How much is enough? Strategic Stability Reconsidered A Collection of Short Essays

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Dr Albert Legault
Dr Tariq Rauf

Prepared for the

International Security Research and Outreach Programme
International Security Bureau

January 2002

Department of Foreign Affairs and International Trade

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PREFACE

The views expressed in these papers are those of the authors, and do not necessarily reflect the views or positions of the Department of Foreign Affairs and International Trade or of the Government of Canada.

The International Security Research and Outreach Programme (ISROP) commissioned four essays to access the actual meaning and utility of the concept of strategic stability in the current and future international security environment in order to evaluate its implication for Canadian foreign policy.

The Department of Foreign Affairs and International Trade wishes to acknowledge the work performed under contract through the International Security Research and Outreach Programme in the preparation of these essays by the authors: Dr James Fergusson, Dr Frank Harvey, Dr Albert Legault and Dr Tariq Rauf. ISROP would also like to thank Dr George Lindsey for writing the introduction to this publication.

Please note that all four essays represent abridged version of the original papers submitted by the authors.

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Ottawa, Ontario, Canada

January 2002

INTRODUCTION

These four essays on strategic stability, written by Albert Legault, James Fergusson, and Frank Harvey of the Universities of Laval, Manitoba, and Dalhousie, and by Tariq Rauf of the Monterey Institute in California, discuss the relevance of strategic stability about which Canada may have to make important decisions in the coming years.

While the subject of strategic stability received scholarly analysis prior to the twentieth century, it was generally discussed under the heading of "the balance of power", and revolved around alliances of European states and the numerical strengths of their armies and navies.

The second half of the twentieth century brought the Cold War, contested between the North Atlantic Alliance and the Warsaw Pact, both equipped with nuclear weapons and the means to deliver them over intercontinental ranges. As accurenlty summarized by Fergusson and Rauf, without means to defend against these strategic weapons the only effective countermeasure was to retain the capability to retaliate for an attack in like manner, to a degree that would be unbearable to the initiator of the attack. This was strategic deterrence. Its objective was not to win or even survive a war, but to use the certainty of "Mutually Assured Destruction" to prevent it occurring at all. To keep the deterrence effective in spite of foreseeable changes in numbers and types of strategic weapons, and to ensure that an attack would not be launched through some mistake, perhaps in the midst of a crisis, would be to make it more stable. Stable strategic deterrence was established, and it worked. World War III did not happen. So why can't we continue to rely on stable deterrence to prevent wars on the future?

The four essays explain the need to examine the concept of strategic stability in the conditions of the twenty-first century, with the Cold War over, the Warsaw Pact gone, Russia no longer an enemy of the United States, and the USA by far the most powerful country in the world. However, more states, including some with unfriendly relations with the developed West, are thought to be acquiring weapons of mass destruction, and may be able to challenge better-equipped enemies by the adoption of "asymmetric" strategies, including terrorism, which can capitalize on the asymmetric tolerance to loss of life between western and some other countries (Legault).

Today, strategic stability should not be assessed simply by comparison of numbers and capabilities of weapons, but must include other attributes of security such as the control, guardianship, and proliferation of weapons (Rauf, Harvey). In Fergusson's opinion "the end of the Cold War (at least in the context of US-Russian relations) spells the end of strategic stability as a useful concept". Many would prefer to retain its usefulness by enlarging its definition.

The authors agree that the strategic deterrence of the Cold War still applies among China, Russia and the United States. Rauf gives a good summary of the negotiations between the US and Russia, which eventually produced a considerable convergence of views, and introduced principles of openness and transparency, irreversibility, predictability, and cooperative threat reduction. As China's power and influence rises one can imagine the emergence of a dominant troika.

However, between the USA and the aspiring or remaining nuclear, the state of deterrence is not mutual, and in some cases is of doubtful stability. Perhaps is better describe as unilateral sad discriminate, and is determined more by politics than by weapon deployments. Parity of numbers will not guarantee stability. Under the right conditions high numbers can be stabilizing while under the wrong conditions low numbers can be dangerous. The acquisition of just one nuclear weapon by a "state of concern" could

be more destabilizing than considerable vertical proliferation by China. None of the authors see any prospect for total abolition of nuclear weapons (Harvey).

All four of the essays make frequent references to the question of ballistic missile defence, especially as regards the American plan for National Missile Defence (NMD).

The US insists that its NMD is intended only to maintain unilateral deterrence of aspiring nuclear powers, or for protection from an unauthorized or accidental launch from anywhere, and will not be capable of negating the deterrents of Russia or China. This contention is supported by the virtual impossibility of constructing a huge defence system with an effectiveness so high as to be able to intercept *nearly 100% of a large number of missiles*. But Russia and China are worried, understandably, that once established the American system could be quickly expanded.

However, Legault considers that the US would be content to see the Chinese offensive capability enlarged enough to compensate for a limited American defensive deployment. Fergusson suggests that NMD will enhance crisis stability, reducing the incentive to launch the retaliatory force on the basis of a false alarm. Harvey believes that missile defence could establish a new type of stable deterrence by bringing about a new balance between offence and defence. Thus, although critics of the NMD plan see it as the trigger for proliferation of offensive arsenals, it could have the opposite effect.

The destructive power of nuclear weapons is such that a small state possessing only a very few of them would be able to inflict terrible losses on the United States. In keeping with the established theory of deterrence, the USA could retaliate for an attack (or pre-empt against an anticipated attack) with utter destruction of the aggressor's country. Nevertheless, the possibility can be imagined where the "state of concern" might attempt to use the threat of nuclear attack (whether rational or irrational by Western standards) to influence US policy. A possibility could be to deter US intervention in some situation far from American shores, which held minor significance for American vital interests. Or, instead of a "state of concern" the threat could come from a dispersed sub-national conspiracy under ruthless leadership, such as al-Qaeda, which would not offer a suitable target for retaliation.

To counter the threat from a state possessing only a very small number of nuclear-armed ICBMs the US would require an NMD which provided nearly 100% probability of being able to intercept every one of the missiles aimed at American territory. This capability *against a small attack* may well be technologically achievable at some time in the mid-term future, albeit not without a long period of research, development, trial, error, and modification. And once deployment is undertaken there will be a very heavy cost.

Harvey and Fergusson consider that this investment is justifiable, and are convinced that it will be made in the near future. Legault and Rauf seem less impressed, but expect that some form of NMD is going to be deployed.

A concern evident in all four essays is about the unilateralist approach towards foreign policy displayed in the first few months of the new Bush administration. There have been encouraging signs of a more multilateral tendency, stimulated in September by the terrorist attacks on New York and Washington. Nevertheless, the US had not shown much enthusiasm for strengthening or even maintaining the multilateral arms control institutions and treaties which have done so much to contain proliferation and build confidence.

Although international treaties have long been considered to be the most stable type of arms control measures, opinions are being expressed that the long periods of negotiation and long-tem commitments associated with formal international treaties are no longer tolerable. Their place could be taken by unilateral commitments which would be subject to effective verification, and could be withdrawn should circumstances change. Harvey recommends coordination and consultation rather than formal codification. However, Rauf reminds us of the considerable accomplishments of the multilateral arms control treaties negotiated during and after the Cold War, and urges that they not be eroded. But Harvey points out that prevention, preemption, conventional deterrence, constructive engagement, economic sanctions, transparency, verification, and codification have all failed to ensure security from Weapons of Mass Destruction.

The authors remind us that ballistic missiles are not the only means of delivery of strategic warheads, nor are nuclear warheads the only weapons of mass destruction. Legault and Rauf point out that both strategic stability and stable deterrence could be enhanced if the existing non-proliferation regimes could be strengthened.

The arms control treaty receiving the most attention in the essays is the ABM treaty, largely because of the widespread expectation that its abrogation would precipitate the collapse of many of the multilateral arms control treaties. The essays suggest that this concern is overdone, but also consider that there is a good probability that the US and Russia will agree to modification of the treaty to permit a limited form of NMD, perhaps combined with balanced reductions in the numbers of offensive weapons (Legault, Rauf). These changes would eave the US and Russia with mutual and stable strategic deterrence, but also allow them both to acquire defence against much smaller threats from other states. Other possibilities are to multilateralize the ABM treaty and to refine its lines of demarcation between intercontinental and theatre range missiles.

Fergusson points out that the strategic characteristics of systems designed to defend against theatre range ballistic missiles are very different from those intended to intercept ICBMs. While none of the weapons currently planned for Theatre Missile Defence (TMD) would be able to protect US territory from ICBMs, they could defend many countries (including Russia and China from hostile neighbours, and also protect US, NATO, or UN forces intervening in distant theatres. Thus, many of the objections to NMD cannot be raised against TMD, while a capability for TMD has a deterrent effect against states engaged in regional aggression. Moreover, TMD systems can be transportable, and hence used for signaling determination in a crisis, as well as providing actual defence (Legault).

The authors of these four useful papers feel a vital need for Canadians to engage in a serious public debate over these important and complicated problems. They have provided good fuel for the debate.

Dr George Lindsey

STRATEGIC STABILITY RECONSIDERED

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The emergence of the concept of strategic stability from the post-Cold War shadows is a function of one issue – the potential threat that US ballistic missile defence (BMD) plans pose to the future of the 1972 Anti-Ballistic Missile (ABM) Treaty, as amended by the 1974 Protocol. Specifically, the US plans to develop and deploy a limited layered ballistic missile defence capability for the defence of the Unites States, and by default Canada as well. Although the architecture of the system remains unspecified, it is clear that there will be a ground component (likely deployed in Alaska) that will violate Article One, Paragraph Two, which prohibits an ABM system capable of defending the entire nation. It will also violate Article One of the Protocol, which restricts deployment of an ABM system to either the defence of the national capital, or an Inter-Continental Ballistic Missile (ICBM) field. In addition, the likely integration of naval-based BMD systems, as well as the US Air Forces Airborne Laser, will violate Article V of the Treaty.

According to many critics of BMD, the threat to the future of the ABM Treaty is a threat to strategic stability. The Treaty is identified as either ***the***, or ***a cornerstone*** of strategic stability, and strategic stability is understood or operationalized in two inter-related ways. First, it is understood in terms of the threatened Russian and Chinese response to increase significantly the size and capability of their respective strategic nuclear forces. Such a response is seen as generating a new arms race. Second, their response will also mean the end of the process of negotiated strategic force reductions, the Strategic Arms Reduction Talks (START). With the collapse of START, the prospects for expanding negotiations to include eventually China, as well as the other nuclear powers will disappear. These two inter-related outcomes are subsequently drawn together to raise the spectre of the collapse of the entire arms control, disarmament, and non-proliferation edifice. Hence, the collapse of ABM will produce strategic instability implicitly defined as a condition of deteriorating political relations among three of the nuclear powers, in which nuclear arsenals will grow, vertically and horizontally, in the absence of a mutually reinforcing legal bilateral and multilateral regime capable of checking or managing these, as well as other weapons.

While the polemics associated with this conceptualization of strategic stability are interesting in theirs own right, this current implicit understanding of the concept is significantly different from its original conceptualization during the Cold War. This raises two distinct perspectives for today and the foreseeable future. The first is the case for rejecting strategic stability as traditionally understood as a useful concept. The key political condition that informed its meaning and utility no longer exists. Instead, the key question from this perspective is whether missile defence deployment will automatically create strategic instability when, or if, the political condition appears. In other words, strategic stability may have no relevance for today and the immediate future, but developments today and in the immediate future could create instability in the future. In this sense, the threat to the ABM Treaty is a threat to the future, not the present. However, as a threat to the future, it implies that the traditional interpretation of the relationship between missile defence and strategic stability was useful, and that the political and technological situation of the future remains no different from the present and the past.

The second perspective is the argument for re-defining strategic stability to update its meaning and utility for the current strategic environment. This argument, as noted above, is evident in the predictions concerning international security, if or when, the United States withdraws from the Treaty. Assessing this perspective hinges significantly on two factors: the longstanding debate about the

relationship between weapons and politics (war), and the implications of conceptualizing the Treaty as ***the***, or ***a*** cornerstone. The key problems relative to both factors is the underlying assumption of a linear process that is difficult to sustain, and the assumed interdependence among the political situation concerning the likelihood of war, the existence of the inter-related bilateral and multilateral arms control/non-proliferation process, and the prospects for disarmament.

As a result, applied in its traditional ***cloak***, or re-conceptualized, strategic stability remains problematic for one basic reason. It represents the triumph of technology (weapons) over politics. This is not to suggest that technology should be ignored. Rather, a concentration on the independent impact of technology on politics is only of limited value: primarily as one indicator of the state of political relations. Moreover, recognizing its limited value relative to the significant value placed upon it by many provides insight into another element of the relationship between technology and politics: the manipulation of value attached to managing the relationship (arms control) as a political weapon. It is here, in fact, that the real problem lies.

The Origins and Traditional Meaning of Strategic Stability

The traditional meaning of strategic stability emerges during the 1960s from separate sub-fields of academic research: general international relations theory (stability), and the new sub-field of strategic studies (strategic). The concept of stability surfaces during the 1950s. Drawn from general systems theory, stability is related to the notion of a system in equilibrium. The stability of a system is determined the system's response to a shock or disturbance, that contains the potential to transform the system, and/or create a new equilibrium (or resting point). The shock, or disturbance, by definition, moves the system away from its equilibrium point. A system capable of absorbing the disturbance, and returning to its equilibrium is considered a stable system. Alternatively, a system that is unable to return to its original equilibrium is considered an unstable system. In both senses, the stability of any system is in effect a prediction about how it will probably respond to a disturbance. Most importantly, one should not make a preferred value judgement about stability or instability, even though stability is implicitly perceived as positive or good, and instability as negative or bad. If one prefers the existing status quo, a stable system is valued. If one seeks to change the status quo, then an unstable system is preferred, assuming of course that the result of a disturbance will produce the preferred new status quo, or equilibrium; a key point to recall in assessing the two perspectives on strategic stability as well.

In classical balance of power theory, the status quo is defined as the existence of the system of sovereign states. Shocks to the system are understood as events, actions, or actors, which threaten the existence of this system. In this sense, events, actions, or actors revolve around two inter-related considerations relative to the European state system of the past. The first is the relationship between territory and power. The more territory a state acquired, the more powerful it was, and the more it threatened the existence of other sovereign states. The second is war, which has two elements. War can be understood as the means to obtain territory, eliminate sovereign states, and ultimately transform the system from anarchy to hierarchy – a universal empire. Thus, war is a disturbance. However, war is also the means used by states to prevent the likelihood of transformation. In this case, war is a mechanism applied to return to equilibrium. The important point is to recognize the dual nature of war, as one type of shock to the system, and as the means applied to return the system to its equilibrium– the ***status quo ante bellum***. Naturally, balance of power theory in relation to stability entails many more elements and nuanced relationships. Nonetheless, it does highlight the original understanding of the concept of stability.

While the logical roots of the concept of strategic are found within the concept of strategy (as defined by Carl von Clausewitz as the use of an engagement for the purpose of war – victory), the term itself is directly related to the development of airpower and airpower theory in the Interwar period. Juilio Douhet in particular argued that airpower would make warfare as traditionally understood obsolete. Well before armies could engage on the battlefield, a massive attack from the air would bring a nation to its knees. In other words, the air engagement alone would lead to victory, and thus the airplane or airpower was a strategic weapon, and the idea of strategic bombing emerged. However, the results of the strategic bombing campaigns of World War II did not meet expectations for one primary reason, which was key to the development of the concept; the inability to deliver a devastating enough strike(s) to cripple the adversary. This would all change with the dropping of the atomic bombs on Hiroshima and Nagasaki.

Atomic and subsequently nuclear (thermonuclear) weapons became strategic weapons, alongside the airplane and subsequently ballistic missiles (land and sea based) as the strategic delivery systems (the nuclear triad). With the means now available to make Douhet's theory reality, planners responded in two ways; developing offensive strategies to employ the strategic capability, and defensive strategies to offset the strategic capability. In the case of the United States, Strategic Air Command (SAC), and Continental Air Defence Command (CONAD) were created. At the same time, civilian analysts (the new community of strategic studies) examined the implications of this new strategic environment– what would become known as the golden age of deterrence theory as informed by the politics of the United States (US)– Soviet Union (SU) adversarial relationship.

The label of the Cold War for this relationship spoke to the linkage between politics and strategic weapons. The relationship possessed all the characteristics that could or would readily lead to war, but would, or should not because of the implications of strategic weapons, and the underlying thesis that nuclear war was unwinnable and thus unthinkable (hence the title of Herman Kahn's famous book *Thinking the Unthinkable*). It was in many ways from this linkage that the concept of strategic stability arose. In so doing, attention was drawn to the independent role of strategic weapons (i.e. technology) on decisions about war and peace. Basically, concern was directed to the implications of strategic nuclear force structures, deployment patterns, targeting, launch postures, and overall doctrine for decisions about war and peace.

