alerting would have several serious ramifications for U.S. nuclear deterrence and national security. De-alerting could undermine deterrence, generate significant instabilities, and introduce safety uncertainties. Deterrence occurs when an aggressor is persuaded not to act by being convinced that his potential victim has both the capability and the will to retaliate with consequences that the aggressor views as unacceptable. Although Saddam Hussein has not revealed his decision-making calculus, it may reasonably be argued that deterrence

¹¹⁹ Blair, Prepared Statement Before the Senate Armed Services Committee Strategic Forces Subcommittee, 18-19.

¹²⁰ Gen. Habiger's point could also apply to proposals for "reconstituting" U.S. nuclear forces withdrawn from Europe and Korea.

¹²¹ Habiger, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 22.

worked as recently as the 1990-91 Gulf War, when Iraq decided not to use chemical weapons – perhaps for fear of U.S. and/or Israeli nuclear retaliation. According to Keith B. Payne,

the available empirical evidence..., including recent history, suggests strongly that US nuclear threats can be credible and they can be essential when a regional challenger is highly motivated and cost and risk tolerate. For example, by Iraqi accounts, nuclear deterrence prevented Iraq's use of chemical and biological weapons during the Gulf War. Senior Iraqi wartime military and civilian leaders have explained that while US conventional threats were insufficient to stop Saddam Hussein, implicit US nuclear threats did deter his use of chemical and biological weapons...US nuclear disarmament or deep reductions could easily fuel nuclear proliferation, military deterrence remains enormously important to US security, and as the Gulf War demonstrated, in some tough cases, nuclear weapons will likely be essential to regional deterrence.¹²²

Opponents to de-alerting point out that, "If the Saddam Husseins of the world believe that our nuclear deterrent is susceptible to a pre-emptive strike, they at least have an incentive to try it."¹²³ Given the numerous international conflict scenarios possible, "conventional responses may not be possible or proportional;" therefore, "the option to respond with nuclear weapons must be preserved and clearly communicated." According to deterrence theory, the retaliatory capability must be swift and ready, as well as highly survivable. If not, the aggressor may believe that the retaliatory capability can be destroyed before it can be used. Thus, nuclear forces must be capable of surviving an attack and/or be

¹²² Keith B. Payne, Prepared Statement for the Hearing of the Strategic Forces Subcommittee of the Senate Armed Services Committee: Strategic Nuclear Policy. March 31, 1998, 42-43.

¹²³ Editorial, "Stay on Alert" *Wall Street Journal*, New York, January 20, 1998, A18.

capable of launching quickly enough to avoid destruction in a first strike. De-alerting would undermine deterrence by reducing both the survivability of nuclear forces and their ability to respond in a timely manner.¹²⁴

De-alerting measures could, critics of such proposals point out, "generate instabilities by making a first strike more attractive to an aggressor."¹²⁵ By definition, de-alerting would inherently reduce readiness, making forces less survivable and more inviting targets. An aggressor could undertake a first strike with forces that have not been de-alerted, either known or unknown, declared systems or clandestine ones, or could regenerate forces quickly in a breakout scenario. The incentive for an aggressor to make such a preemptive strike would be particularly powerful in times of tension, when he might observe or fear the regeneration of U.S. de-alerted forces. Knowing that America's own force regeneration might be destabilizing, the United States could hesitate to re-alert, thus undermining its nuclear deterrent and making its forces more vulnerable.¹²⁶

De-alerting could also lead to a destabilizing "regeneration-of-arms race."¹²⁷ Worried about whether their adversary's forces could be regenerated more quickly and effectively, nations would work to streamline the re-alerting process. This could lead to cutting corners with safety procedures, raising the risk of a nuclear accident. Once the

¹²⁴ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 62.

¹²⁵ Bailey and Barish, 7.

¹²⁶ Ibid., 8.

¹²⁷ Ibid., 7.

regeneration race began, neither side would know whether the other would definitely stop at the brink. This uncertainty could create or escalate tensions, increasing the risk of nuclear war. Under this scenario, the incentive to be the first to strike would be high.¹²⁸

Another paradoxical problem with de-alerting is that, “if one did not exercise to assure regeneration, deterrence and survivability would be decreased.”¹²⁹ Without exercise and training, the level of preparation would be too low to regenerate swiftly and decisively in a crisis. Such operational proficiency would require an extensive investment in resources, education, and training.¹³⁰

The security of nuclear forces is more likely to be compromised under some de-alerting measures. Storing warheads separately from the missiles could make them more vulnerable to theft or sabotage – or enemy attack. In a crisis situation requiring rapid regeneration, hasty efforts to make weapons operable, in the absence of extensive training and exercises in regeneration, could lead to problems – for instance, an accident or a situation in which the regenerated systems would not work properly.¹³¹

De-alerting could also adversely affect safety. According to Kathleen Bailey and Franklin Barish, “Procedures to assure safety would need to be reassessed and perhaps redesigned.”¹³² There must be some concern regarding the removal of the warheads or

¹²⁸ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 64.

¹²⁹ Bailey and Barish, 7.

¹³⁰ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 64.

¹³¹ Ibid., 65.

¹³² Bailey and Barish, 7.

other parts and how their removal would affect the safety and operation of the whole system. Nuclear weapons are designed to satisfy extremely high safety standards within specific parameters set to meet operational reliability requirements. If those parameters are altered, safety and operational reliability could be undermined. Certification for parts that have been removed and separately stored could require expensive, time-consuming evaluation and might even require a completely redesigned system.¹³³

Another problem with de-alerting "is that most proposed measures are either unverifiable or only verifiable with low confidence."¹³⁴ According to Kathleen Bailey,

If Russia agreed to disable one set of mobile missile launchers, it could clandestinely manufacture another set. If it removed one set of warheads, it could secretly produce and upload a second set. Alternatively, Moscow might not declare all of its existing warheads or delivery vehicles. Iraq has already taught us the lesson that mobile missiles are difficult to locate...the U.S. currently has no technologies to locate undeclared, hidden stockpiles of nuclear weapons or weapons materials.¹³⁵

In order to verify some de-alerting measures, full-time teams of inspectors or observers would have to be placed in country. Other methods would be extraordinarily expensive and of even more uncertain reliability. In a time of crisis or tension, these inspectors would be viewed as intruders and their access would be curtailed. Alternatively, they could be required to leave the country (on the model of recent events in Iraq). Placing such restrictions on inspectors would probably escalate and/or prolong the crisis.¹³⁶

¹³³ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 65.

¹³⁴ Bailey and Barish, 8.

¹³⁵ Kathleen Bailey. "De-alerting Nukes Would Imperil U.S. Security," *Wall Street Journal*, New York January 20, 1998, A18.

¹³⁶ Bailey and Barish, 8.

One of the most important pitfalls of de-alerting is that it would circumvent the ongoing arms control process. This is exactly what some of the de-alerting advocates want to see happen because they believe that disarmament negotiations are moving too slowly in the post-Cold War era. "For example, some [de-alerting] advocates have suggested that START III is likely to eliminate four more U.S. [Trident] submarines and reduce the number of nuclear warheads on each missile to four. They argue that these steps should be taken immediately."¹³⁷ However, opponents of de-alerting view most proposed de-alerting measures as dangerous because they would be taken unilaterally, because they would consist of unverifiable actions that would affect force structure, and because the United States could have no guarantee that Russia would reciprocate.¹³⁸ Casper W. Weinberger states that "De-alerting is only the first step towards its proponents' real goal: the elimination of our nuclear deterrent."¹³⁹ According to the opponents of de-alerting, no unilateral measures should be taken without an extensive and thorough review of their impact, and of the prospective negotiation processes with Russia and perhaps others (considering the possible impact on U.S. Allies), to ensure that national security is not compromised.¹⁴⁰

Critics of de-alerting proposals have taken note of numerous problems associated with the methods that most de-alerters propose. One commonly mentioned method of de-alerting calls for the removal and storage of the warheads. According to Kathleen

¹³⁷ Ibid., 8. De-alerters are suggesting that the United States reduce its total number of SSBNs to 10, not the reduction from 18 to 14 that the Secretary of Defense announced in February 1999.

¹³⁸ Ibid., 8.

¹³⁹ Casper W. Weinberger, "The Dangers of Denuclearization," *Forbes*, New York, February 23, 1998, 38.

¹⁴⁰ Bailey and Barish, 10.

Bailey,

Removing [nuclear] warheads... and storing them separately [de-mating] would have a significant adverse impact on survivability and stability. If the warheads were clustered in a limited number of storage locations, they would become high-value targets for preemption, thus having a negative impact on stability [and survivability].¹⁴¹

Assuming that regeneration would be observable, it would take as long to complete as the "re-mating" required, thereby reducing prospects for the timely use of the weapons. Safety and security would also be adversely affected by de-mating. "Warheads are smaller, easier targets for theft or sabotage when separated from their missiles."¹⁴²

If warheads were dispersed to make them less inviting targets, the task of safeguarding them could become highly demanding compared to the security required for the current configuration, or for warheads stored in more limited – yet more vulnerable – areas.¹⁴³ According to Kathleen Bailey and Franklin Barish, "The Russians... have opposed removal of warheads as a de-alerting scheme because of these problems and the extra cost that would be incurred." In addition, the motivation for an adversary to undertake clandestine preparation "would be enhanced by the fact that U.S. warheads likely would be clustered in a limited number of storage locations, making them high-

¹⁴¹ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 65.

¹⁴² Ibid., 65.

¹⁴³ Ibid., 65.

value targets for preemption.”¹⁴⁴ Under these conditions, an adversary could conceivably cripple the U.S. retaliatory capability using only a few weapons.

Verification would become a nightmare under most de-alerting arrangements. A complete chain of custody verifying the presence of removed warheads would be required from the time they were removed from the missiles throughout their stored life. It would be impossible “to assure that no duplicate warheads were available and ready for uploading.”¹⁴⁵ The verification that no warhead had been secretly replaced on a missile would require continuous intrusive monitoring and, even then, cheating would be possible. Given the fact that warhead storage areas would have to be manned and secured, new procedures would have to be developed for security, custody, verification, logistics for downloading and uploading, and operational training.¹⁴⁶ The financial cost of de-mating would therefore be high.

De-alerters also have suggested the incapacitation of missiles by disabling rocket ignition switches, installing switches in launch control centers, placing control switches on the missiles, or removing batteries or guidance systems, methods that are readily reversible within hours.¹⁴⁷ However, survivability would be adversely affected in the case of a sudden first strike, a fact that would increase the value of a preemptive strike. The reliability of the missiles might also suffer from measures that required the starting and stopping of power. The danger would arise upon restarting the power if the missile

¹⁴⁴ Bailey and Barish, 8.

¹⁴⁵ Ibid., 10.

¹⁴⁶ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 66.

¹⁴⁷ Bailey and Barish, 9.

did not work properly. With these de-alerting methods, verification would be virtually impossible, even if highly intrusive and constant surveillance was allowed.¹⁴⁸

Some de-alerters propose a simple disabling of silo covers. The methods vary, but generally the idea is to increase the time required to allow the covers to open. It would certainly be easy to defeat such disabling measures and to open the silos quickly. According to Kathleen Bailey and Franklin Barish, "If a way could be found to make disablement work, the principal downside would be the effect on survivability." In the event of a first strike, silo disablement would make a quick retaliatory strike impossible. Verification of most disablement procedures would be low-cost, but probably not effective.¹⁴⁹

Some proponents of de-alerting suggest keeping the U.S. Trident submarine force on modified alert by not allowing any portion of the force to be on full alert. This method would hamper America's capability to retaliate in the event of a nuclear strike and would therefore undermine deterrence. According to the opponents to de-alerting, "this could undermine deterrence by opening the possibility that the opponent could cripple the U.S. decision-making with a first strike." Furthermore, this "would require a complete redesign of the highly complex U.S. command and control system." The U.S. command and control system is designed to support a force that is on alert. U.S. procedures and practices are set up to support this arrangement. Any change in the alert posture would require the development of new measures assuring the National Command Authority the ability to provide timely instructions to the submarine force. Operational

¹⁴⁸ Ibid., 9-10.

¹⁴⁹ Ibid., 12.

safety could also be adversely affected by placing the SSBNs on a modified alert status. If operators do not routinely practice going on alert, safety and operational readiness may suffer when the call comes. Without training and exercise, they may become more prone to mistakes.¹⁵⁰

Some de-alerters also suggest the removal of launch codes from U.S. submarines. This would completely defeat the objective of having a stealthy, survivable leg of the triad. According to Kathleen Bailey and Franklin Barish,

Removal of launch codes from submarines would lengthen the time that it takes for a submarine to receive and act upon a launch command.... If C3 systems are weakened and the flow of information slowed, as they are likely to be if there is a first strike, SSBNs may have to make themselves more vulnerable to attack by coming to the surface and deploying communication equipment, thus increasing vulnerability. The uncertainty of the survivability of C3 systems coupled with dependence upon those systems for a launch code will diminish dramatically the capability of submarines to retaliate with certainty.¹⁵¹

In order to receive the launch codes, submarines would have to expose themselves to attack. Verification of both these measures would be extremely difficult without subjecting the U.S. submarine force to unacceptable vulnerabilities.

The concept of de-alerting has been offered by some as a means to assuage the concerns over the deterioration of the Russian nuclear command and control system. However, de-alerting should not be allowed to become the back door to negotiated bilateral nuclear disarmament. The United States has a legal obligation to pursue negotiated nuclear disarmament. Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons states,

¹⁵⁰ Ibid., 10-12.

¹⁵¹ Ibid., 10.

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.¹⁵²

As a depositary government of the Treaty, the United States has a legal and moral obligation to pursue treaties to end nuclear arms races and provide for nuclear disarmament. The START treaties have this long-term purpose, along with other nearer-term purposes.

