

A POST-COLD WAR NUCLEAR STRATEGY MODEL

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FOREWORD

We are pleased to publish this twentieth volume in the *Occasional Paper* series of the US Air Force Institute for National Security Studies (INSS). This monograph represents the results of research conducted during fiscal year 1997 under the sponsorship of a grant from INSS. It is an important work, addressing nuclear strategy at a time when those weapons and concepts on their use are undergoing significant review. It presents a summary and critique of major recent proposals regarding United States nuclear forces and strategy, raising significant questions that these proposals have failed to fully address. The paper also addresses issues revolving around Russian nuclear weapons and strategy, asking the same questions about the holder of the world's other major nuclear arsenal. Finally, based on this analysis, the paper proposes a basic framework for the United States to follow in developing its post-Cold War nuclear strategy and posture.

The authors are experienced analysts and observers of United States nuclear and national security issues and policy, and I am pleased to say that they are also colleagues of mine on the USAFA faculty. I have co-taught courses with each of them, and I have come to respect their insights. Thus, it is with personal pleasure that I convey this, the first INSS Occasional Paper issued under my tenure as Director, to you, the reader. INSS is pleased to offer Hall, Cappello, and Lambert's insight for public debate in this important area.

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JAMES M. SMITH
Director

EXECUTIVE SUMMARY

The authors of this paper hold the view that the conceptualization of nuclear weapons in the post-Cold War environment will require some elements of the old Cold War debate, and some new concerns resulting from events in the 1990s. The first relevant debate will pertain to the classic Cold War arguments about deterrence, and its utility. It is clear that the second part of this conceptualization, and clearly related to the need for deterrence, will be the need to monitor and evaluate the current military, economic, and political situation in Russia. Third, after discussions in these two areas there needs to be a careful consideration of the recent proposals for changing the alert status of the U.S. strategic nuclear arsenal. And finally, since U.S. nuclear strategy and posture will reflect certain domestic and political realities, it would be helpful to consider which ones have merit in this question.

With regards to these areas, the authors examined the old and the current debates in open published sources in the United States and in Russia, and interviewed a number of practitioners and scholars in both places. Having done this, the authors believe that at least five assumptions and their associated recommendations will drive U.S. nuclear strategy in the post-Cold War period:

- Nuclear deterrence, as an operating concept, is not in danger in the near- or long-term.
- Nuclear deterrence will not require the same numbers of weapons, mix of weapons, or alert status of weapons as it did during the past fifty years.
- The focus should turn to non-strategic nuclear weapons in an attempt to increase crisis stability, and reduce the possibility of “loose nukes.”
- If strategic numbers decline dramatically and tactical nuclear weapons are virtually eliminated, then nuclear defenses become more defensible to those who were once opposed to them.

- General Andrew Goodpaster's summation of the political and economic realities, and thus, what the U.S. should do seems to be the likely course of action regarding nuclear weapons in the post-Cold War era.

One question that emerges as a dominant one in the debate about the future of nuclear weapons (the number of them and their posture), and is often overlooked when discussing weapons systems, is the broader nature of the overall global environment. More specifically, this has to do with the existing relationship between the states in this environment and what this relationship means when designing a national security strategy. The authors assert that significant changes in these relationships in the post-Cold War era are the predecessor to significant changes in military postures, particularly regarding nuclear weaponry. Thus, a post-Cold War nuclear strategy that is fundamentally different from that found in the Cold War period would require a post-Cold War set of state relationships, and this has not yet occurred.

A Post-Cold War Nuclear Strategy Model

What have I achieved? A legitimate public debate with respect to nuclear weapons. It has gotten serious people to respond.

—General George Lee Butler, ret.¹

INTRODUCTION: FRAMING THE QUESTION

Many scholars and policy makers believe that there is a need to reconceptualize the role of nuclear weapons in the United States' overall post-Cold War national security strategy. Those advocating this position feel that the time is right for significant and dramatic changes to the United States' nuclear posture and strategy. Others engaged in this discussion are more conservative in their assessments and recommendations. Thus, there is a spectrum of proposals and considerable debate over the proper role of nuclear weapons in the post-Cold War period. Unfortunately, most of the arguments for significant nuclear restructuring come up short because they fail to make the case for how the new posture will preserve foundational security concepts such as deterrence, crisis stability, and arms race stability. If these Cold War concepts are no longer necessary in the post-Cold War era, then those debating the matter will have to make the case that they are no longer relevant. As a result of our research we believe this case has not been made because it cannot be made.

This project is being pursued because too many of those presenting new ideas about the role of nuclear weapons in the post-Cold War period have failed to raise several of the questions central to the debate, and these questions have not been addressed sufficiently by the Department of Defense or Congress. Essentially, the cart is being placed

before the horse. In some ways one could say that the cart is being separated from the horse. This means that one cannot discuss dramatic changes to nuclear posture and specific new force structures without looking at the entire nuclear environment along with the relationships between states that drive the nuclear environment. This research effort contributes to this debate by framing it and presenting the skeleton for a new model for post-Cold War nuclear security. To this end, there are several segments to this process that can be outlined by the questions that follow:

- What are the relevant elements of the old nuclear strategy debate and do they still have currency?
- Who are the significant United States and Russian players involved on both sides of the issue, and what are their views when it comes to nuclear strategy?
- What aspects of the post-Cold War security environment are most important in the debate about United States nuclear strategy?
- What bureaucratic, organizational, and political factors are likely to affect future decisions about changes to United States nuclear strategy? Though this will not be examined in detail in this phase of this project, it is an important question that must be explored at some point.

The major sections in this paper provide an initial approach to answering these questions, recognizing that this research is the inaugural phase of a larger conceptual work. Section one briefly discusses some relevant elements of the old nuclear strategy model to include the Cold War concepts that played a role in the model's maintenance. This provides some idea of the kinds of issues and concepts that must be addressed in any *post-Cold War* debate about the role of nuclear weapons and how nuclear strategy might be reformulated. The next section looks at the contemporary environment in order to examine the most current issues and questions being considered. Then the project presents the results from interviews with major United States actors on all sides of the issue in the nuclear policy-making arena to include

current practitioners in nuclear strategy. Next, the paper looks at the other significant Cold War participant, Russia. The current state of Russia, its military, and its economic conditions provide the background for a more complete evaluation of the post-Cold War environment. One cannot expect the United States nuclear posture to be modified without an examination of an adversary of long-standing. The last section does several things in an attempt to provide something useful to DOD policy makers. First, it makes some assumptions about the post-Cold War environment. Second, it makes recommendations for developing a post-Cold War nuclear strategy. These are both politically and militarily realistic, assuming that it is possible for something to be politically realistic but not militarily acceptable, and vice versa.

BACKGROUND

The Butler Initiative

One recent event that highlighted the need to explore this topic was the widely publicized recommendation by retired General George Lee Butler proposing that within some period of time the United States eliminate its strategic nuclear arsenal. In remarks to the Washington Press Club in December 1996, General Butler emphasized his “deepening dismay at the prolongation of Cold War policies and practices in a world where our security interests have been utterly transformed.”² General Butler also challenged deterrence, the most fundamental concept of United States nuclear strategy, when he said that it had an “embedded assumption of hostility and [an] associated preference for forces on high states of alert.”³

General Butler’s remarks were publicly supported by many retired and well-known flag-ranked officers in the United States, as well as abroad.⁴ Some of these officers are from states possessing nuclear weapons and others are not, with the two largest groups being from the United States and Russia. Their message is clear. “The end of the Cold

War created conditions favorable to nuclear disarmament...[conditions that made it possible] to reduce strategic and tactical nuclear weapons, and to eliminate intermediate range missiles.”⁵ These officers go on to say that “in spite of these positive steps” in the post-Cold War security environment “the most commonly postulated nuclear threats are not susceptible to deterrence or are simply not credible.”⁶

One might reasonably expect that the Butler Proposal would have triggered a lively and long-lasting debate on nuclear issues. In fact, this did not happen. Even General Butler expressed his disappointment with the “quality of the debate, by those pundits who simply sniffed imperiously at the goal of elimination, aired their stock Cold War rhetoric, hurled a personal epithet or two and settled smugly back into their world of exaggerated threats and bygone enemies.”⁷

It is surprising that the public reaction to this far-reaching proposal was so muted from the policy-making community. This suggests two major possibilities. Either these participants were not prepared to respond or they did not want to respond publicly. The other possibility is that the policy community is still absorbing the magnitude of the suggestion.

There have been previous attempts to present a plan for a new strategic nuclear environment, and to discuss the effects such plans would have. But the Butler initiative was the first time in the post-Cold War period that a cadre of highly respected and very credible retired officers gave their public support to such a recommendation.⁸ Initially, the Butler proposal did appear to initiate and stimulate some debate on post-Cold War nuclear strategy, but this debate was short lived within the most relevant policy-making circles. It appears that willingness to engage in public discussion was relegated to those constituencies that have always had an interest in arms control and disarmament. Aside from its initial reaction, the defense policy community (e.g., the

Department of Defense, and Congress) did not engage the matter in a public and direct way.

The Nuclear Posture Review

Many in the DOD establishment might first respond by saying that, with the Nuclear Posture Review (NPR), they have already looked at nuclear weapons in the context of the post-Cold War period. This report, approved by President Clinton in September 1994, like most other policy reviews, has its supporters and detractors and seemed to address the Butler proposal even before the General gave his remarks at the Washington Press Club in 1996.⁹ It is clear, and not surprising, that the NPR stands at the other end of the spectrum from the Butler proposal with regards to how the United States ought to think about the role of nuclear weapons in the near-, and perhaps, long-term future.

According to then Secretary of Defense William Perry, the NPR “confirmed that, with the demise of the Soviet Union and the disintegration of the Warsaw Pact, nuclear weapons will play a greatly changed role in our national security strategy.”¹⁰ Shortly after the NPR’s release, it was reported that one of its recommendations was that the United States “should not unilaterally reduce its nuclear weapons below the START II level of 3,500 total warheads.”¹¹ In his letter to the Secretary of Defense reporting on the NPR, Admiral H.G. Chiles, then Commander-in-Chief of Strategic Command, said “[i]f we dismantle strategic forces prematurely, it would take a long time at great expense to recover these national assets should they be needed again.... The stability of our strategic relationships requires we proceed cautiously.”¹²

On the other hand, General Butler concluded that the NPR was “an essential but far from sufficient step toward rethinking the role of nuclear weapons in the post-Cold War world.”¹³ In addition, two well-respected strategic thinkers noted that the NPR was “flawed by its design,” built on “everybody’s fears and paranoias,” but did not go far

enough to move “away from mutual assured destruction principles.”¹⁴ So, somewhere between these two perspectives (that presented by the NPR’s authors and those who feel it did not go far enough) lies the role of nuclear weapons in the post-Cold War period, and only a consideration of all the relevant questions will ensure a proper articulation of United States nuclear strategy.

Presidential Decision Directive (PDD)-60

DOD officials might also point to the 1997 Presidential Decision Directive, PDD-60,¹⁵ the new policy directive on nuclear weapons employment, as evidence that the role of nuclear weapons has been examined in the context of a changed international environment. According to published reports, this is a very significant revision to United States policy and the first of its magnitude since 1981. While the directive supposedly addresses revised United States targeting guidance, the most controversial aspect of the directive concerns using nuclear weapons as a deterrent or response to the use of chemical or biological weapons.¹⁶ The suggestion here is that the role of nuclear weapons is expanding in the post-Cold War era. The President’s senior director for defense policy on the National Security Council has challenged this conclusion by stating that nuclear weapons now play a smaller role.¹⁷ The problem with this directive’s contribution to the debate is that because the report is classified one has to rely on the selected portions released to the media. This is not the recommended method of information dissemination for guiding a public debate on this issue.