Even though nuclear war was considered unwinnable, and thus unthinkable, a situation could arise within the adversarial relationship in which one or both parties would contemplate a first strike. If one, or both of the parties came to believe that the other side might go first, it would be driven to strike first itself; a strategic condition defined by Thomas Schelling as the mutual fear of surprise attack. While victory in a nuclear exchange appeared meaningless, a nation could still believe that it would do better by going first. It was this possibility that directly underpinned the meaning of strategic stability as it emerged in the mid-1960s in the context of the emergence of mutual vulnerability for the United States and Soviet Union.

A stable strategic relationship, thus, began with the postulate of an adversarial relationship in which the probability of war, *ceteris parabus,* was relatively high. As a component of war avoidance, each party required strategic forces or a strategic force structure capable of removing any incentives on the part of its adversary to go first, and incapable of being perceived by its adversary as designed and deployed to go first. If both parties possessed such a structure, then all strategic incentives to go first would be eliminated. This structure came to be defined as the possession of an assured retaliatory or second strike capability invulnerable to any and all attempts to destroy it in a counter-force first strike. Married then to the US concept of assured destruction, and resultant condition of mutual assured destruction, strategic stability was defined as a condition in which political adversaries possessed

invulnerable, assured destruction, strategic second strike forces. In a way, strategic stability became the answer to the question of ***"how much is enough"***.

Along with strategic stability, two other concepts also appeared: crisis stability and arms race stability. Both were defined by direct reference to the condition of strategic stability. Crisis stability (implicitly tied to Cold War crises such as Berlin) was a condition in which neither side in the midst of a political crisis possessed incentives to launch a first strike. In this sense, a crisis was understood as a shock to the system. If both sides possessed invulnerable assured destruction second strike forces (strategic stability), then neither side obtained incentives to go first. The net result was crisis stability, in which the shock or disturbance of a political crisis would not likely result in war. Of course, war could, at least theoretically, occur. But, war would not be the product of the strategic military relationship.

Arms race stability was a condition in which neither side was developing a new generation of strategic weapons whose deployment would undermine strategic stability. It was in the context of arms race stability that the issue of strategic missile defences arose. It was also thiscontext that underpinned the emergence of arms control, and thus today's linkage of the ABM Treaty to strategic stability.

Basically, strategic missile defences threatened second strike forces. Recognizing that no strategic missile defence would be capable of defeating a large-scale, coordinated first strike, such a defence could possibly be effective against a counter-value retaliatory or second strike, especially after the launch of a successful counter-force first strike. The first strike would not only eliminate a large portion of an adversary's strategic forces, but it would also cripple its command and control system. In so doing, the strategic defence would face an uncoordinated, ragged retaliatory strike; a strike which missile defences could be effective against. Under this condition, both parties obtained incentives to go first, thus undermining strategic and crisis stability: the party with strategic defences, because going first held the potential of actually fighting and winning a nuclear war, and the party without, because it faced the prospect of complete destruction with little or any ability to strike back.

This logic is at the core of critics of missile defence during the Cold War. However, it was also recognized that the exact relationship between missile defences and strategic stability depended upon the nature of the defences. Missile defence was not de-stabilizing by definition. First, missile defences deployed to defend second strike forces were stabilizing, because they reinforced second strike invulnerability. Such defences represented one response to an adversary's development of strategic forces, which could threaten its opponent's strategic forces, even without a capability to disarm it completely (known in the 1980 US Presidential election campaign as the *window of vulnerability*). The logic here was that if one side possessed a capability to eliminate a significant portion of an opponent's strategic forces (i.e. its ICBMs), the result would place the opponent in a politically untenable position. It would confront the choice of either launching a retaliatory counter-value strike against its adversary's cities, knowing full well that the adversary possessed the means to retaliate, or surrender.

This missile defence de-stabilizing/stabilizing paradox was enshrined in the ABM Treaty, and it is this context that the logic of the Treaty as ***the,*** or ***a cornerstone*** of stability is actually found. In prohibiting nation-wide defences, the Treaty ensured strategic stability. At the same time, it allowed for limited defences tied to stability concerns by permitting the deployment of a prescribed ABM system at two sites, subsequently amended in 1974 to either an ICBM field or national capital. As defending either was stabilizing, the US choose the former (Safeguard deployed for a limited period of time around the Grand Forks ICBM field), and the SU choose the latter (the Galosh system that still defends Moscow). Finally, in agreeing to a treaty without a time limit, arms race stability was also enshrined. Neither the US nor the SU could proceed to develop missile defence technologies and capabilities that would undermine

strategic stability, as modernization was constrained within the basic parameters of the Treaty (thus the importance of the ***narrow versus broad*** interpretation around Strategic Defense Initiative).

Naturally, this is not the only explanation for the negotiation and signing of the ABM Treaty, nor is it for the bilateral arms control regime as a whole or the missile defence deployment decisions of the US and SU. In fact, one can readily debate whether strategic stability was, in fact, that significant for the actors as distinct from the academic community. At the practical level of politics, the actual motives of the US and SU may have been far divorced from strategic stability. Moreover, the idea of stability was an American one, as was the entire idea of arms control. Nonetheless, most important for understanding the current and future utility of the concept of strategic stability, and by default the ABM Treaty and arms control is the presence of a fundamentally hostile adversarial relationship. Stability served as a measure for decisions about strategic forces, and arms control was the means to manage the impact of this class of weapons in order to reduce, if not eliminate, the possibility that strategic weapons alone could or would result in a nuclear war which no one wanted.

The Contemporary Relevance of Strategic Stability Traditionally Defined

Above all else, strategic stability is an ***apolitical*** concept. It is premised upon the existence of a hostile adversarial relationship between two states (also two groups of states) in which the political conditions exist for war. In the absence of this type of relationship, and thus the likelihood of war, strategic stability has no meaning. If no one is contemplating the use of force for whatever political reason, then strategic weapons cannot play an independent role in leading to war. In other words, the end of the Cold War spells the end of strategic stability as a useful concept.

The United States and Russia are certainly not hostile adversaries, and neither are the United States and China. In fact, the only nuclear relationship that meets a level of hostile adversarial relations in which strategic stability would come into play is India-Pakistan. Even here, the conditions for systemic war are largely absent. While an Indo-Pakistani war, in which nuclear weapons were used, would be disastrous for the region, it is highly unlikely that the political conditions exist for its escalation or spread to a systemic level involving all of the major nuclear powers. Regardless, strategic stability may possess utility for the Indo-Pakistani relationship, not least of all because all the preconditions for a stable relationship are absent. In other words, on strategic grounds, this relationship is unstable.

The absence of an hostile adversarial political relationship underpins recent arguments in the US about the irrelevance of the existing bilateral arms control regime (and especially the ABM Treaty), and the political impact of the regime in perpetuating negative (i.e Cold War) relations between the United States and Russia. From a strategic stability perspective, the case for contemporary irrelevance is undeniable. But, the political argument is problematic, because it posits that arms control serves a range of political functions, and its past and future should be understood relative to these political functions (i.e. symbols of the state of relations, indicators of status, diplomatic tools to manipulate). In other words, the case for or against arms control is completely unrelated to strategic stability, unless strategic stability is re-defined to encompass politics.

If one accepts that the political conditions necessary to bring strategic stability into play are absent today, then the issue becomes the future. In a way, this issue is effectively about the broader question of the future of nuclear deterrence, as strategic stability is really about deterrence stability requirements from a force posture perspective. As noted above, strategic stability is one way to answer the question of ***"how much is enough"***. In the past, it could be based upon a variety of variables that would dictate the size and nature of a nation's second strike capabilities. However, today strategic

stability provides little utility in answering this question, because it is really about the level of strategic forces necessary to practice deterrence in the future. In other words, what level of forces in being provided insurance for unforeseen circumstances which create the political situation in which deterrence and strategic stability come into play.

The answer requires one to image the actors, issues, and situations that could lead to a hostile adversarial relationship. It is important to remember that the Cold War condition was not simply a function of two Great (or Super) Powers possessing fundamentally opposed global ideologies. It was also the existence of specific location, the inter-German border and Berlin, in which one could and did image war breaking out. Stability in every sense of its Cold War meaning was informed by this image. Today, however, it is difficult to image the political conditions in which the probability of warwould be high between the US and the other major nuclear powers. With the withdrawal of Russia from Central/Eastern Europe, it is extremely difficult to image where the war would break out. Similarly, it is also difficult to image where war would break out between China and the United States, with the noted exception of Taiwan.

The cases of Russia and China are illustrative of the key stability issue. If one is concerned about stability, defined as a low probability of war between or among nuclear powers, the key issue is diplomatic; understanding what political actions could bring the powers into a direct clash of interests at a specific territorial point. With regard to Russia, NATO enlargement is a case in point. By bringing the alliance to the borders of Russia, one is creating a territorial point for war. In so doing, assuming relations between Moscow and the West become increasingly hostile, strategic stability starts to come into play. Similarly, a decision by Taiwan to seek recognition as an independent, sovereign state supported fully by the US would create the political and territorial context for war, and thus strategic stability would become relevant again.

The prescription is simply to focus upon political or diplomatic stability, so as to avoid creating the conditions in which strategic stability comes into play. This brings one key consideration into play with regard to the implications of missile defence for strategic stability as traditionally understood; the impact of missile defences on a relationship that becomes politically unstable for whatever reason. The answer is twofold. First, it depends upon the missile defence system. Second, it assumes that strategic stability as understood during the Cold War was an overly useful concept.

As noted above, missile defences are not de-stabilizing by definition. In some cases, such as defending strategic forces and command and control centre(s), they serve to stabilize a strategic relationship. Moreover, theater missile defence systems, unless possessed by the US and employed in a strategic role (i.e. boost-phase and/or early mid-course phase from forward-deployed naval or air assets), also appear not to be de-stabilizing, even though a theater missile defence for Israel and Europe, for example, has a strategic function. Regardless, defending one's strategic forces and its command and control centre(s) ensure that an adversary will not escape a devastating retaliatory attack. Moreover, a nation-wide layered defence, à la some SDI (Strategic Defense Initiative) visions, is also not necessarily de-stabilizing, as long as the adversary in the mutual deterrence relationship responds in a manner that maintains its ability to retaliate. In other words, the strategic equilibrium point (mutual vulnerability) receives a shock (large-scale missile defences), and the system responds to return back to its equilibrium. The response is the expansion of an adversary's strategic forces, thus creating a so-called arms race.

However, an arms race in this context is not a negative phenomenon, but rather a positive one. The response returns the system to strategic equilibrium. While one may envision a never-ending action-reaction process, there are naturally constraints or limits on both. It is these constraints that Paul Nitze

spoke of in terms of one deployment criterion for SDI; the offense-defence cost ratio. If the cost of a unit of defence was significantly greater than the cost of a unit of offence to defeat the defence, then investments in defence made no sense. The inverse also holds true as well, and it is this calculation which must be considered in assessing the counter-proliferation utility of missile defences.

Furthermore, an increase in strategic forces in response to a nation-wide US missile defence does not necessarily result in an arms race. One side may act in response to the deployment by increasing its strategic forces, but it does not follow necessarily that the nation deploying missile defences will respond in kind. A nation-wide defence in serving to defend simultaneously cities and land-based strategic forces may be sufficient to negate such a response. If the defence is reasonably capable, a nation can be confident of its ability to retaliate without expanding its strategic forces.

In addition, missile defences if possessed by both parties may be stabilizing and negate requirements to expand strategic forces. If both can effectively defend their retaliatory capabilities against a first strike, neither possesses an incentive to go first, or an incentive to respond to the opponent's missile defence by increasing strategic forces. In fact, one can argue that the Cold War evidence provides support to this argument.

The problem for the relationship between missile defence and strategic stability is a process one. Like one of the arguments associated with deterrence and proliferation, the problem is extensive missile defences for one party in an adversarial relationship, and no defences for the other. If both develop and deploy defences at roughly the same time and with roughly the same capability and coverage, then they become stabilizing and may readily generate less, rather than more strategic offensive forces. In other words, an alternative response to missile defence is missile defence. Problematic, as reflected in Nitze's criterion, is relative cost. States such as Russia and China lack the resources, regardless of their technological capacity, to develop defences as cheaply as offenses largely because the sunk investment costs of offensive ballistic missile and nuclear weapons development have already been absorbed, and thus aren't counted. Once the sunk costs of missile defence development are absorbed, and the technology diffuses internationally, defence may prove cheaper than offense.

If effect, missile defence does not necessarily mean that the only option in response is to expand one's strategic forces. Not only is a defence response possible, but others exist as well, which also serve strategic stability functions. First, as noted above, any response depends upon the nature of the defence. As many observers suggest, current US missile defence plans would be insufficient against not only the existing Russian strategic arsenal, but also a much smaller arsenal, especially in light of Russian penetration aids technology, even without rejecting the START restrictions on multiple warheads. Second, strategic stability can be ensured in the Russian-US and US-China relationship simply as a function of distance. With approximately a thirty to thirty five minute ICBM flight time in the case of the former, adequate early warning ensures that Russia and the US could release their strategic forces in a coordinated manner in response to the launch of a counter-force first strike, even without adopting a launch on warning posture (this would be a launch under attack posture). In this case, US-Russian cooperation on joint early warning is an important stabilizer for the future, and extending the offer to China would also be stabilizing. Third, alternative strategic postures could be adopted. For example, SSBNs could be forward deployed off American coast lines enabling them to launch underneath the missile defence umbrella, although this option carries its own implications for strategic stability.

In effect, the answer as to whether deployed missile defences in the near future will automatically generate strategic instability in the distant future when the political conditions exist is ambiguous. Moreover, whether the answer lies in expanded strategic arsenals, or the proliferation of defences is also

difficult to predict. Regardless, there are two factors that need to be recognized relative to the future utility of the concept of strategic stability as traditionally understood. The first is the difficult question of "***how much is enough***", and why an assured destruction retaliatory capability is defined as enough, even though this capability is not easily specified. Certainly, one warhead is not enough, but then a thousand is way too much. How the political-military leadership of a state answers this question will significantly determine the impact of missile defences on response options, and thus strategic stability. As long they believe that their forces are sufficient, and act to ensure sufficiency, then stability will obtain.

However, if this remains the case, the world will remain one of nuclear weapons and defence and security based upon nuclear deterrence. Unless strategic stability is rejected or re-defined, its utility remains as a measure of deterrence stability grounded upon nuclear weapons and assured destruction. But, missile defences do not necessarily have to be defined relative to strategic or deterrence stability. It is also possible that missile defences lead away from strategic stability and towards the possibility that defences negate the relevance of strategic stability entirely. In so doing, it also means negating deterrence, and potentially eliminating the political value and utility of nuclear weapons. If this is the case, then the standard interpretation of the missile defence – ABM Treaty relationship needs to be re-thought.

Re-conceptualizing Strategic Stability

There are two basic arguments for re-conceptualizing strategic stability. First, it is a concept that has been a central element of the public policy debate on missile defence and the ABM Treaty, and used repeatedly by senior government officials. As such, it would be difficult simply to drop the concept entirely, and politically problematic to suggest suddenly that it is has no meaning in the current international security environment. Second, strategic stability has already been implicitly re-conceptualized. Although there has been no formal specification of its new meaning, the context in which the concept is used, and thus linked to a series of outcomes that are predicted to follow if the ABM Treaty collapses, provides a nascent new conceptualization. Furthermore, in piecing together its new meaning, it is also possible to provide a brief analysis of the implicit new meaning ascribed to strategic stability.

Piecing together the new meaning of strategic stability begins with two assumptions. First, the US proceeds with the test programmes of its multi-faceted missile defence programme, and subsequently deploys a limited operational missile defence system for North America, which includes, *inter alia*, a ground-based component that violates the ABM Treaty. Second, sometime during this process, the US, having failed to reach an agreement with Russia on amending the ABM Treaty, provides six months notice of withdrawal, and subsequently withdraws, leaving the Treaty null and void. As a result, ***the*** or ***a cornerstone*** of strategic stability disappears.

It is important to differentiate between the treatment of the ABM Treaty as ***the*** and ***a cornerstone***. The former implies that strategic stability no longer exists in the absence of the Treaty; the system by definition is now an unstable one. The latter implies that stability may still exist, because other components of strategic stability remain in place. It is possible to identify four other cornerstones, which apparently will all fall like a line of dominos. The first is the Strategic Arms Reduction Treaties (Talks)– START. Russia has made it fairly clear that if the US abandons ABM, it will abandon START, bringing to an end the entire bilateral arms control process inherited from the Cold War.

The end of this process coincides with the build-up of strategic nuclear forces on the part of Russia and China, thereby ending the process of nuclear reductions – the second additional cornerstone. Russia has made it clear that its response will be to increase its strategic warheads and MIRV its strategic launchers. Similarly, China has also made it clear that its response would be a dramatic increase in its

strategic arsenal. From this follows the collapse of the next cornerstone. With the major nuclear powers having failed to meet their obligations under Article VI, adherents to the Non-Proliferation Treaty (NPT) begin to withdraw, leading to the collapse of the Treaty. With the bilateral arms control process destroyed, two of the major nuclear powers increasing their strategic arsenals, and the NPT in ruins, the final cornerstone, the remnants of the remaining components of the multilateral non-proliferationregime, disintegrate as well.

