

# Missile Defenses and Mother Russia: Scarecrow or Showstopper?

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**ABSTRACT** *Missile defenses will neither derail the post-Cold War political relationship between the US and Russia nor repeal the existence of mutual deterrence as between their respective nuclear arsenals. Because politics rules strategy and strategy must pay homage to the realities of physics, missile defenses will emerge into arsenals gradually, if at all. Whether missile defenses exacerbate political tensions, or can be deployed cooperatively by the United States and/or NATO and Russia, is not a technological given, but a political decision point that will require care taking by the current and prospective administrations in Washington and Moscow.*

## Introduction

Missile defenses have moved from the periphery to the center of US–Russian relations during the past year. American proposals to deploy components of a missile defense system in Eastern Europe have raised questions about US–Russian and NATO–Russian political relations. Missile defenses also raise military-strategic issues with regard to the stability of nuclear deterrence and reassurance in the twenty-first century. In addition, missile defenses deployed by the US or jointly with Russia have implications for controlling the proliferation of nuclear weapons.

The present study considers the problem of missile defenses, as between the US and Russia, as a combination of shared threat and potential reassurance. If the two states approach missile defenses as if the Cold War were still in progress, then threats will be emphasized. If, on the other hand, missile defenses are seen in Washington and in Moscow as a matter of cooperative security, then ballistic missile defenses (BMD) need not be incompatible with further reductions in offensive strategic nuclear forces.

## Putin Poses a Challenge

President Vladimir Putin and other leading Russian officials spoke emphatically in the spring of 2007 against announced US plans to deploy missile

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defense components in Poland and the Czech Republic.<sup>1</sup> But Putin appeared to change course in June 2007, when he surprised US President George W. Bush at the G-8 meetings in Germany with an offer to cooperate in building a joint missile defense system using Russian-leased components in Azerbaijan.<sup>2</sup> US and even Russian experts noted technical problems with Putin's proposal, including the insufficient capability of the radar in Gabala (Qabala) for performing the kinds of tracking and discrimination required for BMD intercept.

Nevertheless, Putin continued with expressions of interest in US–Russian cooperation on missile defenses during his meetings with President Bush at Kennebunkport, Maine, in late June and early July. The Russian President said at a press conference on 2 July that he was ready to expand on his proposal for a shared missile defense system that would take Russian–US relations to ‘an entirely new level’ of cooperation.<sup>3</sup> Putin's revised plan would modernize the radar in Azerbaijan and add another missile warning and detection system being constructed in southern Russia.<sup>4</sup> In addition, the Russian President offered to open ‘an ABM information exchange center’ in Moscow and recommended the creation of a parallel ‘analytical center in a European capital city, for instance, Brussels’.<sup>5</sup>

Putin's choice of Brussels was no coincidence. He was obviously attempting to enlarge the political discourse on BMD to include NATO Europe along with Russia and the US. His preferred forum for broadening BMD consultations was the NATO–Russia Council. Also offering the carrot of political inclusiveness and the possibility of taking US–Russian relations to a higher level of cooperation, Russian First Deputy Prime Minister Sergei Ivanov stated that, if the US accepted Putin's proposals, it would change ‘the configuration of international relations’.<sup>6</sup> Ivanov told journalists in Tashkent on 4 July that BMD cooperation, along the lines of Putin's proposal, would lead to technology exchange and political cooperation: ‘A new space for trust will emerge. We may establish strategic partnership’.<sup>7</sup>

For his part, President Bush at Kennebunkport maintained a positive atmosphere between the two heads of state despite his advisors' technical and political doubts about the Russian proposal. Part of Russia's incentive was undoubtedly to head off any BMD deployments in Poland and the Czech Republic, unless these technologies were incorporated within a broader missile defenses architecture and within a NATO–Russia framework, not under unilateral American control. Bush indicated no willingness to bypass the deployments in Poland and in the Czech Republic. Expert groups were to study further possible cooperation between the US and Russia or Russia and NATO on missile warning information exchange and BMD.

President Putin was not the only sceptic with respect to the details of Bush-proposed missile defense deployments. The US Congress weighed in with various concerns about technical and political aspects of the proposed BMD deployments in Poland and the Czech Republic.<sup>8</sup> In June 2007 the US House of

Representatives passed legislation which reduced funds in the fiscal 2008 Defense Authorization Bill for construction of the interceptor missile sites in Poland and for deployment of the X-band radar in the Czech Republic. The US Senate Armed Services Committee, for its part, decided to delay funding for the European BMD sites. In its report on the defense authorization bill, the Senate committee cited Russia's opposition to East European deployments and indicated that funding for deployment should follow talks between the two governments. In addition, the Committee expressed concern that NATO had neither officially endorsed nor rejected the proposed missile defense deployments on its territory.<sup>9</sup>

Congress also expressed concern about the proposed timing of proposed deployments and its coordination with the pace of technology development. The US Missile Defense Agency (MDA) estimated that construction and deployment could not begin until the Czech Republic and Poland ratified agreements with the US. Such actions 'would not take place before 2009'.<sup>10</sup> The Senate Armed Services Committee reported (presumably based on MDA testimony) that the interceptor to be deployed in Poland 'has not yet been developed or tested, and is not currently planned to be flight-tested until 2010'.<sup>11</sup>

Additional doubt was expressed by the Senate committee with respect to Bush administration threat estimates relative to the requirement for BMD in Europe. Air Force Lt. Gen. Henry A. Obering III, Director of the Missile Defense Agency, had previously testified before the committee that 'right now, experts are saying that Iran will not have an ICBM until the 2010–2015 time frame'.<sup>12</sup> However, the Senate Committee doubted whether Iran would pose a significant threat even by 2015: 'There is uncertainty about whether Iran will have such long-range missiles, or nuclear warheads that could work on such missiles, by 2015' according to the Committee.<sup>13</sup>

### **Missile Defense in Perspective**

Putin's proposal and Congressional scepticism about missile defenses fit into a larger context that stretches back to the Cold War. Although Russia and the United States have a politically non-hostile relationship (reaffirmed by both governments at the Kennebunkport summit, where they pledged continued consultation and cooperation in reducing their numbers of deployed strategic nuclear weapons), their relationship is more geopolitically competitive under Putin than it was during the 1990s. Putin's military and larger security establishment includes persons with a Cold War mentality with respect to American missile defenses. They identify American missile defenses with Reagan's 'Star Wars' system designed, in their view, to win the Cold War by technological overthrow of mutual deterrence. Moscow's military conservatives also distrust the enlargement of NATO that has, since the end of the Cold War, pushed its borders closer to Russia and enlarged its membership to 26

countries. The combination of possibly viable American missile defenses, deployed on the former territory of the Soviet-allied Warsaw Pact and within operational reach of Russia, causes hard liners among the *siloviki* to doubt American reassurances that European BMD are intended to deter and deflect missile threats from the Middle East.