Some de-alerting proposals would not contribute to U.S. security, and most would be detrimental. In fact, the de-alerting measures that have been proposed in the name of safety and stability concerns would not solve any of the alleged problems for which they are being advocated, but would make many of them far worse, including the basic security of nuclear weapons. According to a recent study published by the National Defense University, steps to strengthen America's security "should include cooperation between the United States and Russia on enhanced early warning, the restructuring of nuclear forces as provided in START I and II, deployment of missile defenses and, over the longer term, continued support for political and economic reform in Russia."¹⁵³

D. CONCLUSION

Efforts to de-alert America's nuclear forces along the lines advocated by Bruce Blair and others in the "de-alerting" school of thought should be strongly resisted. De-

¹⁵² *Treaty on the Non-Proliferation of Nuclear Weapons*, Opened for signature at London, Moscow, and Washington: 1 July 1968. Entered into Force: 5 March 1970.

¹⁵³ Executive Report. "U.S. Nuclear Policy in the 21st Century: A Fresh Look at National Strategy and Requirements," Center for Counter Proliferation Research, National Defense University, July 1998, 1.

alerting would have a severe impact on force readiness and reliability, profoundly undermine deterrence, generate serious strategic instabilities, and introduce safety uncertainties.¹⁵⁴ If the United States has concerns regarding Russian nuclear command and control problems, America should address them through other means, not by reducing the readiness, survivability, and safety of U.S. nuclear forces.

The United States must maintain a nuclear deterrent to address a host of threats, including nuclear, chemical, and biological threats, posed by an increasing number of nations. With current technologies, the actual quantity of nuclear materials and weapons possessed by Russia and others is not verifiable.¹⁵⁵ Caution should be exercised regarding any proposal to lower the numbers of nuclear delivery vehicles beyond the levels specified in bilateral agreements. If the United States reduced its nuclear weapons to low numbers while other countries were obtaining and/or retaining larger numbers, U.S. national security could be gravely at risk.

The de-alerters envisage a cooperative world in which America would de-alert its nuclear forces and the other nuclear weapons states would follow suit. The nuclear weapons states then would inspect each other, and we would live in an increasingly nuclear weapons-free world. In contrast, the opponents of de-alerting do not see a world as cooperative as the one described by the de-alerters. They advise taking into account worldwide military capabilities when structuring U.S. security policy and force planning.

¹⁵⁴ Bailey, Prepared Statement Before the Senate Armed Services Strategic Forces Defense Budget: Nuclear Policy, 68.

¹⁵⁵ Ibid., 68.

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IV. NATIONAL BALLISTIC MISSILE DEFENSE SCHOOL

A. INTRODUCTION

Opponents of de-alerting state that if indeed the threat of an unauthorized or accidental launch does exist, absent sufficient evidence to the contrary, the better way to address the problem is through enhancing command and control, bilateral deactivation of weapons scheduled for elimination under treaties, and building U.S. missile defenses.¹⁵⁶ While the end of the Cold War resulted in a significant reduction in the nuclear target base and the number of nuclear weapons, the proliferation of weapons of mass destruction (WMD) has resulted in a geographical expansion of requirements for ballistic missile defense systems. According to the British American Security Information Council, "At the threshold of the post-Cold War era, less than a decade after the fall of the Berlin Wall, the proliferation of WMD has risen to the top of the international agenda."¹⁵⁷

Since the end of the Gulf War, the U.S. focus on developing National Missile Defense (NMD) and Theater Missile Defense (TMD) systems has shifted to Third World "rogue" threats. However, the debate continues over how advanced the threats are, when America should deploy the systems, and what the implications may be for U.S. nuclear policy and force structure. According to Joseph C. Anselmo, "At the heart of the debate is how quickly the U.S. needs to deploy theater missile defenses to protect overseas

¹⁵⁶ Kathleen Bailey, "De-alerting Nukes Would Imperil U.S. Security," A18.

¹⁵⁷ Hans M. Kristensen, "Nuclear Futures: Proliferation of Weapons of Mass Destruction and US Nuclear Policy," *The British American Security Information Council*, March 1998, 22.

troops and a national missile defense systems to shield American cities.”¹⁵⁸ Some security experts have stated that “deploying a national missile defense without touching off offensive missile buildups or increased dependence on nuclear weapons will involve tough strategic choices.”¹⁵⁹ The decisions on whether to deploy national and/or theater missile defense systems and the U.S. and Russian decisions on whether to link future strategic nuclear arms reductions to the ABM treaty could have a significant impact on U.S. nuclear policy and force structure.

B. NATIONAL BALLISTIC MISSILE DEFENSE: PROPOSED SOLUTIONS

A limited national ballistic missile defense system seems to be gaining political support in Washington, D.C. According to Paul Mann, this growing support is in “response to the North Korean missile proliferation, seen by some as a harbinger of a long-term missile race in Asia. In a worst case scenario, a 21st century offensive/defense missile buildup might pit China and North Korea against Taiwan, South Korea, Japan, and the U. S.”¹⁶⁰ Joint Publication 3-12.1 notes that “the threat of nuclear exchange by regional powers and the proliferation of WMD have grown following the end of the Cold

¹⁵⁸ Joseph C. Anselmo, “U.S. Faces Growing Arsenal of Threats,” *Aviation Week & Space Technology*, New York, February 24, 1997, 44.

¹⁵⁹ Paul Mann, “NMD Requires Tough Choices,” *Aviation Week & Space Technology*, New York, March 1, 1999, 53.

¹⁶⁰ Paul Mann, “Missile Defense Gains Political Favor Amid Rifts,” *Aviation Week & Space Technology*, New York, March 1, 1999, 51.

War.” The doctrine publication concludes that “Short, medium, and intermediate-range missiles capable of carrying nuclear, biological, or chemical warheads are the primary threats in theaters.”¹⁶¹

Secretary of Defense William S. Cohen announced on January 20, 1999, that the Defense Department plans to allocate additional resources to National Missile Defense (NMD) and Theater Missile Defense (TMD) programs to meet the growing ballistic missile threat to American territory. Cohen stated, “We are affirming that there is a growing threat and that it will pose a danger not only to our troops overseas, but also to Americans here at home.”¹⁶² Secretary of Defense Cohen based his statements on the findings of the Commission to Assess the Ballistic Missile Threat to the United States (the Rumsfeld Commission) that specifically addressed Russian nuclear command and control, the growing nuclear threat, and the proliferation of weapons of mass destruction. In the executive summary, the Rumsfeld Commission reported that

Russia continues to pose a ballistic missile threat to the United States, although of a different character than in the past. The number of missiles in its [Russia’s] inventory is likely to decline further compared with Cold War levels in that large numbers of Soviet strategic missiles deployed in the 1970s and 1980s are scheduled to be retired. Still, Russian ballistic missile forces continue to be modernized and improved, although the pace of modernization is slowed from planned schedules by economic constraints. The Russian ballistic missile early warning and nuclear command and control systems have also been affected by aging and delays in planned modernization. In the context of a crisis growing out of civil strife, present early warning and command and control (C2) weaknesses, could pose a risk of unauthorized or inadvertent launch of missiles against the United States.¹⁶³

¹⁶¹ U. S. Joint Chiefs of Staff, “Doctrine for Joint Theater Nuclear Operations,” Joint Publication 3-12.1, February 9, 1996.

¹⁶² News Release, “Cohen Announces Plan to Augment Missile Defense Programs,” Office of Assistant Secretary of Defense (Public Affairs), 20 January 1999, Washington D.C. No. 018-99.

¹⁶³ Rumsfeld, 9.

Some experts believe that the deterioration of the Russian command and control system for strategic nuclear weapons is so grave as to “make the chances for an accidental or unauthorized launch of a nuclear-armed ballistic missile significantly more likely today than during the height of the Cold War.”¹⁶⁴ In addition, according to *Aviation Week and Space Technology*, the latest Central Intelligence Agency report indicated that “Russian companies continue to go on filtering missile and nuclear technology into Iran.”¹⁶⁵

According to the Rumsfeld Commission, “with the Cold War ended, the likelihood of a deliberate nuclear attack on the U.S. from Russia has been greatly lessened, but not eliminated.” Russia issued a new national military doctrine in 1993 placing greater reliance on nuclear deterrence, probably in response to Russia’s economic difficulties and the decline in its conventional military forces, among other factors. At the same time, “the risk of an accident or of a loss of control over Russian ballistic missile forces – a risk which now appears low – could increase sharply and with little warning if the political situation in Russia were to deteriorate.”¹⁶⁶ In addition,

American experts believe Russia’s loss of control over its tactical nuclear weapons is a greater immediate risk than a breach of strategic command. A handful of tactical nukes—from an inventory in the tens of thousands—might easily be diverted by insider corruption, a proliferation risk U.S. authorities believe is mounting by the day.¹⁶⁷

¹⁶⁴ Frank J. Gaffney Jr. “Defend America-From the Sea,” *Proceedings*, United States Naval Institute, Annapolis, October 1998, 71.

¹⁶⁵ Paul Mann, “Missile Defense Gains Political Favor Amid Rifts,” 52.

¹⁶⁶ Rumsfeld, 9-10.

¹⁶⁷ Paul Mann, “Missile Defense Gains Political Favor Amid Rifts,” 53.

Another key conclusion of the Rumsfeld Commission is that a long-range missile threat from Iran, Iraq, and North Korea could appear more quickly and with less warning than indicated by the National Intelligence Estimate (NIE) of 1995.¹⁶⁸ Specifically, the 1995 NIE concluded that “no country, other than the major declared nuclear powers, will develop or otherwise acquire ballistic missiles in the next 15 years that could threaten the contiguous 48 states and Canada.”¹⁶⁹ The Rumsfeld Commission found that Iran and North Korea could acquire the capability to strike the United States with ballistic missiles within five years of making a decision to do so (10 years for Iraq), and that the United States might have little to no warning before the missiles were deployed. The report also concluded that shorter-range ballistic missiles, either sea- or air-launched, could pose a threat to the United States sooner than ICBMs.¹⁷⁰

Other experts have concluded that “a dozen or more countries from North Korea to Iran to Brazil are pursuing long-range missiles capable of delivering nuclear weapons or other weapons of mass destruction to distant locations.”¹⁷¹ The general consensus among NMD advocates seems to be that

There is a real and growing danger posed to the United States and its interests by ballistic missiles now in the hands of some nations and those shortly to be fielded by others. America’s own security, its ability to project power and maintain valuable security alliances with others will depend on its ability to contend with such emerging threats.¹⁷²

¹⁶⁸ An intelligence estimate is prepared every year, but the 1995 report is the most recent one declassified and released to the public.

¹⁶⁹ Government Accounting Office Report, “Foreign Missile Threats: Analytic Soundness of the National Intelligence Estimate 95-19,” GAO/T-NSIAD-97-53, on-line, Internet, 24 October 1999, available from <http://209.207.236.112/irp/gao/ansi97053.htm>.

¹⁷⁰ Rumsfeld, 14-15.

¹⁷¹ Gaffney, 71.

¹⁷² Ibid., 71.

According to Loren B. Thompson of the Lexington Institute, national missile defense has dropped out of the ideological political realm and is now

basically a technical defense issue. It comes from a combination of two things, both of which find their origins in North Korea. The first was the test of the Taepo Dong 1 [in the summer of 1998], plus the semi-imminent potential of a Taepo Dong 2. The second is the willingness of Pyongyang to export similar technology to literally anybody with hard currency, but principally Iran.¹⁷³

Missile defense advocates argue that the changing world threat demonstrates a pressing need to rapidly deploy a national missile defense system. The "Ballistic Missile Defense Act of 1995", as part of the *National Defense Authorization Act for Fiscal Year 1996*, requires the Secretary of Defense to:

Deploy affordable and operationally effective theater missile defenses to protect forward-deployed and expeditionary elements of the Armed forces of the United States and to complement the missile defense capabilities of forces of coalition partners and allies of the United States.¹⁷⁴

The Clinton administration responded to the "existing and rapidly emerging ballistic missile threat" with the "3 + 3" program, under which the United States would spend three years developing a national missile defense system that could be deployed in another three years if a threat arose. Under this program the administration plans to make a decision on whether to deploy a limited NMD in June 2000. President Clinton recently stated that "the decision to deploy [NMD] will be based on four key criteria:

¹⁷³ Thompson quoted in Mann, "Missile Defense Gains Political Favor Amid Rifts," 52.

¹⁷⁴ Congress, Senate, "Ballistic Missile Defense Act of 1995," Section 231 of *National Defense Authorization Act for Fiscal Year 1996*, (February 10, 1996).

technological readiness, the maturity of the so-called 'rogue state' missile threat, cost factors and arms control considerations."¹⁷⁵ Defense Secretary Cohen stated that

Our deployment readiness program has had two key criteria that must be satisfied before we could make a decision to deploy a limited National Missile Defense: there must be a threat to warrant the deployment, and our NMD development must have proceeded sufficiently so that we are technologically ready to deploy. What we are saying today is that we now expect the first criterion will soon be met, and technological readiness will be the primary remaining criterion.¹⁷⁶

He also advised Congress that President Clinton's June 2000 deployment decision will be based "primarily on the maturity of the technology," rather than on the threat.¹⁷⁷

Secretary of Defense William S. Cohen announced on January 20, 1999, "Since we intend to make a critical decision in June 2000 regarding deployment, the budget we will submit in February will increase NMD by \$6.6 billion, including the cost associated with NMD deployment over the Future Years Defense Plan."¹⁷⁸ The Secretary also stated that "These new initiatives [funding of TMD/NMD] will help to ensure that we will meet existing and rapidly emerging ballistic missile threats as quickly and effectively as possible."¹⁷⁹

¹⁷⁵ Clinton's statement reported in indirect discourse in Craig Cerniello, "NMD Bill Clears Congress as Senate Re-examines ABM Treaty," *Arms Control Today*, Washington, April/May 1999, 38.

¹⁷⁶ News Release, "Cohen Announces Plan to Augment Missile Defense Programs," Office of Assistant Secretary of Defense (Public Affairs), 20 January 1999, Washington D.C. No. 018-99.

¹⁷⁷ Cohen quoted in Paul Mann, "Missile Defense Gains Political Favor Amid Rifts," 53.