Thus, the interpretation of the missile defence-ABM Treaty as ***a*** cornerstone sets in motion a process resulting in a strategically unstable world. From ***the*** interpretation, the process set in motion is equivalent to instability. In either case, however, the meaning of strategic stability is no longer the **apolitical** Cold War idea of a condition of invulnerable assured destruction second strike forces within an environment of political hostility. Instead, the new meaning of strategic stability is political. It is still about strategic weapon systems (warheads and delivery systems) and arms control/non-proliferation designed to manage them. But, it is also about their causal impact on the state of global relations.

In one sense, stability becomes defined as the absence of the political conditions, which increase the likelihood of systemic war. In so doing, their absence is directly related to the existence of a web of international (bilateral and multilateral) agreements managing weapons, strategic and otherwise. In effect, the stable equilibrium point for the strategic system is this web of international agreements, which is synonymous with a low probability of major war. Thus, instability is either conceived as the death of one vital arms control agreement, signaling movement away from the equilibrium point, or the process whose end result is significant instability. In both cases, the net result is a much more dangerous world.

Central to this view of strategic stability is the prospects for nuclear disarmament. If one focuses directly upon this as key to the re-definition, strategic stability has truly been turned on its head. In addition, the role and function of arms control has also significantly changed, relative to strategic stability. Traditionally, the purpose of arms control in maintaining strategic stability, and thus international security, was to manage and codify the ***balance of nuclear terror***. It had nothing to do with nuclear disarmament. In fact, its function was to perpetuate international security based upon deterrence stability reflected in the condition of mutual assured destruction. In the new conceptualization, arms control is part of a process towards the ultimate goal of nuclear disarmament.

The new meaning reflects a longstanding debate about the relationship between weapons, agreements and political relations, as reflected in the aforementioned alternative views of the role and function of arms control. Arms related agreements are conceptualized not as independent of politics per se, but as an independent causal agent that directly affects the state of political relations– the confidence-building idea. They are much more than just indicators or symbols, as suggested in the idea of the arms control paradox (i.e. when you need arms control because hostility is great, you can't get it, and when you don't need arms control because relations are relatively good, you can get all you want and more).

The causal relationship between weapons and the state of political relations within a redefined strategic stability concept basically represents the belief that military capabilities are the best indicator of intent. Developing and deploying missile defences indicates that a state is expecting that a relationship will become politically unstable, and is preparing a military strategy to deal with it, or at least this is how the action is perceived by others. For example, missile defences are being prepared for that time in which the US and China become hostile political adversaries. Thus, missile defences feed into a specific set of beliefs or expectations about one possible future, and in so doing, the outcome, as confirmed by missile defence, becomes a self-fulfilling prophecy. Missile defence is not the single cause ofpolitical instability. It confirms the likelihood of one possible future over another.

The counter is a relatively straightforward one; weapons don't cause war. War, or the drift towards political instability is a product of political factors, and weapons are a response. In other words, missile defence has no causal relationship with political instability, because instability would result regardless.

There is a third argument, which is largely ignored in this debate. Rather than causing instability, missile defences may contribute to it. In this sense, missile defence is part of a much bigger picture; a component of the so-called Revolution in Military Affairs (RMA) driven by the US. Its purpose is to maintain, if not increase, American military superiority. In so doing, potential world powers will be reluctant to challenge the US, thus creating political stability. As long as the US cannot be challenged realistically, the system is likely to remain relatively stable, and if missile defence contributes to its lead, and further reduces incentives to challenge the US, potential crises may be managed before they begin.

The stabilizing argument also implicitly underpins the case for missile defence as a response to the proliferation of weapons of mass destruction and long-range ballistic missiles among so-called rogue states. Proliferation may be conceptualized as the answer to US military superiority when combined with the absence of an offsetting strategic political competitor to the US (i.e. the SU in theCold War). Nuclear weapons, married to ballistic missiles, are the great equalizer. In so doing, it provides these states with a capability to deter US intervention. As a result, these states also acquire the capability to use their strategic forces for a range of regional political purposes. In other words, unless these weapons are checked, one regional outcome is increased instability, as a function of the US and others being unwilling to risk the costs of intervention; a condition likely if western elites truly believe that these states are undeterrable.

In other words, missile defence undermines the payoff of acquiring nuclear weapons by negating their delivery systems. In so doing, these weapons no longer are equalizers. The gap between the US and these states remains in place, and this gap spills over to promote local and regional stability. No one is likely to entertain or engage in war, *ceteris parabus*, because the US possesses no fundamental obstacle to its intervention. Incentives to acquire nuclear weapons and ballistic missiles significantly decline, because there is little payoff. The status quo regionally is frozen. In addition, missile defences emerge not as a factor driving nuclear proliferation horizontally (even though it may or may not vertically), but rather as a factor supporting non-proliferation, and thus ironically the cause of nuclear disarmament.

If one accepts this view, it can also be extended to some degree into the larger disarmament context. Even though most believe that missile defence leads to vertical proliferation, it is also possible to argue that missile defence may also support the process towards nuclear disarmament. If strategic stability is defined relative to the prospects for disarmament, missile defence may be key. Defence, in this context, is conceived as an alternative strategy to deterrence. Effective defences, especially if they disseminate among all the nuclear powers, can support deeper and deeper reductions. The logic of defence as a means to escape from nuclear deterrence is relatively straightforward.

Recognizing that nuclear weapons cannot be disinvented, the existing knowledge is problematic for reductions as they move closer to zero. In a world of thousands of nuclear weapons, adding ten or so more that violate the limits set out in a Treaty has little actual impact. However, in a world of few or none, based upon an agreement, acquiring ten or one has great significance. Cheating has potentially great payoffs. Missile defences act as a hedge, by eliminating the payoffs. Of course, this perspective on the relationship between missile defence and nuclear disarmament is much more complicated than space

allows for discussion here. Nonetheless, the disarmament component of strategic stability re-defined provides an alternative way to understand missile defence. It is stabilizing, rather than de-stabilizing.

Alongside these elements related to strategic stability re-defined resides the issue of the linear process that will be set in motion by the collapse of ABM. In this context, an agreement between Russia and the US to amend the Treaty is all that is important. In contrast to the traditional meaning of strategic stability, where the intent of the Treaty is arguably more important than the letter, neither intent nor letter is relevant. The details of a revised Treaty are irrelevant. Agreement is all that counts, because it is either evidence of stability, or of a process that does not lead to instability. Russia does not walk away from START, the NPT holds, and the arms control/non-proliferation regime remains viable.

Of course, this places China's response as irrelevant, which is somewhat problematic. Moreover, the outcome is not necessarily irrelevant either. If the amendments are a setback for nuclear disarmament, such as allowing for MIRVing, this could be interpreted as unstable according to the new definition, if one emphasizes the nuclear disarmament element. In a way, this is the heart of the dilemma within the new definition. Is it the political element alone, or the political element if, and only if it is consistent with disarmament? That is, one can have a stable strategic world in which the bilateral/multilateral process of arms control/non-proliferation remains in place, but stability continues to rest upon nuclear weapons. One could also see a stable a world where the process remains in place, but nuclear weapons decline in relevance to stability. Also, one could have an unstable world in both situations.

Assuming that Russia refuses to amend the ABM Treaty, it is also not necessarily the case that the linear process will take place. It is highly likely that in this scenario, the US will also announce that it is unilaterally cutting its strategic forces by a significant amount. From the new meaning of strategic stability, this unilateral decision is apparently de-stabilizing, because stability also demands a bilateral and/or multilateral process. Yet, the unilateral reduction is also evidence of the US meeting its commitment to the NPT. In fact, if the ultimate goal of US strategic plans is to marginalize nuclear weapons and nuclear deterrence by developing and deploying missile defences, then a significant problem for the linear process related to strategic stability arises. The ultimate goal of the US is consistent with the nuclear disarmament component of stability, but it is not done through a bilateral or multilateral process. Does its unilateral nature by definition make it de-stabilizing, or does it create a political environment in which neither Russia, China, nor any of the other nuclear powers can politically afford to be seen as expanding their strategic forces, and thus generates conditions for a new arms control process? If one accepts the former, it is a triumph of process over substance. If one accepts the latter, the collapse of the ABM Treaty does not necessarily lead down the linear path to strategic instability.

In other words, there are a host of unpredictable factors that have to be considered in asserting that the collapse of the ABM Treaty will lead to strategic instability defined as ***hostile political relations, the collapse of the bi/multilateral arms control/non-proliferation process, and the end of prospects for nuclear disarmament***. At the heart is the linkage between the strategic arms builds up of Russia and China and the collapse of the NPT. In response to the US withdrawal from ABM and deployment of a limited missile defence, the actual Russian and Chinese response will be driven by a host of internal and external considerations. For example, both will have to calculate the political fallout of their response on other key aspects of their relationship with the US (political and economic) relative to the response of other states.

Regardless, the assumption that the expansion of Russian and Chinese strategic forces will deal a death blow to the non-proliferation regime in general, and the NPT in particular is difficult to sustain. It assumes that non-nuclear adherents to the NPT signed only because of the commitment by the nuclear

powers to eventual disarmament. Yet, the logic of the NPT, notwithstanding its roots in a US-Soviet Union deal, is derived from the security dilemma argument. In a state of anarchy, every state sees itself as inherently peaceful, and arms to defend itself in an uncertain world. Arming, however, creates fear on the part of other states (neighbours), leading the others to arm as well. The process is an action-reaction one, in which the search for security creates insecurity for all.

The NPT can be understood as a means to deal with this dilemma. States legally commit themselves not to acquire nuclear weapons, and in so doing seek to re-assure their neighbours. If everyone in the neighbourhood signs on, then one motive for acquiring nuclear weapons, fear, disappears. This is not to suggest that any or all of the non-nuclear weapons states had or have any intention to acquire nuclear weapons. Rather, states without the intention could avoid being driven into acquiring nuclear weapons out of fear of what others might do.

If one considers this logic to be central to the NPT, it also holds for the entire multi-dimensional, multilateral non-proliferation regime, and the bilateral arms control one as well. Self-interest drives states to sign on to such agreements, and self-interest will determine whether or not they remain adherents to the agreements and the process. Moreover, self-interest is largely a product of the local or regional security environment, rather than the global environment, with the exception of the only global power – the US. In this context, it is difficult to see how the loss of ABM will result in the linear process leading to global strategic instability. Moreover, it is also difficult to see how this process would affect the supply-side components of the international regime.

However, this redefinition of strategic stability as related to the existing arms management (arms control and non-proliferation) regime may actually be about the fundamental nature of international politics today and into the future. It is not missile defence or the ABM Treaty that is important to stability per se, but rather the slow evolutionary development of a system of relations characterized by multilateralism and cooperation, rather than unilateralism and competition.

THE FUTURE OF STRATEGIC STABILITY AND NUCLEAR DETERRENCE THEORY

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Strategic Stability is a catch-all phrase used by scholars and practitioners to describe a set of interrelated concepts (e.g. mutually assured destruction), theories (e.g., nuclear deterrence), policies (e.g., massive retaliation; flexible response; no-first-use) and treaties (Anti-Ballistic Missile Treaty), all designed during the Cold War for one purpose -- to prevent a nuclear exchange between the US and Russia and stabilise the longest nuclear rivalry in history. The key was to balance strategic forces such that each side had the capability to survive a pre-emptive nuclear attack with sufficient weapons to launch a retaliatory strike. The logic underlying strategic stability was (and remains) elegant and persuasive-- as long as the retaliatory (second) strike threatened sufficient devastation there would be no rational reason to launch first.

Policymakers throughout the Cold War were preoccupied with three central questions: What deters? How much is enough? And what do you do if deterrence fails? The enormous appeal of nuclear deterrence theory was its simple (and impeccable) logic that provided straightforward answers to these questions and guidelines for how to achieve deterrence stability. To work well, according to the theory, the balance of strategic forces had to promise '*crisis stability*' so that there would be no advantage to either side of escalating violence in a crisis; '*arms race stability*' to minimise incentives to build more weapons; and '*survivability*' to maximise second-strike potential and '*mutual vulnerability*'.

Although the perfect balance of air, land and sea-launched strategic missiles was never entirely clear there was one principle to which both sides adhered -- national missile defence systems were to be prohibited. In the context of a highly charged and competitive Cold War environment defence systems would be provocative, destabilising and exceedingly dangerous. They would undermine crisis stability by increasing pressure in a conflict to pre-empt in order to overwhelm the opponent's defences, jeopardise mutual vulnerability by making an opponent's second-strike less threatening (and a first-strike less costly and more rational), and would create enormous incentives for vertical proliferation.

Strategic Stability in Transition: Continuity and Change

Although the Cold War officially ended over a decade ago we are only now experiencing the effects of a transition from one nuclear environment to another.[1] The transition is producing a paradigm shift in how we view the dominant nuclear relationship between the U.S. and Russia, the evolving nuclear relationship with China, and emerging nuclear relationships with new and aspiring proliferants.

The reason why adjustments in nuclear strategies have been relatively slow is because transitions, by definition, encompass both 'continuity' and 'change', with features of the old and new nuclear environments interacting simultaneously. This explains why it is so difficult to resolve policy debates about the future of strategic stability -- both sides are right and wrong about some things, and both sides

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[1] See Colin S. Gray (1999) The Second Nuclear Age. New York: Lynne Rienner Publishers; and Keith B. Payne (1996) Deterrence in the Second Nuclear Age. Lexington: University Press of Kentucky.

can produce evidence to support some of their core arguments. The result is a collection of mutually exclusive conclusions that bipolar strategic stability is relevant and irrelevant; nuclear deterrence theory is valid and invalid; mutually assured destruction is appropriate and inappropriate; the ABM Treaty is essential and obsolete; and National Missile Defence is stabilizing and destabilizing.

The position one takes on each of these debates depends almost exclusively on ones perceptions of ***change***, particularly with respect to the dominant nuclear rivalry. And perceptions of change in turn depend on wether one focusses on ***numbers*** or ***relationships.*** Those who claim that very little has changed since the end of the Cold War tend to focus on existing numbers of nuclear weapons and the current balance of air, land and sea-launched nuclear forces in the US and Russian arsenals. Those who believe the system has undergone fundamental and permamnent change are more likely to focus on the constantly improving relationship between the U.S. and Russia, and deterioriting relations between the U.S. and new (or emerging) proliferants. The relevant question at the heart of debates over the future of startegic stability, therefore, is whether 'numbers' determine the health and stability of a nuclear relationship, or whether the health of a nuclear relationship determines the relevance and stability of numbers.

Continuity and the Stability of Numbers

Proponents of the continuity thesis argue that as long as there are large numbers of nuclear weapons, and as long as abolition is excluded as a serious policy option, the U.S. and Russia will maintain 'military sufficiency' to render enemy nuclear forces ineffective, and to extend deterrence to allies. Since nuclear deterrence stability is a property of the balance in nuclear weapons, Cold War or no Cold War, the number of existing weapons will remain important to strategic decisions made by both sides. By extension, mutual deterrence and traditional approaches to bipolar strategic stability will (and should) continue to be a defining characteristic of the international system.

If one focuses on numbers and assumes that the 'nuclear balance' has a logic and force of its own, then the level of conflict and co-operation between nuclear rivals will always depend on that logical imperative. In other words, the health and stability of a nuclear rivalry is a function of that balance.[2] If true, then the thousands of Russian nuclear weapons and materials that continue to exist are still the main threat to U.S. survival today. Therefore, protecting the 'balance' is crucial and, by implication, the ABM Treaty and associated MAD doctrine remain essential to U.S. security.[3]

Those who focus on numbers are also more inclined to be critical of NMD and to reject any move that undermines the rigid and well defined requirements of traditional, bipolar strategic stability. And all point to the devastating consequences of an 'imbalance' caused by withdrawal from the ABM Treaty and MAD via deployment of NMD. If the balance is not protected the relationship deteriorates.

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2 Scott Peterson (2001) "US grand plan proves hard sell Yesterday, Russia rebuffed a Bush proposal that would lift barrier against US national missile shield." The Christian Science Monitor (August 14, 2001).

3 See John Rhinelander (November 5, 1999) "ABM Treaty - Anachronism or Cornerstone?" Presentation to U.S. Senate Staff Hosted by Council for a Liveable World. Visit: http://www.nyu.edu/globalbeat/nuclear/Isaacs121799.html.

Change and the Stability of Relationships

But deterrence is not, and perhaps never really was, about numbers -- it has always been about relationships.[4] Current levels of nuclear weapons are not the determining feature of the US-Russia strategic relationship -- they are the legacy of Cold War hostility.[5] The degree to which numbers matter depends entirely on whether the relationship is stable. And stability depends not on the balance of numbers, but on the balance of incentives to co-operate -- low numbers of nuclear weapons are dangerous under the wrong conditions, high numbers are stabilizing under the right conditions, and high or low numbers are potentially irrelevant under changing conditions. One needs look no further than U.S.-UK-France relations to appreciate the irrelevance of nuclear numbers under the right conditions. Notwithstanding the fact that U.S. has a first-strike advantage over the UK and France, and that deployment of a U.S. NMD system would further undermine the deterrent value of British and French nuclear forces, this concern is irrelevant to the point of being absurd and does not even enter the consciousness of European officials, for obvious reasons -- their relationship renders such calculations meaningless.