Current State of Debate

Why was debate absent or limited immediately after what must be considered an incredible proposal by a group of high-ranking, well-respected practitioners? It might have been the extreme nature of the Butler proposal that made it non-threatening in the defense policy arena and thus not worthy of serious debate. That is, the United States

could/would never drop to zero strategic nuclear weapons and therefore the proposal should not be taken seriously. But, when trying to galvanize support around more dramatic START options (e.g., 1000 warheads or less) how better to do so than by comparing 1000 to zero. This may not be what General Butler and his supporters had in mind but it is something to think about when looking at what purpose such a proposal might serve in the grand scheme of things.

The problem with the Butler proposal, and with the usual focus on numbers of weapons, is that when discussing nuclear strategy in the post-Cold War period, the cart is being placed before the horse. The numbers really do not matter in the beginning stages of this kind of debate. As one colleague said, “deterrence isn’t about numbers, it’s about relationships.” The current Commander-in-Chief of Strategic Command agrees when he says that while the “public debate on nuclear arms control tends to focus on numbers of weapons...the most important criterion in assessing prospective arms control measures is whether or not they contribute to stability and security.”¹⁸

Numbers were sufficient, however, during the Cold War period *after* the strategists had settled on the conceptualization of nuclear weapons in overall strategy (at least they thought they had done so). That is, during the Cold War there emerged some general agreement about the requirements for deterrence, second-strike retaliatory capability, crisis and arms race stability, and the role that increases and decreases played in nuclear weapons matters. So, there was an acceptance that there was a nuclear weapons regime in which nuclear weapons did not stand alone without discussing such things as crisis stability, etc. This is not the case with most other types of weapons.

The post-Cold War period requires a reassessment of these basic concepts, even before numbers enter the debate. Unlike the Cold War, there has not been the same amount of time for strategic thought to

develop and adjust to the new environment. Questions about deterrence, escalation, stability, and adequate force mixes have not been addressed. Even if these concepts and issues were thoroughly debated by the United States, they have not been resolved by the Russians and their geographically associated partners, or by United States allies, or emerging nuclear powers. Though Cold War strategic thought primarily focused, perhaps inappropriately so, on the United States-Soviet relationship, the post-Cold War debate cannot. Thus, decisions about the United States nuclear arsenal should be evaluated in the context of a wider set of issues and relationships than those that occurred during the United States-Soviet bipolar debate.

The authors of this research are particularly concerned about new members of the nuclear club (those other than the acknowledged nuclear powers) who do not have the benefit of 50-plus years of debate about the consequences of nuclear ownership. One interesting aspect of some of the recommendations made in the post-Cold War period is the degree to which they appear to lack a thorough discussion about the evidence or lack of evidence in the international arena that might support a dramatic change in United States nuclear security policy. This is a very serious matter and a challenge to the credibility of those proposing dramatic changes in the United States nuclear posture. In fact, the statement by the retired Generals supporting the Butler proposal notes that “the exact circumstances and conditions that will make it possible to proceed, finally, to abolition cannot now be foreseen or prescribed.”¹⁹ Significantly, in order to be taken seriously, these circumstances and conditions must be anticipated and prescribed.

With this in mind even the most recent proposals by the National Academy of Sciences might also come up short. The Academy said that rather than asking “How much is enough” the new question of “How low can we go?” is more appropriate.²⁰ While this might be the

question at some point, here again, the focus is on numbers, and this can only be addressed after a reconceptualization of nuclear weapons in the post-Cold War period.

THE OLD CONDITIONS: HAS THE WORLD REALLY CHANGED?

The conceptualization of deterrence and its evolution throughout the Cold War need not be repeated here in much detail. There have been many thorough presentations published throughout the years.²¹ One particular characterization perhaps indicates why the concept lasted virtually unchallenged for so long (even though there were many assertions that it worked or didn't work in this or that situation).

The major strengths and weaknesses of deterrence theory can both be said to derive from the theory's most fundamental characteristic: It is a system of abstract logic, all of whose principal postulates have been derived deductively. This contributed to the theory's appeal as it facilitated the development of coherent, elegant, and seemingly powerful explanations for important aspects of interstate behavior.... This was particularly attractive in a world of nuclear weapons....²²

What is worth mentioning is that while deterrence, as a necessary condition has remained constant the strategies and weapons systems necessary to make deterrence more credible have evolved since the 1950s. So, during the evolution of nuclear strategy from massive retaliation to assured destruction and all that is between the two, strategists recognized that deterrence (in theory and application) needed adjustment even during the Cold War.

There were also many attempts to address not just credibility but also stability during any potential crisis. This, of course, was mandated by the special nature of the nuclear weapon along with its unique lethality. Nuclear strategists were very concerned about the

numbers and types of nuclear weapons states owned, how they were based, how they were controlled in peacetime and during war, and how they engaged various other types of forces. Concepts such as crisis stability, arms race stability, survivability, first-strike and second-strike capability, and escalation dominance became part of the lexicon. Further, there were debates about the role of strategic defenses on these conceptual matters, and whether more versus fewer weapons would add to or detract from the desirable strategic environment. Implicit in these concerns is the view that numbers and types of weapons systems matter in maintaining peace between nuclear powers. One student of arms control put it succinctly when he noted that

At the most basic level of abstraction, three grand conceptual dilemmas dominated strategic thinking and the formulation of United States national security objectives during the Cold War: (1) What deters? (2) How much is enough? (3) What if deterrence fails?²³

As the United States and the Soviet Union fielded their nuclear forces and pursued arms control agreements the primary consideration was how to maintain an environment in which neither side had an incentive to strike first in a crisis (crisis stability). The idea here is that if deployed weapons are considered to be somewhat safe from attack in a crisis (i.e., less vulnerable), there is less incentive to employ them early in order to ensure their usefulness. Strategists believe there are certain types of weapons systems that contribute to stability in a crisis more than others do, though there is much disagreement over which systems do what. Some even argue that the character of weapons contributes more to the stability issue than does the quantity of weapons.²⁴ Though the Cold War arms control regime was unsuccessful in limiting systems that were detrimental to crisis stability, the post-Cold War START agreements are doing just that by requiring dramatic reductions in vulnerable platforms.

Ever since the United States was technically and politically capable of posturing intercontinental missiles on quick reaction alert (QRA), several issues have been a constant feature of the policy and strategy debates. On the positive side, intercontinental-range ballistic missiles (ICBMs) on QRA provided (1) the most accurate (in terms of circular error probability) and timely (due to their 24-hour alert status) United States nuclear strike capability; (2) a challenge to the Soviets in terms of attack planning and timing; (3) a “target sponge” for Soviet missiles, since the Soviet Union could never discount the mere presence of active United States silo-based ICBM fields; (4) a uniquely reliable and hardened command and control system; and (5) a very high reliability and operational readiness rate.

On the other hand, arguments attesting to the vulnerabilities of the ICBM fields also have been present since the mid-1950s. In particular, the emergence of multiple independently-targetable reentry vehicles (MIRVs) directly threatened the survivability of the traditional ICBM fields. As Michael Nacht has written,

[i]t was recognized as early as the early 1950s that fixed-based systems would eventually be vulnerable to missile attack. But only in the early 1970s did it become more apparent that the heightened accuracy of Soviet MIRV-equipped ICBMs and the projected effectiveness of these weapons were a serious threat to the United States Minuteman force.²⁵

Nacht further points out that with MIRVs, “several warheads on a relatively small number of launchers—a large warhead-to-launcher ratio—permits an attacker to expend a small percentage of his force to destroy a large percentage of the other side’s force.”²⁶ Based on this type of reasoning, there are some who would then argue that with increased vulnerability, the “use-or-loose” impetus increases during a crisis situation. For example, a nuclear power would be less likely to engage in a first strike if the nuclear forces at its disposal were securely deployed

on very survivable ballistic missile nuclear submarines at sea, than if the land-based ICBMs were the only means of response. In other words, the “use-or-loose” impetus will tend to increase as a system’s vulnerability becomes more pronounced. As a result of this dynamic, there have been some efforts, including during the 1994 Nuclear Posture Review, to move away from a dependence on land-based ICBMs. Most recently, proposals suggesting some element of dealerting the ICBM force have gained support.

In addition to the types of weapons systems and the manner in which they are deployed, very important questions for the crisis stability issue, there were significant debates concerning the number of weapons required for deterrence and stability. On the one hand, there was some agreement that both sides needed enough to assure destruction and this condition resulted in effective deterrence.²⁷ At the same time, however, there were concerns about the expense of escalating arms races. Some even argued that arms races conflicted with crisis stability because “the competition increased the risk of war by introducing more threatening weapons and by making more nuclear weapons available for expanded roles and missions.”²⁸

Thus, two themes emerged during the Cold War period, preventing war and reducing spending, with the former being much more significant than the latter.²⁹ This pertained to defensive systems as well as offensive ones. Thomas Schelling and Morton Halperin note in their 1961 seminal work on arms control that imperfect defense systems increase the risk of war by creating an incentive for the other side to strike first.³⁰ Thus, defensive systems do not promote stability in a crisis. By the early 1980s the public debate revealed that supporters and critics were still divided over whether or not deterrence was enhanced or diminished by defenses. Some of these arguments start from the premise that deterrence requires a certain amount of vulnerability in order to keep

states from fighting, and defenses, by diminishing vulnerability, might increase the likelihood of war. For these arguments, it is important to recognize, as Charles Glaser notes, the distinction between area defenses and point defenses because of the different strategic implications each has for deterrence. Glaser gives one example of how these are different.

[A] country's area defense, if sufficiently effective, could *reduce* the size of the *adversary's* deterrent threat; a country's point defense, by increasing the size of its offensive force that would survive a counterforce attack, could *increase* the size of the *country's* deterrent threat.³¹

The debate over the Reagan Administration's Strategic Defense Initiative, as well as earlier debates over anti-ballistic missile systems, focussed on costs in addition to the crisis stability issue. That is, some considered the enormous expense involved in fielding defense systems, as well as the expected response to them by the other side (i. e., deploying more offenses) unacceptable reactions to concerns about vulnerable offensive systems. Based on this, strategic defensive systems were thought to violate two of the three classic objectives of arms control (though they do satisfy the third objective of reducing damage should war occur).

Another notable characteristic of the Cold War deterrence environment is that, despite allegations to the contrary, United States national security policy was designed to address one relationship, that between the United States and the Soviet Union. Thus, the main purpose of United States deterrence strategy was to prevent the Soviet Union from using its nuclear weapons on the United States. Though extended deterrence suggests that the United States wanted to deter nuclear attacks against its allies, the rest of that equation was that this was being done in order to prevent escalation of a Soviet-European conflict to one that would harm the United States.³²

Why the continuing emphasis on deterrence? This is not an academic question because the conditions requiring it then are the same conditions requiring it in some other period, unless something changes drastically. Two very well respected scholars from the realist school in international relations theory and national security policy note the five consequences of state behavior that are a “vital” part of the role military power plays (including nuclear weaponry):

- All states must fend for themselves.
- All states must make provisions for their physical security.
- In an anarchic setting, each state must put concern for its short-term position relative to others above concern for the long-term absolute gain of all.
- All states in anarchy are in a position of strategic interdependence.
- States in anarchy can not afford to be moral.³³

Those who hold this view argue that if this was the basis for deterrence and these conditions have not changed, then this will be the basis for deterrence until they do change. It should be noted that during the Cold War period there was some disagreement about whether or not these conditions were the prevailing ones that should govern the continued acquisition of the nuclear instrument. But those who challenged the validity of deterrence could never “prove” that it did *not* work just as those who supported it could not “prove” that deterrence *did* work. After all, unlike a world where military weaponry is relegated to just tanks and guns, the element of risk versus chance changes with nuclear weapons. This fundamental aspect seems to be missing from the proposals to “go to zero,” or some other lower or higher number. Analysts need to address the question of what has changed in the basic relationship between states, and in their quest for security in the post-Cold War world.

