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# WHAT HAPPENED TO RUSSIA'S NUCLEAR WEAPONS?

## A PRIMER

by

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## *Contents*

	<i>Page</i>
DISCLAIMER .....	ii
ABSTRACT.....	iv
INTRODUCTION .....	1
1. Before the Breakup.....	2
Bear Forces .....	2
Challenges & Strengths .....	3
Drivers: Society, Adversary & Hubris .....	5
2. Change .....	7
Keeping Control .....	7
Gorbachev & Yeltsin .....	10
Instability or Evolution? .....	12
3. Treaties & the Alliance.....	15
Currently in Effect .....	15
Motivational Factors.....	19
Projections .....	20
4. Current Snapshot .....	22
State of the Arsenal.....	22
Putin.....	25
Nature of a Nation .....	27
CONCLUSION.....	30
BIBLIOGRAPHY.....	31
Books .....	31
Documents .....	31
Articles.....	32
Electronic Sources .....	32

*Abstract*

The Cold War generated great interest in the nuclear arsenals of both involved major world powers late in the 20<sup>th</sup> Century. When the Soviet Union broke apart, concern lingered over the safety and future of those atomic arms, whose deterioration was symptomatic of the Red state's failures. This paper examines the new "Russian" nuclear forces, their evolving situation and doctrine for their employment.

## Introduction

The Cold War generated great interest in the nuclear arsenals of both involved major world powers late in the 20<sup>th</sup> Century. When the Soviet Union broke apart, concern lingered over the safety and future of those atomic arms, whose deterioration was symptomatic of the Red state's failures. This paper examines the new "Russian" nuclear forces, their evolving situation and doctrine for their employment.

First, the world rightly gives attention to three successive presidential administrations that drove Soviet and Russian governmental change, and changed nuclear posture. A description of the Soviet nuclear arsenal upon the fall of communism precedes discussions of Mikhail Gorbachev's, Boris Yeltsin's, and (toward the end of the paper) Vladimir Putin's terms in office. All three made progress in reform and modernization, and all three struggled. They faced varying challenges, such as ailing economies, stout internal resistance and idiosyncrasies that they offset with some real political cunning.

Second, we focus on how the force has changed over the past 10-15 years. Public bias reinforced by the media resulted in common misconceptions, such as rogue officers with hot missiles. In reality the weapons were not on the loose, whereas nuclear material may be. The actual instability involved Russia lacking confidence the systems would function as designed, and gaps in their defenses drove some of their decision-making.

Third, a section is devoted to arms control and NATO relations, revealing a surprise for many: NATO includes Russia, most robustly in the past two years. In what the NATO Secretary General calls a "revolution in Euro-Atlantic security,"<sup>1</sup> NATO and Russia have forged a new

relationship. The partners meet almost every day on myriad initiatives such as joint early warning and missile defense.

Finally, a look at today's Russian nuclear force includes primary issues determining the road ahead. A poor economy is only one such factor. Another is the fact that critical parts of the defense industry lay in former Soviet republics that have broken away. Yet another is the sheer momentum of huge 1970s and 1980s programs, with associated special interests. Today, the nuclear weapons are extremely antiquated, but improving. Conditions permitting, Russia could field a small, modern and survivable force based on doctrine much like that of the United States.

## **1. Before the Breakup**

### **Bear Forces**

The Soviet nuclear force at the end of the Cold War maintained over 10,000 deployed nuclear weapons.<sup>2</sup> They were located at 20 sites in European Russia, the Urals and along the Trans-Siberian railway.<sup>3</sup> Estimates including tactical warheads throughout Europe vary up to 30,000 or more.<sup>4</sup> There were at one time up to 30 national stockpile storage facilities (twice as many as present), and as many as 500 facilities overall, including regional and combat unit locations. The weapons could be employed from 1,398 ICBM launchers, 162 bomber aircraft, and 62 submarines.<sup>5</sup>

It is easy to over-simplify the Cold War doctrine of both the US and USSR, but the Soviets posited several key missions for their strategic forces, similar to the US: a preemptive strike, a counterstrike, and a retaliatory strike. Consideration of these options was and is highly dependent on situational context and leadership, yet it drove requirements for system accuracy, reliability and timeliness of response. Both the USSR and present day Russia communicated necessary counter-force and counter-value targeting to the military through the Plan of

Operations of Strategic Nuclear Forces. In keeping with its primary focus on ICBMs and unlike the United States, the Soviets never maintained nuclear-loaded bombers during normal readiness conditions.<sup>6</sup>