This is not to suggest that U.S. relations with Russia are as stable as those with European allies, but to the extent that the post Cold-War relationship continues to improve the relevance of numbers will continue to diminish. Expanding levels of economic co-operation, interdependence and, in Russia's case, vulnerability have created an environment in which large scale conflict involving these major powers is becoming increasingly remote and, for many reasons, obsolete. Economic and trade relationships are far more useful than military competition when predicting interactions between these two states, and there is no compelling reason to expect this to change. Indeed, Russian officials are now more inclined to define strategic stability in terms of assured economic viability, not assured destruction.[6] Survival of the Russian state depends less on the balance of nuclear forces and more on the Russian economy and foreign investment from the U.S., Europe and Asian.

O'Hanlon and Lindsey are correct that claims about a new strategic climate can be pushed a little too far. As they point out, "although Russia and the United States have better relations, they are not allies. Substantial suspicion still marks the relationship -- witness the tensions over NATO's 1999 war against Serbia and Russia's ongoing war against Chechen rebels."[7] But the tensions associated with these contemporary crisis can not compare to the stress experienced during their many Cold War crises.

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4 For an excellent account of the importance of relationships, please refer to "A Post-Cold War Nuclear Strategy Model -- Introduction: Framing the Question": http://www.usafa.af.mil/inss/ocp20.htm".

5 See Wolfgang K.H. Panofsky (1997) "The Remaining Unique Role of Nuclear Weapons in Post-Cold War Deterrence," Chapter 7 in Post Cold-War Conflict Deterrence. Washington, D.C.

6 As Under Secretary of State Grossman noted, "What we are saying to anybody who will listen is that the world of 2001 is not the world of 1972. We have got some threats out there that we have to deal with. These are issues that are worth consulting about, are worth pursuing and are worth our investment of time, energy and resources. There will always be critics. That's fine, that's what democracies are all about, but we have to answer these questions. As I told the Minister today, we have a job to do with the public in Europe and the United States, but we believe that if we can have a conversation with people through the media or directly about the needs of strategic stability in the future so that people will see the logic of this comprehensive approach. The technology will follow." – Visit: http://www.state.gov/t/ac/rls/rm/index.cfm?docid=2889

7 James M. Lindsay and Michael E. O'Hanlon (2001) Defending America The Case for Limited National Missile Defense. Washington: The Brookings Institute.

Like Russia, China is also fully (and constructively) engaged with the U.S. in an international economic system that is extremely beneficial to both sides. There are powerful incentives to ensure the relationship remains stable and to prevent crises from escalating out of control (for example: the U.S Navy EP-3 spy plane incident in 2001). The reality of U.S.-China and U.S.-Russia relations illustrate the enormous pressures to co-operate in order to peacefully resolve crises as quickly as possible. In contrast, U.S. relations with new and aspiring nuclear powers are unstable, unpredictable and far less manageable, because the balance of incentives does not yet favour co-operation.

Even if claims regarding improved U.S. relations with Russia and China are exaggerated, and even if both decide to expand their arsenals in response to U.S. NMD deployment, the issue for U.S. policy makers will always be one of comparative risks. If China doubles or triples the number of ICBMs in its nuclear arsenal over the next ten to fifteen (for whatever reason), or deploys MIRV technology, the security risks associated with that kind of proliferation will always be less significant to U.S. decision-makers than the risks of even one nuclear weapon being deployed by Iraq, North Korea, Iran or any other 'state of concern'. When it comes to comparing risks, Russian or Chinese proliferation is easier to deal with and certainly less threatening. This explains why the Bush administration will likely withdraw objections to Chinese plans to modernize its nuclear force -- a relatively minor concession considering that Chinese modernization is inevitable regardless of U.S. NMD deployment.[8]

Economic interdependence and mutual vulnerability associated with trade and financial markets will increasingly emerge as the dominant force in relations between major powers, including major nuclear powers.[9] Consistent with expectations derived from an expanding web of interdependencies and vulnerabilities, we can expect ongoing improvements in co-operative relations between East and West--any other outcome makes no rational sense for either side. As such, there is very little need for large numbers of nuclear weapons to stabilize these relationships, and to the extent that large numbers of weapons exist at all they are likely to become increasingly meaningless.[10]

Two important implications flow from these trends. First, the U.S.-Russian relationship will continue to evolve throughout this transition. Although it will be characterized by ebbs and flows in the level of co-operation and conflict, the threshold for escalation of U.S.-Russia military security crises is significantly higher today than it has ever been, and it is likely to become higher in the future. There is no conceivable scenario that would reproduce a Cold War crisis today or in the foreseeable future.

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8 For a detailed discussion of the many reasons China will modernize their nuclear program regardless of U.S. NMD deployment, please see Frank P. Harvey "National Missile Defence Revisited, Again: A Response to David Mutimer." International Journal (July 2001); "Proliferation, Rogue-State Threats and National Missile Defence: Assessing European Concerns and Interests". Canadian Military Journal (Winter, vol. 1:4, pp. 69-79); "The International Politics of National Missile Defense: A Response to The Critics."

9 Robert Keohane and Joseph Nye (1977) Power and Interdependence: World Politics in Transition. Boston: Little, Brown. (2nd ed., 1989.). See also Robert Keohane and Robert Axelrod (1985) "Achieving Cooperation under Anarchy: Strategies and Institutions." World Politics Vol. 38: pp. 226-254; Robert Keohane (1989) International Institutions and State Power: Essays in International Relations Theory. Boulder: Westview; Robert Keohane (1993) "Institutionalist Theory and the Realist Challenge after the Cold War," in David Baldwin's Neorealism and Neoliberalism: The Contemporary Debate (ed.) New York: Columbia University Press.

10 John Mueller (1989) Retreat from Doomsday: The Obsolescence of Major War. New York: Basic Books.

Second, policies that would have been provocative and dangerous during the Cold War are now conceivable. There is no reason today to expect simultaneous (or unilateral) reduction of offensive weapons and increased expenditures on defence weapons to be destabilizing. The reason is obvious -- there are no credible scenarios remaining that would realistically take us to the brink of a contemporary (or future) crisis in which American officials would consider a pre-emptive first strike against Russia and/or China -- even assuming the United States develops and perfects a shield capable of destroying every single missile, decoy and countermeasure Russia and China would launch in retaliation. In other words, the probability of a crisis provoking a pre-emptive first strike is virtually zero today. Russia and China are not likely to do something that would give the United States reason to contemplate nuclear use, and the U.S. has no rational incentive to pursue a course of action that would provoke a nuclear response from China or Russia.

Interpreting Russia's Response to NMD

Of course, statements from Russian officials on NMD are rarely conciliatory and occasionally quite threatening. But warnings about the negative impact of NMD, and Russian opposition more generally, should be understood in their appropriate context.[11] There is nothing particularly earth shattering about Russia's preferences here - they will always oppose (explicitly or implicitly) any and decision by the United States to deploy advanced defensive and/or offensive system, under any circumstance. This is to be expected, even if the system in question does nothing to undermine the logic of mutually assured destruction or the foundation of bilateral strategic stability. Russian officials can be expected to play on those fears, regardless of the impact of NMD on the stability of their deterrent capability.

But political rhetoric is distinct from political reality. With respect to rhetoric, Russian officials are playing to a domestic, international and American audience and have an interest in perpetuating the myth of Russian superpower status. The status quo provides Moscow "with a sense of lingering prestige, and equality with the United States...a cherished vestige of the days when Moscow was America's peer."[12] In reality, Russia's preferences have less to do with serious concerns about strategic stability and more to do with gaining bargaining leverage over Washington on several issues, including NMD architecture.

Officials in Moscow know that NMD will go forward regardless of their preferences. They also know that Washington is not concerned about Russian or Chinese threats of proliferation, for reasons outlined above. Given the inevitability of NMD, Russian officials are left with four options. They can reject any effort by the US to deploy defence systems or revise the ABM treaty. Aside from modest levels of diplomatic support, which will likely diminish as more European leaders accept the reality of NMD, this option is not particularly appealing. Deploying NMD in the face of Moscow's protests would provide

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11 For a more description of the Russian position on these issues, please see http://www.armscontrol.ru/start/publications/kapralov020601.htm and http://www.acronym.org.uk/44abm.htm

12 Keith B. Payne, Yuri Chkanikov and Andrei Shoumikhin (2000) "A 'Grand Compromise' With Russia on National Missile Defense?" Defense News (May 8). National Institute for Public Policy. As the authors go onto to argue that "the ABM Treaty is considered valuable not because Moscow actually views the treaty itself as strategically significant, but because it now provides significant leverage over Washington."

further proof of Russia's declining influence and signal the end of its status as a superpower worthy of consideration.

The more appealing alternative is for Russian leaders to engage the US (as an equal) by agreeing to ABM amendments and by pushing their own preferences in this regard. The key for Russian diplomats is to strike the optimum balance that maintains the core of the ABM treaty (and bipolar strategic stability) but allows for more robust NMD testing and development of a limited defence. Negotiations over verification, monitoring, and intelligence sharing and other confidence building measures would follow, but not in the context of codified rules and regulations common to traditional arms control negotiations.

A third option is a mix of the first two. Russia could reject U.S. requests for major revisions to the Treaty, but at the same time interpret U.S. testing and deployment decisions asacceptable and consistent with the spirit of ABM limitations. In other words, the current NMD plans do not violate the ABM Treaty as long as Moscow and Washington agree they don't. The fourth, and least appealing alternative for Russian leaders is to let the ABM Treaty die. This addresses none of Russia's concerns about status and excludes Moscow from the bargaining process, amounting to a carte blanche for U.S. NMD testing and deployment.

The Multiple Futures of Strategic Stability: from Simplicity to Complexity

Having made the case that deterrence is about relationships, not numbers, and having established that the relationship between the U.S. and Russia has changed (and continues to evolve and improve) in fundamental and irreversible ways, the question remains: how should the concept of mutual nuclear deterrence and strategic stability be modified from its bilateral meaning in order to address the problem of deterring potential proliferators?

What strategic stability means in 2002 is significantly different from what it meant in 1972, and it will be significantly different in 2032. Any policy that refuses to acknowledge the need for change is, by definition, short-sited and dangerous.

During the Cold War the logic of strategic stability dictated that responsible, rational leaders would refrain from hostilities if the survival of their nation and leadership, or their capacity to fight and win wars, was threatened.[13] Deterrence in the context of bipolar nuclear rivalry was relatively straightforward, because the dominant relationship was simple -- one enemy, one threat, one strategy. But if deterrence is primarily about 'relationships', then as old threats diminish, as new threats emerge, and as bipolarity collapses under the weight of a multipolar pressures, a complex mix of strategies will be needed to address new and evolving relationships.

There are three important implications that follow from this observation. First, as Paul H. Nitze and J.H. McCall observe, "we can no longer construct a security strategy and policy around the belief that sheer numbers and firepower will deter aggression generally; we must create better, more specific, focused policies and strategies with better technology for the job.... Post-Cold War deterrence will

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13 Wolfgang K.H. Panofsky (1997) "The Remaining Unique Role of Nuclear Weapons in Post-Cold War Deterrence".Appendix D in Post Cold-War Conflict Deterrence. Naval Studies Board Commission on Physical Sciences, Mathematics, and Applications, National Research Council, National Academy Press, Washington, D.C., available at http://www.nap.edu/html/pcw/index.html

require creating forces that can offer a credible deterrent on these new terms."[14] This does not mean that the logic of bipolar strategic stability (BSS) is obsolete, only that the relevance of policies derived from that logic is diminishing as new friendships and rivalries emerge. For instance, BSS is becoming less relevant for US-Russia relations, but more relevant for bilateral relations between U.S.-China, India-Pakistan and Israel-Syria. Again, the relevance and utility of strategic stability and nuclear deterrence must be viewed in terms of multiple relationships.[15] The requirements for deterrence stability are becoming increasingly complex and will require flexible approaches -- there is no longer one but multiple versions of strategic stability.[16]

Second, combined with the fact that the number of nuclear deterrence relationships will multiply, these relationships are also becoming more interdependent and inter-linked, so decisions and strategies in one setting will increasingly affect the stability of other relationships (positively and/or negatively). For example, among the many concerns expressed by European leaders is that amendments to the ABM treaty could pave the way for a Russian NMD, which in turn would undermine the deterrent value of European strategic forces.

Third, future deterrence strategies must be able to discriminate between opponents and tailor deterrent threats in more select, context specific ways. The clearest expression of this approach was outlined in a 1988 report, perhaps the best statement of how deterrence will change in a post-Cold War setting.[17] ***Discriminate deterrence*** focuses on the realities of asymmetric threats and recommends emphasis on a range of contingencies that go beyond the two extreme threats that have always dominated force planning -- i.e., a Warsaw Pact attack on Central Europe and a pre-emptive nuclear attack by Russia. The point to discriminate deterrence is that the conditions required for deterrence success in the past (credibility, commitment, resolve and the capability to inflict unacceptable damage) are less likely to work for future threats involving states with no proven channels of communications, no shared assumptions about crisis management, few cultural similarities, and no economic incentives to guide preferences. In the future, threats will need to be tailored to specific opponents and to specific acts.

Of course, if deterrence success in the future depends on the capacity to become actor and situation specific, then maintaining a deterrence system based solely on the logic of mutual vulnerability and

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14 Paul H. Nitze and J.H. McCall (1997) "Contemporary Strategic Deterrence and Precision-Guided Munitions." Appendix B in Post Cold-War Conflict Deterrence.op cit.

15 Andrew J. Goodpaster, C. Richard Nelson and Seymour J. Deitchman Deitchman (1997) "Deterrence: An Overview." Chapter 1 in Post Cold-War Conflict Deterrence.op. cit.. According to the authors, "devising relationships with many of these power centers remains a dynamic and changeable process. The problem of deterrence is thus more complex than it was, and the approaches to situations requiring deterrent actions must be even more measured and flexible."

16 "Developing appropriate deterrence capabilities. Policy makers must carefully determine just what combination of deterrence capabilities—the visible and demonstrable power to punish serious violations of the norms of international behaviour, deny success to aggression, impose heavy costs and losses on the aggressor—should be created and sustained to provide a high likelihood of deterrence against a wide variety of potential threats and risks" -- Ibid: Andrew J. Goodpaster, C. Richard Nelson and Seymour J. Deitchman Deitchman (1997).

17 Fred Ikle, Albert Wohlstetter, Henry Kissinger et al. (1988) Discriminate Deterrence: Report of the Commission on Integrated Long-Term Strategy. Washington, D.C.: Dept. of Defense US Gov't printing office -- cited in James Dougherty and Robert Pfaltzgraff (eds.) Contending Theories of International Relations (New York: Longman, 2001; 5th edition) pp. 374-386.

bipolar strategic stability is likely to become exceedingly dangerous. This is precisely the predicament the U.S. faces if it continues to be confined by the ABM treaty and MAD.

Fourth, with respect to 'how much is enough', future U.S. and Russian force requirements will be more difficult to estimate as the system becomes more complex. In the past, a truly meaningful assessment of the numbers required for strategic stability focused on several interdependent variables[18] These considerations will remain central to nuclear force planning in the future, but it will become increasingly difficult to make accurate estimates of each variable, for each opponent across a complex set of scenarios. A definitive account of appropriate numbers applicable for all relationships will be virtually impossible. The propensity to err on the side of caution, therefore, will result in deployment of more rather than fewer weapons -- another reason why abolition will never be a serious policy option.

The Future of Arms Control and Disarmament: Codification vs Co-ordination

Bipolar nuclear deterrence is no longer sufficient to accommodate changing circumstances, but it is not the only policy ripe for modification. Similar challenges apply to dominant approaches to non-proliferation, arms control and disarmament (NACD), namely: *prevention, transparency, verification, monitoring, import/export controls, pre-emption, conventional deterrence, diplomacy* (e.g., constructive engagement) and *codification*.

There are three general problems with these policy alternatives: a) they failed throughout the Cold War to prevent the spread of nuclear and ballistic missile technology; b) they are incapable of providing sufficient levels of security to render nuclear weapons obsolete; and c) they are insufficient (and inappropriate) to address current and future security threats. Yet, notwithstanding the need for change, the arms control and disarmament community continues to defend status quo policies as if they represent the only legitimate options. Several problems with each approach will be described below.

Prevention

Consider for a moment the following list of NACD failures: the inability to enter into force of START II; the lack of serious negotiations on START III; re-affirmation by major powers of the need for nuclear weapons (e.g., NATO's New Strategic Doctrine, U.S. Presidential Directive 60, Russia's revised nuclear policy); refusal by Russian, American and European (NATO) officials to reject a relatively straightforward commitment to "no-first-use"; the persistence of tactical nuclear weapons and their inclusion in nuclear force planning doctrine; South Asian nuclear tests and subsequent decisions by Western powers to lift economic sanctions against India and Pakistan; the impending demise of the Comprehensive Test Ban and Anti Ballistic Missile Treaties; proliferation of weapons technology to outer

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[18] Consider a few of the variables central to a typical force posture review -- ***a.*** characteristics of specific adversaries are essential for determining locations, types, and number of targets; ***b.*** targeting strategies determine the extent to which counter-value or counter-force targeting will be used (counter-force strategies require more targets); ***c.*** survivability and vulnerability vary from context to context and dictate whether multiple platforms or basing modes will be required to counter surprise attacks; ***d.*** both active (NMD/BMD) and passive (mobility, dispersal, redundancy, deception, concealment, hardening, etc.) remain important, but will vary from case to case; ***e.*** intelligence about targets also affects the size of an arsenal (less intelligence means more targets), but intelligence gathering becomes more difficult as the number of rivals proliferates; ***f.*** pre-launch survivability, system reliability, penetration capability, delivery accuracy, etc. all have an impact on numbers (e.g., the more reliable these systems, the fewer weapons required) and all will vary from case to case.

space; the failure of the Non-proliferation Treaty (NPT) to stop signatories and non-signatories from spreading and acquiring nuclear material and weapons technology.