Even during the Cold War period, when an equally equipped adversary was known to all, there were groups and individuals making

the case for nuclear disarmament. In fact, there seemed to be more disarmament activity during this period, even when the possibility for reductions seemed quite low, given the nature of the threat, particularly compared to present times. These arguments against nuclear weapons, presented in 1945, have stood the test of time and have relevance today. Major enduring arguments against nuclear weapons include that:

[O]ther nations would soon develop atomic weapons, that these weapons had reversed the relationship between offensive and defensive military capacities such that the former would forever be superior to the latter, that nations must be willing to sacrifice a certain degree of sovereignty in order to control nuclear armaments, and, finally, that it was necessary to institute international controls because “neither [the United States] or any other nation can stake its whole existence on trust in other nations’ signatures [on paper agreements].”³⁴

One interesting aspect regarding deterrence and further proliferation points out how an abstract concept that no one can prove or disprove might have its longevity assured by its ambiguity. Some believe that one reason there has not been rampant proliferation is that certain states have been deterred from acquiring nuclear weapons out of fear of reaction by the other nuclear powers. There are, however, many other reasons why states have not acquired nuclear weapons.³⁵

THE CONTEMPORARY ENVIRONMENT: UNCHECKED OPTIMISM?

The end of the Cold War brought along with it questions and demands to adjust United States nuclear strategy. In fact, the United States nuclear posture *has* changed during this period (though many will argue that the strategy that goes along with it has not). According to Walter Slocombe, Under Secretary of Defense for Policy, “The role of nuclear weapons in our and NATO’s defense posture has diminished.”³⁶ In fact, as Slocombe points out

United States spending on strategic forces has declined dramatically from Cold War levels—from 24 percent of the total Department of Defense budget in the mid-1960s, to 7 percent in 1991, to less than 3 percent today.... Moreover, the United States has unilaterally reduced its non-strategic (or sub-strategic) nuclear weapons to one-tenth of Cold War levels. [In addition], the 1994 Nuclear Posture Review...resulted in the complete elimination of a non-strategic role for the United States surface Navy.³⁷

Between 1991 and 1992, the United States also removed all nuclear bombers from quick reaction alert and eliminated, well ahead of schedule, those ICBMs and strategic missile submarines scheduled for elimination under START I.³⁸ It should not be surprising therefore, that after these reductions, many of those still in government, and military officers in particular, offer very conservative responses to the future of United States nuclear strategy. According to some, the 1994 Nuclear Posture Review reflects this conservative outlook because it keeps in place the fundamental elements of the United States nuclear triad and advocates the “lead and hedge” strategy. Although the 1994 NPR did not go as far as some progressive thinkers had hoped for, one has to recognize that those responsible for the success or failure of such an important segment of United States national security have cautious views about radical change to a policy that has been successful for many years (whether you can prove it or not). Retired Admiral Stansfield Turner, however, offers a less complimentary perspective.

A small club of zealous military experts has dominated the military’s input on nuclear weapons policy. The members of this club have insisted on parity with Russia, on being ready to fight it out even with large numbers of weapons, and on agonizing over a window of vulnerability. As recently as 1994, they successfully twisted the Nuclear Posture Review into a meaningless effort.³⁹

There have been some attempts, however, to debate the underlying assumptions of the old United States nuclear policy, and like

the Cold War period, there does not appear to be consensus among the policy elites, or between the elites and the practitioners. The Nuclear Strategy Study group, for example, holds that certain fundamental assumptions of United States nuclear strategy ought to remain in place in the near-term (until 2010).⁴⁰ These assumptions are instructive and are summarized below.⁴¹

- Nuclear weapons will remain important in an anarchic international system as a means of making war between the major powers unthinkable.
- Nuclear retaliation will still be able to cause “assured destruction.”
- The United States will maintain “military sufficiency” to render the enemy’s forces ineffective.
- The United States will still be able to extend deterrence to its allies.
- The dominant nuclear balance will be a bipolar one.
- The nuclear capabilities of developing-world actors do not drive United States and Russian nuclear force strategies.
- There continues to be a gradual trend toward the development of defenses against tactical ballistic missiles and ground-based defenses.
- Nuclear force spending will continue to decline.
- Arms control can have the long-term effect of driving reform and democracy in Russia.

Several of the arguments regarding these assumptions must be examined. The first is especially important in the debate about the future of nuclear weapons. The assertion within the first assumption is that the anarchic international system has not changed because of the dissolution of the Soviet Union, the reunification of Germany, and other post-Cold War events. Those proposing deep cuts seem to suggest that because the post-Cold War world has a more “benign” Russia and other areas in which “democracy is breaking out,” there is cause to revise United States nuclear posture. Preoccupation with just the Soviet Union during the Cold War is no reason to be preoccupied in the post-Cold War, and thus, the reminder that the international system is still anarchic remains valid.

Further, since no one has proven that nuclear deterrence is flawed, the assumption about the role of nuclear weapons in an anarchical system is likely to continue to guide United States nuclear posture.

Some of the arguments embedded in the other assumptions are worthy of a comment. Sam Nunn and Bruce Blair do not believe that the Cold War assumptions about assured destruction remain valid and they made this clear in a 1997 article titled “From Nuclear Deterrence to Mutual Safety.” They say that the United States is “stuck in the Cold War logic of “mutual assured destruction,” and “[i]t is time for the United States and Russia to cast off the mental shackles of deterrence, to “dealert” our strategic forces and embrace a new formula that makes our nuclear relationship more compatible with our political relationship.”⁴² What is interesting about the Nunn/Blair recommendations is that they do not propose the elimination of nuclear weapons. Instead, here is an attempt to acknowledge the very important changes in the international environment while still accommodating the existing anarchic international system.

Regarding the assumption about extended deterrence, Morton Halperin and Fred Ikle say, “extended nuclear deterrence is no longer needed—nor useful—against conventional attack.”⁴³ They do not state, however, that extended nuclear deterrence is no longer useful against nuclear attack. Further, Halperin and Ikle argue that by adopting a “no first use” policy and a strategy of punishing those who use these weapons first “we will have enhanced deterrence and [made] proliferation less intriguing to the proliferators.”⁴⁴ Punishing those who “use” nuclear weapons is not the same as punishing those who “have” nuclear weapons. Though the out-of-control proliferation predicted by some has not yet materialized it is unclear whether this will remain the case. The United States still needs to be concerned about what kind of international environment will exist when there are more nuclear players.

That is, what is the resulting level of security and stability in the world and what is the appropriate response to proliferation?

It is obvious that the individuals charged with maintaining the nuclear force are well aware of some of the latest arguments for and against these types of weapons. In a speech delivered to the Atlantic Council on 10 February 1997 (before the Nunn-Blair article was published), General Eugene Habiger, the Commander-in-Chief of United States Strategic Command, said “radical reductions in forces or the wholesale removal of forces from alert may create situations which could be dangerously destabilizing in a crisis.”⁴⁵

Shortly after General Habiger’s speech, General Andrew Goodpaster, co-signatory of the Butler proposal, made the following statement to the Senate Governmental Affairs Subcommittee.

[T]he future of nuclear deterrence should be seen as one key element in a coordinated three-fold United States effort serving this objective, consisting of these main components: Cooperative nuclear threat reduction, most importantly between Russia and the United States; Non-proliferation efforts aimed at preventing the spread of nuclear weapons to additional nations or other sources of violence; Nuclear deterrence focussed on preventing the use or threat of use of nuclear weapons by others against the United States or United States allies.⁴⁶

Having said this, it is clear that General Goodpaster still sees the post-Cold War period as an opportunity to “re-orient our policies” because it offers a “real possibility of dealing with the nuclear weapons issue in a way that will greatly reduce the risks they pose to United States security.”⁴⁷ Given these three components of United States nuclear deterrence, General Goodpaster advocates that the United States “go as far and as fast as we prudently can toward elimination of these weapons,” although he does note that eliminating *most* is more realistic than eliminating *all* of them.⁴⁸ Herein lies the major flaw of this logic—the case has not been made that United States security is enhanced by

deep cuts, or elimination, particularly given the nature of the relationships between all states, within all regions.

Put another way, General Goodpaster can say that nuclear weapons pose a risk to United States security, but it is possible that *not* having strategic nuclear weapons will be an even greater risk. This does not suggest that there should be as many as there are in the current period, for an excess number may not provide as much security as some lesser amount. This means that even eliminating *most* may be as dangerous as eliminating *all*. As one practitioner and scholar noted, “the benefits are assumed to have all but disappeared.”⁴⁹

In discussing the existence of nuclear weapons in the United States arsenal, General Goodpaster also warns against using nuclear weapons in the game of balance-of-power politics. Instead, he argues that the focus should be on reducing risks to United States security.⁵⁰ Missing from his argument is a discussion about whether or not the presence of nuclear weapons furthers United States security.

There are some very practical matters that should enter into any discussion about the presence or absence of nuclear weapons. Immediately after the Butler proposal was publicly announced, Richard Haass offered some obvious and compelling concerns that may have affected the public debate in the aftermath of the proposal. These would need to be overcome to get beyond where the United States is at the moment. Haass said the following, regarding any proposal to denuclearize.

[T]he abolition of nuclear weapons is impractical [because] you can not disinvent an idea.... [It] assumes that the declared nuclear powers will agree not only to destroy their weapons but to do so in concert.... It is also quixotic to think that states with secret nuclear programs will abandon their efforts if the big powers disarm.... Even if they agree to destroy their existing arsenals, most of the nuclear powers, declared or otherwise, would undoubtedly keep a stock of all-but-finished bombs as a hedge against those who cheat and break the ban.⁵¹

Those suggesting that the United States and other nuclear states eliminate their nuclear weapons are asking that the genie be put back into the bottle. Further, the bottle top would have to be permanently fused so that it could not ever be opened, and the bottle would then need to be thrown into the deepest ocean. In addition, no state should ever have the slightest confidence of finding the bottle, so ideally, it would never look. This requires an enormous leap of faith among states, and there is no evidence that this has ever happened. This does not suggest that it never will, but there is no evidence that it will happen in the near- or long-term future (within the next 25 years). Even General Charles Horner, one of the signatories of the Statement by Generals and Admirals, said that “the genie is out of the bottle, they’re always going to be around, either virtually or in reality.”⁵² As Thomas Schelling suggests, the world would have to undergo universal brain surgery in order to erase the memory of nuclear weapons and how to build them.⁵³

General Horner's remarks allude to two other rather dramatic ideas that entered the arena: Sam Nunn and Bruce Blair’s idea about dealerting the force; and retired Admiral Stansfield Turner’s proposal to put the United States strategic nuclear force in strategic escrow. One basic difference between these two proposals is the time needed to reconstitute the force if necessary. Admiral Turner believes that a nuclear force in strategic escrow is more stable because it would take days or weeks instead of hours to reconstitute the force.⁵⁴ These new proposals, added to General Butler’s, are likely to spark more discussion about numbers of strategic nuclear weapons and their alert status.

UNITED STATES ACTORS: BETWEEN STOICISM AND IDEALISM?

Different policy makers, practitioners, and scholars have their own conception of security and what posture will get us there. This results in difficulty in resolving the question of what to do about nuclear weapons. This research project involved interviewing a cross-section of participants in this debate. They included members of the executive and legislative branches; well-known scholars and analysts who have been engaged in the nuclear weapons and strategy debate during the Cold War and post-Cold War; present and former practitioners in the defense community; and supporters of the Butler proposal to include Generals Butler, Goodpaster, and Horner.

The purpose of the interviews was to get a sense of what these various actors have to say about the future of deterrence, and thus, the future of the nuclear instrument in deterring a variety of potential adversaries (some are traditional and some not so traditional). In addition, an assortment of other issues were covered: the role of defenses in a potential environment of fewer nuclear weapons; the necessary verification regime in a world of fewer nuclear weapons; the relationship between states in the post-Cold War world as a precondition to a world of fewer nuclear weapons; and the kinds of nuclear arsenals that are possible to maintain a stable and secure United States.