¹⁷⁸ News Release, "Cohen Announces Plan to Augment Missile Defense Programs" Office of Assistant Secretary of Defense (Public Affairs), 20 January 1999, Washington D.C. No. 018-99.

¹⁷⁹ *Ibid.*

The Secretary of Defense also recognized that deployment of the national missile defense system may require an amendment to the Anti-Ballistic Missile (ABM) Treaty and indicated that the United States would negotiate with the Russians in good faith.

While our NMD development program is being conducted consistent with the terms of the ABM treaty, our deployment may require modifications to the treaty and the administration is working to determine the nature and scope of these modifications. We have already begun environmental site surveys for potential basing sites in both Alaska and North Dakota, and we have briefed Russian officials on these activities.¹⁸⁰

The U.S. willingness to negotiate modifications to the ABM Treaty implies that the decision to deploy an NMD system may directly or indirectly influence U.S. nuclear policy and force structure.¹⁸¹

C. IMPLICATIONS OF NMD FOR U.S. NUCLEAR AND SECURITY POLICIES: A CRITICAL ANALYSIS

The future of ballistic missile defenses, both tactical and strategic, will remain a contentious issue on the strategic arms control agenda for the foreseeable future. On 18 March 1999, the House of Representatives approved a one-sentence bill, sponsored by Curt Weldon, Republican of Pennsylvania, stating "That it is the policy of the United States to deploy a national missile defense."¹⁸² Not surprisingly, Russia continues to denounce U.S. interest in NMD. On 27 May 1999, a Russian Foreign Ministry official

¹⁸⁰ Ibid.

¹⁸¹ This issue is further explored in this chapter and also in the analysis and conclusion chapter of this thesis.

¹⁸² Weldon quoted in Cerniello, "NMD Bill Clears Congress as Senate Re-examines ABM Treaty," 38.

stated, "By pursuing a policy of creating and deploying a [NMD] system, which is banned by the ABM Treaty, the U.S. ignores the opinion of an absolute majority of the states of the world, which justifiably regard such a policy as directly undermining global security and stability."¹⁸³

At the core of Russian concerns about the effects of a limited NMD deployment "lies the strong perception of the system's [potential for] rapid vertical and horizontal expansion in the future." In Russian eyes an additional irritating element in the U.S. movement towards deployment is "the oblique 3-plus-3 formula that avoids giving dates for deployment and any possible further improvements and expansion of the system." Consequently, the Russian side must "draw worst-case scenarios, trying to evaluate the impact of the potentially growing U.S. NMD system on its decreasing retaliatory capacity."¹⁸⁴

Some observers of the U.S. - Russian arms control process argue that a "continuation of major strategic offensive force reductions by these two countries will be possible only if the 1972 ABM Treaty remains a viable cornerstone of the strategic relationship." The Clinton administration has insisted that the ABM Treaty is the "cornerstone of strategic stability" and has pointed out that "adherence to START I and START II has been specifically linked by the Yeltsin government to the future of the ABM Treaty."¹⁸⁵ According to President Yeltsin,

¹⁸³ Unnamed Russian Official quoted in Cerniello, "NMD Bill Clears Congress as Senate Re-examines ABM Treaty," 39.

¹⁸⁴ Yuri Chkanikov and Andrei Shoumikhin, "Russian Security Requirements and the U.S. Limited National Missile Defense System: Is Accommodation Possible?," *Comparative Strategy*, Vol. 17, No. 3, July/September 1998, 295.

¹⁸⁵ Jack Mendelson, "The U.S.-Russian Strategic Arms Control Agenda," *Arms Control Today*, Washington, November/December 1997, 15.

the Russian Federation is determined to adhere strictly to existing and future treaties on strategic offensive weapons and antiballistic missile defense, and is ready to continue further reductions of its nuclear weapons on a bilateral basis with the United States, while maintaining the balance of strategic weapons as a guarantee against the return to global opposition of forces and the race of arms.¹⁸⁶

In accordance with this perspective, the Russian Federation has directly linked offensive and defensive strategic weapons; and consequently continued reduction of strategic "offensive weapons is possible only provided both sides abide strictly to the ABM treaty."¹⁸⁷

According to Paul Mann, there is more to the ABM Treaty debate than the simple psychology of nuclear arms control.

Deterrence was not enshrined in the treaty simply for its own sake. It was conjoined with the practical objective of major reductions in each side's arsenal of offensive nuclear missiles. The treaty's second premise was that shunning antimissile defenses was the only way to achieve such reductions. This linkage was the treaty's central underpinning.¹⁸⁸

The Anti-Ballistic Missile Treaty, signed in 1972 by the United States and the Soviet Union, limits the signatories (in conjunction with the 1974 protocol) to a single strategic BMD site with 100 interceptor missiles and imposes additional constraints – e.g., on large phased-array radars. To prevent circumvention, the treaty also restricts air defenses and theater missile defenses. Specifically, the treaty states that air defense systems cannot be given "capabilities to counter strategic ballistic missiles or their

¹⁸⁶ Chkanikov and Shoumikhin, 292.

¹⁸⁷ Chkanikov and Shoumikhin, 292.

¹⁸⁸ Paul Mann, "ABM Treaty at 25: Relic or Rebirth?," *Aviation Week & Space Technology*, February 24, 1997, 51.

elements in flight trajectory” and the parties are committed not to test such systems “in an ABM mode.”¹⁸⁹ However, the treaty failed to specify how to determine if a defense system meets these two requirements.

For two decades this was not a problem because “U.S. and Russian defenses against bombers and short-range theater missiles were clearly no threat to faster-flying strategic missiles.”¹⁹⁰ However, the Gulf War and the growing threat of WMD-armed missiles prompted the United States to speed the development and possible deployment of new and more capable theater and national missile defenses. It soon became apparent that some of these systems, Theater High Altitude Area Defense (THAAD) and Navy Theater Wide, had at least crossed into the “gray area” of the ABM Treaty. Both systems are designed to be highly mobile and intercept much longer-range missiles. In addition to the advertised purpose of defending U.S. and allied troops from ballistic missile attacks, some observers argued, “they could in principle be deployed to defend the United States from strategic missiles.”¹⁹¹

In March 1999, most members of Congress voted to deploy a national missile defense as soon as technologically possible. However, the Clinton administration prefers to rely on the ABM treaty. Seven agreements affecting the treaty were signed by representatives of the Clinton and Yeltsin administrations in September 1997. These agreements would change the ABM treaty from a bilateral agreement with Russia, as the

¹⁸⁹ *Treaty Between The United States of America and The Union of Soviet Socialist Republics on the Limitations of Anti-Ballistic Missile Systems*, Article VI, Par. (a), on-line, Internet, 24 October 1999, Available from <http://209.207.236.112/nuke/control/abmt/docs/abm1.htm>.

¹⁹⁰ Lisbeth Gronlund, “ABM: Just Kicking the Can,” *Bulletin of Atomic Scientists*, Chicago, January/February 1998, 15.

¹⁹¹ *Ibid.*, 15.

principal successor state to the Soviet Union, to a multilateral treaty involving the United States, Russia, Ukraine, Belarus, and Kazakhstan, extend the coverage to theater missile defenses, and add a limitation on the speed of TMD interceptor missiles.¹⁹² At the same time the five countries signed or issued these ABM Treaty modifications (yet to be sent by the President to the Senate for ratification), they also approved “an agreement extending the deadline for START II reductions in deployed strategic warheads by five years, to the end of 2007.”¹⁹³ This extension should ease Russia’s concern over the cost of dismantling its weapons, and it will also allow Russia to see what missile defenses the United States deploys before destroying more of its strategic nuclear weapons.

The Clinton administration indicated that the demarcation would permit all six current U.S. theater missile defense programs while not restricting future systems. Meanwhile, Yeltsin presented it to the Duma as an agreement that would preserve the ABM treaty, constrain U.S. missile defenses, and give Russia the stable security environment it wants before cutting its strategic forces further under START II and possibly START III.¹⁹⁴

On 20 June 1999, at the economic summit in Cologne, Germany, Presidents Clinton and Yeltsin “reaffirmed their commitment to the ABM treaty, continued support for the agreements reached in 1997, agreed to consider new amendments, and agreed to link future reduction in nuclear weapons to the continuation of the treaty.”¹⁹⁵

¹⁹² James T. Hackett, “Extensions of ABM Treaty will Hurt Missile Defense,” *Insight on the News*, Washington, July 26, 1999, 28.

¹⁹³ Gronlund, 16.

¹⁹⁴ *Ibid.*, 15.

¹⁹⁵ Hackett, 29.

In a series of hearings on the ABM Treaty, several prominent former government officials "argued that the strategic rationale for the 1972 accord no longer exists and that the United States must either negotiate substantial modifications allowing for NMD deployment or exercise its right to withdraw."¹⁹⁶ Former Secretary of State Henry Kissinger, the principal architect of the ABM Treaty, argued on May 26, 1999, that "the United States must deploy missile defenses for both strategic and moral reasons. Strategically because of the proliferation of weapons of mass destruction and the missile technology to deliver them. Morally, because the doctrine of mutual assured destruction... is bankrupt."¹⁹⁷ James Woolsey, former Director of Central Intelligence, argued that "the logic behind the ABM Treaty 'seems dated now,' in light of the end of the Cold War, the increasing possibility of an accidental or unauthorized Russian nuclear launch, and the emerging rogue-state ICBM threat."¹⁹⁸ However, both Kissinger and Woolsey concluded that it would be "better for the United States to negotiate amendments to the ABM Treaty than to simply withdraw, a point also made by former Commander in Chief of U.S. Strategic Command, General Eugene Habiger, and former Secretary of Defense James Schlesinger."¹⁹⁹

The Council on Foreign Relations analysis authored by Robert Blackwill recommended that the United States should "urgently develop an effective TMD with the Russians if possible, and without them if necessary." The study stated that

¹⁹⁶ Cerniello, "NMD Bill Clears Congress as Senate Re-examines ABM Treaty," 38.

¹⁹⁷ Kissinger quoted in Cerniello, "NMD Bill Clears Congress as Senate Re-examines ABM Treaty," 38.

¹⁹⁸ Woolsey quoted in indirect discourse in Cerniello, "NMD Bill Clears Congress as Senate Re-examines ABM Treaty," 39.

¹⁹⁹ Cerniello, "NMD Bill Clears Congress as Senate Re-examines ABM Treaty," 39.

The ABM Treaty is too important a strategic symbol in U.S.-Russian and transatlantic relations to carelessly throw it aside, but it is not sacrosanct. It should be modified through mutual agreement to meet the new circumstances and new risks. A 1972 agreement, negotiated in wholly different times, must not, over the long term, stand in the way of an energetic commitment by the U.S. to defend its citizens against ballistic missile attack.

However, the study's dissenting views warned that if the current efforts to deploy antimissile defenses undercut the treaty or lead to its termination, it "would have a profound negative impact on U.S. efforts to reduce Russian and Chinese strategic arsenals."²⁰⁰

However, some NMD advocates do not understand why the United States is even trying to amend the treaty. For them, it hard to see how a treaty designed to prevent a nationwide missile defense can be amended to allow one. They argue that

At a minimum, Article I, which prohibits a nationwide defense, must be removed; Article III, which limits the number and location of sites, interceptors and radars, must be amended extensively; Article V, which bans sea-based, air-based and space-based defenses, must be eliminated if more effective defenses are to be added in the future; Article VI, which hinders the use of lasers and other advanced technologies, must be modified. Changes in various Agreed Statements and Common Understandings are also needed. Anything less will be just cosmetic changes that leave the country with inadequate defenses.²⁰¹

Former Secretary of Defense Casper Weinberger has "called for U.S. abrogation, claiming that an effective defense could not be deployed under the treaty."²⁰² According to Weinberger, two steps are necessary to enable the United States to develop and deploy

²⁰⁰ Robert D. Blackwill, "The Future of Transatlantic Relations," Council on Foreign Relations, 9, on-line, Internet, 6 November 1999, available from <http://www.foreignrelations.org/public/pubs/cfr54207.html>.

²⁰¹ Hackett, 29.

²⁰² Weinberger quoted in indirect discourse in Cerniello, "NMD Bill Clears Congress as Senate Re-examines ABM Treaty," 39.

an effective NMD system capable of protecting the nation and its allies for generations.

"We [the United States] must reject the succession agreements and announce that we will no longer be bound by the old ABM Treaty; and we must move ahead with the work that will give us and our allies a viable defense against nuclear, chemical and biological weapons."²⁰³

According to many of the missile defense advocates, "Since there are no constraints on the ballistic missiles that can be developed to threaten this country, there should be no constraints on the defenses to protect against them."²⁰⁴ For them, the best solution is to withdraw from the ABM Treaty and be free of its limits on U.S. defenses. According to Frank J. Gaffney Jr.,

By making clear its willingness to use the six-month notice-and-wait period called for by the treaty's Article XV to seek a new *modus vivendi* with Russia - one based on mutual assured survival rather than on the United States' assured vulnerability - America can make clear that the deployment of its antimissile defenses will not constitute a threat to Moscow.²⁰⁵

Even though the United States could legally withdraw from the treaty, the U.S. government must take into account the potential security costs for the United States that could result from foreign reactions to U.S. NMD deployment in the absence of the ABM Treaty. As long as Russia continues to rely on nuclear missiles for deterrence, "it will react strongly to U.S. deployment of a national missile defense system that could, in

²⁰³ Casper W. Weinberger, "It is Time for True Missile Defense," *Forbes*, New York, December 15, 1997, 38.

²⁰⁴ Hackett, 29.