### **Challenges & Strengths**

By the end of the Cold War, US technology, if it did not tip the balance, at least forced the USSR to play catch-up. The Strategic Defense Initiative posed a serious problem in that, while US systems already threatened Soviet weapons on the ground, they would also be able to shoot them down once launched. This caused the Soviets to divert huge portions of defense funding to development of their own defensive systems; upon collapse, they were preparing to test their own space-based weapons. One outcome was the stagnation of further ICBM development, and the stalling of aircraft and submarine programs that would bottom out in the new millennium. Another was curbed air and sea launched cruise missiles, where Soviet manufacturers fell into and out of favor with the armed services, and offered various designs (some of which failed) before fielding much smaller numbers.<sup>7</sup>

As much as the military tried to develop defenses to counter US advances, the Soviet economy's nature did not spawn advanced technology, and military procurement was inconsistent. For example, inefficient industry survived in part to maintain employment as it manufactured outdated gear that actually included vacuum tubes, while the US employed transistors and circuitry. For many reasons, such as social hardship and the military-industry's corrupt nature, they put unacceptable weapons into service. As Steven Zaloga summarized succinctly in *The Kremlin's Nuclear Sword*, "Even if the Soviet Union could catch up to the United States in critical areas of electronics, sensors and computer processing, the economic hurdles appeared formidable."<sup>8</sup>

For the reasons stated above, the ground and space warning network suffered periods of stagnation. The Soviets had a difficult time maintaining effective satellites throughout the 1970s and 1980s, and by 1984 (when they achieved geosynchronous orbit) required nine satellites to do what the US did with three, and they normally only kept four running. This drove them to rely on ground-based radar, and they have problems with that as well.<sup>9</sup> In addition to many blind spots, a gap in radar coverage actually occurred in 1998, the same year the last of their geosynchronous assets failed, contributing to urgency for a new generation of satellites.<sup>10</sup>

Perhaps the two most notorious moments for inferior technology were in 1983 and 1987. In 1983, the satellite warning system erroneously reported (based, as later discovered, on solar spikes) a massive US launch three times. Fortunately for humanity, the watch officer, used to a high malfunction rate, did not generate a dangerous Soviet alert. In 1987, the Soviets attempted to launch a space station, as part of their counter to SDI, to conduct ground and space based interference. The platform failed to achieve orbit and “splashed” down.<sup>11</sup>

Finally, the actual condition of operational resources became a concern. This cascading problem started with failure to replace aging systems. The weapons themselves were not made to last as long as their US counterparts, and as stated above were not necessarily appropriate to begin with. Once deployed, the military elected to use the only option left to keep pressure on the US: increasing tempo for the aircraft, submarines and mobile ICBMs. This in turn caused greater wear, reduced replacement times, decreased training and readiness, and affected morale.<sup>12</sup>

The best way to describe the USSR’s success is that they theoretically accomplished their objective of deterring any major Western aggression. Although seriously in decline due to economic and political irrelevance, the military prior to the breakup patrolled a number of

ballistic missile submarines near US waters, and readied a wide array of long-range missiles toward the US and Europe. Finally, as ugly as it was for them, they did so against a much wealthier foe.<sup>13</sup>

### **Drivers: Society, Adversary & Hubris**

Although it is not a goal of this paper to outline the historical roots of Soviet military thought—itsself the subject of many books—the nuclear monolith of the late 1980s was not simply fruit of the Cold War. To understand any modern phenomenon, one must appreciate its history, as Professor Joseph Nagee highlighted in a 1989 speech. He outlined deep conflict with neighbors and repeated invasions of Russia as one source of contemporary suspicion and perceived need for power and security. Other factors include a unique political system based on performance and doctrine, as well as the personalities and decisions of individual leaders.<sup>14</sup>

One reason for continued emphasis on developing nuclear weapons during the last days of the Soviet Union is “institutional inertia.”<sup>15</sup> Due to the nearly inextricable links between the government and defense industry, as well as the momentum brought on by arms races throughout the 1960s and 1970s, programs begun in the 1970s continued as if for their own sake into the 1980s. This placed an increasing burden on ailing economies. It also resulted from the nature of defense design policies, which were fundamentally different from in the US. As opposed to designing through competition for a specific capability, several Russian companies might develop similar weapon systems, which then required modification for use.<sup>16</sup>

A good example of a weapons program that continued despite national internal difficulties is the development of the TU-160 strategic bomber in parallel to the US B-1. Strategic bombing held a lower priority than the other triad legs, dating back to Nikita Khrushchev, but the USSR

decided to build 100 of the planes beginning in 1987. The country's disintegration is the only thing that prevented all of their construction.<sup>17</sup>