After looking at the results of the interviews it is safe to say that most people willing to state a position on the future of the nuclear instrument make the connection between the weapons and the presence or absence of security and/or stability. No one put it better than George Quester when he said that as weapons numbers go up and down, security and insecurity rises and falls. When you combine all of these functions you get something called “net security,” and for now the functions of insecurity are greater when numbers go down.⁵⁵

Most everyone interviewed is concerned about the political, military, and economic uncertainty in Russia primarily, but also in China,

Iran, and Iraq. A few noted the fundamental relationship between states as a necessary precondition for deep cuts. For the most part the view of states was a pessimistic one, represented by one senior military official who expressed a concern about “man’s inhumanity towards man.”⁵⁶ More concretely, retired Lieutenant General Brent Scowcroft believes that major changes in the United States nuclear arsenal can only come about after you change human nature, and the nature of conflict.⁵⁷

There seem to be four broad categories of nuclear weapons levels receiving support.

- **Group 1: Nuclear Abolitionists.** Total elimination is the ultimate goal, or an immediate goal. As General Butler put it, there is no defense for anything above zero.⁵⁸ Congressman Neil Abercrombie was more abrupt by saying “maintaining a nuclear force is insanity.”⁵⁹
- **Group 2: Virtual Deterrence.** More than zero but less than 1000 (and in some cases less than 500), and sometimes referred to as a “virtual arsenal” when combined with some degree of dealtering the force. This group supports the most radical change (short of abolition) to the configuration of the remaining United States nuclear forces. For example, removing the warhead from the delivery system and storing both at separate locations. In effect, deterrence would be in place with a “virtual arsenal” that could be reconfigured if necessary. Admiral Turner sees these dealtered forces in “strategic escrow.”⁶⁰
- **Group 3: Minimum Deterrence.** Some number less than the status quo but more than 1000. This group seeks to attain robust deterrence in the post-Cold War environment at a number below the status quo. It tends to acknowledge the inherent deterrent value of nuclear weapons, but not at present-day numerical levels.
- **Group 4: The Status Quo (START II levels).** This group tends to support the present levels of nuclear weapons given the state of global strategic uncertainty. These individuals express concern about such issues as the proliferation of weapons of mass destruction, the future of

the Russian Federation, and the emergence of rogue nuclear weapons states.

For the most part, the members in each of the four schools have made their case in terms of what number of nuclear weapons will result in security. General Butler, for example, asserts that United States security is achieved by the elimination of nuclear weapons. Thus, this should be the ultimate goal. On the other hand, Brent Scowcroft sees United States security and superpower stability maintained by the status quo. While looking at the same number (the status quo), one group sees it as a secure environment, the other as insecure, and others in between see various levels of security and insecurity. Herein lies the dilemma—there are so many measures and debates regarding the nature of security.

The arguments presented by those who seem comfortable with the status quo do not seem any different from those willing to reduce the United States arsenal below the START II levels. What these two groups have in common is an aversion to the ideas presented by those supporting the concept of virtual deterrence. And most of those supporting virtual deterrence stop at arsenals short of zero, but less than 1000 because they accept that a fundamental change in state behavior is a precondition to going any further (i.e., abolishing nuclear weapons altogether).

What is interesting is that though General Goodpaster co-signed the controversial proposal with General Butler he is not really in the same category as Butler. According to General Goodpaster what he really is advocating is “the fewest number in the fewest hands,” somewhere in the neighborhood of 300.⁶¹ Thus, he is more aligned with Admiral Stansfield Turner’s proposal of 200, though Turner has an additional condition—dealerting the force.⁶²

In most political debates, those on the extremes rarely succeed in the long run. It would therefore be useful to examine the positions of

those in the middle to see if they can satisfy some of what is desired by those on the extremes. That is, how do you address the various definitions of security as determined by some number of nuclear weapons (to include the assertion that zero will also result in security)?

One potential approach would fall somewhere between minimum and virtual deterrence, borrowing elements from both. It would advocate a very robust and securely employable core number of nuclear weapons somewhere between 2000 and 2500 (usually associated with a potential START III regime). However, recognizing post-Cold War political realities and concerns relating to nuclear weapons on hair-trigger alert, a percentage of weapons could be placed into a virtual alert status, with warheads safely stored at separate locations from their respective delivery systems. The percentage of warheads in “virtual” status would have to be determined after a thorough military targeting analysis of potential threats, both on the grand strategic level as well as the regime that would encompass a counterproliferation role. This posture is what Sam Nunn and Bruce Blair recently called *a force geared towards mutual safety instead of mutual assured destruction*.⁶³ Former Secretary of Defense Perry made similar comments after the NPR, though he did not mention dealerting the force as a means of achieving this. He said “We now have the opportunity to create a new relationship based not on MAD, not on Mutual Assured Destruction, but rather on another acronym, MAS, or Mutual Assured Safety.”⁶⁴

Many of those interviewed who propose dealerting the force are talking about very low numbers (below 500). Richard Nelson suggests small numbers, instead of zero, because elimination is not politically feasible for the foreseeable future.⁶⁵ The authors of this project believe his observation is astute and correct. He also says that the relationships between states is the condition that will drive the need to maintain nuclear arsenals, though the United States can still maintain its security

with a dealerted force.⁶⁶ Thus, as Lynn Hanson states, reductions short of zero will still result in an effective and necessary deterrent.⁶⁷ Michael Mazaar, a national security scholar and currently a congressional staffer, uses a term that is being heard more often—“virtual arsenals.”⁶⁸ These arsenals are an attempt to have it both ways; nuclear weapons exist but the warheads are removed and could be refitted in a crisis. Admiral Turner says that these weapons are then in “strategic escrow.”⁶⁹

Among those supporting very low numbers (200-300) there is disagreement on the role that strategic defenses could play in an environment of dramatically reduced nuclear forces. Nelson, for example, is wary of them while Turner sees a useful role. Regardless of the viewpoint, however, one thing is certain. With extremely low numbers of warheads, before one can begin to address defenses, one must first address the new strategic deterrence relationship under these dramatically new circumstances.

For these proposals to be accepted in the active military community, the proponents of these deep cuts would need to address the concerns expressed by former Air Force Chief of Staff Larry Welch. General Welch said that with regards to numbers of nuclear weapons, 2500 is the “firebreak” because below that number the United States would need to change its strategy of deterrence.⁷⁰ In responding to the idea about dealerting, one senior military official’s recommendation to dealert a percentage might be more acceptable if this idea catches on.⁷¹

All of those advocating caution with regards to cuts, deep or otherwise, point to the uncertainty of Russia as the primary reason. To some degree, China evokes the same reaction. The current condition in Russia is therefore crucial to the debate about the role of nuclear weapons in the post-Cold War period, and what amount or alert status is necessary to United States security. The next section elaborates on the Russian situation and it should be considered *before* proposals are made.

THE RUSSIAN PERSPECTIVE: STRATEGIC PARTNERSHIP OR COMPETITION?

The Russian Federation is faced with several harsh new realities as it seeks to adjust to its new security environment. The romantic era in United States-Russian relations that existed during the first years after the collapse of the Soviet Union has ended. As Russia tries to assert what it claims to be its global interests and attempts to regain its external influence, it sees itself increasingly as a competitor rather than a partner to the United States and the West. Russia and the United States are no longer deadly enemies. However, it is significant to state that they have not become strategic partners either, despite multiple political and public declarations signed at numerous summit meetings.

The Defense-Industrial Base and the Economic Elite

The military, the defense-industrial base, and the economic elite are inseparably intertwined in today's Russian society. The needs and requirements of the defense industrial base and the immense powerbase that this sector provides to key actors within the system have a defined impact on Russia's nuclear weapons posture. In Russia, which inherited its defense industry from the former Soviet Union, the defense-industrial base was the very core and substance of the national economy. The situation remains similar today. The civilian economy is merely an adjunct to the defense sector and it is so inefficient that it has difficulty surviving in an open market economy. One observer recently noted that Russia is trying to build its new economy on 25 percent of its former economic foundation (the civilian or private sector) and this is an insufficient base and an inefficient approach to modernization.⁷² The main reason for the low productivity of this civilian sector is that for more than half a century all the best technologies, material, and human

resources of the country were being channeled into defense related industries, while civilian industries and the economic infrastructure were doomed to partial or complete inefficiency. The backwardness of the civilian industries is proportionate to the funds diverted from them into the defense sector.⁷³

Furthermore, the switch to a Western-style market economy is not as simple as was asserted nor is it the panacea that many Western leaders hoped it would be. As Donald Jensen, a correspondent for Radio Free Europe/Radio Liberty writes, “[d]ismantling a centrally planned economy such as the one that existed in the former Soviet Union, does not automatically establish a free market.” In fact, one aspect of Russia’s culture—what scholars such as Richard Pipes and Max Weber have called patrimonialism—has ensured that its post-Soviet political and economic transformation would be especially difficult.⁷⁴

Patrimonialism, or what some have called “structural materialism” or “nomenklatura capitalism,” has a tendency to weaken democratic development by fostering a close relationship between business and politics. The government holds large chunks of stock in key industries and state efforts to regulate entrepreneurial activities are therefore half-hearted and often favor certain privileged individuals. Conversely, patrimonialism means that political authority often depends on a leader's business contacts and leads to the dominance of clan politics, whereby politicians, businessmen, media entrepreneurs, and security forces use the political process to vie for control over the economy. Patrimonialism is also reflected in the increasing identity of Russian foreign policy with the economic interests of specific clans and lobbies.⁷⁵

Thus, an economy that does not respond to such measures as cutting defense expenditures or defense purchases and does not allow overflow of financial resources from the defense to the civilian sector⁷⁶ is

doubly hamstrung by a feudalistic system of clan politics where former *nomenklatura* members now control the key defense industries as well as the natural resources monopolies. In addition, white-collar crime, such as bribery, embezzlement, and the extortion of protection money, is widespread, reflecting the weakness of the state. Official corruption, which President Boris Yeltsin's government sometimes sponsors in the name of economic reform and revenue raising, exists in the form of insider trading, preferential treatment in the granting of licenses, and the banking of state funds in favored financial institutions.⁷⁷

Dr. Mark Galeotti, a distinguished contributor to *Janes Intelligence Review*, writes that "one of the most striking phenomena of post-Soviet life in all the successor states has been the explosion of crime in general and organized crime in particular. The USSR had always been a deeply corrupt country, ruled by cliques of self-serving party *apparatchiki*."⁷⁸ In the new era of anarchic pseudo-capitalism, they have acquired a new independence. According to Galeotti, it is sad but probably fair to say that organized crime is about Russia's only growth industry. Organized crime has definite implications for the national security of the post-Soviet states. Military mafias are prevalent within the defense industrial complex. Beset with problems of low morale, appalling living conditions and a pervasive sense of lack of purpose, it is not surprising that the armed forces have also been involved in the rise of organized crime.⁷⁹ This includes officers within the Strategic Rocket Forces, traditionally the troops which were the most impervious to outside influence and meddling. Retired Russian military officers substantiate this perspective. Alexander Belkin, Col. (Ret.), explains that "many military commanders at the regimental level and higher are involved in 'commercial enterprises' and are therefore not focused on the primary tasks of combat and professional training."⁸⁰ The level of criminal subversion within Russia seems to be substantiated by a variety

of independent sources. For example, a recent two-year study by the Center for Strategic and International Studies recorded a panoply of criminal activity under the umbrella of Russian military and defense-industrial mafia groups. “Left unchecked, the report states, Russia is in danger of becoming a ‘criminal-syndicalist state’ under the control of corrupt government bureaucrats, politicians, businessmen, and criminals. This poses a threat to the security interests of the United States by fostering instability in a nuclear-armed major power.”⁸¹

In conclusion, according to Vitaly Shlykov, a retired Soviet Army Colonel, the difficulties of dismantling a “structurally militarized” economy have largely been ignored by the Russian reformers themselves, resulting in the loss of some irretrievable opportunities to thoroughly dismantle past Soviet-Russian economic structuralism and militarism.⁸² The result is a confusing web of alliances, clans, and fiefdoms, often with conflicting goals, that results in politico-economic relationships that benefit the small number of elites at the expense of the state and the mass populace.