The doubts of members of Congress about the effectiveness of US missile defense technology, notwithstanding the political arguments for or against BMD deployments, can also be traced back to Cold War origins. Ever since the 'ABM' (anti-ballistic missile system) debates of the 1960s and 1970s in American politics, critics of missile defenses have charged that the technology promises more than it delivers. In addition, Cold War and later sceptics have contended that anti-missile defenses are overmatched against the offensive striking power of long range ballistic missiles armed with nuclear warheads. The paradoxical logic of deterrence that provided the dominant rationale for US arms control policy during the Cold War was that, even if missile defenses worked technologically, they would be politically destabilizing. By this logic, 'successful' nationwide missile defenses deployed by one side would deny to the other side its 'assured retaliation' or 'assured destruction', thereby decreasing deterrence and arms control stability.<sup>14</sup>

The demise of the Soviet Union, the end of the Cold War and the attacks of 9/11, according to some, have changed the political-military and technology contexts relative to missile defenses.<sup>15</sup> As to the political context: the threat of nuclear or other weapons of mass destruction (WMD) attack is posed primarily by rogue states or non-state actors such as terrorists. While these state and non-state actors may be 'beyond deterrence' as a cost-benefit proposition (depending on their motives), the challenge their attacks pose to evolving BMD systems may not be as one sided as that posed by Cold War offences against available defenses. According to this reasoning, states nowadays face a higher probability of nuclear deterrence failure, compared to the Cold War years—but defense technology is more equal to the task of interception of attacking missiles and warheads against probable aggressors.

In addition, current proponents of BMD systems would contend that missile defenses provide both societal protection and some supplemental deterrence. Even rogue states contemplating a nuclear first strike might pause if they expected any such attacks to be exercises in futility against superior defenses. The first strike would serve only to antagonize the victim without causing significant damage. However, there is also the aspect that defenses can be used against retaliatory strikes as well as against first strikes. A first striker supported by missile defenses might then be emboldened to attack, counting on its BMD to negate the defender's retaliation. Thus political intentions are compelling as to the purpose for which missile defense or other technologies will be used: war is still war, and strategy, strategy, per Clausewitz.

US, Russian or other missile defenses, whether viewgraph systems or actual deployments, also have implications for the pace and character of nuclear

weapons proliferation.<sup>16</sup> Arguably the spread of nuclear weapons, limited during the Cold War to a small number of major powers, is on the verge of escaping international control. This judgment is not uncontroversial. Optimists about nuclear proliferation would point to North Korea's agreement with the US, Russia, China, Japan and South Korea signed in February 2007.

In this agreement, North Korea promised to shut down its nuclear reactor at Yongbyon within 60 days and to admit international inspectors to verify compliance. In return, the DPRK (Democratic People's Republic of Korea) was to receive an emergency shipment of fuel oil from the US, China, Russia and South Korea. This first phase of the agreement accomplished the freezing of North Korea's plutonium-based weapons programme, but left for future discussion its suspected uranium-enrichment programme and other aspects of its nuclear capabilities. Some experts suggested that, as of February 2007, North Korea had already accumulated sufficient fissile material to assemble between six and ten nuclear weapons.<sup>17</sup>

It remained to be seen whether North Korea would follow through with a more complete accountability for its nuclear weapons programmes that was sufficient to satisfy the international community.<sup>18</sup> Verifiable and enforceable nuclear disarmament of North Korea would remove one member of President George W. Bush's 'axis of evil' from the list of rogue states that were either judged as nuclear capable or nuclear aspiring. Presumably this might also weaken the US case for nationwide BMD deployments, although other candidate rogues existed. With the defenestration of the Saddam Hussein regime in Iraq and the denuclearization of North Korea, the focus of US and allied attention to emerging nuclear 'states of concern' would shift to Iran.

Estimates of the speed with which Iran might deploy missiles of inter-continental range and nuclear warheads vary within the government and among outside experts.<sup>19</sup> Regardless of the disagreements about specifics, the US and allied governments are agreed that the acquisition of nuclear weapons by Iran would be a setback to peace and security in the Middle East. Britain, France and Germany have taken the initiative within the European Union to negotiate with the regime in Tehran, supported by the UN Security Council and International Atomic Energy Agency. The policy consensus about the undesirability of Iranian nuclear weapons also appears to include Russia, although Russia has its own economic interests in Iran, as does China. Thus Russia and China have preferred a go-slower approach to UN sanctions against Iran than the EU triumvirate or the Security Council P-5.

Iran's nuclear ambitions have, as noted above, backed into the issue of nuclear arms control and nuclear arms race stability in Europe. The US fears that longer range Iranian missiles could eventually reach military, economic or population targets in NATO Europe. Having acquired and deployed nuclear weapons together with longer range missiles, Iran could coerce states into compliance with its demands, or deny the US and its allies access to various theatres of operations contiguous to Iranian territory. Thus, without having

fired a shot in anger, an Iranian nuclear threat-in-being would raise the stakes in any diplomatic confrontation between the regime in Tehran and the United States, NATO Europe, or regional adversaries, including Israel.

The possible emergence of a nuclear armed Iran shows how the issue of cooperative security in Europe and in the Middle East is directly linked to the US–Russian problem of post-Cold War nuclear stability. Russian political support is necessary inside and outside of the UN Security Council in order to contain Iranian nuclear ambitions. To obtain this cooperation, the US must reassure Russia that it has no interest in nuclear superiority with the intent of coercing Russia or using NATO as a vehicle for undermining the Russian regime. Missile defenses, if deployed, cannot have their Cold War flavor of competition for nuclear superiority, but must emerge from an environment of US–Russian security cooperation.