²⁰⁵ Frank J. Gaffney Jr., "Defend America—From the Sea," *United States Naval Institute Proceedings*, Annapolis, October 1998, 73.

principle if not reality, reduce the effectiveness of its deterrent.”²⁰⁶ Even the hard core NMD advocates only recommend withdrawing from the treaty in conjunction with ongoing discussions with Russia. They contend that such discussions can reassure Russia that the “United States poses no threat to them, that limited U.S. defenses will not affect strategic stability and that Washington is willing to reduce its offensive arms in tandem with theirs.”²⁰⁷

Treaty supporters state that “Russia would have no incentive to make nationwide U.S. missile defense easier by reducing offensive missiles. In fact, Moscow would retain those missiles to overcome a nationwide U.S. deployment.”²⁰⁸ Under START II, Russia would eliminate its land-based nuclear missiles with multiple warheads, like the SS-18. Russia has yet to ratify START II and has directly linked ratification of this agreement with the survival of the ABM Treaty.²⁰⁹ According to James Goodby, a former vice chairman of the U.S. START delegation, because the Russians have linked their approval of START II to the ABM Treaty’s preservation and the halting of NATO enlargement, “things could happen in the next four years that could unravel four decades of nuclear arms control.”²¹⁰

²⁰⁶ Lisbeth Gronlund and David Wright, “What They Didn’t Do,” *Bulletin of Atomic Scientists*, Chicago, November/December 1998, 51.

²⁰⁷ Hackett, 29.

²⁰⁸ Paul Mann, “ABM Treaty at 25: Relic or Rebirth?,” 51.

²⁰⁹ *Ibid.*, 52.

²¹⁰ Goodby quoted in Mann, “ABM Treaty at 25: Relic or Rebirth,” 52.

Other opponents of U.S. NMD suggest that a "U.S. national defense (NMD) deployment might further impel Russia to overreliance on its nuclear arsenal, entrenching a development already far advanced by the precipitous decline of Moscow's conventional forces." They contend that "because missile defense technologies possess inherent offensive as well as defensive capability, their widespread use could trigger fresh rounds of the very proliferation they are intended to counteract."²¹¹

Yet, according to Paul Mann's analysis, most missile defense advocates

would like to preserve enough of the ABM Treaty to secure what they envision as a relationship of mutual reinforcement between nuclear deterrence and missile defense. In this "peaceful coexistence" of the two, the U.S. could step back from the mutual assured destruction doctrine following the Cold War, while ensuring some protection from rogue states and accidental or unauthorized launches without triggering uncontrolled offensive missile buildups.²¹²

Representative John Spratt, Democrat of South Carolina, a veteran member of the House Armed Services Committee, sees a potential for such a complementary NMD/offensive nuclear deterrence relationship. "If we could complement deterrence with defense, we would have a stabler world, no question about it."²¹³ Bruce Blair refers to the idea as "non-provocative" NMD and believes NMD could be "arranged with the Russians as a nonproliferation undertaking, based on joint cooperation in design, deployment, possibly even in systems operation."²¹⁴

²¹¹ Paul Mann, "NMD Requires Tough Choices," *Aviation Week & Space Technology*, February 24, 1997, 53.

²¹² *Ibid.*, 53.

²¹³ Spratt quoted in Mann, "Missile Defense Gains Political Favor Amid Rifts," 55.

²¹⁴ Blair quoted in indirect discourse in Mann, "NMD Requires Tough Choices," 54.

Although critics denounce the ABM Treaty as a Cold War relic, its supporters contend that the pact has timeless value for keeping NMD deployments within reasonable bounds. They claim that “no technological advance can void the treaty’s main function; disconnecting the age-old action-reaction cycle between offense and defense.”²¹⁵

D. CONCLUSION

As the proliferation threat moves America’s decades-old NMD debate into a new stage, the technological and strategic issues will remain front and center. Yet, there still does not appear to be any agreement on the appropriate NMD architecture to deploy or when to deploy it.

Officially, the United States executive – the President – has declared the ABM treaty the “cornerstone of strategic stability.” However, in May 1999, the House of Representatives approved legislation stating that “it is U.S. policy to both deploy an ‘effective’ national missile defense (NMD) system ‘as soon as is technologically possible’ and to ‘seek continued negotiated reductions in Russian nuclear forces’.”²¹⁶ The compatibility of these two policies remains in question. According to James T. Hackett,

²¹⁵ Paul Mann, “NMD Requires Tough Choices,” 54.

²¹⁶ House legislation quoted in indirect discourse in Cerniello, “NMD Bill Clears Congress as Senate Re-examines ABM Treaty,” 38.

Since the Clinton administration has opposed missile defenses, it is likely to seek minimal changes - just enough to deploy one ground-based site of interceptors. The Russians, bitterly opposed to U.S missile defenses, will stonewall and delay. That will enable Clinton to defer the deployment decision he promised to make next June [that is June 2000], on the grounds that it must await the outcome of negotiations.²¹⁷

The Russian side may be expected to "rigorously object to any element, no matter how seemingly insignificant, of the architecture or technical parameters of any limited U.S. NMD architecture, if it believes that it deviates from or violates the original intent and purpose of the [ABM] treaty."²¹⁸

Naturally, the United States could pursue its NMD policy with total disregard for Russian objections. However, Russia could "retaliate" with a decision to abandon all or most of the previously concluded bilateral strategic and intermediate range arms control agreements. Russia could adhere to the START I force reductions, but refuse to continue with START II, START III, and beyond. Russia could also, hypothetically at least, abandon the INF Treaty and START I. Because Russia can hardly afford extensive production of strategic nuclear weapons, however, it is probable that "most probably, the main accent would be on keeping and extending the service life of existing strategic forces, most especially multiple independently-targeted reentry vehicles (MIRVed) ICBMs."²¹⁹ These actions would probably be costly for Russia. "However, the negative

²¹⁷ Hackett, 29. The Clinton administration has in fact expressed interest in a two-site NMD system (Alaska and North Dakota), notably in Secretary Cohen's statement on 20 January 1999.

²¹⁸ Chkanikov and Shoumikhin, 295.

²¹⁹ Ibid., 297.

synergism of foreign-policy failures, such as continued NATO expansion and mounting internal pressures, may push Russia up against the wall when any ruling regime would have to prove its strength in opposing the perceived U.S. dictate."²²⁰

Serious complications in the arms control arena, particularly in association with NMD, are on the horizon. However, according to Andrei Shoumikhin,

it may be possible to achieve genuine political accommodation without necessarily testing the two nations' limits in the military-strategic area. If both sides decide to address the entire range of contentious BMD issues, including NMD deployment, in an honest, constructive, and systematic way, they may discover that their positions are more compatible than is believed.²²¹

The United States must first decide what strategic arms policy it wants to follow and which of its objectives has the highest priority. If the United States wants to seek reductions in U.S. and Russian strategic arsenals within the framework of treaty regimes, it appears that it must pursue bilateral negotiations within the confines of the ABM Treaty. If the United States determines that it must deploy an extensive NMD system, with or without Russian accommodations, bilateral arms control negotiations may drastically suffer.

However, America must remember that "Russia continues to pose a ballistic missile threat to the United States." As the Rumsfeld Commission reported, "In the context of a crisis growing out of civil strife, present early warning and command and

²²⁰ Ibid., 298.

²²¹ Andrei Shoumikhin, "Current Russian Perspectives on Arms Control and Ballistic Missile Defense," *Comparative Strategy*, Vol. 18, New York, January 1999, 56.

control (C2) weaknesses could pose a risk of unauthorized or inadvertent launch of missiles against the United States.”²²²

According to Vladimir Shlapentokh,

Theoretically, the chances of someone breaking the codes and gaining access to the control buttons [of strategic nuclear weapons] are very low... The tendencies toward disorganization and even chaos in the Russian army are [nonetheless] continually increasing, while the people who consider themselves patriots are becoming despondent. Furthermore, an analysis on the current development of Russia leaves very little hope for significant improvement in the life of the country in the near future... Even though the chances for an individual, or a small organization, to take over the control of the Russian military installation is clearly growing, the probability of fatal action still remains very low. However, the repercussions of such actions would be enormous, [and] therefore, even a minimal probability is extremely frightening.

Concerning the possibility, however slight, of an accidental or unauthorized launch of a strategic nuclear weapon against the United States, Shlapentokh makes the following recommendation:

The United States, and the West as a whole, are inevitably faced with the uncontrolled developments in Russia. The United States and its allies should be aware of the danger and instability surrounding the control of lethal weapons in Russia and, therefore, use all possible means to increase the security of this weapon in Russia. The United States and its allies should also continue to build up their anti-missile systems and improve counteractive measures to prevent the penetration of nuclear terrorism in the territories of Western countries.²²³

²²² Rumsfeld, 9.

²²³ Vladimir Shlapentokh, “Are There Raskolnikovs in Russia With Lethal Weapons Instead of Axes?,” Distributed by the Special Advisor for Central & Eastern European Affairs, NATO Secretary-General, 16 April 1997, 3/4.

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V. BILATERAL NEGOTIATIONS SCHOOL

A. INTRODUCTION

The United States and Russia control the world's largest nuclear arsenals. Since the demise of the Soviet Union, these two countries have made progress in reducing nuclear stockpiles and containing the spread of nuclear weapons and materials. Through bilateral negotiations, like the Strategic Arms Reduction Talks (START), the United States and Russia are on their way to cutting their nuclear arsenals by more than two-thirds from the Cold War days.

Bilateral strategic arms negotiations are nothing new in the U.S./Russian relationship. America and the Soviet Union negotiated several limitations and reductions in strategic arms. As Thomas Wolfe noted in 1979, Strategic Arms Limitation Talks (SALT), which formally began in November 1969, were an "ongoing endeavor to regulate the strategic arms competition between the United States and the Soviet Union."²²⁴

According to Thomas Wolfe, "assumptions widely held during the SALT I period credit the Soviet Union and the United States with much the same set of aims in SALT."

He summarizes these aims as follows:

(1) to freeze the strategic balance at the level of parity; (2) to stabilize mutual deterrence; (3) to regulate the strategic competition so as to reduce its resource costs, lower the risks of accidental nuclear war outbreak, and discourage the need for new cycles of improved strategic weapons systems.²²⁵

²²⁴ Thomas W. Wolfe, *The SALT Experience*, The Rand Corporation, Ballinger Publishing Company, Cambridge, MA, 1979, 01.

²²⁵ Wolfe, 247-248.

Proponents of negotiated reductions of nuclear weapons see a world that continues to contain actual and potential threats to U.S. interests. Therefore, the advocates argue that the United States must maintain a reasonable level of nuclear weapons for deterrence reasons. Thomas Wolfe states that "there is a school [of thought] that regards SALT [or any other negotiated approach] as the only realistic alternative to an unbridled nuclear arms race that neither side could win."²²⁶ This school of thought, which existed during the Cold War, continues to inspire negotiations with Russia in the START process. In 1979 Thomas Wolfe wrote,

Given the maintenance of some 'reasonable' level of strategic retaliatory forces for nuclear deterrence, mutual limitations agreements negotiated in SALT are seen to be greatly preferable to unilateral strategic programs as a means to preserve deterrent stability and enhance national security.²²⁷

This school of thought is alive and well in America and continues to influence U.S. strategic nuclear policy and force structure. The simple difference is that today we can replace the word SALT with START, the name of the current negotiations.

Proponents of the negotiations school argue that the best way to reduce strategic nuclear forces, maintain a deterrence force, discourage nuclear weapons proliferation, and meet the growing threat of nuclear, biological and chemical weapons (also known as weapons of mass destruction) is through a robust system of negotiated, verifiable, bilateral agreements, much like the system governing the actions of the United States and the Soviet Union since the first of the strategic arms limitation agreements during the Cold War.

²²⁶ Wolfe, 246.

²²⁷ Wolfe, 246.

B. BILATERAL NEGOTIATIONS: PROPOSED SOLUTIONS AND BENEFITS

Proponents of the bilateral negotiations school often point to the Nuclear Posture Review (NPR), the Secretary of Defense's nuclear follow-up to the conventional Bottom-Up Review, that was completed in September 1994 and that provided the United States with a post-Cold War nuclear roadmap extending to the year 2003.²²⁸ According to William Perry, then Secretary of Defense, the NPR participants had the difficult task of suggesting a force structure and policy direction that balanced a desire to further reduce U.S. nuclear forces with the need to hedge against the possibility of a Russian return to a hostile state or inability to drawdown at a rate comparable with that of the U.S.²²⁹ The recommendations of the NPR have been described as a "lead and hedge" strategy. In this strategy, the United States would seek to maintain a force structure still based on a triad, and robust enough to serve as a hedge, while simultaneously seeking to lead in the nuclear reduction efforts. In addition, the NPR identified the need to maintain the national level support infrastructure to ensure "that [the United States] could reconstitute our forces as the decade went along, if we needed to."²³⁰

While critics of the bilateral negotiations school and the "lead and hedge" strategy claim that it is decidedly weighted towards the "hedge" side, the drafters of the NPR sought from the beginning to ensure that their intentions regarding force reductions were

²²⁸ Department of Defense News Release Number 541-94, Washington DC: Office of Assistant Secretary of Defense, 22 September 1994, 5.

²²⁹ Department of Defense News Release Number 535-94, Washington DC: Office of Assistant Secretary of Defense, 20 September 1994, 2.

²³⁰ Secretary Perry's remarks quoted in Department of Defense News Release Number 541-94, 3.

well known. Deputy Secretary of Defense John Deutch stated at the Defense Department's initial NPR briefing, "I want to emphasize that this force structure permits options for deeper reductions to accelerate both the implementation of START II and to go to even larger and more far-reaching reductions, should the political circumstances warrant."²³¹

In addition to the NPR, another major policy decision that bears directly on the bilateral negotiations school's nuclear doctrine and force structure recommendations was the signing of the Presidential Decision Directive-60 (PDD-60) in November 1997. PDD-60 was a result of expressed concerns from the Chairman of the Joint Chiefs of Staff and the Commander in Chief, U.S. Strategic Command, who realized that the doctrine that underwrote deterrence during the Cold War and the resultant targeting strategy could no longer be supported with current force levels.²³² The Clinton administration's response to this doctrine – force structure mismatch was to reexamine the Cold War doctrine. According to Robert G. Bell, special assistant to the President and National Security Council Senior Director for Defense Policy, this PDD removes all references to prevailing in a nuclear war and changes the role of U.S. nuclear weapons to that of "deterring nuclear wars or the use of nuclear weapons at any level, not fighting [with] them."²³³ This marked a significant departure for official U.S. nuclear policy.