The Russian Military and Policy Elites and Nuclear Weapons

In order to appreciate fully the current Russian “condition” and its impact on present and future Russian perspectives toward strategic and nuclear arms control, one must first acknowledge that there is no unified Russian opinion toward national security and arms control issues. Rather, a broad range of perspectives exists, these largely motivated by various constituencies with financial and political motives. Although the same is true for most Western countries, the situation is especially virulent in Russia today. Some have compared Russia to a feudal state, where different fiefdoms rule roughshod dependent on their various legitimate and corrupt power bases.

Russia’s approach to nuclear weapons has inherited many features from the Soviet perspective of the late 1980s. While economic

conditions have somewhat constrained Russia's ability to pursue both modernization and reduction of nuclear weapons, they have also enhanced the role of nuclear weapons as a means of providing security. It is important to note, however, that there is no comprehensive elaboration of the contemporary Russian approach to the role of nuclear weapons in Russian and international security, nor does there exist a full consensus on all details. However, certain key thoughts can be identified within the current debate:

- 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 are seen to guarantee Russia the status of a great power and provide the last line of defense, meaning that potential foes will hesitate even to test where the last line lies.
- Theater and tactical nuclear weapons are viewed as providing defense against local threats, which are usually associated with Russia's Southern Flank.
- Nuclear weapons, both strategic and tactical, also are seen as fulfilling an additional deterrent role—that of providing security for other newly independent states. The Tashkent Treaty on Collective Security (May 1992), as well as bilateral agreements with some of the states not party to the Tashkent Treaty, indirectly provide for a Russian “nuclear umbrella” by employing language that closely parallels relevant provisions of the North Atlantic Treaty.⁸³

In a general sense there is broad agreement among Russian experts and politicians that nuclear weapons ensure Russian international security through the threat of inflicting “unacceptable damage” in a retaliatory strike. Therefore, in an academic sense, this makes the preservation of second-strike capability the key element in the nuclear equation. However, one should not assume that this second-strike perspective rules out first-strike options.

First of all, the military doctrine promulgated in 1993 officially renounced the 1982 Soviet no-first use pledge.⁸⁴ Second, since

conventional weapons can be almost as destructive as some lower-yield nuclear weapons and, given Russia's inferiority in modern conventional weapons, retaliation against a conventional attack might require the use of nuclear weapons. Third, as Russia no longer holds superiority in conventional armed forces over its neighbors (NATO, China, and other Southern Flank countries), it might need nuclear weapons to deter a conventional attack. Fourth, the strategic balance is viewed by a majority of Russian experts as a comprehensive phenomenon, and not simply a matter of numbers of warheads. The balance includes early-warning systems; command, control, and communications systems; defensive capability; and conventional weapons with strategic capabilities (e.g., conventional air-launched cruise missiles capable of destroying missile silos or command and control systems and radars). Although such "conventional strategic weapons" were largely excluded from START I and II, the role of such weapons is likely to increase for several reasons, most notably: (1) as the number of nuclear weapons decreases, the role of conventional weapons capable of destroying second-strike weapons, as well as early-warning and command and control systems, will become significant; and (2) conventional weapons increasingly are acquiring a capability to inflict "unacceptable damage" by themselves. Therefore, according to Dr. Alexei Arbatov, the Deputy Chairman of the Duma Defense Committee, Russia's strategic nuclear forces and associated command and control systems are more vulnerable to counterforce nuclear and possibly conventional precision-guided munitions strikes, making a second-strike posture less reliable for general deterrence.⁸⁵

Russia has therefore adopted a nuclear posture that views weapons as a means for deterring both nuclear and conventional war. The Chairman of the State Duma Defense Committee, Gen. (Ret.) Lev Rokhlin, has plainly stated that "if somebody tries to exploit our present

weakness, we can use nuclear weapons immediately.”⁸⁶ Current official military doctrine reserves the right to deliver a preemptive nuclear strike against any country that strikes Russia’s nuclear or “ecologically dangerous” facilities with conventional weapons. The use of tactical nuclear weapons has also been threatened against countries with multi-million man armies such as China, and against aspiring members of the nuclear club.⁸⁷ Due to Russia’s conventional military weakness, tactical nuclear weapons have been advocated in a containment role. The current doctrine and Defense Council plan states that

in the event of a threat of aggression developing from a regional conflict into a large-scale war, Russia shall be able to be the first to employ nuclear weapons to deliver a preemptive strike at military targets. The delivery of a limited nuclear strike shall be carried out to de-escalate the armed conflict and prevent its deterioration into a large-scale war.⁸⁸

In conjunction with this increased reliance on nuclear weapons, Russia’s nuclear elite has focused on making nuclear weapons, especially tactical ones, more “user friendly.” In other words, since Russia’s nuclear weapons will retain their exceptional role in defense for a lengthy period, there must be movement toward converting them from weapons of mass destruction into weapons capable of performing operational military missions.⁸⁹ Both Soviet and now Russian military scientists have discussed so-called “third-generation” nuclear weapons as a means of eliminating the nuclear impasse. The catalogue of weapons includes the following: neutron weapons, electromagnetic pulse and “super-EMP” weapons, super high frequency microwave weapons, earth-penetrating nuclear weapons, nuclear-pumped x-ray laser weapons, nuclear shrapnel bombs, and miniaturized nuclear explosives.⁹⁰

In addition to concentrating on “third-generation” nuclear weapons and “weapons with new physical principles,” Russian decision-makers and nuclear elites continue to divert significant financial outlays

toward numerous other nuclear weapons programs. For example, despite crippling state finances, a tremendous effort is underway to restore a network of underground tunnels and command and control facilities designed to protect the Russian elite in the event of a nuclear war. According to recent Central Intelligence Agency reports, a new rocket complex is being developed in the Ural mountains at Kosvinsky Mountain 850 miles east of Moscow, and American satellite pictures point to another vast underground project near the Urals town of Beloretsk.⁹¹ The facility underneath Yamantau Mountain in the Urals is a massive base designed to survive a nuclear war, including roads, rail lines, and housing for up to 60,000 Russians.

In addition to these upgrades, the Russian nuclear elite is pushing toward a comprehensive strategic nuclear force modernization program. General Sergeev, the Russian Defense Minister, is a strong champion of strategic modernization, reflecting a genuine belief in the role that nuclear forces play as the buttress of Russian world power status.⁹² In the mid-term, Sergeev is anxious to deploy more rail-mobile SS-24 Scalpel systems and refit the Typhoon SSBN fleet with the SS-N-24/26 Sturgeon missiles. However, there is still a commitment to eventually develop entire classes of new-generation systems, notably both mobile and silo-based SS-X-27 missiles as well as stealthy long-range cruise missiles for the bomber fleet. On 3 July 1997, the commander of the strategic rocket forces, Colonel General Vladimir Yakovlev, told the press he hopes to have a regiment of Russia's new ICBM, the SS-X-27 Topol M-2 missile, in the field by the end of this year. On 8 July 1997, a Topol M-2 was successfully test-launched for the fourth time and is now ready to go into serial production.⁹³

There are several things to consider when balancing this force structure against the United States post-START II posture. Russian systems will be more dispersed than United States forces (3496 warheads

on 1283 delivery vehicles versus 3500 warheads on 922 delivery vehicles for the United States).⁹⁴ Russian systems will also be more modern than United States forces, with 75 percent of Russian delivery vehicles postured after 1985, while only 39 percent of United States systems (Trident D-5 and B-2) will be deployed in the post-1985 period.⁹⁵

Finally, the Russians are suspected of on-going nuclear testing, in violation of the zero-threshold nuclear test ban. Russia may have tested a nuclear device on 16 August 1997 at a remote, arctic underground site near the island of Novaya Zemlya—a test facility that supposedly was closed after the collapse of the Soviet Union.⁹⁶ Coincidentally, information about the suspected test is lacking because a key monitoring station in Norway was closed for repairs at the time of the alleged test. In addition, two Russian seismic stations that monitored the suspected test have yet to be outfitted with special equipment that could spot any data tampering by the Russians. Significantly, the Pentagon detected similar activity in January 1996 at the Novaya Zemlya nuclear test site. Although a Russian spokesman immediately dismissed the “seismic event” as a naturally occurring earthquake, Pentagon officials explained that the explosive characteristics were based on signals that created very sharp waves on detection equipment. Waves associated with an earthquake normally do not appear quite so suddenly. According to Pentagon officials, initial data on the event produced high confidence that the activity detected was a nuclear test equivalent to between 100 and 1,000 tons of TNT. Spy satellite photographs of the Russian test facility prior to the test date indicated the movement of trucks and other activities that in the past were seen prior to nuclear test explosions.

Russian nuclear weapons strategists and elites continue to drive forward the development and modernization of Russia’s nuclear

weapons base. Most still accept force—specifically nuclear weapons—as a means to an end and as a way to resolve a problematic security situation. According to highly placed Russian sources formerly within the General Staff, Russian nuclear planners openly talk about “precision” and “surgical” strikes with tactical nuclear weapons. These terms are used in an operational sense—that tactical weapons would be employed by Russian forces in a conflict without any problem. Unfortunately however, there seems to also be a great diversity of information and expertise when discussing these issues. According to Dr. Vladimir A. Orlov, the Director of the Center for Policy Studies in Russia, “the Russian military has a complete lack of understanding of the role of tactical nuclear weapons, to include what they should posture the European weapons against (those west of the Urals).”⁹⁷ It is not completely out of bounds to say that the inputs feeding into the Russian nuclear weapons infrastructure, doctrine, and force posture are convoluted and intertwined with no clearly emerging priorities or policies. Most Russian nuclear elites believe that nuclear weapons assure Russian security and give Russia a major power status. However, beyond these points, opinions are greatly divergent, and there seems to be controversy inside the Russian Ministry of Defense as to the form and function of nuclear weapons. One can only say with certainty that the Russian military is resistant to a nuclear drawdown and, in fact, is dominated by an operational culture schooled in nuclear warfighting.⁹⁸

Russian Perspectives toward Arms Control

In essence, the contemporary international situation and the domestic political situation in Russia are being formed by highly contradictory factors. Within this complex world, Russians as a whole believe that, despite the reduction of strategic offensive weapons based upon international treaties, it is obvious that at the present time and in the foreseeable future nuclear weapons will remain the defining element of

European and global stability. Therefore, they regard the strategic nuclear forces as the most important guarantee of ensuring the military security of Russia and its allies.

Beyond this consensus, however, Russian strategic calculations are affected by the disarray in Moscow's decision-making system on strategic programs and arms control talks, and this has led to confused priorities in defense policy and wide divergence between force planning, budgeting, and arms control agreements. The prospects for future fruitful arms control efforts are therefore indeterminate, especially given the Russian perspective that nuclear weapons remain Russia's last reliable and credible security guarantee. Confidence-building and transparency measures aside, a meaningful interchange between the two sides will rely on the consolidation of the highly divergent opinions and trends within the Russian domestic political scene. A jointly articulated statement on national interests followed by a national security strategy and a military doctrine are all prerequisites before the Russians can actually engage in productive arms control talks.

As Ariel Cohen has written, since the end of the Cold War, Russia has become a weak regional power in need of Western assistance, while simultaneously making demands on its neighbors—for example, by trying to block Poland, the Czech Republic, and other countries from joining the North Atlantic Treaty Organization. If the Russian Federation is to emerge as a respected power in the Western club of nations, it must begin to act like a good neighbor instead of a nervous and calculating opponent. Unfortunately, the end result is dependent on a process that the West can have little control over, namely the consolidation of power within the Russian Federation. It is with this in mind that future arms control efforts should be handled with steadied caution and conservatism and a pronounced demand for Russian reciprocity.