Proponent of arms control will argue that the NACD regime has successfully slowed the pace of proliferation and that a more relevant measure of effectiveness is the number of nuclear weapons states in the world today. There were five when the NPT was signed in 1968, there are now seven with India and Pakistan, and eleven if the undeclared states (Israel) and aspiring nuclear powers (Iraq, Iran, and North Korea) are included. The expectation when the NPT was negotiated was that there would be far more nuclear weapon states, so the treaty and NACD regime it inspired should be considered an overwhelming success.

But most non-nuclear states are uninterested in acquiring nuclear weapons, simply because they provide no added security or because security guarantees from allies are more than sufficient (as is the case with Canada). The success of the NACD regime must be measured in terms of how many aspiring nuclear states (NPT signatories and non-signatories) are prevented from acquiring or developing the technology to deploy nuclear weapons and their delivery vehicles, and how many states (signatory and non-signatory) continue to provide the requisite technology to help them along.

Regardless of whether one looks at the supply or demand side of any dimension of proliferation, the balance of evidence does not favour the optimists view. It takes only one nuclear weapon to produce the catastrophe the NPT was designed to prevent. The simple fact is that the capability to inflict that level of damage and devastation is spreading to more states. The international community has tried for years to prevent the spread of ballistic missile technology from the supply and demand side. The U.S. has used military force against Iraq, not to mention one of the most intrusive sanctions, monitoring and verification regimes in history, and it has essentially failed. Despite all of these efforts WMD technology continues to spread, and proponents of the status quo provide almost no evidence that the proliferation puzzle can be resolved in the future using the same techniques.

Some optimists point to decreased arms expenditures by rogue states as evidence that something must be working. Taking Iran, Iraq, Syria, Libya, and North Korea as a group: since the late 1980s their military spending has fallen 70 percent; their arms imports are barely 10 percent of what they once were... More generally, without the technical support, funds, and arms once provided by superpower patrons, yesterday's rogue giants have lost the capacity to equip, train, sustain, or employ armed forces of the size and quality typical of the 1980s. But the implication of these trends is that "rogue" leaders will become more reliant on asymmetric threats, ballistic missiles and weapons of mass destruction (WMD)--they are all more affordable.[19]

Arms control advocates continue to push for improved transparency, weapons verification, monitoring, and various import/export controls. These tactics are considered to be more constructive than national missile defence because they approach the proliferation problem from the demand and supply sides and produce none of the costs and risks associated with NMD. But proponents of these approaches rarely provide the details policy-makers need to compare success and failure (or strengths and weaknesses). How much has the international community spent on these strategies? What exactly do we

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[19] Please see "The Paradoxes of post-Cold War US Defense Policy: An Agenda for the 2001 Quadrennial Defense Review Project on Defense Alternatives, *Briefing Memo* #18, 5 February 2001 -- http://www.comw.org/pda/0102bmemo18.html.

have to show for all of these efforts and investments? And what is the probability that they will work in the future? Answers to these questions should be compared to answers offered by proponents of NMD.

Pre-emption and Conventional Deterrence

A successful pre-emptive attack requires accurate intelligence about the location of enemy missiles, domestic and international support for the attack, sufficient (locally deployed) military capabilities, and a political leadership willing to take the risks and incur the costs. Preemption may appear to be a relatively straightforward solution to the problem of proliferation, but these strikes are very difficult to mount for political and operational reasons. Again, proponents rarely provide the details about operational criteria or the conditions under which a pre-emptive strike would be justified.

With respect to conventional deterrence, a common assertion among critics of NMD is that the U.S. is more than capable of retaliating with a devastating conventional strike. The capability to quickly disable or destroy targets (without suffering many casualties) constitutes a credible deterrent that makes national missile defence redundant and a complete waste of time and money. According to this argument, rational rogue leaders would never contemplate experiencing the kind of devastation the U.S. is capable of inflicting on enemies. There are at least three problems with this line of argument.

First, conventional retaliation will never rise to the potency of a nuclear threat, because the risks of suffering even a large conventional attack will always be more acceptable than a nuclear strike. As Victor Utgoff (1997) points out, "history provides many cases of states standing up to conventional bombardment for years ... Nuclear retaliation is universally and deeply feared and thus has unmatched psychological power as a deterrent... Although conventional retaliation may be an adequate deterrent in some cases, its prospect has far less deterrent power than that of nuclear retaliation."[20]

Second, even if conventional capabilities of major powers are sufficient to achieve military victories without suffering many casualties, there are unintended consequences of this superiority that actually increase incentives for nuclear proliferation.

Third, as Hopkins and Maaranen argue in their excellent report on post-Cold War deterrence, leaders face several operational problems when applying conventional deterrence in contemporary crises. For example, a credible deterrent force requires a large 'power projection' capability to intervene to protect U.S. interests. This capability is expensive to maintain and entails "a complex of naval, air, and ground forces and their support. To operate these forces effectively requires an overseas base network, which (the U.S. is) losing, and a forcible entry capability, which is doubly challenging especially if there are no local bases to rely on." The point is that localized conventional superiority requires a large standing force to project a reliable and credible deterrent threat. All of this is extremely costly, and certainly far more expensive than the current budget for NMD.[21]

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20 Victor Utgoff (1997) "Extended Nuclear Deterrence and Coalitions for Defending Against Regional Challengers Armed with Weapons of Mass Destruction." Appendix C in Post Cold-War Conflict Deterrence . op. cit.

21 John C. Hopkins and Steven A. Maaranen (1997) "Nuclear Weapons in Post-Cold War Deterrence, Los Alamos National Laboratory." Appendix E in Post Cold-War Conflict Deterrence . op. cit.

Constructive Engagement

With respect to constructive engagement, there simply is no persuasive evidence available that these efforts have worked in the past, and no reason to expect that they will work in the future. Over a decade of constructive engagement between the U.S and China has done very little to stop China's modernization plans, or to prevent China from selling advanced nuclear and missile technology to aspiring nuclear powers. More importantly, proponents of constructive engagement have yet to provide a logical explanation for why constructive engagement should be expected to work at all. If the objective was to convince a regime to abandon its plans to develop and sell long-range missiles, then increasing levels of attention paid to this regime is just as likely to send an important message to other aspiring nuclear weapons states -- acquire, develop, deploy and sell ballistic missile technology as soon as you can, because that is the quickest path to international respect and diplomatic recognition.

Codification

Perhaps the most significant problem with the current NACD regime is the fundamental assumption that codification is a necessary condition for success. Proponents assume that the only way to control the spread of WMD, or to establish meaningful cuts in the nuclear arsenals of major powers, is to rigidly tie these states to a set of specific rules, regulations and guidelines for the rest of time. According to this view, the only path to collective security is to ensure that states recognise the supremacy of international law and acquiesce to its tenets, principles and treaties, regardless of their defects. The assumption is that until and unless nuclear weapons states remain absolutely committed to specific codified limits stipulated in standardised arms control agreements we will never experience 'real' security.

There are several problems with 'codification' that its advocates rarely acknowledge, four of which will be covered here. First, codification closes options, and while closing options may be appealing to proponents of bilateral strategic stability, it is not likely to appeal to those who are responsible for identifying security strategies for new and emerging WMD threats.

Second, as Payne argues, "irreversible codification" diminishes incentives to enter into good agreement, even if potential signatories accept the principles and objectives underlying the treaty in question.[22]. When major threats are assumed to be static and unchanging (as was the case throughout the Cold War) codified agreements are perceived as less risky. But when perceptions of major threats change and become more complex, as is the case in a post Cold War environment, agreements that limit options carry more security risks.

Third, codification makes it more difficult to withdraw from potentially dangerous agreements that maintain force numbers at artificially high levels, as is the case with the ABM treaty.[23] The Treaty compels both sides to field forces that are sufficiently large to maintain mutually assured destruction, not

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22 Keith B. Payne (1990) "Deterrence and US Strategic Force Requirements After the Cold War." Comparative Strategy (July-September: pp. 269-282); and Keith Payne and Lawrence Falk "Deterrence: Gambling on Perfection." Strategic Review (Winter 1989: pp. 25-40.

23 Keith B. Payne (2001) "Rational Requirements for U.S. Nuclear Forces and Arms Control: Executive Report." Comparative Strategy, vol. 20: pp. 105-128. See also the discussion of the evolution of nuclear deterrence theory after the Cold War in James Dougherty and Robert Pfaltzgraff (2001) (eds.) Contending Theories of International Relations (New York: Longman, 2001; 5th edition, pp. 374-386).

because the relationship requires this balance, but because the logic of bipolar strategic stability demands these numbers. Indeed, the "parity principle" perpetuates an obsolete code of conduct that maintains force numbers for mutual annihilation that Washington does not want, Moscow can not afford, and the relationship does not demand.

Speculations and Observations

The question is how to accommodate US-Russian bipolar strategic stability with the American need to address emerging ballistic missile threats? In other words, how can they reconcile nuclear deterrence in a bipolar context, with discriminate deterrence in a multipolar setting? I offer the following speculations and observations.

1. Current U.S. efforts to deploy a national missile defence (NMD) system and to revise (or withdraw from) the ABM Treaty go well beyond ideological divisions in the U.S. The question is no longer 'whether' but 'how' to deploy missile defence.

2. The 'how' of NMD will be resolved in favour of a limited, multiple platform (land, sea and air), layered (boost, mid-course and entry level) missile defence system. The U.S. will legally withdraw from the ABM Treaty if Russia refuses to sign new demarcation agreements to permit testing of faster, more robust sea- and land-based interceptors, or to allow for deployment of land-based components of a nation-wide defence system. As Slocombe argues, "the real threat to the Treaty comes not from our efforts to modify it to reflect current realties, but from a fixed refusal to modify it to permit the U.S. (and Russia) to build effective defences against rogue state threats. Neither the ABM Treaty, nor any other international treaty, can remain viable if it fails to reflect contemporary realities."[24]

3. The critical policy puzzle is how to find the right balance of *mutual* and *discriminate* deterrence in order to enhance both bilateral and multilateral stability. The challenge for U.S. policymakers is to develop a defensive system with sufficient transparency and predictability to convey clearly to Russia and China that it is indeed directed against third parties.[25] This will likely lead to a U.S.-Russian agreement on at least two important provisions: revisions of START III and IV to make allowances for a limited number of MIRVed ICBMs after 2007-2010; and revisions to the ABM Treaty expanding the number of BMD basing areas to 3 or more.[26]

4. Interceptor technology, like any technology, will continue to improve. Deployment today makes sense because of increasing probabilities of success, the inevitability of further improvements through trial and error, and the risks and benefits to overall security when compared to alternative strategies. The fact that NMD has not yet reached 100 per cent accuracy is irrelevant. What is relevant to policy makers is whether the pace of innovation is such that NMD will, at some future point, produce a 'high enough' probability of success to warrant development, testing and deployment. The current programme provides more than sufficient promise of enhanced security to offset the costs and potential risks.

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24 Walter B. Slocombe (1999) "Testimony to the House Armed Services Committee Hearing on National Missile Defense." U.S. Government Documents.

25 Sam Nunn and Bruce Blair (1997) "From Nuclear Deterrence to Mutual Safety" Washington Post (June 30, 1997: pp. 22).

26 Alexei G. Arbitov (2000) "The Future of Strategic Deterrence and Nuclear Postures of Great Powers." Institute for National Strategic Studies: http://www.ndu.edu/inss/books/ usrp13.html.

5. The U.S. effort to develop an alternative approach to strategic stability by constructing a new balance of offensive and defensive systems is not a temporary phenomenon -- it represents the beginning of a long term strategy to reshape and update strategic stability to address contemporary (and emerging) threats in a more complex international environment. We are experiencing a paradigm shift in nuclear deterrence, arms control and disarmament thinking that will remain a permanent fixture of all future force structure debates in the U.S. and Russia.

6. Bipolar strategic stability and deterrence must be redefined in the context of contemporary international politics or it will cease to be relevant. While the logic of mutual nuclear deterrence is impeccable, its relevance will continue to vary from context to context depending on the health of the relationship in question. In a post-Cold War world, stability must be expanded to accommodate the realities of a complex international system with expanding sets of inter-linking and interdependent nuclear relationships.[27]

7. All of these changes are the result of four inter-related factors: (1) permanently improved relations with Russia, (2) technology, (3) the proliferation of weapons of mass destruction (WMD) and emerging ballistic missile threats, and (4) the fact that there are no realistic policy alternatives-- prevention, pre-emption, conventional deterrence, constructive engagement, economic sanctions, transparency, verification and codification have all failed in the past, and are even less likely in the future, to ensure U.S. or Russian security from WMD threats.[28] Collectively, these approaches have made meaningful progress on arms control and non-proliferation, but they will never produce sufficient security assurances to render WMD obsolete -- no combination of policies can ever achieve that objective.

8. The paradigm shift towards a new nuclear age will also affect the NACD regime and associated strategies. Co-ordination and consultation, not codification, will become the cornerstone of the regime. Rather than codifying numeric goals and expecting them to be valid over time, complexity dictates that states will increasingly chose to retain the prerogative to adapt to changing circumstances and will avoid becoming irreversibly restricted by artificially rigid rules and regulations.[29] Artificial competition, adversarial negotiations, never ending bargaining periods that typically get drawn out for years, detailed verification procedures, etc., all represent an outdated approach to arms control that will soon reach the point of irrelevance. The assumption that there are no realistic alternatives to the status quo is simply wrong. Moreover, rejection of U.S. offers to unilaterally disarm, simply because unilateral disarmament takes place outside the confines of traditional arms control, is profoundly counterproductive to NACD goals.

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27 Keith Payne (1994) "Proliferation, Deterrence, Stability and Missile Defence." Comparative Strategy vol. 13: 1 (January); Lewis A. Dunn (1994) "Deterring the New Nuclear Powers." The Washington Quarterly vol. 17: 1 (Winter); Richard K. Betts (1991) "The Concept of Deterrence in the Postwar Era." Security Studies (Autumn); Roberto Zadra (1992) "Deterrence After The Cold War." http://weu.int/institute/chaillot/chai05e.html

28 W.F. Biddle, W.F. (1972) Weapons Technology and Arms Control. New York: Praeger. See also Colin S. Gray (1992) House of Cards: Why Arms Control Must Fail. Ithica, New Jersey: Cornell University Press. For an alternative view on the new nuclear age see Jonathan Schell "The Second Age of Nuclear Danger: Did the end of the Cold War mean the end of arms control?" http://bostonreview.mit.edu/BR25.2/schell.html.

Keith B. Payne (2001) "Rational Requirements for U.S. Nuclear Forces and Arms Control: Executive Report." Comparative Strategy, vol. 20, pp. 105-128.

Conclusions

Debates in Canada regarding the contemporary relevance of bipolar strategic stability, the validity of mutual nuclear deterrence, the future of Mutually Assured Destruction, the obsolescence of the ABM Treaty, and the stability of NMD are only just beginning. Comprehensive assessments of the many arguments put forward by proponents and critics of NMD appear in Harvey (2000, 2001a, 2001b, 2001c), three examples are cited here.[30]

Example 1: The current NMD system is criticized for being too expensive *and* not robust enough to work effectively. But for any defence system to work more effectively the government would have to invest larger amounts in the program -- obviously, more effective defences are more expensive defences, and vice-versa (even allowing for Pentagon waste). In comparison to fifty interceptors, for example, ten thousand interceptors will obviously provide a more effective defence against fifty incoming missiles (even allowing for a low hit-to-kill ratio). Efforts to address the problem of overall expense (e.g., by lowering the costs) are likely to make the other problem (NMD effectiveness) worse. The question is whether the system is necessary -- the costs are secondary.

Example 2: The current NMD system is criticized for technological deficiencies *and* for provoking a new arms race. But the stronger the evidence critics put forward regarding the technological deficiencies of NMD, the weaker their claims about automatic and justifiable proliferation by Russia and China-- they would have no reason to feel compelled to compensate for losses in security if NMD can't work (why waste their time?). Apparently only critics are bright enough to appreciate the mind-boggling technological hurdles facing NMD.