The next section considers alternative scenarios of US and Russian strategic nuclear weapons deployments and models the outcomes of hypothetical nuclear exchanges with these forces—with and without missile defenses.

## **Analysis and Methodology**

### *Context*

The US and Russia are required, according to the SORT (Strategic Offensive Reductions Treaty) or Moscow Treaty of May, 2002, to reduce their numbers of operationally deployed nuclear weapons on intercontinental launchers to within the range of 2,200–1,700 warheads. The deadline for accomplishing these reductions in offensive nuclear weapons is the end of December 2012. The Bush administration preferred to negotiate SORT according to a broad framework instead of a set of detailed specifications and restrictions. Each side has ‘freedom to mix’ its forces among land based, sea based and airborne launchers, and prior START (Strategic Arms Reduction Treaty) limits on multiple warhead missiles were superseded by SORT. The SORT approach provided Russia with more flexibility, by permitting the preservation of one or more of its multiple-warhead Intercontinental Ballistic Missiles (land based) (ICBMs).

The US has not deployed a missile defense system since the ill-fated Safeguard BMD site was demobilized by Congress in 1975. The Soviet Union and then Russia deployed several versions of missile defenses to protect the national capital and command centers around Moscow, but these systems would have been overwhelmed by Cold War and later American forces. Further inhibiting Russia from deploying missile defenses has been its technological lag behind the United States in military information systems and in funding for defense research and development, especially in the 1990s. Under Putin, Russia has improved its economic performance and the defense sector has benefited from this improvement, including modernization for the strategic and other nuclear

forces.<sup>20</sup> Nevertheless, Russia, like the Soviet Union during the 1980s, fears that an arms race in missile defenses would be a loser for the Kremlin, in competition with the larger US defense budget and American defense technology innovation. All indications are that Russia would prefer to modernize its offensive nuclear forces and rely on countermeasures to overcome any US defenses.

The SORT agreement leaves undecided the status of US or Russian strategic nuclear forces beyond 2012.<sup>21</sup> Indeed, from a legal standpoint, it becomes obsolete at the very moment that it goes into effect. SORT provides for no verification protocols other than national technical means; the protocols carried forward under START I expire in 2009. Both the Bush and Putin administrations have indicated that they would prefer to maintain the SORT limits on offensive forces well beyond 2012, but the preferences of their successors after 2008 are unknown and unconstrained.

For reasons of economy or strategy, Russia might opt for limits on strategic nuclear weapons below the SORT ceilings—if the US would agree similar limits. A less expensive nuclear force would free additional funds for modernizing and otherwise improving Russia's conventional military. Russia's conventional forces took a big hit in virtually all categories of military capability during the 1990s: equipment, training, modernization and quality of recruits.<sup>22</sup> In addition to their lack of resources and personnel for modern wars against peer competitors or even ambitious regional powers, Russia's armed forces are also inhibited by hidebound doctrine and retro definitions of their probable opponents. Russia's higher military echelons include persons who remain fixated on NATO as the enemy of choice, and the Russian armed forces leadership has been slow to adapt its training and temperament to the new requirements for fighting terrorists and unconventional wars.<sup>23</sup>

### *Procedures and Data*

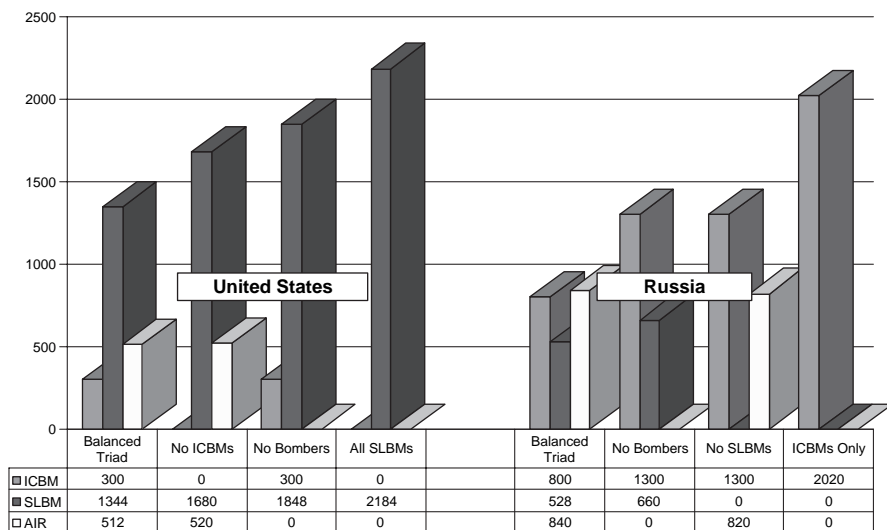
Given the preceding context of political, military and economic factors, the use of SORT-constrained limits for Russian and American strategic nuclear force projections is at least a reasonable point of departure. For purposes of the present analysis, each state has been assigned four hypothetical SORT-limited forces for the period 2012–20. Russia's forces include: a balanced triad; a dyad of land based missiles (ICBMs) and submarine-launched missiles (SLBMs) without bombers; a dyad of land based missiles and bombers (without SLBMs); and, a force of strategic land based missiles only. US forces include: a balanced triad; a dyad of ICBMs and SLBMs without bombers; a dyad of submarine-launched missiles and bombers (without ICBMs); and a force of strategic sea based missiles only. These forces are not predictions of what might actually happen: they are heuristic devices to highlight various aspects of the analysis.

The performances of the various Russian and US forces are compared according to the numbers of second strike surviving and retaliating warheads provided by each force, under the following operational conditions of alertness

and launch procedures: (1), generated alert, and launch on warning (GEN-LOW); (2), generated alert, and riding out the attack (GEN-ROA); (3), day to day alert, and launch on warning (DAY-LOW); and, (4), day to day alert, riding out the attack (DAY-ROA). In general, one might expect that the progression from (1) through (4) would result in decreasing numbers of surviving and retaliating warheads, but this is not always the case. Much depends on the size and character of the attack and the performance of the defender under various conditions.