**TOWARD A POST-COLD WAR
NUCLEAR STRATEGY**

Much is being made about the post-Cold War period, and the need for a new, revised, or even status quo nuclear strategy. Those wanting something new—either denuclearization, de-alerting, or radical cuts—point to the dissolution of the Soviet Union, the reunification of Germany, and NATO enlargement as signs that it is time for change. Those expressing the desire for a more cautious approach note uncertainty in Russia's future, the concern about weapons of mass destruction (WMD) proliferation, and various international conflicts, making the case that the absence of a Cold War between the United States and the former Soviet Union does not mean a post-Cold War period for the rest of the international environment.

Richard Haass' article highlights some major impediments to overly deep cuts, suggesting that elimination in the immediate future and even in the long term (within the next 25 years) is unrealistic. Even if some of the hurdles can be overcome, others can not. Even if the United States could successfully negotiate the elimination of all strategic nuclear arsenals, along with the necessary intrusive verification regime, there is still no way to negotiate or mandate the trust between states that would be required for this to succeed. So, as long as there are some nuclear weapons there is a need to have deterrence to make sure they are not used.

What is interesting is that in an attempt to prepare for the challenge to deterrence as a concept, General Habiger provides a reason for the nuclear instrument that may prevail as long as the logic cannot be challenged (though this is not the first time this argument has been made).

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.... In the 50 years since the end of World War II—and the beginning of the nuclear age and nuclear deterrence—less than

one half of 1 percent of the world's population has died in wars.⁹⁹

This would suggest that strategic nuclear weapons might be justified beyond the condition of the United States-Russian relationship. There are, however, many other explanations for the absence of war among at least the superpowers. According to Michael Brown, a senior fellow at the International Institute for Strategic Studies, one school of thought argues that the great powers have been discouraged from making war because of factors other than the presence of nuclear weapons, therefore, "getting rid of nuclear weapons would not undermine international security."¹⁰⁰

It should not be surprising that there is not a lot of support for the United States adjusting its nuclear strategy in a vacuum without taking into account the situation in Russia. General Habiger is correct, politically as well as militarily, that "much depends on the decisions that Russia makes."¹⁰¹ Predicting Russia's actions is as difficult now as it was in the past. Alexei Arbatov notes that

It's surprising that even now some people in the West fail to recognize that Russia, like the United States, is not a homogenous political player, devising sophisticated bargaining strategies. Most Russian political actions are the result of tough domestic infighting, and foreign and domestic events can shift internal balances and affect policy decisions.¹⁰²

There *is* too much uncertainty in Russia. Former Secretary of Defense William Perry said that during the NPR three problems were identified that would obviously affect the degree to which the role of nuclear weapons could be modified.¹⁰³

- There is the persistent danger that Russian reform might fail.
- The Russian nuclear drawdown is slower than the one in the United States
- Concern about Russian security of nuclear components and materials.

These three problems are major stumbling blocks and any proposals for adjusting United States nuclear strategy would need to address them. As recently as September 1997, Alexander Lebed, a major figure in Russian national security, discussed the possibility of “loose nukes” in Russia.¹⁰⁴ Lebed’s concern was reportedly substantiated when Alexei Yablokov, former senior environmental adviser to Boris Yeltsin, testified before the House National Security subcommittee in October 1997.¹⁰⁵ This is not a new concern. In 1994 then Secretary of Defense Perry expressed his concern about “loose tactical nuclear weapons, such as artillery shells, land mines and others.”¹⁰⁶

Even if all of this is put aside, one has to give some credence to the concern about how Russia sees the nuclear instrument as an indicator of superpower status. What else does Russia have to show for its ability to stand equal with another superpower? The United States will have to give Russia something very big in return for its nuclear weapons. The Nunn-Lugar agreement may have been very cheap in comparison.

It would not be a stretch to suggest that post-Cold War economics in the United States might even drive the decision regarding nuclear strategy (through the choice and deployment of certain weapons). When the National Defense Panel looked at the 1997 Quadrennial Defense Review, its recommendations to proceed with the START II reductions without waiting for Russian ratification were based on the fact that the United States “should not continue spending for these higher force levels beyond the point the costs would become insurmountable.”¹⁰⁷ But the fact that nuclear weapons account for only 3.5 percent of the defense budget may mean that radical change in the overall numbers is unlikely, although the Clinton administration is looking at altering the warhead mix in order to silence those calling for reductions, since some platforms are more costly than others.¹⁰⁸ The

administration's plan was approved by the Senate Armed Services committee as long as the total number does not go below 6000 (the START I) level, clearly waiting for START II to be ratified by the Russian Duma.¹⁰⁹ So, it is more likely that personnel issues, which are big-ticket items, and other weapons systems are likely to dominate the agenda concerning defense costs for some time.

What are the motivations to focus on nuclear strategy, and make significant changes to that strategy? Anyone who studies the American political landscape knows that, for good and bad, major policy areas do not change in dramatic ways in short periods of time. Nuclear strategy is no exception, neither should it be. The predominant voices have the fear of risk on their side, and no other weapons system evokes the same reaction. The legislative branch is not prodding the Department of Defense to make radical changes. The scholarly voices are largely silent on this issue, and these political elites had been major forces in shaping the debate in the Cold War period.

Since the beginning of the nuclear age many have called for the abolition of nuclear weapons. This is also one of the underlying premises of the Nonproliferation Treaty (NPT, Article VI). Is the push for nuclear abolition the result of world leaders paying lip service to what seems like a good idea? Is it because of the NPT and the need for the signatories to get on board? Or, is it because leaders really believe these weapons are a bad idea and the only way to motivate arms control efforts is to publicly acknowledge the desire to get rid of them?

Though many have expressed a preference for zero nuclear weapons—all Presidents during the nuclear era, study groups, Nobel Peace Prize recipients, political figures, and national security practitioners—the authors agree with the assessments of Stansfield Turner and others: “nuclear disarmament is not feasible in the foreseeable future.”¹¹⁰

Going to zero and staying there demands a regime for verification and control light-years beyond anything we have in place today. It would include virtually every country in the world; all civil and military uses of nuclear energy; a detailed accounting of all existing weapons, weapons components, means of production, and stocks of fissile materials. The overall commitment of resources would be immense.... Even advocates of nuclear disarmament acknowledge it is decades away and will require fundamental changes in the relations of nations.¹¹¹

The current debate should focus on the condition of state relationships; the presence of a technological advancement that is not going away; and therefore, the kind of deterrence a state needs to maintain a secure and stable relationship with other states. This is not an easy debate that is likely to produce a winner and a loser because the risk of being wrong is so great. Therefore, it is probable that as in all things in the American political process, a compromise will be made that will give both sides of the debate some of what they want.

KEY FINDINGS: UNITED STATES POST-COLD WAR NUCLEAR STRATEGY

To conclude the analysis in this paper, the authors would like to offer the following five assumptions and/or recommendations for consideration (in the context of the post-Cold War debate on nuclear deterrence and nuclear weapons as a whole).

Assumption One: Nuclear deterrence, as an operating concept, is not in danger in the near or long term.

Former Secretary Perry's comments, though challenged by Butler, will most likely prevail. Perry talks about the "one unfortunate truth about the post-Cold War era: Even though the superpower nuclear standoff is over, the nuclear age is not. We can't shut the lid on the nuclear

Pandora's box, but we can—and must—limit and control the dangers it has released.”¹¹² General Goodpaster concedes as much when he notes that “[s]o long as nuclear weapons exist elsewhere in the world, along with the possibility of their production, it will be essential for the United States to maintain an arsenal of nuclear weapons of our own, safe, reliable and secure, as well as effective and adequate in numbers.”¹¹³

What is most interesting about General Goodpaster's recent testimony before the Senate is not his ultimate goal of elimination, or his proposed drastic reductions in the interim, but his thoughts on what to do about proliferation. It is clear that he sees a role for nuclear deterrence, and this is somewhat inconsistent with the theme of the Butler proposal and the Joint Statement he issued with Butler.

Deterrence from use or threat of use of these weapons, should nations nevertheless develop them, is the next stage; it must have as its basis, the unquestioned capabilities for massive and quickly decisive attack, including the use of our nuclear weapons if required. Defeat of a nation using or threatening the use of these weapons against United States or our allies, accompanied by swift and complete destruction of its nuclear weapons infrastructure and, so far as possible, its delivery forces and weapons. Theater ballistic missile defense and at least a limited national missile defense would reinforce our attacks against the elements of such weapons capability.... [These measures] warrant continued attention and high-priority effort...[and] they are a powerful contribution to reducing the nuclear danger to United States security....¹¹⁴

It should be noted that the Russians have recognized and accepted deterrence as a viable concept, after having questioned its morality during the Cold War. According to Sergei Rogov, deputy director of the Institute for the Study of United States and Canada in Moscow,

Deterrence was a very bad word in Soviet military thinking; only imperialists would conduct a strategy of deterrence.... Now deterrence is proclaimed openly as the foundation of Russian defense strategy. Yet many Russian military thinkers

are urging that deterrence be conducted in a very provocative manner. It is linked with the notion of immediate response to aggression, which in English terms means “launch on warning.” There is quite an open debate today whether it is possible to give up launch on warning and take a purely retaliatory posture.¹¹⁵

Assumption Two: Nuclear deterrence will not require the same numbers of weapons, mix of weapons, or alert status of weapons as it did during the past fifty years.

Cold War arguments will not stand up to those individuals in the United States who are fluent or connected with the nuclear debate, particularly if they believe that “smaller forces are safer forces because they are much easier to protect from accident, theft, or unauthorized use.”¹¹⁶ We have yet to see the fallout from the recently released report on Russian organized crime and its potential to subject the Russian nuclear force to “criminal influence and control.”¹¹⁷ According to the task force conducting the study, headed by William Webster and Arnaud de Borchgrave, the United States can expect to see “the prospect of strategic, nuclear-armed missile systems in the hands of a disintegrating military subject to criminal control.”¹¹⁸ This recent 92-page study, “Russian Organized Crime,” is consistent with the research conducted for this project. One ominous event also reported was the suicide of Vladimir Nechai, director of the Federal Nuclear Center at Snezhinsk, a major nuclear weapons research center. “He left a letter saying he could no longer guarantee the security of the scientists and nuclear facilities he was responsible for.”¹¹⁹

The NPR supports further, but cautious, reductions by indicating that the United States could reduce its strategic arsenals once START I and II are fully implemented. However, policymakers will need to be involved in the debate about the connection between numbers and stability (when it comes to nuclear weapons). The NPR’s recommendation to stay at the 3500 level may have some merit but it is

possible that deterrence and stability can be maintained at lower levels.

As one strategist notes

[F]orce levels should be set high enough to ensure that strategically significant cheating could not occur...high enough to ensure that neither side would be tempted to break out of an arms control agreement by building up its arsenal...high enough to ensure that new nuclear states will not be able to acquire comparable capabilities in short order...high enough to convince allied governments that the American nuclear umbrella is not being withdrawn.¹²⁰

General Goodpaster's conclusion that perhaps 100-200 weapons might satisfy what he calls the Minimum Nuclear Forces Plan needs a thorough examination in light of whether or not this level produces stable security or unacceptable risk to United States security because of the possible international response to an environment of low numbers of nuclear weapons.¹²¹ In other words, there needs to be a recognition of the dual nature of nuclear weapons.

The existence of nuclear weapons creates the risk of catastrophe, but it also creates the only way to ameliorate that risk by minimizing the possibility of war between the major powers.... Nuclear weapons have this dual nature: they are the only possible solution to the problem they pose.¹²²

Recommendation One: The focus should turn to non-strategic (tactical) nuclear weapons in an attempt to increase crisis stability, and reduce the possibility of "loose nukes."