Example 3: Critics claim that there are other ways to detonate a nuclear device that cannot be stopped by NMD. There are three problems with this argument. First, the fact that there are other ways to detonate a nuclear device says absolutely nothing about the utility of NMD -- it simply implies that investing solely in NMD and ignoring other threats is likely to be dangerous. Proponents of NMD would agree. There is a self-fulfilling prophecy associated with military investments -- the more one invests in defending against one type of threat, the more likely it is that opponents will focus on other approaches. If Washington decided to move away from NMD, ballistic missile proliferation would logically become more, not less, likely -- rogue leaders would be more inclined to invest in a ballistic missile program when it is less expensive (i.e., when countermeasures are not needed) and when it is more likely to work (i.e., when NMD doesn't exist.

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30 Please see Frank P. Harvey "National Missile Defence Revisited, Again: A Response to David Mutimer." International Journal (forthcoming, July 2001); "Proliferation, Rogue-State Threats and National Missile Defence: Assessing European Concerns and Interests". Canadian Military Journal (Winter, vol. 1:4, pp. 69-79); "The International Politics of National Missile Defense: A Response to The Critics." International Journal (Autumn, vol. 55:4, pp. 545-566); "ABCs of NMDs and ABMs" Chronicle-Herald, Halifax (10 May); "Politics, Not Technology Explains U.S. Missile Defence Decision". Chronicle-Herald, Halifax (9 September); "North Korea: a rogue by any other name." National Post. July 29, 2000; "Price is right for U.S. missile program." National Post. July 22, 2000; "Good Defences Make Good Neighbours." Globe and Mail (April 11, 2000).

REDEFINING THE CONCEPT OF STRATEGIC STABILITY

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American antimissile defence plans are still vague and ill defined. However, they betoken a radical shift in the US administration. In this situation, the US clearly intends to test everything it has to test and will do so with or without Russian agreement, though preferably with rather than without. It will then choose the best systems for deployment. For the moment, three systems command priority US attention: land systems buried in Alaskan silos, marine systems based on Aegis ships and the ABL (airborne laser) system. The objective in all cases is to speed up the testing process in order to separate the wheat from the chaff, for all environments and with the greatest possible integration, so as to create a multi-layered antimissile defence capability and be able to call on emergency systems in crises from 2004 or 2005 onwards in compliance with the National Missile Defense Act passed in 1991. Changes in content, changes in style ... are we now seeing the dawn of a basic shift from the dominant strategic discourse of the past?

The New Strategic Discourse

There are many reasons behind the new paradigm in American thinking. Camille Grand summarizes them in these words: "Current trends, such as the legitimate emphasis put on proliferation as the major strategic challenge, the erosion of the bilateral dominance of the nuclear order, the reduced salience of nuclear weapons in Western strategies, the emergence of new regional powers, the distrust for traditional arms control, and the growing reliance on new military tools, form the foundation for a new paradigm."[31]

Since the election of George W. Bush, the US has been stating flatly that mutual assured destruction, or MAD, has ceased to be a reasonable paradigm for securing the future relations between yesterday's two enemies, now two friends. Nowadays we have to rely on an abrupt cooperative transition in a regime of deterrence based on a careful mix of offensive and defensive weaponry. It is all really a matter of perspective. The Anti-Ballistic Missile or ABM Treaty has in fact become an obstacle and hindrance to the spectacular technological expansion of US military might. This is a major obstacle since the US will soon have the technology to defend itself while prohibited by treaty from doing so. A hindrance, finally, because in the mind of the international community all efforts at arms control will collapse if the ABM Treaty is meddled with. Blending old and new is therefore no easy task. This is truly a major dilemma because, as Gompert and Isaacson point out, "so well crafted is the ABM Treaty that any solution accommodated by changing it slightly is by definition suspect as the basis for effective and adaptable NMD. Conversely, solving the general problem might require an ABM arms control regime so much more permissive than the current one as to raise a question about that regime's meaningfulness."[32]

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31 Camille Grand, "Ballistic Missile Threats, Missile Defenses, Deterrence, and Strategic Stability," Monterey Institute of International Studies, at: http://cns.miis.edu/pubs/opapers/op5/

32 David C. Gompert and Jeffrey A. Isaacson, *Planning a Ballistic Missile Defense System of Systems*, Rand Corporation IP-181 (1999), p. 4.

What remains of the concept of stable nuclear deterrence? The classic definitions of deterrence have always encompassed two basic dimensions: deterrence by punishment and deterrence by denial. The first of these, deterrence by punishment, is and will always be central, though it has obviously lost its old meaning. Indeed, stable deterrence has always been defined as the capability of one adversary in any set of circumstances to impose intolerable destruction on the other. This concept assumes, whatever scenario one adversary might imagine (a preventive strike to disarm the opponent or a pre-emptive strike unleashed in cold blood to hit that opponent before being hit), that the other will always have sufficient invulnerable strength to wreak unacceptable destruction on the aggressor. Let us not forget that this type of thinking is based on what the philosopher Max Weber called the irrationality of the reason that also has its reasons. It is precisely because the nuclear apocalypse or mutual suicide is viewed as an absurd or irrational outcome of conflict that reason imposes its law of necessary survival, meaning that it is better to do nothing than something ... hence the idea of deterrence. Here, wisdom is the mother of all virtues. For years, therefore, the strategists have pored over what Albert Wohlstetter once described as the "delicate balance of terror." Such calculations are still being made today, though their value for the US and Russia ceased to be other than symbolic on the day when the Communist ideology shed its malignance and was no longer a cause for concern around the globe. Moreover, as a number of observers point out, deterrence is used only against enemies, not against partners. No one would think of producing a study on the stability of nuclear deterrence between Americans and the British or between Americans and the French!

The old question, "How much is enough?" attracts so few experts today that some even label it an anachronistic process which is simply a distraction.[33] And even though the US continues to insist that nuclear deterrence remains vital to its security, we are still seeing the "progressive erosion of nuclear expertise in terms of planning and in our operational forces."[34] Actually, since the Cold War ended Washington is unafraid of Russia and even less afraid of one day finding its forces decimated by a Russian strategic strike. The fact is that the Russians are having the greatest difficulty keeping their strategic arsenal in working order. Their submarines lie rusting in their home ports when they are not sinking on ill-fated naval exercises (the *Kursk* affair); their alarm and detection systems are seriously deteriorated and the condition of their nuclear warheads inspires the greatest misgivings about their safe operation and reliability. The Russian economy generally is more dead than alive.

So what remains of Moscow-Washington nuclear deterrence? The answer is simple: the US feels invulnerable enough not to have to worry about a potential upset in the nuclear equation. As conceptual as the nuclear deterrent may have been during the Cold War, its remnant today is just an existential idea that could resurface in a crisis, though no one can seriously expect the sudden resurgence of a brinkmanship policy as practised in Cuba. The sense of overkill or supersaturation is now entrenched in our thinking and the US can therefore peacefully keep basking in its military superpower status. Yet the nuclear armouries of the great powers remain disproportionate to their needs: the US has 7 200 nuclear warheads compared to 6 100 for Russia. These floor levels are well above the 3 000-3 500 warheads identified as limits in the second round of the START II (Strategic Arms Reduction Talks) negotiations. That treaty

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33 Eugene B. Rumer and Richard D. Sokolsky, "Normalizing U.S.-Russian relations," *Strategic Forum*, National Defense University, No. 180, April 2001, p. 2: "The Cold War approach to arms control, which focuses on negotiating legally binding treaties that codify numerical parity and perpetuate the MAD principle, is no longer relevant to U.S. strategic priorities. Efforts to maintain this anachronistic process are a distraction."

34 Dennis M. Gormley, *"Dealing with the Threat of Cruise Missiles,"* London, IISS, *Adelphi Paper* 339, June 2001, p. 56.

was described in 1993 by then presidents Bush and Yeltsin as "the biggest disarmament agreement in history." Meanwhile deterrence remains an incontrovertible existential fact even if the START III negotiations were to lower these levels to around 1 500 nuclear warheads.

Must we therefore abandon the concept of stable nuclear deterrence or consign it to permanent obscurity in the recesses of the Cold War closet? In this regard the evolving relations among the major powers during the Cold War are rich in misconceptions. Each state justified increasing its forces in the name of nuclear stability and each state attempted to thwart the rules of nuclear deterrence at every possible level by introducing new technologies or new systems. We will refer to only two well-known examples: the introduction of MIRVs (Multiple Independently-targetable Re-entry Vehicles), MARVs (Manoeuvrable Re-entry Vehicles) and decoys to thwart Soviet-era ABM defence and the deployment of Pershing cruise missiles to respond to the threat from the Soviet SS-20 and other mobile missiles deployed in the 1980s. These extremely tense episodes are forgotten today quite simply because the major powers have codified their relations in a whole series of arms control agreements. For example, the deployment of MIRV warheads on Russia's heavy intercontinental missiles is prohibited by the START II treaty signed by the Duma in April 2000, even though the status of this treaty is still unclear. The signing of the INF (Intermediate Nuclear Forces) Treaty in December 1987 also resulted in the disappearance of medium-range (500 to 5 500 km) devices in Europe.

There has therefore been clear determination to stabilize nuclear deterrence between the great powers, though this cause has now lost some of its urgency as yesterday's foes seek a new form of cooperation described by the deputy chairman of the Russian Parliament's defence committee, Alexei G. Arbatov, as "an amorphous, transitional middle state" somewhere between "rivalry and alliance." On both sides, the major powers now seem to agree on the need to avoid upsetting the existing rules of nuclear deterrence while accepting a form of ABM defence capability. A study by Dr. Willie Curtis argues the need to have two different levels of deterrence, the first for Russia and China and the second for all other proliferating states.[35]

On a purely mathematical basis George Lindsey, Canada's major expert on these matters, has published a study with a most revealing title: "*Strategic Nuclear Weapons, Fewer Would Be Better But Zero Would Be Imprudent.*" This author's essential arguments can be summed up as follows: "The solution to vulnerability is mobility. The way to achieve very substantial reductions in nuclear arsenals is to place the main responsibility on SLBMs, retain a few heavy bomber aircraft for a nuclear role, and either dispense entirely with ICBMs or keep a few mobile missiles with single warheads."[36]

If the deplorable competition among the various elements of the US military could be avoided, we might have the same nuclear stability based on sound strategic planning as we could have in the past with tens of thousands of nuclear warheads. In July, Washington revealed that it was considering an immediate reduction of 1 000 warheads in its strategic arsenal over the year to come.

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35 Willie Curtis, The Assured Vulnerability Paradigm: Can it Provide a Useful Basis for Deterrence in a World of Strategic Multipolarity?, 2000, Institute for National Security Studies, http://www.usafa.af.mil/inss<nbeintro.htm

36 George Lindsey, *Strategic Nuclear Weapons, Fewer Would Be Better But Zero Would Be Imprudent*, Waterloo, Ontario, Laurier Centre for Military Strategic and Disarmament Studies, undated, 50 pp.

Deterrence by Denial

If the matter of what constitutes intolerable destruction fails to arise for the major powers, whose capabilities are such as to make the issue literally pointless, the same does not apply to the rogue states or states of concern. This issue will forever remain philosophical or highly metaphysical: who can know whether Adolf Hitler would have overrun Poland in 1939 had Warsaw possessed an atom bomb? There is a clear basis here for US concerns about the perils of nuclear proliferation. Though nuclear deterrence has enabled the major powers to avoid disaster, there is absolutely no certainty of this in the case of the so-called states of concern. Though no intercontinental missiles were ever used for belligerent purposes during the Cold War, more than 5 000 ballistic missiles have been used in regional conflicts. Some heads of state may lack the nuclear rationality espoused by the West, especially since personal intersubjectivities in the matter of preferences are rarely aired. As Hanna Y. Freij stresses in a study on Iraq: "The self-image of a head of state and the regional or international role he wants to claim or play are more often causes of war than the complex calculations of strategists who are overly inclined to see things in terms of balance or imbalance in opposing forces."[37]

And this is where the second aspect, deterrence by denial, comes into play. A country's ability to elude the will of an adversary must always be studied from a dyadic standpoint. Beauty and unsightliness, they say, are in the eye of the beholder! When it comes to the deterrer and the deteree, the former will always be seen by a potential deteree as a bad guy or troublemaker, while the deteree will always be viewed by the deterrer as a foe to be kept in line. The only way we can tell one from the other is by the laws and/or moral judgments we apply to their observed behaviour. A threatened or threatening state can always elude the will of the other by forcing it to suffer losses if the latter acts. The one's evaluation of the other's determination to run risks therefore becomes a significant parameter of the stability of deterrence. The zero death syndrome is something Saddam Hussein understood perfectly when he said that the US would cease all belligerent activity from the moment that country saw its dead coming home in body bags. This defensive side of deterrence practised by a small country and its effectiveness will always depend on the specific circumstances of a conflict, the risks a leader is prepared to assume and the price he is prepared to impose on his people for continuing to offer provocation or nourish expansionist designs. At the same time, a much bigger country's ability to rain punishment on a smaller one should logically deter the latter from aggression, hence the US interest in Theatre Missile Defence (TMD).[38] Denying the other's ability to act by threatening a strike and even its disarmament if compliance is refused is another essential element of deterrence by denial. And Iraq and Kosovo realized this at their cost, whatever moral judgments we may make on this type of intervention. Given the perils of nuclear proliferation, the absence of antimissile defensive resources in a region is seen by the US as "serious vulnerability." Gompert and Isaacson go even farther in seeing antimissile defence as not only a shield but also an enabler of US action.[39]

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37 Hanna Y. Freij, "Self-Image and Role Definition as a Cause of War: Saddam Hussein, 1988-90," *The Journal of Conflict Studies* (University of New Brunswick), Spring 2001, pp. 101-121.

38 Opinion is divided on this matter. Some experts, like Richard N. Lebow and Janice G. Stein, feel that deterrence fails more often than it succeeds. See: http://www.ndu.edu/ndu/inss/macnair/macnair45/m45i.html. Others challenge this view, but whatever arguments are used it is clear that deterrence or its failure is but one factor in the outbreak or non-outbreak of hostilities and we cannot base everything on it.

39 See Gompert and Isaacson, *op. cit.*, p. 5.

In purely logical terms, a situation of stable nuclear deterrence between the great powers during the Cold War looked like this:

	Deterrer	Adversary
Ability to punish	X	X
Determination to resist or run risks	X	X
Vulnerability	X	X

In other words, the two parties were capable of annihilating each other, had no intention of yielding to the other in any circumstances and, last, were mutually vulnerable to their retaliation. The conflict then assumed the form of pure dialectical will with the sole purpose of changing the situation for one's benefit or resisting the other's attempts to change it. Logically, it became a matter either of being respected or of preventing one from imposing its will on the other. In an asymmetrical conflict between a big and a small country, the dialectic remains the same. The basic changes are the ability to punish and the matter of vulnerability. Clearly, the bigger country can always wipe the smaller from the map if it so wishes. In logical terms, the bigger has the upper hand and the smaller should be deterred. However, regional conflicts are rarely rational.[40] Rather, they partake of passion, propaganda and manipulation. What is more, the smaller country can always raise the ante because the bigger one is either sensitive to body counts or has weapons of mass destruction. In an environment defined by the presence of weapons of mass destruction the deterrer will always try to elude the dialectical will of the smaller ... hence the former's emphasis on antimissile defence.

The same facet of the problem is considered by Michael Krepon: "During Cold War crises, the United States would signal resolve by increasing the readiness of nuclear forces or by repositioning ships or planes that could be carrying nuclear weapons. Now that the Cold War is over, signalling of this sort by the world's sole nuclear power is likely to be provocative, dangerous and counterproductive in a new era of asymmetrical warfare. The management of future crises and the demonstration of alliance resolve are far better served by moving missile defences instead of nuclear weapons into harm's way."[41]

The real question facing Americans is therefore whether they want to remain mute and defenceless and thus relatively vulnerable, or else continue, when they feel their interests are threatened, to use the complementary deterrence afforded by the deployment of antimissile weaponry on the ground. We may like this situation or deplore it, or else claim like some that it represents a dangerous policy,

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40 In a study by Gerald M. Steinberg entitled, "Parameters of Stable Deterrence in a Proliferated Middle East: Lessons from the 1991 Gulf War," appearing in the *Non-Proliferation Review*, Vol. 7, No. 3, Fall-Winter 2000 (http://www.faculty.biu.ac.il/~stein/conflict/armspapers), the writer concludes: "Nevertheless, given the existing environment, there are no realistic alternatives to deterrence in areas of regional conflict, and some of the alternatives, including the adoption of a preventive or pre-emptive strategy, are more uncertain and even more destabilizing. Under these conditions, policymakers would be best served by working to reduce the impact of the inherent limitation of deterrence. This means developing channels of communication to prevent misperceptions and misunderstandings, increasing the transparency of decision making, and developing responses that avoid the consequences of the escalation spiral and the commitment trap."