We will examine the performances of these forces without defenses, and then consider how well they would do with defenses added to the equation.<sup>24</sup> The character of future defenses is a technological unknown. Therefore, we created straw man defenses with one of three levels: a single layered defense, capable of intercepting 25 per cent of second strike retaliating warheads; a two tiered defense, capable of intercepting 50 per cent of the retaliating warheads; and, third, a three layered defense, capable of intercepting 75 per cent of retaliating warheads. Of course, in the 'real world' of actually deployed and functioning defenses, the estimation of their performance against responsive offences with countermeasures becomes much more complicated to accomplish—even in testing, apart from actual hostilities.<sup>25</sup>

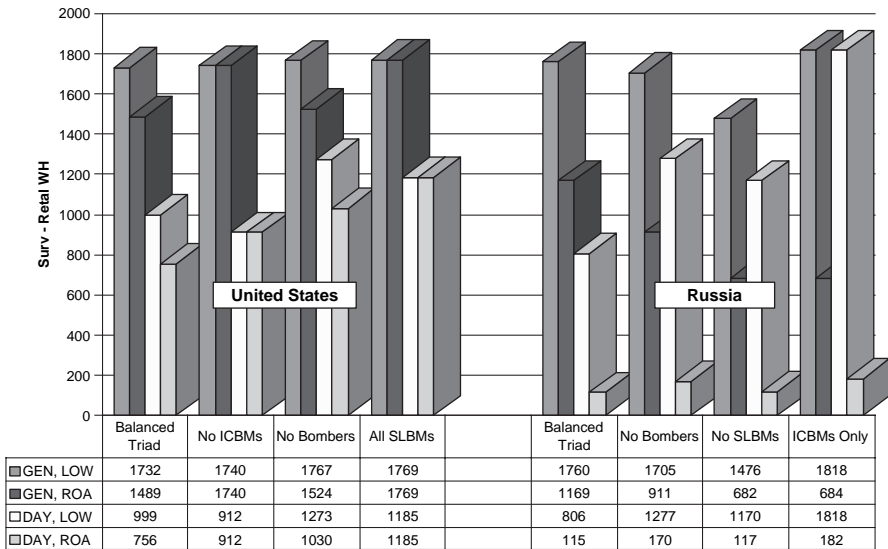
Figures 1 to 5, below, summarise these scenarios for Russian and US forces under deployment limits of 2,200 warheads. Figure 1 summarises both states'



**Figure 1.** Total Strategic Weapons, 2200 Forces

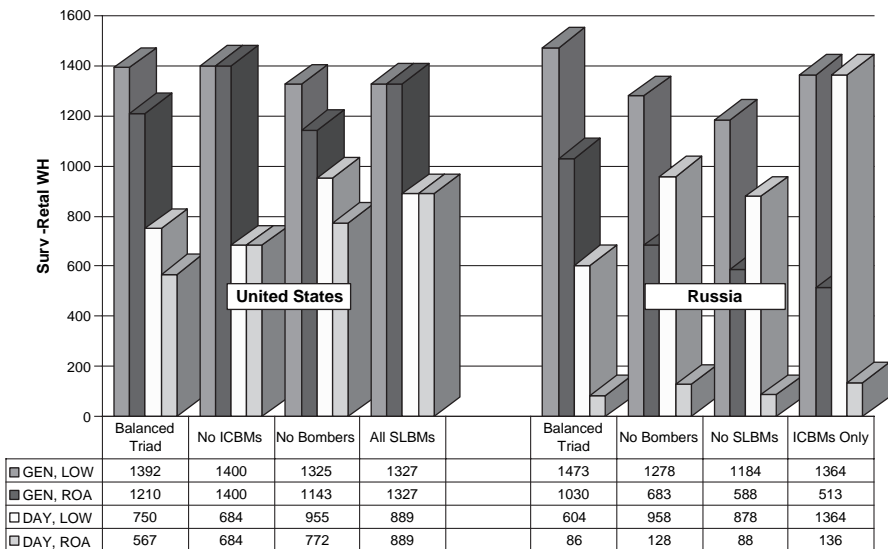
*Source:* Author, based on AWSM@ force exchange model developed by Dr James Scouras. He is neither responsible for the analysis here, nor for any arguments or conclusions.