Another problem for the USSR that exacerbated procurement challenges was continued US and Allied weapons development. For example, Soviet intelligence placed extremely high confidence in US Trident submarine capability. In order to counter this threat, they began to de-emphasize silo hardening and silo-based missiles to develop rail and road-mobile systems.<sup>18</sup>

Over-estimation of US capability was an underlying theme that contributed to aggressive nuclear posture. The defense establishment tended to inflate ranges, for example, which in turn fostered system requirements within the USSR. This usually manifested itself in US missiles foreseen to be able to strike command and control elements. Since the inability to detect a pre-emptive strike in time to respond would be a lethal failure, they made every effort to deploy redundant architecture and early warning. The military even insisted the US space shuttle would have offensive and reconnaissance capability.<sup>19</sup>

Finally, one cannot disregard the notion that Russia's former status as a superpower would continue as long as its nuclear arm retained its weight. As a recognized nuclear state in the Nonproliferation Treaty, and with its United Nations Security Council seat, the Former Soviet Union had the respect and prestige germane to real military power.<sup>20</sup> Moreover, a failing economy and stagnated conventional forces in the 1990s constituted a mandate to enhance capable nuclear forces as the first line of defense. As reformers aimed for real economic growth and healing, nuclear might was possibly the only way to buy time in the internal and external security environment. This strategy would not have to outdo the United States, but only offer a credible deterrent to invasion or intervention.<sup>21</sup>

## 2. Change

### Keeping Control

In 1991, Russia created the Confederation of Independent States to exercise political and administrative control.<sup>22</sup> It was not very successful in erecting a military command structure, primarily because Ukraine hinted for years at great power aspirations. This included initial concern over numerous, dispersed tactical missiles, but there is evidence the breakaway states saw retaining nuclear weapons as an invitation for Russia to invade. Ukraine keenly capitalized on its position, obtaining Russian aircraft and other equipment, and nearly \$1 billion in gifts from the US as incentive for its nuclear capability transfer.<sup>23</sup> One article suggests Russian generals successfully scared the US by exaggerating the level of disrepair of Ukraine's weapons.<sup>24</sup> Another quoted the authors of the "Nunn-Lugar" plan as swaying a cautious Congress and White House with national security threats of lost Russian weapons should the US fail to help dismantle them.<sup>25</sup>

By the end of 1996, Russia had control of the nuclear weapons formerly positioned in Belarus, Kazakhstan and Ukraine. According to the Lisbon Protocol, the result of a 1992 Start I succession, the four republics assumed the Soviet Union's responsibility under the treaty. The three newly independent states transferred nuclear weapons to Russia and joined the Nonproliferation Treaty as non-nuclear states.<sup>26</sup> Although this move was very complex, it was not without precedent: the social and political aspects of the fall of communism in Europe prompted the USSR to adjust its nuclear posture. Since 1989, it removed weapons from the Baltics, Armenia, Azerbaijan and Moldova. Then Soviet nuclear forces withdrew from Eastern European countries, to include East Germany.<sup>27</sup>

A common fear associated with control of nuclear weapons after the breakup of the Soviet Union is rogue commanders in Russia or the former republics. This fear was dramatized in popular films. To the contrary, Russia designed weapons to operate like those of the United States: a missile that has its flight pre-assigned still requires a launch command with legitimate authority to fire. This command includes remotely unlocking chosen weapons and entering of codes by higher command and the launch crew. Submarines and bombers (the latter must first load weapons) must reach designated launch points, and two-person teams must authenticate the orders to target and fire the weapons.<sup>28</sup> Furthermore, the launch codes covering the entire arsenal before and after the breakup passed securely from Gorbachev to Yeltsin. To further ensure civilian control, the government removed nuclear “suitcases” from the Defense Minister and Chief of the General Staff in 1991.<sup>29</sup>

Much of the public debate may stem from statements Russian defense officials made in the 1990s. In response to budget cuts and curtailed modernization programs, several worried officials stated in 1997 that control of forces was nearly breaking and commands to increase readiness were inadvertently sent on several occasions. One reason given was looting of copper from critical command and control hard lines. Whereas the media and public may have interpreted instability, however, there were no malevolent actors at work. Alert orders transmitted by aging systems were several steps in the process before code passage and authentication, and Russians were primarily concerned about the ability of the nuclear force to operate as designed. This is partly why the US and Russia decided to form a joint early warning center.<sup>30</sup>