In a general sense, these types of nuclear weapons cannot be justified as contributors to deterrence in the post-Cold War era, or to the stability of relationships between states. According to then Secretary of Defense William Perry, as of late 1996 the United States had "reduced its arsenal of short-range nuclear weapons by 90%."¹²³ But, on the other hand, Russia has between 7000 and 12,000 nonstrategic nuclear weapons.¹²⁴ According to Admiral Turner, most senior United States military officers

have an aversion to tactical nuclear weapons, and this has been increasingly so since the mid-1980s.¹²⁵

Assumption Three: Strategic defenses may become more acceptable in an environment where (1) East-West crisis stability concerns are diminished; (2) strategic warhead numbers decline dramatically; and (3) WMD and missile proliferation threats increase.

When the debate ensued regarding the Reagan administration's Strategic Defense Initiative, the argument that it was easy to overwhelm defenses when a state had tens of thousands of nuclear weapons had merit.

Therefore, it did not make sense to have strategic defenses. This is overly simplistic because there were and are also some other very good arguments challenging strategic defenses in terms of deterrence, first-strike and second-strike stability, and other conceptual matters.

Any move in this direction should be in cooperation with the Russians because as Admiral Turner warns a move towards defenses will most probably be met by Russian increases in offenses unless they too are able to play the defense game (and this is not likely).¹²⁶

Assumption Four: General Goodpaster's summation of the political and military realities, and thus, what the United States should do seems to be the likely course of action regarding nuclear weapons in the post-Cold War era.

The elimination of *most* nuclear weapons is realistic, beneficial in terms of enhanced security and well worth the time, attention and best efforts it will demand from us for a long time to come. The elimination of *all*, is for the present still *well beyond our grasp*; no one today knows whether, when or how it can prudently be done. But in practical terms the United States is far from needing to make that decision. Ten years or more will be required to dismantle the weapons already marked for elimination—at 2000 or so a year, roughly the same rate at which we and the Soviets were each able to build them during the Cold War. During the time it will take we can see how well the Non-Proliferation Treaty succeeds, what is done with the Comprehensive Test Ban Treaty, and how the world security

environment develops, particularly as among the major nations. During that time we should make sure that the United States nuclear weapons arsenal is safe, reliable and adequate to our needs.¹²⁷

General Butler is right—it still looks like the Cold War, particularly with regards to United States nuclear strategy and posture. That is, not much has changed. The reason is that *not enough has changed*. One problem is that when there were those consistent calls throughout the Cold War to reduce dramatically or eliminate the nuclear arsenal, no one specified the conditions under which this could happen. Had they done so, General Butler's task would have been easier. Now the question has to be, what does the world need to look like before such measures could be contemplated?

ENDNOTES

¹ General George Lee Butler, interview with author, Omaha, Nebraska, August 6, 1997.

² General Lee Butler, United States Air Force (ret.), National Press Club Remarks, Washington, D.C., December 4, 1996.

³ Ibid.

⁴ General Andrew J. Goodpaster, United States Army (ret.) and General Lee Butler, United States Air Force (ret.), “Joint Statement on Reduction of Nuclear Weapons Arsenals: Declining Utility, Continuing Risks,” May 5, 1997. Major General Leonard V. Johnson, ret., et. al., “Statement on Nuclear Weapons by International Generals and Admirals,” May 5, 1997.

⁵ Ibid.

⁶ Ibid.

⁷ George Lee Butler, “The General’s Bombshell,” *Washington Post*, January 12, 1997, C1.

⁸ Though General Butler’s luncheon remarks at the National Press Club made the headlines, he had expressed similar views in a October 3, 1996 speech before the State of the World Forum in San Francisco. During this presentation, General Butler said that “nuclear weapons are inherently dangerous, hugely expensive, militarily inefficient and morally indefensible.” But before then, the Henry L. Stimson Center began a multi-year project “intended to encourage serious consideration of the conditions under which all states might move toward the progressive elimination of all weapons of mass destruction” (*An Evolving United States Nuclear Posture*, Report No. 19, December 1995). This report was the result of work done by a panel of retired senior military officers, former government officials, members of Congress, and defense experts. General Andrew Goodpaster chaired this panel. In addition to this effort, a number of other fora have recently devoted their attention to this same issue: The Canberra Commission on the Elimination of Nuclear Weapons (1996), the Non-Aligned Movement/Group of 21 (1995), Abolition 2000, The International Network of Engineers and Scientists Against Proliferation, etc.

⁹ It should be noted that after the Nuclear Posture Review in 1994,

General Butler joined the Canberra Commission on the Elimination of Nuclear Weapons which “set forth a practical, realistic blueprint for working toward their elimination.” And General Butler admits that it was after the Canberra report failed to “ignite the interest and debate which its subject so urgently warrants” that he was led to express his views at the Washington Press Club in December 1996, General George Lee Butler (USAF, ret.), Stimson Center Award Remarks, Washington, DC, January 8, 1997; <http://allison.clark.net/pub/stimson/generals/carbarn.htm>, 2, May 5, 1997.

¹⁰ News Release, Office of the Assistant Secretary of Defense, Public Affairs, Remarks Prepared For Delivery By Secretary of Defense William J. Perry to the Henry L. Stimson Center, 20 September 1994.

¹¹ *Inside the Pentagon's Inside the Air Force*, Vol. 5, No. 38, September 23, 1994, 10. This volume reports that “[A]fter NPR co-chair Ashton Carter briefed proposals to eliminate the bomber and ICBM legs of the triad, relying solely on submarine-based nuclear missiles as a retaliatory force, the services’ deputy chiefs for operations and plans signed a joint letter of protest aimed at blocking the option,” 11.

¹² *Ibid.*, 13.

¹³ Butler’s December 4, 1996 National Press Club remarks.

¹⁴ “A New Nuclear Policy Review,” The Nuclear Roundtable, Meeting Summary for November 21, 1996; <http://allison.clark.net/pub/stimson/rd-table/posture.htm>, 1, May 6, 1997.

¹⁵ As referred to in Hans M. Kristensen, “Nuclear Futures: Proliferation of Weapons of Mass Destruction and United States Nuclear Strategy,” British American Security Information Council (BASIC), <http://www.basicint.org/nfuture2.htm>, March 1998, 6.

¹⁶ See Steven Lee Meyers, “United States ‘Updates’ Nuclear War Guidelines,” *New York Times*, December 8, 1997; R. Jeffrey Smith, “Clinton Directive Changes Strategy on Nuclear Arms,” *Washington Post*, December 7, 1997, 1; and Jeff Erlich, “New United States Nuclear Policy Maintains Ambiguity,” *Defense News*, January 5-11, 1998, 4.

¹⁷ Erlich, “New United States Nuclear Policy Maintains Ambiguity.”

¹⁸ General Eugene B. Habiger, CINC United States STRATCOM,

“Deterrence in a New Security Environment,” *Strategic Forum*, Number 109, April 1997, 1.

¹⁹ Statement on Nuclear Weapons by International Generals and Admirals, op. cit.

²⁰ Tim Weiner, “Panel Urges Deep Cuts in United States and Russian Nuclear Arsenals,” *New York Times*, June 18, 1997, 5.

²¹ See Lawrence Freedman, *The Evolution of Nuclear Strategy* (London: The MacMillan Press Ltd, 1981); and Robert J. Art and Kenneth N. Waltz, eds, *The Use of Force*, 2nd ed., (New York: University Press of America, 1983).

²² Richard Ned Lebow, “Deterrence Reconsidered: The Challenge of Recent Research,” *Nuclear Deterrence* (New York: Pergamon-Brassey’s, 1986), 129.

²³ Kerry Kartchner, “The Objectives of Arms Control,” *American Defense Policy*, 7th edition, Peter L. Hays, Brenda J. Vallance, Alan R. Van Tassel, eds. (Baltimore: The Johns Hopkins University Press, 1997), 425.

²⁴ See Thomas C. Schelling, *Arms and Influence* (New Haven: Yale University Press, 1966), 244.

²⁵ Michael Nacht, *The Age of Vulnerability: Threats to the Nuclear Stalemate* (Washington D.C.: The Brookings Institution, 1985), 68-9.

²⁶ Ibid.

²⁷ See Robert S. McNamara, “Hearings on Military Posture Before the U.S. Congress,” *Nuclear Strategy, Arms Control and the Future*, P. Edward Haley and Jack Merritt (Boulder: Westview Press, 1988), 86-96.

²⁸ National Academy of Sciences, *Nuclear Arms Control, Background and Issues* (Washington, D.C.: National Academy Press, 1985), 4.

²⁹ These are two of the three classic objectives of arms control introduced by one of the most significant books on arms control and nuclear strategy: Thomas C. Schelling and Morton H. Halperin, *Strategy and Arms Control* (New York: Pergamon-Brassey, 1985).

³⁰ Ibid. First published in 1975 from work accomplished during a 1961

project studying arms control.

³¹ Charles Glaser, “Why Even Good Defenses May Be Bad,” *The Use of Force*, 3rd ed., Robert J. Art and Kenneth N. Waltz, eds. (Lanham: University Press of America, 1988), 421.

³² The authors wish to note that this statement is not meant to detract from the vital Atlantic link in nuclear deterrence between the United States and its NATO allies. Rather, the paper wishes to focus on the very essence of the Cold War nuclear stalemate, the one between the two superpowers.

³³ Art and Waltz, “Technology, Strategy, and the Uses of Force,” op. cit., 2-3.

³⁴ Lester R. Kurtz, *The Nuclear Cage* (Englewood Cliffs, New Jersey: Prentice Hall, 1988), 240. This is an excerpt from the Franck Report authored by the Committee on the Social and Political Implications, which was organized by the Manhattan Project scientists.

³⁵ William H. Kincade, *Nuclear Proliferation: Diminishing Threat*, INSS Occasional Paper 6, (United States Air Force Academy, December 1995).

³⁶ Walter Slocombe, “Is there a role for nuclear deterrence?” *NATO Review*, November-December 1997, p. 23.

³⁷ Ibid.

³⁸ Ibid.

³⁹ Stansfield Turner, *Caging the Nuclear Genie* (Boulder, Colorado: Westview Press, 1997), 118-119.

⁴⁰ Michael J. Mazarr and Alexander T. Lennon, eds., *Toward a Nuclear Peace* (New York: St Martin’s Press, 1994), 6.

⁴¹ Ibid., 8.

⁴² Sam Nunn and Bruce Blair, “From Nuclear Deterrence to Mutual Safety,” *The Washington Post National Weekly Edition*, June 30, 1997, 22.

⁴³ The Nuclear Roundtable, A New Nuclear Policy Review, Meeting

Summary for November 21, 1996, op. cit., 1.

⁴⁴ Ibid.

⁴⁵ Habiger, op. cit., 1.

⁴⁶ Statement of General Andrew J. Goodpaster, United States Army (Ret.) to the Senate Governmental Affairs Subcommittee on International Security, Proliferation and Federal Services, February 12, 1997.

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Robert G. Spulak, Jr., "The Case in Favor of United States Nuclear Weapons," *Parameters*, Spring 1997, 107. Dr. Spulak is a senior analyst at the Strategic Studies Center, Sandia National Laboratories.

⁵⁰ Statement of General Andrew J. Goodpaster, United States Army (Ret.) to the Senate Governmental Affairs Subcommittee on International Security, op.cit.

⁵¹ Richard N. Haass, "It's Dangerous to Disarm," *New York Times*, December 11, 1996, A23.

⁵² General Charles A. Horner (USAF, ret.), interview with Margaret Warner on PBS Frontline, Transcript released on December 4, 1996.

⁵³ Schelling, 248.

⁵⁴ Stansfield Turner, "A United States Initiative to Cage the Nuclear Genie," *Christian Science Monitor*, October 29, 1997, 19.

⁵⁵ George Quester, interview with author, Alexandria, Virginia, June 18, 1997.

⁵⁶ Interview with author, Pentagon, Washington, D.C., July 21, 1997.