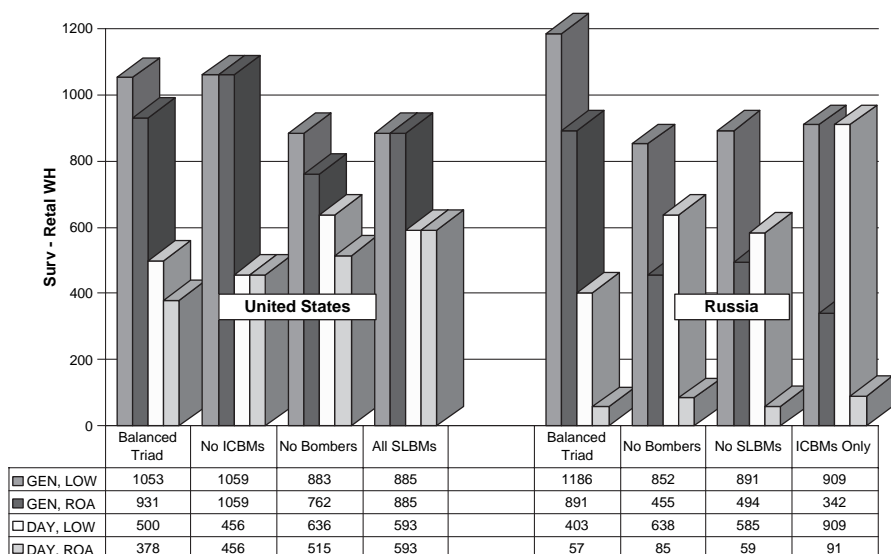


**Figure 2.** Arriving Weapons, 2200 Forces, No Defenses

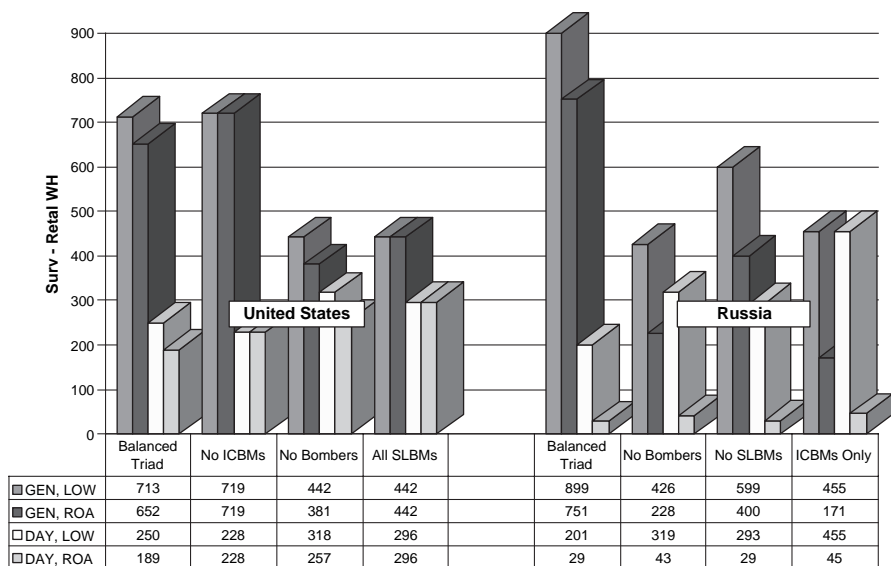
pre-war nuclear weapons. In Figure 2, Russian and US forces are compared by type of force and operational posture according to the numbers of surviving and retaliating warheads provided by each. In Figure 2, no defenses are



**Figure 3.** Arriving Weapons, 2200 Forces, Defenses 25 Per Cent



**Figure 4.** Arriving Weapons, 2200 Forces, Defenses 50 Per Cent



**Figure 5.** Arriving Weapons, 2200 Forces, Defenses 75 Per Cent

assumed to exist on either side. Figures 3 to 5 introduce defenses into the equation. In Figure 3, each state is assigned defenses capable of intercepting 25 per cent of second strike retaliating warheads. Figure 4 provides similar information to that appearing in Figure 3, but each state's defenses can now intercept 50 per cent of retaliating warheads. In Figure 5, the defenses are improved again, and US and Russian BMD can now intercept 75 per cent of retaliating warheads. Thus, the sequencing from Figures 3 to 5 crudely measures the progression of improved outcomes that the US or Russia might obtain by deploying one layered, two layered and three layered defenses (terminal only, terminal plus midcourse, and terminal plus midcourse and boost phase defenses, respectively).

A number of preliminary findings suggest themselves, based on these data. First, the nuclear revolution has not been repealed in the post-Cold War world, even at greatly reduced US and Russian force levels compared to Cold War norms. Both states' SORT-constrained forces retain the capability to provide for assured retaliation and the inflicting of unacceptable societal damage. This is emphatically the case without defenses, but it is also true with defenses added.<sup>26</sup> Russia's 'day to day alert, riding out the attack' forces are less survivable than others, but Russia is unlikely to be in that posture during a crisis—if ever. (But, see below for more on this case.)

Second, force structures and operational postures do matter. They matter because they influence the probability of accidental or inadvertent nuclear war, as well as the tendency for leaders to jump through windows of opportunity or fear. Thus, for example, US forces are more survivable than are Russian forces within the same deployment ceilings. The reason for this higher survivability of US forces is the more reliable performance of the American sea based deterrent. Russia's ballistic missile submarine force went into the doldrums in the 1990s and is only now bringing into fruition newer generations of submarines and missiles. In addition, Russia's long range bomber force (less survivable than sea based ballistic missiles, but more survivable than land based missiles deployed in silos) lags its American counterpart in providing for numbers of surviving and retaliating warheads.

Third, the performance of Russia's forces under the most pessimistic conditions of alertness and launch readiness (day to day alert, riding out the attack) is a possible cause for concern. Although war between the two states under any foreseeable political conditions appears impossible, the appearance of singular vulnerability in this category could contribute to greater Russian reliance upon generated alert or prompt launch during a crisis. Russia can improve the performance of its forces in this category by making itself less dependent on land based missiles through improvements in its submarine and bomber forces.

Fourth, the hypothetical forces other than American and Russian 'balanced triads' are not mere excursions into fantasy. They show that both states could be more imaginative in devising force structures that would provide for equal

or better performance in war, but at lower risk of accidental-inadvertent war or of excessive dependency on forward leaning crisis management. Some out-of-the-box thinking about force structures might induce leaders in the US or Russia to consider one or more of the following options (the author does not necessarily endorse any or all of these).

## US

Shift to a dyad of sea based and bomber forces, eliminating the ICBM force. Substitute air and sea launched strategic cruise missiles for the ICBM force.

Deploy conventional instead of nuclear warheads on part or all of the US ICBM force. Current Department of Defense plans call for the US to deploy some ballistic missile submarines with conventional instead of nuclear warheads. The purpose is to create a long range conventional strike option without the collateral damage of nuclear weapons. The objective is admirable, but the ICBM force is better used for this purpose. SLBM trajectories might be confused with a US first strike against Russian forces or state territory. In addition, the American Ballistic Missile Submarine (Nuclear) (SSBN) fleet is the backbone of the strategic nuclear retaliatory force—not only in terms of survivable firepower, but also in terms of flexible operations and deployment.

Deploy a family of strategic non-nuclear UAVs (unoccupied aerial vehicles) with lookdown-shootdown capabilities against military targets, including hardened and deeply buried targets, such as command bunkers and WMD storage sites. These strategic non-nuclear UAVs (SNUAVs, or ‘snoo-avs’) would provide a long loitering, reconnaissance-strike capability during crises and would reduce dependency on the prompt or delayed use of nuclear weapons.

Deploy missile defenses in sync with further reductions in offensive nuclear weapons, providing reassurance to Russia that American BMD was not intended as a checkmate move against Russia’s deterrent. If missile defenses or components are deployed in Europe, bring Russia into the conversation, including the option of making use of Russian advanced air defense missile technology.

When possible, encourage US–Russian and Russian–NATO cooperation on missile defense technology and, notwithstanding political obstacles, on future BMD deployments. Shared information from joint early warning centers, and more transparency with regard to Russian and US alerts, are recommended for building trust and for improving crisis stability.