²³¹ Deutch quoted in Department of Defense News Release Number 546-94, Washington DC: Office of Assistant Secretary of Defense, 22 September 1994, 8.

²³² Steven L. Meyers, "U.S. Updates Nuclear War Guidelines," *New York Times*, 8 December 1997, 4.

²³³ Bell quoted in R. Jeffrey Smith, "Clinton Directive Changes Strategy on Nuclear Arms," *Washington Post*, 7 December 1997, 1.

The bilateral negotiations school's nuclear policy and force structure recommendations are primarily expressed through formal negotiation processes (such as START) and are directly linked to the NPR recommendations and PPD-60. The current START regime is also linked to START's predecessor, the Strategic Arms Limitations Talks (SALT). Since the bilateral negotiations school is committed to these inspection regimes, any description of the school would be incomplete without a brief review of these treaties' purposes and status.

Formal bilateral nuclear arms control treaty regimes began with SALT, which as the name suggests, sought not to reduce strategic weapons totals, but simply to limit further deployments. It was not until START I went into force on 5 December 1994 that the United States and Russia actually had a working framework established to reduce deployed strategic weapons counts. December 1999 will mark the fifth anniversary of the entry into force of the START I treaty. During this period, the five parties to the START Treaty, the United States and the successors to the former Soviet Union as agreed in the Lisbon Protocol (Belarus, Kazakhstan, Russia, and Ukraine), have worked seriously to meet their obligations under the Treaty. Belarus and Kazakhstan have "eliminated all of their strategic offensive arms, while Ukraine is continuing to eliminate its accountable strategic offensive arms."²³⁴

The United States and Russia have not only reduced their strategic offensive forces well below the levels required for the first phase reduction deadline, but will have no problem meeting the required levels mandated by the second phase of reductions.

²³⁴ State Department Web page, on-line, Internet, 14 October 1999, available from <http://www.acda.gov/factshee/wmd/nuclear/start1/achieve.htm>.

Among other cuts, under START I, the United States has reduced its ICBM force to 550 (from 1000 in 1990), cut its SLBM force to 432 (from 568 in 1990), reduced its SSBN force to 14 (from 31 in 1990), and cut heavy bomber totals to 97 (from 324 in 1990).²³⁵ According to Tim Zimmermann, “under the framework of the Strategic Arms Reduction Treaty or START I, the U.S. and Russian strategic nuclear arsenals have been cut by about one third. Both countries have mothballed thousands of short-range tactical weapons and taken their long-range bombers off alert.”²³⁶ By 2001, START I will have reduced U.S. and Russian START-accountable deployed long-range strategic nuclear warheads to about 6000 apiece. This constitutes a reduction of about 50 percent from Cold War heights in the mid-1980s.

Recognizing their mutual interest in creating smaller and more stabilizing nuclear forces than those allowed under START I, the U.S. and Russian Presidents signed the START II Treaty on 3 January 1993. START II codified a stabilizing and orderly draw-down of strategic nuclear forces that is in the security and economic interests of both the United States and Russia. When implemented, START II will eliminate “the most destabilizing strategic weapons – heavy intercontinental ballistic missile (ICBMs) and all other multiple-warhead ICBMs.” It will also “reduce dramatically the total number of strategic nuclear weapons deployed by both countries, by two-thirds below pre-START levels.”²³⁷

²³⁵ Department of Defense, *Annual Report to the President and the Congress 1998*, Washington, DC: Office of the Secretary of Defense, 1998, 59.

²³⁶ Zimmermann, 71.

²³⁷ State Department Web page, on-line, Internet, 14 October 1999, available from <http://www.acda.gov/factsheet/wmd/nuclear/start2/start95.htm>.

START II's qualitative stabilizing features are every bit as important as its numerical reductions. START II sets an equal limit on the number of strategic weapons that can be deployed by the United States and Russia. The limits set will come in two phases. By the end of the first phase, "each side must reduce its total deployed strategic nuclear weapons to 3,800-4,250." By the end of the second and final phase, "each side must have reduced its total deployed strategic nuclear warheads to 3,000-3,500. Of those, none may be MIRVed ICBMs, including heavy ICBMs." By prohibiting heavy ICBMs and multiple warhead ICBMs, START II will significantly reduce first-strike potential and thereby increase stability²³⁸

START II, ratified by the U.S. Senate in January 1996, has not yet entered into force. It has been held up by the Russian Duma's failure to consider or ratify the treaty. The United States is currently budgeting to maintain strategic nuclear forces at START I levels with a plan to implement START II quickly if it is ratified by the Russian Duma. The deadline for compliance with START II (if ratified) is December 2007 (recently extended from January 2003 at the request of President Yeltsin).²³⁹

At the end of 1998, Russia's ICBM forces "totaled 756 missiles of five types and were located at 19 bases: 360 SS-18s, SS-19s, SS-24s, and SS-27s in underground silos; 36 SS-24s on railroad cars; and 360 road-mobile SS-25s." If START II enters into force,

²³⁸ Ibid.

²³⁹ Department of Defense, *Annual Report to the President and the Congress 1998*, Washington, DC: Office of the Secretary of Defense, 1998, 67-69.

“all SS-18s and SS-24s, and all but 105 SS-19s, will be eliminated. The remaining SS-19s will be downloaded to one warhead each from their present six. As many as 90 SS-18 silos may be converted to take the SS-27 Topol-M.”²⁴⁰

START Accountable Warheads

	START I	START II PHASE 1	START II PHASE II
Total Strategic Warhead	6,000 Accountable	3,800-4,250 actual	3,000-3,500
Ballistic Missile Warhead	4,900	No Specific sublimit	No specific sublimit
MIRVed ICBM Warheads	N/A	1,200	0
SLBM Warhead	N/A	2,160	1,700-1,750
Heavy ICBM Warheads	1,540	650	0
Mobile ICBM Warheads	1,100	START I applies	START I applies
Total Strategic Nuclear Delivery Vehicles	1,600	START I applies	START I applies ²⁴¹

According to Therese Delpech, “as a result of START I and II, US and Russian initiatives on tactical nuclear weapons and unilateral French and British moves, deployed nuclear forces in Europe have been cut by approximately 70% since the beginning of the 1980s.”²⁴²

Even though no START III treaty exists, Presidents Yeltsin and Clinton discussed the possible terms of such a treaty at the Helsinki summit in 1997. As part of a package negotiated at the U.S./ Russian summit in Helsinki to help obtain Russian ratification of

²⁴⁰ Robert S. Norris and William M. Arkin, “Russian Strategic Nuclear Forces, End of 1998,” *Bulletin of the Atomic Scientists*, March/ April 1999, 62.

²⁴¹ The above table compares the central limits set by START I and by START II. State Department Web page, on-line, Internet, 14 October 1999, available from <http://www.acda.gov/factshee/wmd/nuclear/start2/start95.htm>.

²⁴² Therese Delpech, “Nuclear Weapons and the New World Order: Early Warning From Asia,” *Survival*, London, Winter 1998/1999, 59.

START II, the leaders agreed in principle to proceed quickly with START III as soon as START II is ratified by the Duma. According to Jack Mendelsohn, the United States and Russia agreed that the START III negotiations would include four basic components:

a lower aggregate level of 2,000-2,500 deployed strategic nuclear warheads for each party; deactivation by December 31, 2003, of all strategic nuclear delivery vehicles (SNDVs) scheduled to be eliminated under START II (such as Russia's SS-18 and SS-24 ICBMs and the U.S. MX ICBM); conversion of the current START agreement from a fixed 15-year term with five year renewal periods to unlimited duration; and measures relating to the transparency of strategic nuclear warhead inventories and the destruction of strategic nuclear warheads.²⁴³

The bilateral negotiations school also supports activities such as the Cooperative Threat Reduction (CTR) program, informally known as Nunn-Lugar Program, and shared early warning (SEW). The CTR program began in 1991 with the overall mission to "help secure former Soviet weapons of mass destruction." U.S. leaders feared not only the failure of the former Soviet Union to meet its treaty obligations under START, but also feared the proliferation of weapons of mass destruction in the turmoil surrounding the collapse of the Soviet Union. As such, the CTR program began with five broad objectives, including the goals of aiding Russia in meeting its treaty reduction obligations and offering assistance to enable nuclear-equipped former Soviet states to return all former Soviet nuclear weapons to Russia.²⁴⁴

²⁴³ Jack Mendelsohn, "The U.S.-Russian Strategic Arms Control Agenda," *Arms Control Today*, Washington, November/December 1997, 13.

²⁴⁴ Office of the Secretary of Defense CTR Web Page, on-line, Internet, 15 October 1999, available from <http://www.ctr.osd.mil>.

While there have been criticisms concerning the spending of CTR funds,²⁴⁵ the program has been credited with significantly contributing to the purging of nuclear weapons from all non-Russian Soviet successor states and with being instrumental in accelerating Russian nuclear weapons destruction in accordance with START.²⁴⁶ As of November 1998, the CTR program “has facilitated the destruction of 339 ICBMs, 286 ICBM launchers, 37 bombers, 96 submarine-launched ballistic missile (SLBM) launchers, and 30 SLBMs; the deactivation of 4,838 former Soviet strategic warheads; and the sealing of 191 nuclear test tunnels.”²⁴⁷

According to William Perry, then Secretary of Defense, the Cooperative Threat Reduction program has often been referred to as “defense by other means.” It removes the nuclear threat “missile by missile, warhead by warhead, factory by factory, and person by person.” The Secretary argued that “dollar for dollar, there is no better way for America to spend its resources than to help a former enemy destroy its weapons and transform its war machine to peaceful commercial industry.”²⁴⁸

Shared early warning (SEW) is another bilateral initiative intended to help solve a post-Cold War dilemma. As discussed in much greater detail in Chapter 2, Russian strategic nuclear command and control and early warning are in a state of disrepair.

²⁴⁵ See for example, J. Michael Waller, “To Russia, With Cash,” *Demokratizatsiya: The Journal of Post-Soviet Democratization*, vol. 5, no. 1 (winter 1997), 105-109. This issue of *Demokratizatsiya* also includes an official response by the U.S. Department of Defense.

²⁴⁶ Office of the Secretary of Defense CTR Web Page, on-line, Internet, 15 October 1999, available from <http://www.ctr.osd.mil>.

²⁴⁷ Craig Cerniello, “Lugar Cites CTR Progress, Calls on U.S. for More Aid,” *Arms Control Today*, Washington, November/December 1998, 22.

²⁴⁸ Perry quoted in Harold P. Smith Jr, “Cooperative Threat Reduction: Defense by Other Means,” *Defense*, Arlington, 1997, 44.

Many suggest that this disrepair creates instability by reducing Russian leaders' confidence in the ability of their systems to provide early warning. This in turn leads to pressure to make quicker decisions which in turn, the argument runs, may lead to a Russian launch-on-warning doctrine.

To help relieve this pressure, the United States embarked on a program to share early warning information from its space-based surveillance assets with Russia. The decision to supply Russia with this early warning information was made public in a Joint Statement on the Exchange of Information on Missile Launches and Early Warning signed by Presidents Clinton and Yeltsin in Moscow in September 1998.²⁴⁹ According to Andrei Shoumikhin, "The Russian Federation is eminently interested in such cooperation, because it lost many of the former Soviet early warning facilities."²⁵⁰

Even though the SEW program has been in existence for some time, no hardware or facilities have yet to be acquired. The goal of the SEW program is to provide Russia with the capability to receive U.S. launch detection information. This information will be provided to a Joint Warning Center (JWC), slated to be built in Moscow and manned by Russian and American personnel. The JWC will not be completed by January 2000. As an interim solution, a Year 2000 (Y2K) Warning Center is slated for completion by

²⁴⁹ Joint Statement on the Exchange of Information on Missile Launches and Early Warning, Moscow Summit, 2 September 1998.

²⁵⁰ Shoumikhin, 51.

November 1999. This site, located in the United States, will allow Russian personnel to monitor launch activity from U.S. surveillance systems during the end of 1999. In addition, this Y2K center will serve as the training facility for the JWC.²⁵¹

Along with the START treaties, the Clinton administration has made the CTR and SEW programs a "top priority." The Defense Department's Fiscal Year 2000 budget "includes nearly \$3 billion for this program."²⁵² The United States and the Russian Federation signed a protocol to continue the Cooperative Threat Reduction (CTR) program in Russia through June 2006. By extending the program, bilateral negotiations proponents argue, the United States and Russia will be able to continue CTR efforts to reduce the weapons of mass destruction and prevent their proliferation. According to the Department of Defense, important current and future projects include:

Accelerating the elimination of Russian missiles, bombers, submarines and land-based missile launchers to assist Russia in meeting Strategic Arms Reduction Treaty requirements. Enhancing the safety, security, control, and accounting of nuclear weapons in transport and at all of Russia's nuclear weapons storage sites. Ending Russia's production of weapons-grade plutonium. Constructing a facility for the storage of nuclear material for up to 12,500 dismantled nuclear warheads. Assisting Russia to implement the Chemical Weapons Convention by dismantling former chemical weapons production facilities and helping to destroy chemical weapons.²⁵³

²⁵¹ Elizabeth Becker, "Russia to Join U.S. Battle To Ward Off Y2K Debacle," *New York Times*, 28 October 1999, A14.

²⁵² Michelle Drumheller, "U.S. Program Targets Russia's Arms Control," *National Defense*, Arlington, March 1999, 29.

²⁵³ Department of Defense, "US DOD: United States and Russia Extend Nunn-Lugar Cooperative Threat reduction Agreement," *M2 Presswire*, Coventry, June 25, 1999. 1.