41 Michael Krepon, "Moving Away from MAD," *Survival*, London, IISS, vol. 43, no. 2, Summer 2001, p. 84.

since deterrence fails more often than it succeeds, but it does not diminish the freedom of the US to determine its own future. Basically, as Serge Sur points out, "we can sense a doctrinal opportunism in the United States that prompts it to use the United Nations when possible, or failing that, NATO, and when no multilateral coverage seems realistic, act on its own."[42] All this is true but changes nothing in the reality of deterrence which, after all, is only a psychological process intended to create the desired expectations in the other, even if deterrence usually remains, in Lawrence Freedman's phrase, "marginal, tangential, or speculative."[43] Yet it is hard to claim that antimissile defence in general will spur arms proliferation. India and Pakistan did not acquire nuclear weapons because of US efforts in antimissile defence, and it is unreasonable to describe this trend as destabilizing,[44] likely to spur WMD (weapons of mass destruction) proliferation or deliver the fatal blow to arms control. The ultimate strategic purpose of antimissile defence is to undermine the plausibility of a scenario where states of concern threaten the use of weapons of mass destruction to defuse any US temptation to intervene. Moreover in terms of theatre operations there is no doubt that TMD, like antimissile defence of limited territory, can be seen as a stabilizing factor, not a destabilizing one. Yet the fact remains, as emphasized by Rajesh Rajagopalan, that "A state with weak capabilities and a dangerous strategy can present greater dangers in a WMD environment than a strong state with more defensive strategies."[45]

Moscow-Washington nuclear deterrence is alive and well even though its significance is destined to decline. The great powers are actually over-armed, and there is no reason why they should not keep using arms control to look for a form of cooperation and stabilization that helps to produce deterrence based on smaller numbers of nuclear weapons and an effective mix of offensive and defensive weaponry. The perils of proliferation should gradually lead them to accept a form of limited antimissile defence that puts no basic strain on their relationship. Antimissile defence not only protects them from the dangers of WMD proliferation but also re-establishes US strategic freedom in regional defence that remains fundamental to Western interests.

Although it is not hard to imagine stability in deterrence between the great powers based on freely negotiated mutual agreements or arrangements, it is not so easy to claim that this applies in all circumstances involving regional conflicts between big states and smaller ones. The presence of so many imponderables makes it impossible to talk about stable deterrence: most of the time these conflicts elude logic and their rationale frequently goes beyond mere numerical equations. The strike forces that seem to represent a growing trend in the post-Cold War world will not be able to maintain their credibility unless they are assured of a powerful security screen against weapons of mass destruction. For the moment, only antimissile defence can provide a form of protection that is viewed as all the more imperative in that the industrial societies have become casualty averse.

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42 Serge Sur, "Le recours à la force dans l'affaire du Kosovo et le droit international" ("The Use of Force in Kosovo and International Law"), *Les Notes de l'IFRI* (Institut français des relations internationales), no. 22, Paris, September 2000, p. 34.

43 Lawrence Freedman, "Does Deterrence Have a Future?", *Arms Control Today*, October 2000: also available from the *Arms Control Today* Web site.

44 T.V. Paul, *Power versus Prudence: Why Nations Forego Nuclear Weapons*, Montreal & Kingston, London, Ithaca, McGill-Queen's University Press, 2000, esp. Chapter 8.

45 Rajesh Rajagopalan, *Prospects for Stability in a WMD Environment*, http://www.idsa-india.org/an-jan00-6.html

STRATEGIC STABILITY

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In his classic treatise, *On War*, Carl von Clausewitz said: "In war, the will is directed at an animate object that reacts," and that "war is the continuation of politics by other means". Action and reaction lies at the heart of strategic stability, and one of the objectives of strategic stability is the prevention of war (i.e. the continuation of politics as normal). The interaction between history's two greatest proliferators of nuclear and other weapons of mass destruction (WMD) – the United States and the Soviet Union – during the Cold War was based on different formulations of strategic stability that eventually achieved convergence.

Since the end of the Cold War, the concept of "strategic stability" has been used or invoked increasingly in discussions on the future international security architecture. In such discussions, however, strategic stability has meant different things to different players.[46] In many respects, the discourse on bipolar strategic stability in the nuclear context can be traced back to the early 1950s. Indeed, the arms control literature from the 1960s through to the present time is replete with references to stability in the context of crisis management, arms races, security dilemmas, parity, and strategic stability. Following the end of the Cold War, a series of US-Russian presidential communiqués[47] have focused on strategic stability and enumerated measures to preserve and strengthen it. Furthermore, in May 2000, the parties to the Non-Proliferation Treaty (NPT) formally endorsed the continuation of strategic stability as a pre-condition for further reductions in the nuclear arsenals of the five declared nuclear-weapon states.[48] As US interest in deploying ballistic missile defences (BMD) gathered domestic political momentum in the mid-1990s, it evoked strong responses from the Russian Federation and China, as well as concern by several other states with respect to the preservation of strategic stability. The election of George W. Bush as US president and statements and moves by his administration favouring unilateral action over multilateral engagement, commitment to proceed with BMD, to abandon the 1972 Anti-Ballistic Missile Treaty (ABM), together with stated positions regarding flexible nuclear forces at lower numbers

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46 See, for example: Yuriy Kapralov, "Effects of National Missile Defence on Arms Control and Strategic Stability," and Thérèse Delpech, "Ballistic Missile Defence and Strategic Stability," in *Missile Threats and Ballistic Missile Defense: Technology, Strategic Stability and Impact on Global Security*, (Landau Network–Centro Volta, Italy: 2001); and Camille Grand, "Ballistic Missile Threats, Missile Defences, Deterrence, and Strategic Stability," and John Simpson, "Current Issues Concerning the Control of Ballistic Missile Proliferation and Ballistic Missile Defences," in *International Perspectives on Missile Proliferation and Defenses*, Occasional Paper No. 5 (Monterey Institute of International Studies and Mountbatten Centre for International Studies: March 2001).

47 Statements and agreements on strategic stability agreed between the United States and the Russian Federation include the following: Strategic Stability Cooperation Initiative (New York: September 6, 2000); Joint Statement on Strategic Stability (Okinawa: July 21, 2000); Joint Statement on Strategic Stability (Moscow: June 4, 2000); Joint Statement Concerning Strategic Offensive and Defensive Arms and Further Strengthening of Strategic Stability (Cologne: June 20, 1999); Joint Statement on Parameters on Future Reductions in Nuclear Forces (Helsinki: March 21, 1997); and Joint Statement on Strategic Stability and Nuclear Security (Washington: September 28, 1994).

48 United Nations: Final Document adopted by the Parties to the NPT, NPT/CONF.2000/28 (Vol. I, Part I and II), 25 May 2000 – see the section, "Article VI and preambular paragraphs 8 to 12".

unconstrained by negotiated treaties, have raised fears about the collapse of the current arms control regimes and contributed to renewed interest in trying to elaborate a new strategic framework.[49] With the end of the Cold War and bipolarity, the US has regarded WMD proliferation and use by "states of concern" as the greatest threat to the security of its homeland and expeditionary forces – following the collapse of the Soviet Union and in the aftermath of the 1991 Gulf War, the number of US forces deployed in non-traditional theatres has been and remains the highest in its history. In contrast, the European allies regard the degrading post-Soviet WMD capabilities of Russia as a major potential risk, while Japan is concerned about China's rising power, and both Japan and South Korea fear North Korea's nuclear and missile potential. Furthermore, since the US has emerged as the sole surviving superpower, there is a growing debate on the longevity and stability of a unipolar system.

Thus, there is no shortage of material discussing the concept of strategic stability in its various formulations. This brief paper will attempt to clarify the meaning and context of strategic stability in the current context as well as in the emerging international security environment.

Strategic Stability During the Cold War

Ever since the US lost its nuclear weapons monopoly in 1949, the quest for strategic stability has been the central organizing principle of its nuclear strategy and arms control policy.[50] US policymakers traditionally viewed overall stability as based on a duality of crisis stability and arms race stability. The nominal definition of crisis stability was a lack of incentives for initiating a nuclear attack. In other words, a condition under which neither superpower felt pressured to resort to pre-emptive nuclear war to resolve a crisis situation. Furthermore, it was essential to maintain stability not only during crises but at all times and to prevent a "bolt out of the blue" nuclear attack – hence, first-strike stability came about and was captured structurally in the concept of "mutual assured destruction". This required a preoccupation with numbers, technical characteristics, and operational considerations. Stability rested on the survivability of strategic offensive forces and on the lack of a decapitation capability – i.e. that nuclear forces must be survivable to resist "use them, or lose them" pressure, yet not be capable to taking out the adversary's retaliatory forces in a disarming first strike. This led to the US and the USSR each developing and deploying very large numbers of nuclear weapons on permanent high-alert and capable of inflicting unacceptable damage on the adversary – this was quantified as a capability for destroying 50 percent or more of military, leadership, and industrial targets.

The strategic arms control agreements of the late 1960s and early 1970s – SALT I and II, and the ABM – were designed to preserve arms race stability – thus stabilizing the central strategic balance and by extension the East-West relationship. It was believed that such central stability would result in a safer world based on a negotiated codification of nuclear arms control conflating a relationship of mutual vulnerability to second strike retaliation, and essential equivalence-parity in overall offensive nuclear

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49 See, for example: George W. Bush, "New Leadership on National Security," speech on May 23, 2000; President George W. Bush, "Remarks by the President to Students and Faculty at National Defense University," on May 1, 2001; testimony by Defense Secretary Donald Rumsfeld to the US Senate Armed Services Committee," on June 21, 2001; *Administration Missile Defense Papers* on-line at www.ceip.org/npp; and President Vladimir Putin, "Address to the Millennium Summit," on September 6, 2000; and President Jacques Chirac, "Speech to the Institute of Higher National Defence Studies," on June 8, 2001.

50 See, John D. Steinbrunner, "National Security and the Concept of Strategic Stability," *Journal of Conflict Resolution* (September 1978), p. 413.

capability. The ABM banned nationwide ballistic missile defences and was intended to prevent the offence/defence arms race that had traditionally plagued other military technologies. The principal breakthrough achieved by the ABM was the recognition that strategic offence and defence were closely connected and that deployment of defences would inevitably encourage increases and improvements in offensive forces to overcome them. SALT I froze the number of ICBM and SLBM launchers at their July and May 1972 levels, respectively, and formalized the principle of verification by national technical means (NTM), but as the number of missile launchers were capped, the arms race continued in warhead numbers. SALT II sought to establish equal quantitative limits on the aggregate number of ICBMs, SLBMs, and strategic bombers, as well as qualitative limits on destabilizing force developments (such as, the addition of MIRVs).

SALT contributed paradoxically to an erosion of strategic/(arms race) stability by freezing the number of targets (launchers) while placing few constraints on the proliferation of warheads (MIRVs) aimed at those targets. The US proceeded to increase its force loading through MIRVs, and its warheads on ICBMs and SLBMs grew from less than 2,000 in 1970 to more than 7,000 by 1978. Despite the US' initial lead in MIRV technology, the Soviet Union caught up and its warheads went from 1,100 in 1968 to 3,300 in 1976 and eventually to approximately 8,000 in 1982. Thus, SALT's goal of strengthening arms race stability was undermined, leading to destabilizing fears in the US of a "window of vulnerability". Even though President Ronald Reagan's "Special Commission on Strategic Forces" (the Scowcroft Commission) rejected the notion of US strategic vulnerability to a Soviet first strike, and the US engaged in a major strategic modernization programme designed for the US to prevail in a nuclear war.

Under pressure from the allies, the US returned to negotiations on "reductions" in strategic offensive forces but it also re-opened the debate on strategic defences. The Scowcroft Commission recommended in 1983 that, "Whether the Soviets prove willing or not, stability should be the primary objective both of the modernization of our strategic forces and of our arms control proposals."[51] In this respect, the US position represented a return to a concept of strategic/(first-strike) stability focused on reducing the incentives for a surprise attack through major structural modifications to, and reductions in, strategic offensive forces.

In contrast to the US, the Soviet Union's conception of strategic stability reflected an ability to predict and control military operations with a high degree of certainty. Thus, arms control could make significant contributions to stabilizing the threat environment for military planning. The Soviet Union regarded any change in the strategic environment, particularly the adversary's forces, which compromised their confidence in strategic planning as inherently destabilizing. Hence, the USSR criticized nearly every new US strategic weapon as destabilizing. From its perspective, the Soviet Union regarded as destabilizing any increase in the adversary's ability to hold at risk its command and control systems, or to conduct versatile nuclear operations. The Soviet Union exhibited a tendency to define stability both in political and technical terms, in other words stability depended upon managing the tensions of East-West political competition and also restricting US offensive capabilities (qualitatively within reach of Soviet capabilities).

In the START negotiations both sides sought to enhance stability, but their respective concepts differed. Both regarded stability as based on deterring nuclear war and reduced risk of miscalculation – i.e. both first strike and crisis stability. However, the US interpreted stability at the operational level as a

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[51] Report of the President's Commission on Strategic Forces (The White House: Washington, DC, April 1983).

lack of incentives for launching a disarming first strike against the adversary's retaliatory forces, while the Soviet Union regarded preponderant first strike forces as enhancing stability. Hence, the US maintained a preponderance of its strategic offensive forces at sea, while the Soviet Union relied on land-based ICBMs. Furthermore, strategic parity became a corollary of strategic stability – i.e. that the strategic balance could be stabilized under conditions of strategic parity or essential equivalence. The Soviet Union sought to preserve strategic stability by initially freezing the current levels of nuclear weapons, leading to a radical reduction.[52] In favouring enhanced arms race stability, the Soviet Union pursued a policy of strategic equilibrium that entailed three benefits: first, it ensured the futility of nuclear war; second, it created the necessary conditions for stability at lower levels of nuclear weapons while strictly adhering to the principle of equal security; and third, it was an essential prerequisite for lessening East-West tensions. Thus, arms race stability facilitated equal security and by extension undiminished security (taking into account the asymmetrical defence requirements of the Soviet Union and the US).

In START, the US aimed to reduce the first strike potential of the Soviet Union by limiting and then eliminating "heavy" (MIRVed) ICBMs, and encouraging greater reliance on "slow-flying" strategic bombers and cruise missiles. The Soviet Union, on the other hand, favoured an approach on reducing both strategic nuclear delivery vehicles (SNDVs) and warheads across the triad, and it linked an agreement on strategic offensive forces to one on space-based weapons. As the US persisted in its interest in strategic defences, the Soviet Union insisted upon a commitment by both sides not to withdraw from the ABM for at least 15-20 years and to adhere to that Treaty's ban on space-based ABM systems.

Under President George H. Bush, the US focus shifted to strategic stability through predictability and transparency, which relied on intrusive and reliable verification measures – the foundation for which had been laid in the 1987 INF Treaty through the elimination of an entire class of nuclear delivery systems, and the policies of *perestroika* and *glasnost* implemented by President Mikhail Gorbachev. START I halved the number of the most threatening weapons–heavy ICBMs–and reduced the nuclear attack potential of both sides, thus enhancing both crisis and first strike stability. START II characterized the end of the nuclear arms race and set lower equal numerical ceilings to be achieved in two stages, and enhanced strategic stability by eliminating all MIRVed ICBMs.[53] Earlier, in September 1991, following the unsuccessful coup in Moscow, the US unilaterally pledged to reduce by one-third its non-strategic nuclear forces. The following month, the Soviet Union made a similar pledge to reduce by one-half its holdings on non-strategic nuclear forces.

The Presidential Nuclear Initiatives of 1991 and START II signified the end of the Cold War nuclear arms race between the US and the Soviet Union/Russian Federation, the two sides broke the lockstep of matching weapon for weapon and ushered in a new period whereby neither regarded the other as an enemy and put in place strategic stability based on lower negotiated numerical and qualitative ceilings buttressed by transparency and verification measures.

Non-Proliferation and Lesser Nuclear Powers

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52 "Brezhnev: USSR is Ready for Arms Talks," *Current Digest of the Soviet Press* (16 June 1982).

53 START II has not yet entered into force. Following Russian ratification in April 2000, the US Senate still has to ratify the changes to the treaty stretching out the destruction periods.

In general, throughout the Cold War, the US and the Soviet Union cooperated in preventing the spread of nuclear weapons to additional countries. However, these efforts did not prevent the United Kingdom, France and China from acquiring nuclear arms. On the other hand, this cooperation led to the conclusion of the Non-Proliferation Treaty (NPT) in 1968, both to reduce the likelihood of nuclear war by limiting the centres of nuclear weapon decision-making and to provide a basis for the eventual elimination of nuclear weapons, thus contributing to the maintenance of bipolarity and its concomitant stability resting on assured destruction.

None of the three lesser declared NWS had the capacity or wherewithal to compete with or to threaten the two nuclear behemoths. As a result, their nuclear capabilities did not feature in the discussion on strategic stability and nuclear arms control between the two nuclear superpowers. Yet, both made allowances in their respective targeting plans and warhead inventory requirements to factor in targets in these lesser nuclear weapon states.

In the early 1960s, a study in the US had predicted the emergence of up to 25 nuclear armed states by the end of that decade. The extension of security guarantees, underpinned by nuclear forces, led to several advanced industrial states with active nuclear programmes to eschew nuclear weapons. Others renounced nuclear weapon ambitions under the NPT in return for access to safeguarded peaceful nuclear technology and commitments by the NWS to nuclear disarmament. Political expediencies of the Cold War led the US and the Soviet Union to tolerate undeclared nuclear weapon programmes in India, Israel and South Africa. However, these capabilities did not impact upon the nuclear powers and their calculus of strategic stability.