## Russia

Improve capabilities of sea based and bomber deterrents, and rely less on silo based ICBMs whose vulnerability raises the risk of crisis instability. Russia’s new Topol-M land based missile can be deployed in mobile or fixed basing modes. Mobile missiles, to the extent that supporting infrastructure is affordable, offer additional increments of first strike survivability compared

to silo based missiles. Mobile ICBMs could also be combined with land based ballistic missiles of shorter ranges or cruise missiles (see below).

Emphasise theatre instead of intercontinental range nuclear forces in future modernization. Russia's nuclear 'deterrent' can affect the United States by holding NATO Europe or parts of strategic Asia at risk. Russia could maintain a downsized, mini-triad of intercontinental nuclear launchers, while increasing its theatre and shorter range ballistic and cruise missiles. For example, Russia might abrogate the INF treaty and deploy a new generation of Long Range Intermediate Nuclear Forces, including both nuclear and conventionally armed missiles.<sup>27</sup>

Shifting the emphasis in nuclear force modernization from intercontinental to theatre or shorter range ballistic (or cruise) missiles would be more consistent with Russian military doctrine under Putin, acknowledging the option of nuclear first use in a variety of circumstances other than a war with the United States.<sup>28</sup> Some Russian analysts have also noted that the use of nonstrategic nuclear weapons may be a more believable, and therefore more practical, option:

it is far from always advisable to perform missions of deterring and repelling aggression using only strategic nuclear weapons. Under certain conditions the most effective regional deterrence can be ensured by means which on the one hand would be powerful enough to inflict significant damage on the aggressor and thereby to carry out the real threat, and on the other hand not so powerful that the effect of self-deterrence and of their nonuse arises.<sup>29</sup>

As Dr Jacob W. Kipp has noted, Russian debates over the most appropriate response to US National Missile Defense proposals 'became entangled in the issue of nonstrategic nuclear weapons' as early as the latter years of the Clinton Administration.<sup>30</sup> In addition, the highly visible power struggle between former Defense Minister Igor Sergeev and former Chief of the General Staff Anatoliy Kvashnin under Presidents Yeltsin and Putin was, in part, driven by the efforts of Kvashnin to diminish the role of nuclear forces (including, presumably, tactical and other non-strategic nuclear forces) and to increase the strategic centrality and budgetary support for conventional forces.<sup>31</sup>

However, from an arms control standpoint, if Russia goes in this direction of greater reliance on theatre or shorter range nuclear systems, it will become more important for Russia to improve its accounting, safety and security of fissile materials and to accept more transparency about its inventories of tactical and theatre nuclear weapons than hitherto.

Flanked by a vanguard of improved operational-tactical and theatre nuclear systems (as above), Russia could invest additional funds in the modernization of its conventional forces. Conventional force modernization would lower the nuclear threshold. Much needs to be done. Putin has urged the General Staff

and Ministry of Defense to transition from a largely conscript military to one that relies more heavily on contract soldiers—especially in elite units that would be used against terrorists or in rapid deployments, or both. However, contract soldiers are more expensive than conscripts, so to accomplish this, military reform would also be required. This reform would include training, including less tolerance of hazing of new recruits, and higher pay for junior officers so that more will re-enlist. In addition, much of the equipment in Russia's military is shopworn and badly in need of replacement or repair. Finally, troops need to spend more time in realistic training exercises using their assigned tanks, planes and ships, and with non-scripted outcomes allowed as possibilities (unlike in the former Soviet style).<sup>32</sup>

Russia might take some of its ICBM force off ready alert and even download some of its land based missile warheads into storage. Warheads from de-alerted or downloaded land based missiles could be replaced by newer submarine launched missiles and warheads, or by newly acquired theatre systems. This point and the second point under 'Russia', above, might seem to allow Russia greater compellence against US European allies in order to provide more reassurance to Americans against crisis instability or deliberate attack. But the impression of divisible deterrence on this issue, as between the US and NATO Europe, is mistaken. The Soviet Union tried to create this escalation firebreak between the American homeland and the territory of US NATO European allies in the latter 1970s, when it deployed the long range INF SS-20 systems targeted at the European theatre of military actions (TVD).

However, the Soviets were unsuccessful in dividing NATO on this point and NATO responded with counter-deployments (Pershing II ballistic and long range cruise missiles) targeted at Russia. *Politics* then and now determines whether the nuclear hostage status of Europe and North America can be torn into separate compartments. If NATO holds together politically, then Russian theatre nuclear force modernization does not threaten Europe's survival any more than hitherto. If, on the other hand, NATO lacks political cohesion, then Russia can perhaps exploit the seams in the alliance and make use of nuclear blackmail to drive some members of NATO into appeasement. But to what end? Unlike the situation during the Cold War, Russia now embraces capitalism and guided democracy, albeit with reservations, and neither needs nor wants a global confrontation with the US and the West. Only if Russia falls prey to internal anarchy is it likely to see nuclear brinkmanship as a strategy that pays dividends—whatever the views of remaining cavemen in its military bureaucracy.

Russia might also, in recognition of the implausibility of a nuclear war with the United States, agree offensive arms reductions down to the level of a truly 'minimum deterrent' force (say, 1,000 operationally deployed warheads on each side). The concept of minimum deterrence deserves more serious consideration that it gets from military bureaucracies in Washington and in Moscow. With

1,000 warhead forces deployed, the United States and Russia would remain ahead of other existing (or aspiring) nuclear powers.

A post-SORT arms reduction agreement down to 1,000 warheads could have an escape clause in case a peer competitor arose who posed a danger of deploying an essentially equivalent force. There would be plenty of time for Russia and the United States to react, in that eventuality. Meanwhile, Russia's minimum deterrent could deploy some 400 survivably based warheads on land based missiles; some 300 on submarines; and another 300 on bombers. The US could deploy 400 or so on submarines, 300 on bombers and another 300 on land based missiles (this assumes that both states remain with a balanced triad of forces). Of course, the 'survivability' of the various launchers and warheads would not be identical, but all should be more survivable than silo based ICBMs now are.

A post-SORT minimum deterrent would require more verification than the present SORT arrangement, beyond national technical means of surveillance. Some may also object that a smaller force will deny to military planners options for counterforce attacks on certain kinds of military and other targets, should deterrence fail. But once deterrence has actually failed: who would care?