Proponents of the bilateral negotiations school argue that a program like CTR

complements the U.S. strategy of preventing and deterring the use of weapons of mass destruction. While our strategic programs deter nuclear or other attacks, Cooperative Threat Reduction actually eliminates a large part of the arsenal that could be used in such an attack and reduces the infrastructure that could be used to modernize the nuclear or chemical and biological arsenal.²⁵⁴

C. IMPLICATIONS OF BILATERAL NEGOTIATIONS FOR U.S.

NUCLEAR SECURITY POLICIES: A CRITICAL ANALYSIS

One of the biggest implications of bilateral negotiations is time. After all, START I was signed on 31 July 1991 and did not enter into force until 5 December 1994, more than three years later. START II was signed on 3 January 1993 and has yet to enter into force because the Russian Duma has failed to ratify it. According to some analysts, START III, and yet START II is more than 6 years old and seems to be going nowhere. Despite the optimism surrounding the bilateral negotiations school, Russian ratification of START II is by no means assured.

Critics of the bilateral negotiations school argue that the window for progress in arms reductions may only be open for a short time and that the bilateral arms control paradigm is moving too slowly to capitalize on this unique opportunity, even as augmented by programs such as CTR. These critics believe that the risks and costs associated with maintaining the nuclear arsenal and the possible closing of the window of opportunity require the U.S. to move quickly, perhaps unilaterally, and outside the existing negotiated boundaries. According to Jack Mendelsohn,

²⁵⁴ Harold P. Smith Jr, "Cooperative Threat Reduction: Defense by Other Means," *Defense*, Arlington, 1997, 44.

If START II fails to be approved, if (as is almost certain) Russian conventional forces remain weak and its defense resources scarce, if U.S. TMD and national missile defense (NMD) programs proceed apace, and if NATO continues its "open door" expansion policy, then undoubtedly Russia and subsequently the United States will be forced to reappraise its political and strategic relationship with the other nation.²⁵⁵

Perhaps the phrase "slow and steady" best captures the overall methodology espoused by the bilateral negotiations school. This school's reliance on robust arms control regimes whose tenets demand balanced reductions indicates its desire to maintain parity during drawdown. To bilateral negotiations proponents this parity creates equilibrium that is necessary for deterrence and stability.²⁵⁶

Flowing naturally from a reliance on bilateral negotiations that seeks parity is this school's need for substantive verification measures to enhance stability by ensuring that arsenal balances are maintained. Bilateral negotiations proponents are comfortable with the lack of speed that is inherent in this type of drawdown. Many supporters of bilateral arms control feel that speed is not desirable and that stability is enhanced by pursuing cuts in what General Habiger calls a "rational, verifiable manner."²⁵⁷ For the bilateral negotiations camp, the desired force posture is flexible, and able to be drawn down in concert with other parties.

According to the bilateral negotiations proponents the Russians face three major incentives to work through the START negotiations:

²⁵⁵ Mendelsohn, 12.

²⁵⁶ David W. Tarr, *Nuclear Deterrence and International Security, Alternative Nuclear Regimes*, White Plains, New York: Longmont Publishing Group, 1991, 91-92.

²⁵⁷ General Eugene Habiger, Transcript of Oral Interview by Defense Writer's Group, 31 March 1998, 3.

First, they know that with or without new START agreements, their strategic nuclear forces, which they see as one of their last claims on great power status, will continue to shrink as a result of their dire economic straits. They have an interest in using arms control to bring the US nuclear arsenal down to their new level rather than live in a world in which the United States has overwhelming nuclear superiority.

Second, although they are loath to admit it, the Russians increasingly realize that the United States is going to deploy missile defenses in some form. If they have to choose, they surely would prefer reaching agreement on new limits that protect their interests, rather than to live in a world in which the US missile defenses are unconstrained.

Third, they have a strong political interest in reaching an agreement with the United States, not only because they have a stake in good relations with us, but also because they are far better off if they are seen to be players rather than isolated and ignored.²⁵⁸

According to Dean A. Wilkening, "Russia's strategic nuclear forces stand on the verge of obsolescence." Under foreseeable conditions,

without ratification of the Strategic Arms Reduction Talks (START) II Treaty, Russia might maintain a strategic force of some 4,000 nuclear warheads – roughly half of what the US, in principle, could deploy. If the Duma does ratify the treaty, Russia's likely force of 1,800–2,500 warheads would remain markedly inferior to the United States' 3,500 potential warheads. There are also Russian concerns about the asymmetry in strategic nuclear reconstitution and counterforce capabilities under START II. Hence, the easiest – perhaps the only – way to recover rough parity with the US would be through a START III treaty limiting both sides to between 2,000 and 2,500 warheads.²⁵⁹

Financial constraints are likely to be the dominant factor in limiting Russian force modernization, creating maintenance problems for some strategic systems, forcing early

²⁵⁸ Sam Nunn, Brent Scowcroft, and Arnold Kanter, "A Deal With Russia On Arms Control?," *Boston Globe*, 13 September 1999, 13.

²⁵⁹ Dean A. Wilkening, "The Future of Russia's Strategic Nuclear Force," *Survival*, Vol. 40, Autumn 1998, 89.

retirement for others, and causing delays in the replacement of aging systems. The majority of Russian strategic nuclear systems “will become obsolete after the turn of the century.”²⁶⁰

During the Cold War, the “Soviet Union maintained about 2,500 strategic nuclear-delivery vehicles, with the warhead count peaking at approximately 11,000 warheads in 1989.” After 1990 the Russian strategic force started to shrink rapidly and “will be largely obsolete by 2005.” The START I ceiling provides “a plausible upper limit for the force level Russia might be able to maintain if the START II Treaty is not ratified.” According to Dean Wilkening, this force projection “assumes the service lives of the SS-18, SS-19, and SS-25 ICBMs are extended; that 16 *Borey* SSBNs will be deployed, with SS-NX-28 or SS-N-23 follow on SLBMs carrying ten MIRVs.” According to his analysis, “Russia may be able to deploy slightly more than 4,000 strategic warheads under START I until the year 2017.”²⁶¹

While it is true that Russia’s financial constraints will make it difficult to maintain forces even at the START I level, the details of the Russian force structure could be different if START II is not ratified. For example, according to Wilkening, “land-based inter-continental ballistic missiles (ICBMs) could carry multiple independently targeted re-entry vehicles (MIRVs) and more than 90 SS-18 silos could be converted to launchers for new ICBMs [the SS-27].”²⁶²

²⁶⁰ Ibid., 89.

²⁶¹ Ibid., 101-102.

²⁶² Ibid., 91.

However, by 2005 the current Russian ICBM force will become largely obsolete. Therefore, the START II treaty "does not appreciably alter the number of deployed warheads, since most of these systems reach the end of their service life before START II takes effect. Rather, START II would constrain Russia's ICBM modernization options."²⁶³

Russian leaders face a choice between having U.S. and Russian forces constrained only by the START I treaty or ratifying START II so that negotiations can proceed to START III. According to Dean Wilkening,

Moscow's desire to maintain rough parity with the US is the main reason why it is in Russia's interest to ratify the START II Treaty. Under START I, Russia at most will have a force with slightly more than 4,000 strategic nuclear warheads. The US, on the other hand, could deploy up to 6,000 START-accountable warheads, equating to 8,000–8,500 actual warheads given START I bomber-counting rules. Hence, a failure to ratify START II could lead to a 2:1 US advantage in deployed strategic warheads.²⁶⁴

According to General Habiger, START II is

in the Russians' best interest, if you look at their forces... if you look at their SS-18's, which is their work horse, their MIRV System, Multiple Independent Reentry Vehicles, ten warheads apiece, they've got a hundred-and-fifty-plus, that's 1500 warheads. They're flat running out of service life in those things. Their warranties are expiring and Yakovlev and Sergeyev have made a point of that... So it's going to be in their best interest – I see the Russians ratifying START II quickly, wanting to go immediately to START III, and they will get to START III very quickly.²⁶⁵

²⁶³ Ibid., 96.

²⁶⁴ Ibid., 102-103.

²⁶⁵ Habiger, Transcript of Oral interview by Defense Writer's Group, 3.

However, Russian traditionalists believe that “unfair arms control deals reduce Russia’s credible deterrence even faster than the ‘natural attrition’ of systems’ service lives expiring.” According to the traditionalists, “it is easier and cheaper to maintain strategic forces at the START I level by extending the service life of existing heavy ICBMs.” According to their view, “this is the only way to preserve Russia’s superpower status well into the next century. Moreover, by maintaining substantial retaliatory capacity, Russia would be able to offset any potential American advantages related to U.S. BMD.”²⁶⁶

If Russia ratifies START II, its modernization programs will still not reach the 3,500 weapon limit allowed by the START II treaty. This implies “that the asymmetry in deployed warheads could still be between 1.5:1 and 2:1 in Washington’s favor.” Consequently the “numerical asymmetry under START II is no worse than it would be without START II, at considerably reduced cost, and START II ratification opens the door to a follow-on START III Treaty that limits each side to 2,000-2500 strategic nuclear warheads, thereby guaranteeing rough parity with the US.”²⁶⁷

The Russian realists agree with this perspective. According to Andrei Shoumikhin,

Many realists argue that with the current financial and technical realities, Russia can only think in terms of a countervalue retaliatory deterrent. Given the requirements of such a deterrent posture as compared with a highly effective counterforce capability, realists see more room for compromise with the United States on specific arms control issues... They

²⁶⁶ Shoumikhin, 51.

²⁶⁷ Wilkening, 104.

emphasize that under START-2 the United States is supposed to reduce its nuclear warheads from over 8000 to 3000 to 3500. The Russian Federation faces [a] similar and even more dramatic reduction of its arsenal with or without the ABM Treaty through "natural" processes.²⁶⁸

According to Jack Mendelsohn, a

perhaps more fundamental issues is whether the Yeltsin administration and the Duma would actually be satisfied with a 2,000-to-2,500 warhead level for START III... Russian analysts and government officials are now indicating that these levels may be too high for Russia by at least 500 warheads. Because Russian deactivation and elimination costs are relatively constant, driven as they are by the requirement to eliminate multiple-warhead ICBMs, the lower the START III warhead number, the lower the costs will be for any projected modernization and replacement program.²⁶⁹

Another major Russian concern regarding START II is the U.S. warhead-reconstitution advantage allowed under the treaty. The United States would maintain an upload capability of about 2,700 warheads under START II and nearly 2,000 under START III. The Russia reconstitution capability would be somewhat more limited.

According to Wilkening,

Russia cannot rapidly upload warheads on ballistic missiles after 2005 because the SS-18 and SS-24 ICBMs will most likely be retired and the SS-19 is assumed to remain MIRVed until 2007, after which it will be retired within one or two years. However,... the SS-25 and SS-27 can probably carry three MIRVs, the SS-N-18 can carry up to seven MIRVs, and the SS-N-23, SS-NX-28 and any follow-on to the SS-N-23 that might be deployed can probably carry up to ten MIRVs... Therefore, Russia will have a reconstitution capability of between approximately 1,500 and 2,150 warheads over the next two decades.²⁷⁰

²⁶⁸ Shoumikhin, 52.

²⁶⁹ Mendelsohn, 13.

²⁷⁰ Wilkening, 104-105.

However, the U.S. advantage would only be important in a hypothetical scenario in which the United States decided to breakout from the START II treaty and load its strategic nuclear delivery systems with additional warheads. This scenario is rather unlikely, "given that the strategic advantage from having several thousand more warheads than another nuclear power armed with several thousand warheads is marginal."²⁷¹

Some Russian analysts have argued that START II also gives the United States an advantage in counterforce capability. This argument usually refers to an advantage in prompt hard-target kill (HTK) capability that can threaten ICBM silos. According to Wilkening,

The US will have approximately 1,860 prompt HTK warheads under START I, 884 prompt HTK warheads under START II and around 684 prompt HTK warheads under START III. Under START I, Russia can match the US in prompt HTK capability, assuming the SS-27 carries three MIRVs. On the other hand, under START II Russia will have only 45-60% as many prompt HTK warheads as the US after 2007... Under START III, the Russian prompt HTK capability would be approximately 60-80% of the US value after 2007.²⁷²

However, Wilkening also points out that

Among the benefits of START II (and START III) is the fact that the overall Russian strategic force is more survivable despite the hypothetical vulnerability of Russian silo-based ICBMs. First, the SS-27 – when deployed in former SS-18 and SS-19 silos – may be very difficult to destroy. Moreover, even if the silo-based SS-27 is vulnerable, only a small fraction of the future Russian force will be deployed in silos under START II or START III (approximately 10% of their warheads, compared

²⁷¹ Wilkening, 104.

²⁷² Wilkening, 105.

to approximately 60% during the Cold War). Future Russian force survival will depend increasingly on the ability to deploy mobile ICBMs out of garrison, SSBNs to sea, and to place bombers on high states of alert.²⁷³

This scenario is nonetheless implausible for strategic planning in the post-Cold War era. First, the United States has never had a "first strike" policy, and second, the political basis for a surprise attack in peacetime is completely lacking.

Russian realists agree with Wilkening and "point out that reducing U.S. offensive forces through arms control in effect improves the survivability of Russia's remaining strategic forces as well." From a political perspective, the Russian realists are also "convinced that START-2 ratification would give Russia an advantage in the form of continued mutual arms control with the United States. Russia also would be able to count on American assistance in eliminating dangerous materials and substances and so forth." According to Andrei Shoumikhin, "Abandonment of previous arms control agreements would be psychologically and practically ineffective, if the deterioration of Russian strategic offensive forces continues for natural reasons."²⁷⁴

D. CONCLUSION

During the Cold War, the United States spent billions of dollars to deter Moscow from employing the Soviet Union's weapons of mass destruction. For a fraction of that cost, the United States is now helping to eliminate some of these very weapons in ways that are tangible, observable, enduring, and in some cases immediate. U.S. CTR

²⁷³ Wilkening 107.

²⁷⁴ Shoumikhin, 53-55.