⁵⁷ Lieutenant General Brent Scowcroft (USAF, ret.), interview with author, Washington, D.C., June 25, 1997.

⁵⁸ General George Lee Butler, interview, op. cit.

⁵⁹ Congress Neil Abercrombie, interview with author, Washington, D.C.,

June 19, 1997.

⁶⁰ Admiral Stansfield Turner (USN, ret.), interview with author, Langley, Virginia, June 12, 1997.

⁶¹ General Andrew J. Goodpaster (USA, ret.), interview with author, Washington, D.C., June 17, 1997.

⁶² Turner interview, *op. cit.*

⁶³ Nunn and Blair, *op. cit.*

⁶⁴ Perry remarks to the Stimson Center, *op. cit.*

⁶⁵ C. Richard Nelson, interview with author, Washington, D.C., July 30, 1997.

⁶⁶ *Ibid.*

⁶⁷ Lynn Hanson, interview with author, Langley, Virginia, June 12, 1997. Hanson is Vice Chairman of the National Intelligence Council.

⁶⁸ Michael Mazaar, interview with author, Washington, D.C., June 12, 1997.

⁶⁹ Turner interview, *op. cit.*

⁷⁰ General Larry Welch (USAF, ret.), interview with author, Alexandria, Virginia, June 13, 1997. Certainly, there is a serious need to rethink the entire targeting scenario. It is quite possible that in order to maintain deterrence with a much lower number of warheads, the United States may need to revert back to a countervalue, or what was once termed “city busting,” targeting strategy. Unfortunately, a scholarly targeting analysis is beyond the scope of this paper. In the future, this issue will definitely have to be addressed.

⁷¹ Interview with author, *op. cit.*

⁷² Alexander A. Belkin, interview with author, Moscow, 18 June 97.

⁷³ Dr. Vitaly Shlykov. Conference Paper entitled “The Political Economy of Russian Defense,” 3-7.

⁷⁴ Donald N. Jensen. “Patrimonialism in Post-Soviet Russia.” *FE/RL*

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Ibid.

⁷⁸ Dr. Mark Galeotti. "Red Mafias and National Security," *Lexis-Nexis* (Jane's Information Group Limited, *Jane's Intelligence Review*), January 1, 1993. On the criminal penetration of Russia's "power ministries" see also, Graham H. Turbiville, Jr., "Weapons Proliferation and Organized Crime: The Russian Military and Security Force Dimension," *INSS Occasional Paper 10* (USAF Academy, CO: Institute for National Security Studies, June 1996).

⁷⁹ Ibid.

⁸⁰ Alexander A. Belkin, interview with the author.

⁸¹ David Adams, Tom Rodes, and Robin Lodge. "Russian Mafia in Colombia Drug Link," *London Times*, Internet Edition, September 30, 1997.

⁸² Vitaly V. Shlykov, *The Crisis in the Russian Economy* (United States Army War College. Strategic Studies Institute, 30 June 1970), 17.

⁸³ Nikolai N. Sokov, "Russia's Approach to Nuclear Weapons," *Lexis-Nexis* (The Center for Strategic and International Studies and the Massachusetts Institute of Technology, *The Washington Quarterly*), Summer 1997.

⁸⁴ The following discussion is a summary of Dr. Nikolai N. Sokov's argument.

⁸⁵ Dr. Alexei Arbatov, "Russian Military Doctrine and Strategic Nuclear Forces to the Year 2000 and Beyond." Conference paper presented at the Naval Postgraduate School, Monterey, California, March 23-29, 1997, 4.

⁸⁶ Lev Rokhlin cited in Mary C. Fitzgerald. "Emerging Russian Nuclear Doctrine." *Lexis-Nexis* (Federal Information Systems Corporation, *Federal News Service*). Prepared Testimony before the House Committee on National Security, Military Research and Development

Subcommittee, March 13, 1997.

⁸⁷ Ibid.

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⁸⁹ Ibid.

⁹⁰ Ibid.

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⁹² The following is a compilation of information from the author’s interviews with Russian defense experts in Moscow as well as from Mark Galeotti, “Russia’s Military Power Under a new Master,” *Lexis-Nexis* (Jane’s Information Group Limited, *Jane’s Intelligence Review*), September 1, 1997.

⁹³ James T. Hackett, “Underground Readiness for War,” *Lexis-Nexis* (News World Communications, Inc., *The Washington Times*), July 16, 1997.

⁹⁴ Michael R. Boldrick, “Nuclear Posture Review: Liabilities and Risks.” Briefing for the Technical Seminar Series, Center for International Security and Arms Control, Stanford University, February 13, 1996.

⁹⁵ Ibid.

⁹⁶ The following information is compiled from an interview with a United States government official in Washington D.C. in May 1997 as well as from Bill Gertz, “Russia Suspected of Nuclear Testing; Moscow Says Blast was an Earthquake,” *Lexis-Nexis* (News World Communications, Inc., *The Washington Times*), August 28, 1997.

⁹⁷ Vladimir A. Orlov, interview with the author at the Center for Policy Studies in Moscow, June 24, 1997.

⁹⁸ Alexander G. Savelyev, interview with the author at the Academy of the Russian Foreign Ministry, Moscow, June 24, 1997.

⁹⁹ Habiger, 3. A methodologist, however, would find plenty to say about these conclusions.

¹⁰⁰ Michael Brown, "The 'End' of Nuclear Arms Control," *Rethinking the Unthinkable*, Ivo H. Daalder and Terry Terriff, eds. (Portland, Oregon: Frank Cass and Co., 1993), 41.

¹⁰¹ Habiger, op. cit., 2.

¹⁰² Alexei Arbatov, "As NATO Grows, Start 2 Shudders," *New York Times*, August 26, 1997.

¹⁰³ Secretary Perry's remarks to the Stimson Center, op. cit.

¹⁰⁴ Interview, Alexander Lebed, "60 Minutes," televised on September 7, 1997. Lebed was fired as Yeltsin's National Security Advisor. Mr. Lebed was not at all confident that all of the Russian tactical nuclear weapons were accounted for, and that they were perhaps somewhere in Georgia, Ukraine, or in the Baltics. He told Congressman Kurt Weldon that 84 were unaccounted for. Russian Foreign Minister of Defense Rodiyonov, however, does not support Lebed's conclusions.

¹⁰⁵ Warren P. Strobel, "Russian scientist to back claim of missing nukes," *Washington Times*, October 2, 1997, 3.

¹⁰⁶ Secretary Perry's statement to the Stimson Center, September 20, 1994, op. cit.

¹⁰⁷ R. Jeffrey Smith and Bradley Graham, "Administration Considers Changing Mix of Nuclear Warhead Deployment," *Washington Post*, June 18, 1997. 1.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Turner, op. cit., 100.

¹¹¹ Ibid., 101.

¹¹² Secretary Perry's remarks to the Stimson Center, op. cit.

¹¹³ Goodpaster statement to Senate Governmental Affairs Subcommittee, op. cit.

¹¹⁴ Ibid.

¹¹⁵ Sergei Rogov, "Russian Views of Nuclear Weapons," *Toward a Nuclear Peace*, Michael J. Mazarr and Alexander T. Lennon, eds. (New York: Center for Strategic and International Studies, 1994), 206.

¹¹⁶ William F. Burns, "New nuclear dangers," *Journal of Commerce*, October 1, 1967, 8. Burns is a retired United States Army Major General who was the director of the United States Arms Control and Disarmament Agency under President Reagan.

¹¹⁷ Martin Sleff, "Russian 'kleptocracy' risks spread of nuclear weapons," *Washington Times*, September 30, 1997, 1.

¹¹⁸ Ibid.

¹¹⁹ Ibid.

¹²⁰ Brown, op. cit., 50.

¹²¹ Goodpaster statement to the Senate Governmental Affairs Subcommittee, op. cit.

¹²² Spulak, op. cit., 108.

¹²³ George C. Wilson, "Former warriors oppose nuclear arms," *Air Force Times*, December 16, 1996, 4.

¹²⁴ General Habiger interview with Jeff Erlich, "Are nuclear arms needed?" *Air Force Times*, March 24, 1997, 30.

¹²⁵ Turner, op. cit., 47. This is not the case with the Russian military.

¹²⁶ Ibid, 92.

¹²⁷ Goodpaster's statement to Senate Governmental Affairs subcommittee, op. cit.

Interviews Conducted

United States

Representative Neil Abercrombie (Dem-HI), National Security Committee. Longworth Building, Washington, D.C., June 19, 1997.

Major William F. Buechter, Special Assistant to CINC STRATCOM. Omaha, Nebraska, August 6, 1997.

General George Lee Butler (USAF, ret.), Peter Kiewit Sons, Inc. Omaha, Nebraska, August 6, 1997.

General Andrew J. Goodpaster (USAF, ret.), Atlantic Council. Washington, D.C., June 17, 1997.

Brian Green, Staff, Committee on National Security. Washington, D.C., August 1, 1997.

Lee Halterman, General Counsel, Congressman Ron Dellums; Council, Committee on National Security. Washington, D.C., August 1, 1997.

Lynn Hanson, Vice Chairman, National Intelligence Council. CIA Headquarters, Langley, Virginia, June 12, 1997.

General Charles A. Horner (USAF, ret.), Chairman, Board of Directors, Granite Corporation. Roslyn, Virginia, June 4, 1997.

Andrew Krepinevich, Executive Director, Center for Strategic and Budgetary Assessments. Washington, D.C., July 25, 1997.

Commander Susan I. Lynn, Deputy Chief CINC Staff Group, STRATCOM. Telephone interview, July 1, 1997.

Colonel Randy Mason, Joint Chiefs of Staff, Chief, Nuclear Arms Control Division. Pentagon, Washington, D.C., June 20, 1997.

Dr. Michael Mazaar, Editor, *The Washington Quarterly*, Center for Strategic and International Studies. Washington, D.C., June 12, 1997.

General James P. McCarthy (USAF, ret.), Olin Professor of National Security Studies, United States Air Force Academy, Colorado, October 9, 1997.

Frank Miller, Assistant Secretary of Defense, International Security Policy (Acting). Pentagon, Washington, D.C., June 25, 1997.

C. Richard Nelson, Director, Program on International Security, Atlantic

Council. Washington, D.C., July 30, 1997.

Colonel Donald Petit, Joint Chiefs of Staff, Operations Directorate, Nuclear Operations Division. Pentagon, Washington, D.C., July 21, 1997.

Dr. George Quester, Professor, University of Maryland. Alexandria, Virginia, June 18, 1997.

Lieutenant General Brent Scowcroft (USAF, ret.), President, The Scowcroft Group. Washington D.C., June 25, 1997.

John D. Steinbruner, Senior Fellow, Foreign Policy Studies Program, Brookings Institute. Washington, D.C., June 6, 1997.

Admiral Stansfield Turner (USN, ret.), Faculty, University of Maryland. Langley, Virginia, June 12, 1997.

Dr. Ted Warner, Assistant Secretary of Defense, Strategy and Requirements. Pentagon, Washington, D.C., June 19, 1997.

General Larry D. Welch (USAF, ret.), President and CEO, Institute for Defense Analysis. Alexandria, Virginia, June 13, 1997.

Russian Federation

Col (Ret.) Victor Baranets, General Staff Officer and the former Russian Ministry of Defense Press Spokesman for General Rodionov. Moscow, June 24, 1997.

Col. (Ret.) Alexander A. Belkin, Deputy Executive Director, Council on Foreign and Defense Policy. CFDP Offices, Moscow, June 18, 1997.

Dr. Vladimir Orlov, Director of the Center for Policy Studies Russia (PIR). PIR Center, Moscow, June 24, 1997.

Dr. Alexander Savalyev, Vice-President of the Institute for National Security and Strategic Studies (INSS) and advisor to Dr. Alexei Arbatov. Moscow, June 24, 1997.

Mr. Victor Tkachev, Academy of the Foreign Ministry of the Russian Federation, Moscow, June 16, 1997.