## **Conclusions**

The study has covered a considerable number of issues. The major conclusions are as follows. First, there is no repeal of mutual deterrence on offer between the United States and Russia, for at least two reasons. The first reason is that neither possesses nor will possess, under SORT constraints, a first strike capability with high confidence of avoiding unacceptable retaliation. The second reason, more important, is that there are no political issues dividing the United States and Russia worth a war—any war, let alone, nuclear war. This situation should continue unless both states bungle diplomacy to a degree as yet unseen.

Second, US missile defenses will not destabilize the post-Cold War relationship between the United States and Russia for at least four reasons. First, American defenses will build capability incrementally. As US defenses improve, Russia will have the opportunity to offset those defenses with active and other countermeasures (including military-technical means such as penetration aids and decoys, or political measures such as coercing American allies to bring pressure on the United States). Second, US missile defenses will not remove America from its nuclear hostage condition unless, and until, the United States acquires a space based, boost-phase intercept BMD that can defend itself, or be defended against, attack by anti-satellite weapons (ASATs). Third, Russia, not the United States, lives in Europe. If necessary, Russia can squeeze the orange pips in Europe to create juice in American policy making. And Russia's options in Europe are not limited to military ones: Russia can also turn off the gas. Fourth, and finally, the United States needs Russia to balance against a rising

China with aspirations to dominate Asia economically and militarily. And Russia also needs the United States for the same reason. And both need China to balance against each other, when necessary! It's still Kissinger's world.

## Notes

- <sup>1</sup> For example, see Oleg Shchedrov, 'Putin Still Opposed to U.S. Missile Shield', *Reuters*, 23 May 2007 in *Johnson's Russia List 2007* – #118, 24 May 2007, davidjohnson@starpower.net, and Associated Press, 'Russia says it will target European sites of U.S. missile shield proceeds', *International Herald Tribune Europe*, 3 June 2007, <http://www.ihf.com/articles/ap/2007/06/04/europe/EU-GEN-Russia-Putin-US.php>. All web links last accessed 14 October 2007.
- <sup>2</sup> Sheryl Gay Stolberg, 'Putin Surprises Bush With Plan on Missile Shield', *New York Times*, 8 June 2007, <http://www.nytimes.com/2007/06/08/world/europe/08prexy.html>
- <sup>3</sup> Jim Rutenberg, 'Putin Expands on His Missile Defense Plan', *New York Times*, 3 July 2007, <http://www.nytimes.com/2007/07/03/us/03putin.html>
- <sup>4</sup> Rutenberg, 'Putin Expands on His Missile Defense Plan'.
- <sup>5</sup> 'Putin Waiting For US Response to Missile Defense Initiatives', *Itar-Tass*, 3 July 2007, in *Johnson's Russia List 2007* – #148, 5 July 2007, davidjohnson@starpower.net
- <sup>6</sup> 'RF ABM proposals may change configuration of global relations', *Itar-Tass*, 4 July 2007, in *Johnson's Russia List 2007* – #148, 5 July 2007, davidjohnson@starpower.net
- <sup>7</sup> 'RF ABM proposals may change configuration of global relations'.
- <sup>8</sup> Walter Pincus, 'Senate Panel Faults Missile Defense Plan: Location in Eastern Europe Is Criticized', *Washington Post*, 5 July 2007, in *Johnson's Russia List 2007* – #148, 5 July 2007, davidjohnson@starpower.net
- <sup>9</sup> Pincus, 'Senate Panel Faults Missile Defense Plan'.
- <sup>10</sup> Pincus, 'Senate Panel Faults Missile Defense Plan'.
- <sup>11</sup> Pincus, 'Senate Panel Faults Missile Defense Plan'.
- <sup>12</sup> Pincus, 'Senate Panel Faults Missile Defense Plan'.
- <sup>13</sup> Pincus, 'Senate Panel Faults Missile Defense Plan'.
- <sup>14</sup> This terse summary ignores many nuances in US and Soviet military thinking during the Cold War. For pertinent history with regard to US missile defenses, see Donald R. Baucom, *The Origins of SDI, 1944–1983* (Lawrence, KS: University Press of Kansas, 1992). For the Soviet and post-Soviet Russian experience, see Jennifer G. Mathers, *The Russian Nuclear Shield from Stalin to Yeltsin* (New York: St. Martin's Press, 2000).
- <sup>15</sup> For diverse perspectives on deterrence in the Cold War compared to later, see: Keith B. Payne, *Deterrence in the Second Nuclear Age* (Lexington, KY: University Press of Kentucky, 1996); Colin S. Gray, *The Second Nuclear Age* (Boulder, CO: Lynne Rienner, 1999); Stephen J. Cimbala, *Nuclear Weapons and Strategy: U.S. Nuclear Policy for the Twenty-First Century* (London: Routledge, 2005); and Derek D. Smith, *Deterring America: Rogue States and the Proliferation of Weapons of Mass Destruction* (Cambridge: Cambridge University Press, 2006).
- <sup>16</sup> On the general topic of nuclear proliferation and its contemporary aspects, see Henry Sokolski (ed.), *Taming the Next Set of Strategic Weapons Threats* (Carlisle, PA: US Army War College, Nonproliferation Policy Education Center and Strategic Studies Institute, June 2006); and Sokolski (ed.), *Prevailing in a Well-Armed World: Devising Competitive Strategies Against Weapons Proliferation* (Carlisle, PA: US Army War College, Nonproliferation Policy Education Center and Strategic Studies Institute, March 2000). On the relationship between nuclear proliferation and terrorism, see Graham T. Allison, *Nuclear Terrorism: The Ultimate Preventable Catastrophe* (New York: Henry Holt-Times Books, 2004), esp. Ch. 7–8 on risk reduction measures.
- <sup>17</sup> See Jim Yardley and David E. Sanger, 'In Shift, Accord on North Korea Seems to Be Set', *New York Times*, 13 February 2007, <http://www.nytimes.com/2007/02/13/world/asia/13korea.html> and



Bill Powell, 'North Korea Has Agreed To Shut Down Its Nuclear Program: Is He Really Ready to Disarm?', *Time*, 26 February 2007, pp. 32–33.