“assistance helps stem the flow of nuclear warheads, material and knowledge from the Former Soviet Union to potentially hostile nations and groups, [and] it also reduces the likelihood new threats will arise.”²⁷⁵

If Russia does not ratify START II, it can probably only maintain a strategic nuclear force of about 4,000 warheads over the next two decades. The United States could in principle maintain a strategic force about twice this size. Under START II, Russia is likely to maintain a force of approximately 1,800 to 2,500 warheads, compared to an American arsenal of about 3,500. Russia retains a great interest in maintaining parity with U.S. strategic weapons and therefore should have a great interest in ratifying START II and quickly moving on to START III. This would be the less expensive way for both countries to maintain comparable strategic forces.²⁷⁶

Concerning bilateral negotiations, General Habiger has stated that “The glide path we’re on...is stable, it’s verifiable, and it’s well thought out. Today the Russians have almost 3,000 weapons on alert, under START II those numbers will be down to around 1,000 or so, and Under START III those numbers will be down to probably less than 700.”²⁷⁷

Even though START II has not been ratified, the Kremlin continues to reiterate its preference for continuing arms control processes. This is also one of America’s foreign policy priorities. By continuing to pursue bilateral treaties and programs like CTR and

²⁷⁵ H. P. Smith Jr., 47.

²⁷⁶ Wilkening, 108.

²⁷⁷ Habiger, Interview with Defense Writer’s Group, 3.

SEW, Russia and the United States can reduce their strategic nuclear arsenals under a controlled and verifiable process, safeguard nuclear weapons storage and dismantlement, and slow nuclear proliferation.

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VI. ANALYSIS, COMPARISON, AND CONCLUSION

A. INTRODUCTION

The Soviet Union and the Warsaw Pact have dissolved and pieces of the Berlin Wall now sit in museums and on the mantles of military leaders and politicians. Russia is struggling through democratic reforms; Russian and American troops have served together in peacekeeping operations; the United States is financing the destruction of unneeded portions of the Russian strategic arsenal and is developing a cooperative joint U.S./Russian early warning center. The changes in the relationship are dramatic and undeniable. The Cold War is over. The United States and Russia nonetheless still possess thousands of strategic nuclear weapons and will continue to possess these weapons for the foreseeable future.

To what extent are nuclear weapons still required for U.S. national security? How may the three schools of thought examined in this thesis influence U.S. nuclear policy and force structure over the short-term and long-term? According to President Clinton,

Nuclear weapons serve as a hedge against an uncertain future, a guarantee of our security commitments to allies and a disincentive to those who would contemplate developing or otherwise acquiring their own nuclear weapons. The United States must continue to maintain a robust triad of strategic forces sufficient to deter any hostile foreign leadership with access to nuclear forces and to convince it that seeking a nuclear advantage would be futile.²⁷⁸

Walter B. Slocombe, the Under Secretary of Defense for Policy, has told Congress that,

²⁷⁸ William J. Clinton, President, United States of America, *A National Security Strategy For a New Century*, The White House, October 1998, 12.

For the foreseeable future, we [the United States] will continue to need a reliable and flexible nuclear deterrent—survivable against the most aggressive attack, under highly constitutional command and control, and assured in its safety against both accident and unauthorized use. We will need such a force because nuclear deterrence—far from being made wholly obsolete—remains an essential ultimate assurance against the gravest of threats.²⁷⁹

As Slocombe pointed out, the Nuclear Posture Review (NPR), the first comprehensive post-Cold War review of U.S. nuclear policy, recognized that,

with the dissolution of the Warsaw Pact, the demise of the Soviet Union, and the embarkation of Russia on the road to democracy and a free market economy, the strategic environment has been transformed. Conventional forces, therefore, could and should assume a large share of the deterrent role...nonetheless, nuclear weapons continue to play a critical role in deterring aggression against the U.S., its overseas forces, its allies and friends.²⁸⁰

Nuclear weapons are also important to Russia's security. According to Nikolai Sokov,

In the view of most Russian military planners, strategic nuclear weapons are the foundation of international security because they are believed to prevent war among the major powers and possibly regional wars as well. Nuclear weapons also are seen to guarantee Russia the status of a great power and provide it a last line of defense...there is a broad agreement among Russian experts and politicians that nuclear weapons ensure Russian and international security through the threat of inflicting "unacceptable damage" in a retaliatory strike.²⁸¹

²⁷⁹ Walter B. Slocombe, "The Future of Nuclear Deterrence," Prepared Statement Before the Subcommittee on International Security, Proliferation, and Federal Services of the Committee on Governmental Affairs, *Federal News Service*, 12 February 1997, 2.

²⁸⁰ Slocombe, 4.

²⁸¹ Nikolai Sokov, "Russia's Approach to Nuclear Weapons," *The Washington Quarterly*, Vol. 20, No.3, Summer 1997, 107.

Nuclear deterrence is going to remain a part of international security for the foreseeable future. America's objective is a safe and stable world. However, as Slocombe has observed,

We must develop our national security policy with the understanding that nuclear weapons and the underlying technical knowledge cannot be disinvented whether or not the U.S. retains its weapons. In this connection, the U.S. will continue to lead the way to a safer world through the deep reductions in nuclear forces undertaken in START and through Nunn-Lugar cooperative threat reduction and other actions. At the same time, we will maintain a smaller nuclear force as a "hedge" against a future that is uncertain and in a world in which substantial nuclear arsenals remain.²⁸²

Similarly, General Habiger has stated that "For the foreseeable future, nuclear weapons will remain instruments of war prevention. In that respect, their function is not *solely* to deter nuclear use by others but to restrain war itself."²⁸³ Charles Glaser states that a "well-designed and well-managed nuclear arsenal will continue to contribute to avoiding nuclear war."²⁸⁴ Nuclear weapons technology cannot be "disinvented." According to U.S. and Russian doctrines, nuclear weapons will continue to play an essential role in international stability and security.

The distinct assumptions of the three schools of thought examined in this thesis influence their proposals for U.S. nuclear policy and force structure.

²⁸² Slocombe, 7.

²⁸³ Eugene B. Habiger, General, Commander in Chief, U.S. Strategic Command, "Deterrence in a New Security Environment," *Strategic Forum*, National Defense University, No. 109, April 1997, 3.

²⁸⁴ Charles L. Glaser, "The Flawed Case for Nuclear Disarmament," *Survival*, London, Spring 1998, 128.

B. DISTINCT THREAT PERSPECTIVES

Each school of thought views the primary threat to the United States from a slightly different perspective. Each school's threat perspective influences its proposed policy and force structure recommendations. The de-alerting school sees the deterioration of Russia's strategic nuclear command and control as the primary threat. According to the de-alerters, the biggest threat to U.S. security resides in the possibility of an accidental or unauthorized launch of a Russian strategic nuclear weapon. To remedy this threat, the de-alerters suggest lowering the alert status of the entire U.S. strategic nuclear force, with the hope that Russia will follow suit. This recommendation is intended to reduce the launch readiness posture of both the United States and Russia, thereby (it is argued) reducing the likelihood of an accidental or unauthorized launch.

The bilateral negotiations and NMD schools acknowledge the fact that Russia's command and control arrangements are deteriorating, but suggest that the possibility of an accidental or unauthorized launch is extremely remote and highly exaggerated by the de-alerting school. According to the bilateral negotiations and NMD schools, the threat of an accidental or unauthorized launch does not warrant de-alerting the entire U.S. strategic force. These two schools also contend that, given Russia's doctrine and reliance on nuclear weapons, the likelihood that Russia would de-alert its strategic nuclear forces is extremely low. Opponents of de-alerting also point out that several of the de-alerting proposals are unverifiable and could actually be detrimental to U.S. national security in an increasingly uncertain world.

The bilateral negotiations and NMD schools see the greatest threats to the United States coming from nuclear weapons and other weapons of mass destruction. According to Joseph Anselmo, "Many analysts and lawmakers on both sides of the U.S. missile defense debate concur that the world is a more dangerous and unpredictable place today than it was during the Cold War."²⁸⁵ To face "dangerous and unpredictable" threats, the NMD school advocates building national and theater missile defenses.

The bilateral negotiations school agrees with the NMD school's threat assessment and advocates retaining strategic nuclear weapons (subject to negotiated constraints) to provide the deterrent required against rogue nations that might consider launching weapons of mass destruction against the United States. However, the bilateral negotiations school believes that the force structure of the United States should be tied to bilateral agreements with Russia and that both sides should cut back their forces under stringent, verifiable, and regulated regimes. According to the bilateral negotiations school,

The danger of unauthorized use and theft of nuclear weapons could be much reduced by cutting the size of nuclear forces. The impact of reductions would be more than proportional to their size, since the remaining weapons should be those with the best safety and security features.²⁸⁶

²⁸⁵ Joseph Anselmo, "U.S. Faces Growing Arsenal of Threats," *Aviation Week & Space Technology*, February 24, 1997, 46.

²⁸⁶ Glaser, 117.

According to the National Defense Panel's report, entitled "Transforming Defense: National Security in the 21st Century,"

The key task for U.S. nuclear policy in the first decades of the twenty-first century will be to deter attacks against the United States and its allies, discourage the use of, or the threat to use, nuclear weapons, and promote the efforts to achieve balanced and stabilizing reductions in nuclear arsenals.²⁸⁷

The testimony of the Under Secretary of Defense for Policy, Walter Slocombe, included the following reflection:

Even if we could ignore the Russian nuclear arsenal entirely, there are unfortunately a range of other potential threats to which nuclear weapons are a deterrent. One cannot survey the list of rogue states with potential WMD programs and conclude otherwise. I do not, by the way, regard such states as undeterrable, either in the long-run sense of the incentives to acquire WMD capability, or the short-run sense of incentives to use such capability. Indeed, the knowledge that the U.S. has a powerful and ready nuclear capability is, I believe, a significant deterrent to proliferators to even contemplate the use of WMD. In view of this, it would be irresponsible to dismantle the well-established – and much reduced – system of deterrence before new and reliable systems for preserving stability are in place.²⁸⁸

Kathleen Bailey has explained the need to maintain a nuclear arsenal for deterrence purposes with appropriate starkness:

The U.S. nuclear deterrent protects us not just from Russia but also from other nations' nuclear arsenals, as well as from the chemical and biological weapons proliferating around the world. President Clinton's recent revision of the nuclear-use doctrine recognizes the growing need to rely on nuclear retaliation to deter attacks with other types of weapons of mass destruction. The speed with which nuclear retaliation can be executed can mean the difference between the U.S. or its allies suffering one chemical or biological weapons attack or many.²⁸⁹

²⁸⁷ Cerniello, "NDP Report Says Wait on NMD, But Not on Nuclear Reductions," 22.

²⁸⁸ Slocombe, 5.

²⁸⁹ Bailey, "De-Alerting Nukes Would Imperil U.S. Security," A18.

It is clear that the United States will maintain a strategic nuclear capability for the foreseeable future. U.S. nuclear policy will pursue further force reductions and all three schools of thought will influence the future of U.S. nuclear policy and force structure to some extent, although the impact of the recommendations of the de-alerting school will probably be less significant.

C. NEAR-TERM U.S. NUCLEAR POLICY AND FORCE STRUCTURE

Although it is in the interests of Russia, the United States, and the rest of the world to continue the process to further reduce nuclear weapons, the United States will not make any dramatic changes in its nuclear policy or force structure beyond START III in the foreseeable future. The United States will maintain a strategic force as the ultimate assurance against the gravest threats. A key conclusion of the Administration's National Security Strategy is that the United States will retain a strategic nuclear force "sufficient to deter any hostile foreign leadership with access to nuclear forces and to convince it that seeking a nuclear advantage would be futile."²⁹⁰ General Habiger has highlighted the implications of shrinking America's nuclear posture to low levels:

As you go down to lower and lower numbers the policy folks need to start thinking about issues such as extended deterrence. You know if we go down to such low numbers perhaps you drive some of our allies into nuclear weapons programs only because they perceive extended deterrence is no longer applicable to them... as you go to lower and lower force levels, the counter force targeting strategy is no longer applicable because you don't have the weapons to cover all the targets so then you go into counter value and that's back to "City Busting."²⁹¹

²⁹⁰ William J. Clinton, President, United States of America, *A National Security Strategy For a New Century*, The White House, October 1998, 12.

²⁹¹ Habiger, Transcript of Oral Interview by Defense Writer's Group, 7.

The United States Strategic Command has publicly endorsed the START III force projection of 2,000 to 2,500 strategic nuclear warheads.²⁹² At this force level, America can still hold at risk the targets outlined in PDD-60, still provide the deterrent required by the WMD threat, still provide an extended nuclear umbrella to its allies, and still maintain a counter force capability.

According to estimates prepared in Russia and in the West,

Regardless of whether the United States and Russia move ahead on bilateral arms-control treaties, a decade from now Russia's forces will be less than one-tenth the size they were at the peak of Soviet power. Ten years from now...Russia may have a strategic nuclear force just larger than that of China, and somewhat more than Britain and France combined.²⁹³

According to Russian President Boris Yeltsin,

The Russian Federation is determined to adhere strictly to existing and future treaties on strategic offensive weapons and antiballistic missile defense, and it is ready to continue further reductions of its nuclear weapons on a bilateral basis with the United States, while maintaining the balance of strategic weapons as a guarantee against the return to global opposition of forces and the race of arms.²⁹⁴

Consequently, the bilateral negotiations school will play a direct role in achieving the force structure of 2,000 to 2,500 warheads through bilateral START negotiations.

The vital methodologies for the bilateral negotiations school are to maintain parity in the reduction process, to provide for effective verification measures, and to proceed in a slow and deliberate manner. These methodologies also seem to be important to Russia. The

²⁹² Ibid., 5.

²⁹³ David Hoffman, "Shattered Shield: Decline of Russia's Nuclear Forces," *Washington Post*, 16 March 1998, A1.

²⁹⁴ Yeltsin quoted in Chkanikov and Shoumikhin, 292.