With the end of the Cold War nuclear standoff, attention in the US in particular turned to warning about the dangers of nuclear and WMD proliferation in the Third World. The threat to stability once posed by the USSR was then attributed to "states of concern" or so-called "rogue" states - Iran, Iraq, Libya, North Korea, Syria and Sudan. US threat assessments regularly characterized the threats posed by such "undeterrable" states to its expeditionary forces and allies, and even to its own homeland in the longer run.[54] Uncertainty, WMD and missile proliferation, and undeterrable states were and are posited by the US as threats to continuing strategic stability, requiring sustained high defence spending, missile defences and even new low-yield nuclear weapons.

In May 1998, India brusquely challenged the global nuclear non-proliferation norm and conducted a series of weapon tests followed by a declaration of its NWS status. Pakistan followed suit in short measure. These events, however, did not impact directly on existing strategic stability but further development, testing and deployment of nuclear weapons by these states could have an influence on strategic stability, particularly if China decides to undertake countervailing steps.

Post-Cold War Strategic Stability

As noted previously, with the end of the Cold War and the collapse of the Soviet Union, the traditional understanding of strategic stability based on crisis stability, first strike stability, and arms race stability has evolved to acquire new characteristics. At the same time, given sustained pessimistic intelligence estimates propounded by the US citing emerging threats of WMD and ballistic missile terrorism, the initial post-Cold War euphoria of achieving a new stable international system with reduced

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54 See Office of the Secretary of Defense, *Proliferation Threat and Response* (January 2001).

defence spending and radical reductions in nuclear weapons rapidly vanished. Nuclear weapons were quickly re-rationalized in both the US and the Russian Federation and domestic opposition emerged in both countries to further cuts. The 1994 US Nuclear Posture Review brought in a policy of "lead and hedge" – i.e. to reduce to START II levels but to maintain a reserve nuclear force at START I levels for rapid reload in a crisis.[55] And, the Quadrennial Defense Review of 1996, led the US to enunciate a policy threatening nuclear retaliation to deter not only nuclear, but also biological and chemical weapon attacks. For its part, the Russian Federation in 1999, revised its nuclear doctrine and citing a conventional force imbalance posited the early (even first) use of nuclear weapons to ensure its defence, and it allowed for the use of nuclear weapons in response to other weapons of mass destruction, such as chemical weapons.[56] And, Russia's new security concept of January 2000, stated that nuclear weapons were the only reliable means to dissuade NATO from using force against Russia.[57]

Despite Washington's dire warnings about the threat of WMD use and terrorism, during the decade 1991-2001, a nascent consensus emerged on the meaning of strategic stability, at least as reflected in a succession of US-Russian joint statements. The two sides had agreed that a nuclear war could not be won and must never be fought. They had agreed to break the Cold War lockstep of matching nuclear weapon deployments and had agreed on frameworks for reducing by nearly one-half the deployed numbers of strategic nuclear warheads. Furthermore, they had initiated discussion on warhead transparency and dismantlement measures, possible measures on strategic offensive and defensive forces, and on a mix of possible measures on strategic and non-strategic nuclear forces. In annual summits from 1993 through 2000, the US and Russia reached a number of significant agreements on strategic stability, disposition of excess weapons plutonium, demarcation of TMD testing limits, and the preservation of the ABM, among other measures.

In Vancouver, on April 4, 1993, Presidents Clinton and Yeltsin declared their firm commitment to a dynamic and effective partnership that strengthened international stability, cooperation in preventing WMD and delivery systems proliferation, implementing the START agreements, and US assistance to Russia for dismantling its nuclear and chemical weapons.

A year and a half later in Moscow, on September 28, 1994, the two presidents issued a joint statement on strengthening strategic stability and nuclear security in which they agreed to ensure an indefinite and unconditional extension of the NPT in 1995, the conclusion of a Comprehensive Nuclear-Test Ban Treaty (CTBT) at the earliest possible date while continuing with their respective testing moratoria, to achieve a global ban on the production of weapon-usable fissile material, and to cooperate in enhancing the security of weapon-usable nuclear material and preventing nuclear smuggling.

At the fourth Clinton-Yeltsin summit, on May 9-10, 1995 in Moscow, the joint statement called for new opportunities to strengthen stability through openness and transparency. They welcomed the ongoing deactivation and dismantlement of strategic nuclear systems under START I and agreed to exchange information every three months on strategic systems that have been deactivated and eliminated. In an important new development, the presidents concurred that, once the START II Treaty

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55 Janne E. Nolan, "Preparing for the 2001 Nuclear Posture Review," *Arms Control Today* (November 2000).

56 See, Nikolai Sokov, "An Assessment of the Draft Russian Nuclear Doctrine," (October 1999), http://cns.miis.edu/db/nisprofs/russia/weapons/ff_ruwea.htm.

57 See, Nikolai Sokov, "Russia's New Security Concept: The Nuclear Angle," (28 January 2000), http://cns.miis.edu/db/nisprofs/russia/weapons/ff_ruwea.htm.

was ratified, the United States and Russia would proceed to deactivate all strategic delivery systems to be reduced under START II by removing their nuclear warheads or taking other steps to remove them from alert status. They also agreed to an intensified expert dialogue to compare conceptual approaches and to develop concrete steps to adapt the nuclear forces and practices on both sides to the changed international security situation, including the possibility, after ratification of START II, of further reductions of, and limitations on, remaining nuclear forces. They noted new opportunities to strengthen stability through openness and transparency, and agreed that each side would independently consider further unilateral steps, as appropriate, with regard to their respective nuclear forces, including reduction in, and enhancements to, the security of non-strategic nuclear forces. They also agreed on the fundamental importance of preserving the viability and integrity of the ABM Treaty. The two sides agreed to a joint exercise of theatre missile defences and early warning of missile launches, to exchange detailed information at Gore-Chernomyrdin Commission meetings on aggregate stockpiles of nuclear warheads, on stocks of fissile materials, and on their safety and security. Taking a broad view of strategic stability, the two sides reiterated their commitment to the ABM Treaty as a cornerstone of strategic stability.

The sixth Clinton-Yeltsin Summit, March 21, 1997 in Helsinki, underscored the progress achieved with regard to strengthening strategic stability and nuclear security, including: significant reductions in nuclear forces, detargeting of strategic missiles, reaffirmation of their commitment to further reduce the nuclear danger and strengthen strategic stability and nuclear security. Importantly, understandings were reached on further reductions in and limitations on strategic offensive arms, demarcation between ABM and theatre missile defence systems, immediate negotiation on START II once START II had entered into force - which would establish, by December 31, 2007, lower aggregate levels of 2,000-2,500 strategic nuclear warheads for each party; transparency in strategic nuclear warhead inventories; the destruction of strategic nuclear warheads; placement in a deactivated status of all SNDVs which would be eliminated under START II by December 31, 2003, by removing their nuclear warheads or taking other jointly agreed steps (with assistance through the Nunn-Lugar programme) to facilitate early deactivation; the deadline for the elimination of SNDVs under START II would be extended to December 31, 2007. Once again, the two sides confirmed their common task to preserve the ABM Treaty - a cornerstone of strategic stability. Agreement was also reached on limiting tests for TMD systems with interceptor missiles faster than 5.5 km/sec for land-based and air-based systems or 4.5 km/sec for sea-based systems, with the velocity of the ballistic target missiles to not exceed 5 km/sec, and the flight range of the ballistic target missiles to not exceed 3500 km. Neither side would develop, test, or deploy space-based TMD interceptor missiles or components based on other physical principles that are capable of substituting for such interceptor missiles.

The seventh summit took place, September 2, 1998 in Moscow, with agreement on a joint statement on the exchange of information on missile launches and early warning, with the objective of the continuous exchange of information on the launches of ballistic missiles and space launch vehicles derived from each side's missile launch warning system, including the possible establishment of a center for the exchange of missile launch data operated by the two sides but separately from their respective national centres; and to examine the possibility of establishing a multilateral ballistic missile and space launch vehicle pre-launch notification regime in which other states could voluntarily participate.

At the G-8 summit in Cologne, June 20, 1999, agreement was reached on a joint statement concerning strategic offensive and defensive arms and further strengthening of stability. The two sides concurred that strategic stability could be strengthened only if there was compliance with existing arms reduction agreements.

The Moscow summit, June 3-5, 2000, agreed on principles of strategic stability, *inter alia*: the need to maintain strategic nuclear stability; to strengthen strategic stability and international security, while preserving deterrence; the full ratification of START II; intensified discussion on further reductions in strategic forces within the framework of a future START III, and on ABM issues, in accordance with the Moscow and Cologne statements of 1998 and 1999, respectively; the essential contribution of the ABM Treaty to reductions in offensive forces, and as a cornerstone of strategic stability; agreement on combating the growing threat of proliferation of weapons of mass destruction and their means of delivery, including missiles and missile technologies, through existing and possible new international legal mechanisms, while recognizing that this new threat represented a potentially significant change in the strategic situation and international security environment; and that issues of strategic offensive arms could not be considered in isolation from issues of strategic defensive arms and vice versa – an interrelationship that is reflected in the ABM Treaty and aimed to ensure equally the security of the two countries.

At the Okinawa G-8 meeting, July 21-23, 2000, the two presidents signed a joint statement on cooperation on strategic stability that included a search for new ways of cooperation to control the spread of missiles and missile technology – including a new mechanism to supplement the Missile Technology Control Regime; creating, and placing into operation within the year, a joint US-Russia center for exchange of data from early warning systems and notification of missile and space vehicle launches, and on principles for opening this system to the voluntary participation of all interested countries; and call upon the other G-8 states and all other nations of the world to unite in their efforts to strengthen strategic stability.

A US-Russia strategic stability cooperation initiative was agreed on September 6, 2000, at the UN Millennium Summit, that included an "implementation plan" that covered on-going and future cooperation on theatre missile defence testing, missile non-proliferation, CTBT verification, and progress on a shared early-warning centre and a bilateral ballistic missile pre-launch notification agreement.

This listing of agreements and understandings between the Russian Federation and the United States reflected a clear convergence of views on aspects of strategic stability, the means to achieve it, despite the two sides having asymmetric views on the utility of missile defences. To a certain extent, it was obvious that Russia had modified its position to concur with the US on the new dangers of WMD and missile proliferation, on the potential utility of limited theatre missile defences (restricted in a manner as not to impinge on the provisions of the ABM), on securing and disposition of surplus weapon-usable fissile material, on accepting US financial assistance (with some physical intrusiveness) to dismantle nuclear and chemical weapon systems and ballistic missiles, and on transparency and irreversibility measures for nuclear reductions. On the other hand, the United States exercised restraint in moving forward on theatre and national missile defence while attempting to remain within the strictures of the ABM, provided Nunn-Lugar funding for cooperative threat reduction, proposed a joint early warning data exchange centre, agreed to Y2K cooperation, and pressured Russia to improve export controls and to cease and desist from nuclear and missile exports.

Thus, despite major differences between Washington and Moscow on issues such as NATO expansion, use of force in Kosovo and against Iraq, continuing provocative surveillance operations by the US Navy and Air Force against Russia, CTBT ratification, and on missile defences, the two sides had in fact reached a modicum of agreement on strategic stability based on the principles of openness and transparency, irreversibility, predictability, cooperative threat reduction and further reductions in strategic offensive forces.

In stark contrast to this rich and ambitious menu of measures to enhance strategic stability, the new Bush administration could bring itself to agree only to a paltry four-line statement at the G-8 Summit in Genoa, on July 22, 2001: "We agreed that major changes in the world require concrete discussions of both offensive and defensive systems. We already have some strong and tangible points of agreement. We will shortly begin intensive consultations on the interrelated subjects of offensive and defensive systems". Surprisingly, this agreement was hailed as a major breakthrough. Lost in the shuffle was the fact that precisely such a formulation had been under intensive consideration in the Ross-Mamedov discussions during the administration of President George H. Bush in 1991-1992.

From Bipolar to Unipolar Strategic Stability?

The Cold War was characterized by a bipolar system, with the US and the USSR as the two competing poles. From the mid-1940s through to the mid-1970s, bipolarity was essentially a zero-sum phenomenon. With the onset of the policy of *Ostpolitik* and the resulting *détente*, bipolarity slowly began to shift toward non-zero sum outcomes in certain areas. Eventually modified bipolarity became the norm underpinned by mutual assured destruction. All of this changed literally overnight with the dissolution of the Warsaw Treaty Organization and the subsequent collapse of the Soviet Union.

The four decade long bipolar system collapsed, leaving the US as the sole surviving superpower. Quickly, the US defence department drafted a new grand strategy designed to preserve unipolarity by preventing the rise of a peer.[58] In the face of mounting domestic and international criticism, the US reverted to the moniker of a "leader" or "an indispensable nation". For many neorealists, the least stable of structures is unipolarity, as any overwhelming concentration of power threatens other states and propels them to form countervailing coalitions.[59] Other scholars doubt whether the system is indeed unipolar and maintain that it is "uni-multipolar".[60] Whatever the characteristics of the international system, it is clear that for the foreseeable future it will be dominated by a predominant hegemon – the United States. It enjoys an overwhelming margin of superiority over its nearest rival, and also over all the other great powers combined. The US maintains overwhelming preponderance in all the key indicators of power: economy, military, technology and geopolitics. The challenge for the rest of the international community is how to deal with the US, how to tame the hegemon, and how to get it to carry its weight in a multilateral context? And, how will strategic stability evolve in a unipolar system? Already, we are witnessing some of the stresses and strains as the US struggles to redefine its nuclear force posture without upsetting the rest of the apple cart. With regard to strategic stability, is this unipolar system conducive to peace, will it engender attempts at countervailing coalitions. Furthermore, is the hegemon positioning itself to forestall the rise of challengers – is the US cozying up to India, for example, to provide a regional counter to China? It is as yet too early to answer these questions – the current tendencies though do not appear propitious, because the sole surviving superpower is afflicted with leadership, vision, commitment and engagement deficits. Thus, there is a window of opportunity for middle powers to try to tame the hegemon and to direct it toward constructing a cooperative, interdependent system of strategic stability.

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58 Patrick Tyler, "The Lone Superpower Plan: Ammunition for Critics," *The New York Times* (March 10, 1992), p. A12.

59 Christopher Layne, "The Unipolar Illusion: Why New Great Powers Will Arise," *International Security* (Spring 1993), pp. 5-51; and Michael Mastanduno, "Preserving the Unipolar Moment: Realist Theories and U.S. Grand Strategy after the Cold War," *International Security* (Spring 1997), pp. 44-98.

60 Samuel Huntington, "The Lonely Superpower," *Foreign Affairs* (March/April 1999), p. 36.

It is sobering to remember that to date all of the nuclear-tipped missiles that have been destroyed, and all of nuclear warheads that have been dismantled, have been as a result of arms control diplomacy not through military force or defensive systems.[61] Unfortunately, this is a stark reality that has escaped the proponents of missile defences–even though the vast bulk of these destruction/dismantlement measures were agreed to under Republican administrations in the US. And it clearly indicates the importance of not turning away from the first line of defence-arms control–in favour of a last line of defence, military preparations.

The US is currently engaged in a nuclear posture review but it is not at all clear if it will address the relevant questions,[62] such as: is the US prepared to use nuclear weapons against non-nuclear states? Does the US require new lower yield "bunker-busting" nuclear weapons to deal with regional threats? What is the US nuclear doctrine? What is the relationship of nuclear deterrence policy, targeting strategy, and arms control? How much deterrence is needed? Is it still in the US national interest, and in the interest of strategic stability, to maintain a robust and balanced triad of strategic offensive forces? What is the purpose of nuclear weapons and nuclear deterrence? How will the US manage a transition to deployed missile defences without provoking instability? And, how is the US fulfilling its nuclear disarmament obligations under the NPT?

The 1994 NPR was a wasted opportunity, will history repeat itself in 2001? Thus far, the odds militate against major change. The planning principles devised by STRATCOM act as powerful road blocks to deep cuts in nuclear forces: as the number of warheads is reduced, the triad becomes more important because of the increased vulnerability of fewer platforms to attack or failure; as the target base is reduced due to reductions in strategic forces, the flexibility and capability of the triad increases; as the number of warheads is reduced, transparency of the remaining numbers and types becomes more important; as strategic offensive warheads are reduced, the value of non-strategic warheads increases; as the overall numbers and types of nuclear warheads are cut, the value of the remaining ones increases; and as the number of warheads is reduced, the impact of missile defences on both offensive and defensive nuclear war planning becomes more important.[63]

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61 The 1987 US-USSR INF Treaty resulted in the elimination by May 1991 of 846 longer-and shorter-range US INF missile systems and 1846 Soviet INF missile systems, including the modernized U.S. Pershing II and Soviet SS-20 missiles; and under the INF and START I agreements the US has dismantled some 13,000 nuclear warheads and Russia more than 6,000.

62 See, Janne E. Nolan, "Preparing for the 2001 Nuclear Posture Review," *Arms Control Today* (November 2000); and Robert Kerrey and William D. Hartung, "Toward a New Nuclear Posture: Challenges for the Bush Administration," *Arms Control Today* (April 2001).

63 Derived from, Hans Kristensen, *The Matrix of Deterrence*, (May 2001).