- <sup>18</sup> On political issues related to North Korean security see Young Whan Kihl and Hong Nack Kim (eds), *North Korea: The Politics of Regime Survival* (Armonk, NY: M.E. Sharpe, 2006). On North Korea's motives for having nuclear weapons and their relationship to other military capabilities see Andrew Scobell and John M. Sanford, *North Korea's Military Threat: Pyongyang's Conventional Forces, Weapons of Mass Destruction, and Ballistic Missiles* (Carlisle, PA: US Army War College, Strategic Studies Institute, April 2007).
- <sup>19</sup> For US intelligence community thinking on Iran see Director of National Intelligence John Negroponte, *DNI Annual Threat Assessment 2006*, cited in Anthony H. Cordesman, *Iran's Nuclear and Missile Programs: A Strategic Assessment* (Washington, DC: Center for Strategic and International Studies, Revised 31 August 2006), p. 23. For political assessments of Iran's nuclear intentions and possible US responses see Henry Sokolski and Patrick Clawson (eds), *Getting Ready for a Nuclear-Ready Iran* (Carlisle, PA: Strategic Studies Institute, October 2005).
- <sup>20</sup> Dale R. Herspring, *The Kremlin and the High Command: Presidential Impact on the Russian Military from Gorbachev to Putin* (Lawrence, KS: University Press of Kansas, 2006), pp. 155–193.
- <sup>21</sup> On Russian plans for strategic nuclear force modernization for the 2015–20 time period see Irina Isakova, *Russian Defense Reform: Current Trends* (Carlisle, PA: Strategic Studies Institute, US Army War College, November 2006), pp. 34–38.
- <sup>22</sup> See Pavel K. Baev, 'The Trajectory of the Russian Military: Downsizing, Degeneration, and Defeat', in Steven E. Miller and Dmitri Trenin (eds), *The Russian Military: Power and Policy* (Cambridge, MA: The MIT Press, 2004), Ch. 1, pp. 43–72.
- <sup>23</sup> See Stephen J. Blank, 'Potemkin's Treadmill: Russia's Military Modernization', in Ashley J. Tellis and Michael Wills (eds), *Strategic Asia 2005–06: Military Modernization in an Era of Uncertainty* (Washington, DC: National Bureau of Asian Research, 2005), pp. 175–205.
- <sup>24</sup> The author gratefully acknowledges Dr James Scouras for use of his AWSM@ model in this study. He is not responsible for any of the analysis or arguments here. For additional information on methodology see Stephen J. Cimbala and James Scouras, *A New Nuclear Century* (Westport, CT: Praeger Publishers, 2002).
- <sup>25</sup> For example, our simple model assumes only additive gains for the defense by deploying additional layers, but some analysis suggests that additional defensive layers would have multiplicative instead of additive effects. This is especially the case if BMD development and deployment proceed from 'tail to head' (ground based to space based or other boost phase intercept) instead of the other way around. For expert assessment on this and other BMD performance issues see Dean A. Wilkening, *Ballistic-Missile Defence and Strategic Stability* (New York: International Institute for Strategic Studies and Oxford University Press, 2000), esp. pp. 34–41, and Col. Ronald C. Weigand, USAF, *Heads, Not Tails: How Best To Engage Theatre Ballistic Missiles?* (Maxwell AFB, AL: Center for Strategy and Technology, Air University, February 2006).
- <sup>26</sup> For counterarguments to the effect that the era of mutual deterrence may have ended and an era of US nuclear 'primacy' places Russia's deterrent at risk see Keir A. Lieber and Daryl G. Press, 'The Rise of U.S. Nuclear Primacy', *Foreign Affairs* 85/2 (2006), <http://www.foreignaffairs.org/20060301faessay85204/keir-a-lieber-daryl-g-press/the-rise-of-u-s-nuclear-primacy.html> accessed 23 February 2007.
- <sup>27</sup> Russian First Deputy Prime Minister and immediate past Defense Minister Sergei Ivanov has alluded to this possibility. Referring to the INF Treaty signed by Presidents Ronald Reagan and Mikhail Gorbachev in 1987 as 'a relic, a rudiment of the Cold War', Ivanov noted that dozens of nations have developed intermediate-range ballistic missiles since the pact was signed, and some of those states are located near Russia's borders. See Vladimir Isachenkov, 'Russian Leader Assails U.S. Defences', *Associated Press*, 23 May 2007, in *Johnson's Russia List* 2007 – #118, 24 May 2007, [davidjohnson@starpower.net](mailto:davidjohnson@starpower.net)
- <sup>28</sup> The role of nonstrategic nuclear forces in Russian military doctrine and strategy has been important, and a matter of some contention, from the debates over the draft military doctrine

published by the Ministry of Defense in October 2000. Non-strategic nuclear weapons have since been discussed in a variety of contexts by Russian defense officials and commentators, including: (1), their role in negating or deterring possible attacks by opponents capable of attacking Russia with strategic conventional weapons based on information superiority (so-called Sixth Generation Warfare); (2), their use for the purpose of avoiding military defeat in a conventional war while de-escalating the conflict to Russian advantage; (3), their role in helping to preserve combat stability, or continuity of mission performance during enemy attacks, as a factor of equal or greater importance to survivability of nuclear forces. For historical perspective including the early Putin years see Jacob W. Kipp, *Russia's Nonstrategic Nuclear Weapons* (Ft. Leavenworth, KS: Foreign Military Studies Office, May–June 2001), [http://leav-www.army.mil/fmso/documents/russias\\_nukes/russias\\_nukes.htm](http://leav-www.army.mil/fmso/documents/russias_nukes/russias_nukes.htm)

<sup>29</sup> Vladimir Sivolob and Mikhail Sosnovskiy, 'A Reality of Deterrence: Algorithms for Nuclear Use Should Become a Component Part of Military Doctrine', *Nezavisimoye Voyennoye Obozreniye*, 22 October 1999, p. 4, cited in Kipp, *Russia's Nonstrategic Nuclear Weapons*.

<sup>30</sup> Kipp, *Russia's Nonstrategic Nuclear Weapons*.

<sup>31</sup> Herspring, *The Kremlin and the High Command*, pp. 129–135 and 157–162.

<sup>32</sup> On this point see Herspring, *The Kremlin and the High Command*, *passim*.

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