Russian strategic nuclear arsenal is going down, with or without START, and the Russians have a great interest in maintaining parity with the United States. Russia may therefore ratify START II and move quickly to START III before the Clinton administration leaves office. Given the chance that a Republican may gain the White House and the possibility that Russia would rather deal with the known Clinton administration, as opposed to dealing with an unknown new administration, the Duma may finally take action on START II.

When the United States and Russia turn to START III, de-alerting may be on the agenda. De-alerting is nothing new to American nuclear policy and force structure changes. In September 1991, President Bush de-alerted U.S. strategic bombers by taking them off alert. At that time, some 30 percent of the U.S. bomber force sat on strip alert, with nuclear weapons loaded on the aircraft and crews ready. President Bush also withdrew all nuclear weapons from American ground forces and placed the remaining non-strategic nuclear weapons in storage. In 1994, President Clinton directed the Navy to abandon the capability of employing nuclear weapons from its surface ships. In 1993, Presidents Clinton and Yeltsin agreed not to target each other's nation with ballistic missiles, an arrangement that went into effect in May 1994. Overall, the United States has unilaterally de-alerted, de-activated, or dismantled some 90 percent of its non-strategic nuclear arsenal.²⁹⁵

²⁹⁵ Habiger, "Deterrence in a New Security Environment," 2.

De-alerting and/or de-activation will continue to play an essential role in current and future arms negotiations. According to Jack Mendelsohn,

The current U.S. proposal for deactivation [under START II] calls for the removal of nuclear reentry vehicles (warheads) from those missiles destined to be eliminated. Russia...prefers other deactivation measures...Russian experts argue that they do not have adequate safe storage facilities for those missile warheads that would have to be removed under the deactivation program. Consequently, the Russians have put forward in talks with the United States a deactivation option that would involve removing batteries that operate the missile guidance systems. There are indications that Russia may have other suggestions in the future.²⁹⁶

Similarly, James Kitfield has argued as follows:

When negotiations turn to the START III agreement, de-alerting is likely to be on the agenda. The United States has agreed in principle to have a very thorough discussion with the Russians — as part of START III — on how we actually go about deactivating those weapons covered by START II.²⁹⁷

It should be recalled that in 1991 President Bush elected to remove forces from alert that had been identified for deactivation under START I. De-alerting might again be employed as an initial step to broader bilateral agreements.

De-alerting might also contribute to bilateral programs as a topic for negotiations in itself. START and CTR have demonstrated how costly large-scale deactivation can be. In contrast with de-alerting as simply a precursor to deactivation, de-alerting as a negotiated constraint would require much more thought. To ensure that the United States

²⁹⁶ Mendelsohn, "The U.S.-Russian Strategic Arms Control Agenda," 14.

²⁹⁷ Kitfield, "Don't Get MAD, Get De-alerted," 33.

maintains stability and deterrence in its alerted forces, the remaining force must continue to meet all the requirements for credible deterrence: the numbers must be sufficient, the systems must be survivable and responsive, and the overall posture must be perceived as credible to potential adversaries.

However, any de-alerting program would have to satisfy the bilateral negotiations requirements mentioned earlier. A de-alerting program within a broader arms reduction regime would have to conform to parity requirements, for example. However, verification is problematic for many of the de-alerting proposals. Virtually all methods of de-alerting have some sort of verification problem, as outlined in Chapter 3. Most de-alerting methods either take place out of sight (electronic and minor hardware removal) or mandate extensive and intrusive verification mechanisms. This does not mean that robust and intrusive verification means can not be devised to electronically or physically monitor the weapons. It means, however, that defining such verification methods would be a significant challenge.

National and theater ballistic missile defenses are also likely to play a role in shaping U.S nuclear policy and force structure in the short-term. ABM treaty-related issues may be linked to START III negotiations. Modifications and agreements on the ABM treaty will probably be negotiated in conjunction with START III, as well as possible de-alerting options for early deactivation of systems scheduled for destruction.

Another option for both the United States and Russia is to abandon the bilateral accords and simply focus on shaping their own nuclear forces according to their national threat assessments and budgets. According to Senator Pete Domenici, Republican of New Mexico,

We focus on the creation of bilateral accords with Russia to size our nuclear stockpile, and we expend much energy debating the pros and cons of START II versus START III. Instead, I believe that the United States should move away from sizing its nuclear stockpile in accordance with bilateral accords with Russia. Instead, within the limitations of existing treaties, the United States should move to a "threat-based stockpile," driven by the minimal stockpile that meets credible threat evaluations.²⁹⁸

Russia could also be considering this option. According to David Hoffman,

Some Russian strategists are beginning to look for an exit from the arms-race mentality of the Cold War, a way that would preserve Russia's membership in the nuclear club, perhaps even its Great Power status, but without the enormous drag on its resources. One recent proposal is for Russia simply to abandon the bilateral arms-control process with the United States and go its own way with a small, independent nuclear force.²⁹⁹

The United States and Russia could move unilaterally, without any negotiations, to a "threat-based stockpile." But one does not have to look far in history to determine that this was one of the causes of the Cold War nuclear arms race. Both countries moved unilaterally, without negotiations, and acquired over 12 thousand strategic nuclear warheads each. Russia is far from being a stable democratic country, and may at some point become an adversary of the United States once more. Through bilateral negotiations, both countries are down to approximately six thousand START-accountable warheads, and they may go down to around 2,000 to 2,500 warheads in START III. It is in both countries' interests to pursue bilateral agreements and to avoid future Cold War-type arms races.

²⁹⁸ Pete Domenici, Senator, Floor Speech on Nuclear Issues, 11 February 1998.

²⁹⁹ Hoffman, "Shattered Shield: Decline of Russia's Nuclear Forces," A1.

In addition, Russia currently looks to its southern and eastern borders (China and the Islamic world) as the real future threats to Russia. If it accepts lower strategic nuclear numbers through bilateral agreements with the United States, Russia will be legally obligated not to exceed those numbers. China will then have fewer incentives to build large numbers of nuclear weapons. Therefore, bilateral negotiations between Russia and the United States may also help to prevent a future Cold War-style nuclear arms race between Russia and China.

D. LONG-TERM U.S. NUCLEAR POLICY AND FORCE STRUCTURE

It is likely that international relations will continue to be characterized by patterns of conflict and aggression, as well as dialogue and cooperation. Nuclear deterrence will therefore continue to play an indispensable role in America's long-term national strategy to ensure that conflict does not take its most violent and destructive form.

America's long term nuclear policy and force structure will focus on maintaining a force that constitutes a stable and effective deterrent. According to Nunn, Scowcroft, and Kanter,

More broadly, the post-reduction forces also must remain sufficient to support our nonproliferation objectives, both by maintaining the confidence of our nonnuclear allies who rely on our nuclear guarantee and by maintaining the nuclear bar sufficiently high to discourage nuclear wannabes from being tempted... it would not be surprising if that number were somewhere in the range of 1,000-2,000 weapons. Numbers in this range also would go a long way toward responding to the pressure Russia feels to move down to much smaller and more affordable force levels.³⁰⁰

³⁰⁰ Nunn, Scowcroft, and Kanter, 13.

Concerning extended deterrence and nuclear force structure, General Habiger made the following point:

America's nuclear forces also extend an important deterrent guarantee to U.S. allies – many of whom would otherwise face disturbing and potentially destabilizing questions about whether they needed their own nuclear weapons for their security against both regional and global threats. Thus, in a way not often appreciated, America's nuclear forces complement efforts to restrict nuclear proliferation.³⁰¹

Indeed, according to Therese Delpech,

Tokyo has no choice but to depend on the nuclear umbrella of an ally. It is in the interest of the United States, so long as it does not wish to see Japan withdraw from the NPT and develop its own nuclear deterrent, to maintain its alliance with Japan and continue to provide a nuclear umbrella... The right level of arsenals has to be assessed in the light of two factors: the necessity for deterrence (including extended deterrence) to work, as long as it is the stated policy of the countries concerned; and the need to prevent any violator of a disarmament regime from gaining a quick advantage.³⁰²

Because of these considerations, bilateral negotiations will continue to play an essential role in America's long-term nuclear force structure reductions. The United States will proceed with START III and possibly START IV bilaterally with Russia. As a result of these negotiations, according to some analysts, the United States and Russia will possibly agree on strategic force structures of about 1,000 to 1,500 warheads each. Further reductions, possibly START V and VI, may have to become multilateral negotiations. As the United States and Russia approach numbers comparable to or within reaching distance of the numbers held by countries like China, bilateral strategic arms

³⁰¹ Habiger, "Deterrence in a New Security Environment," 4.

³⁰² Therese Delpech, "Nuclear Weapons and the New World Order: Early Warning From Asia," *Survival*, London, Winter 1998/1999, 71.

negotiations may have to become multilateral negotiations to maintain international stability. Neither the United States nor Russia wants to be threatened by a possible breakout scenario from countries like China, India, Pakistan, or a future nuclear Iraq or Iran. Therefore, further strategic nuclear reductions beyond the 1,000 to 1,500 limit may require multilateral negotiations with a strong international monitoring system.

According to some analysts, de-alerting may ultimately play an important role in long-term nuclear policy and force structure decisions. In the earliest stages of the multilateral negotiations, leaders will probably want to display their commitment to the new doctrine and force structure while still hedging against potential instability caused by the shift to lower numbers. Partial de-alerting could provide a mechanism (among others) to achieve that aim.

America's long-term nuclear policy and force structure will probably continue to include de-alerting for those weapons scheduled for destruction. In addition, de-alerting could play an instrumental role in multilateral negotiations. As the numbers of strategic weapons in Russia and the United States are reduced and bilateral negotiations become multilateral negotiations involving other nuclear powers, de-alerting could be employed as part of the negotiation process. Britain, France, China, Russia, and the United States could multilaterally de-alert those forces scheduled for destruction under the reduction agreements.

In the early phases of a multilateral process, some observers might argue, any de-alerting method that would allow rapid and reliable reconstitution (electronic shutdown/manual safing) could serve as the hedge against instability. Conversely, some might argue that any such methods could be a source of instability. These fast and easily

reconstitutable re-alerting methods could, however, be replaced with more permanent de-alerting methods (such as the removal of warheads) later in the process. These de-alerting methods could only be employed after the national leaders were satisfied with the system's stability.

NMD may also play an essential role in America's long-term nuclear policy and force structure composition. As technology improves and the U.S. ability to intercept incoming ballistic missiles and re-entry vehicles increases, America will feel safer in reducing its strategic arsenal. As the technology advances, the United States may even share it with Russia, reducing its fears of an American advantage. This might allow both countries to be protected from ballistic missiles and to feel more secure in reducing their strategic nuclear arsenals to even lower numbers.

E. CONCLUSION

Since the end of the Cold War, significant strides have been made in reducing the nuclear arsenals of both the United States and Russia and in increasing the safety, security, and accountability of their nuclear forces. The risks inherent in maintaining a smaller nuclear force are far outweighed by the security and nonproliferation benefits gained from our nuclear deterrent. According to Edward L. Warner III, Assistant Secretary of Defense for Strategy and Threat Reduction,

While... [successive] US administrations have embraced the objective of nuclear disarmament as our ultimate goal, the path to this goal is not fairly marked, because we are still in a very uncertain security environment. What is clear, is the ultimate goal of nuclear disarmament will be reached only through realistic, methodical, pragmatic, moves forward, as genuine security permits with each step building on those before. We have made

dramatic reductions in our nuclear deterrent forces, over the past several years as a result of unilateral initiatives and formal, verifiable, [strategic] Arms Reduction Treaties. Such stabilizing reductions will continue to be the primary objective of the United States.³⁰³

While the current political climate is significantly less tense than during the Cold War era, the fact still remains that Russia is the only country capable of destroying the United States. Russia's future is filled with uncertainty, and a future Russian government may be unstable or hostile to the West. According to General Habiger,

The United States deters aggression by having nuclear weapons – with appropriate plans for their use, and a force posture with the flexibility, survivability, and responsiveness to provide the President with credible options. At about 3.5% of our defense budget, America's strategic offensive forces represent what General John Shalikashvili, Chairman of the Joint Chiefs of Staff, called "America's ultimate insurance policy."³⁰⁴

For these reasons, the United States will continue to possess nuclear weapons for the foreseeable future. Under this assumption, the de-alerting, ballistic missile defense, and bilateral negotiations schools of thought will continue to influence, in both the short term and the long term, U.S. nuclear policy and force structure issues. Bilateral negotiations will exert the biggest influence as America and Russia reduce their strategic nuclear arsenals while maintaining approximate parity in START-accountable delivery systems. De-alerting will play a limited role within a negotiated arms reductions regime (particularly with regard to forces scheduled for de-activation and elimination) and will to this extent continue to contribute to future U.S. policy and force structure.

³⁰³ Edward L. Warner III, Assistant Secretary of Defense for Strategy and Threat Reduction, Prepared Statement Before the Hearing of the Strategic Forces Subcommittee of the Senate Armed Services Committee: Strategic Nuclear Policy, *Federal News Service*, 31 March 1998, 27.

³⁰⁴ Habiger, "Deterrence in a New Security Environment," 4.

NMD will also continue to influence U.S. nuclear policy and force structure. As technology advances, America may gain confidence in its ability to protect its citizens, its troops, and its allies from WMD threats. With this confidence, America may become less dependent on nuclear deterrence and more disposed to rely on a smaller and more flexible nuclear force.

Nuclear forces provide the "ultimate insurance" that U.S. national security strategy calls for. Wholesale de-alerting is not advisable at any time in the foreseeable future, but partial de-alerting could play a significant role within a negotiated arms reduction regime, particularly for forces scheduled for de-activation and/or elimination. NMD will have limited influence over America's nuclear policy and force structure in the short term. However, as technology advances, NMD is likely to play a more significant role in the long term. The United States will continue to pursue bilateral arms reductions with Russia in the short term and may pursue multilateral arms reductions with Russia and other nuclear powers in the long term. America's strategic nuclear forces will probably be reduced in time, but this reduction will be conducted under the auspices of slow, deliberate, verifiable, and controlled negotiated regimes, bilateral and/or multilateral.

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