There is substantial disagreement regarding the actual vulnerability of Russian weapons to theft or accident. Some writers base arguments for tactical nuclear reductions on the idea that

unhappy Russian troops were more likely to black-market them.<sup>31</sup> Such an argument assumes tactical warheads are in many ways easier to pilfer than their strategic counterparts. The little detail available is US State Department and CIA assessments in the 1990s that the Russians were providing security in the areas of the weapons, and that Russian officials were in control of them. The US also provided funding and advisors to enhance physical security, install warhead safety devices and shut down excess weapons production plants. Additionally, Russia is unique in that its dedicated ICBM security force possesses extensive light armor, helicopters and surface to air missile systems.<sup>32</sup>

US and international partnerships, such as between the US Department of Energy and Russia's Atomic Energy Ministry (Minatom) are addressing other problems, such as thousands of Minatom sites, research institutes, nuclear reactors, waste sites and over one hundred discarded submarines. Proliferation of material for "dirty bombs" seems to be certain and, according to investigators, has already occurred, while governments take appropriate steps for warheads.<sup>33</sup> Analysts are particularly concerned about stockpiles of material that in 1998 totaled 1,200 tons of uranium and 200 tons of plutonium, whereas a device only requires 15 kg. They acknowledge that all of the known losses involved minimal material.<sup>34</sup>

To assist in reduction of nuclear material, the US agreed to help convert highly enriched uranium to a low grade for use in nuclear reactors, and to purchase 500 tons. Furthermore, because Russia has been so cooperative in dismantling warheads (1-2 thousand per year), the US Defense Department has continued to participate in the process and help construct secure storage areas for excess material. The US has spent well over \$1 billion on all Cooperative Threat Reduction efforts, and the sheer volume is one reason there is speculation over how many non-operational warheads the Russians retain. In the tens of thousands at the height of the Cold War,

the number remains the subject of arms talks and international control efforts described above. The biggest reported challenges to nuclear controls are disagreements over export law stringency and economic constraints on Russian programs.<sup>35</sup>

### **Gorbachev & Yeltsin**

As political scientists and historians note, Mikhail Gorbachev, a generation younger than his predecessors, brought a new perspective to Soviet leadership. His outsider status, however, pitted him against a military establishment with which he had no credibility. The military exercised some level of control over political decisions by this time, if only so they could influence policy that affected them. This would turn out to be the crux of Gorbachev's differences with the military, as national events amazingly helped the President move forward with his agenda.<sup>36</sup>

Gorbachev initially saw improving the economy as the chief means to save the USSR, while simultaneously modernizing the military. This was an acceptable goal for the generals as well, except that he intended to accomplish it at their expense, by making deep fiscal cuts. He later focused on resuming arms reductions (also irritating hardliners) in order to stabilize tensions and ease pressure on the Soviets to continue the arms race. The ABM and SALT talks that had stagnated between the US and the Soviet Union left the two countries at a low point in relations, when Gorbachev assumed office. In a simple summary of the military prescription, he viewed these problems as related, and working against the USSR—a self-fulfilling prophecy.<sup>37</sup>

While Gorbachev sought to move moderate leaders into key positions, such as Minister of Defense, two events paved the way for important changes: first, the Chernobyl accident underscored the precariousness of nuclear buildup amid instability and second, the loss of the submarine K-219 highlighted military hollowness. These occurred in the second year of his

presidency, amid renewed INF talks and the Iceland summit with Ronald Reagan. Strategically, they allowed high-level removal of Gorbachev opponents and trading force modernization initiatives to the military for deep weapons cuts.<sup>38</sup>

All of this is not to say zeal for nuclear weapons bankrupted the USSR, or that Gorbachev abated military influence. Nuclear expense, itself only 10-20 percent of defense spending, combined with massive conventional capability that in turn inspired US actions. And according to Zaloga, “the military system proved remarkably resistant to reform,”<sup>39</sup> based on ingrained patriotism tied to resistance under Leonid Brezhnev to Khrushchev’s reform effort.<sup>40</sup> Soviet structures integrating military leaders into the party and government did bolster loyalty, such as when the military failed to support 1991 and 1993 coup attempts. Nonetheless, longstanding suspicion of the West and defense industry ties inhibited military support.<sup>41</sup> The US intelligence community predicted this resistance in its 1988-1991 estimates, stating 1980s program decisions designed for combat advantage in nuclear war, along with associated policy and procedures appeared to continue under Gorbachev.<sup>42</sup>

Whatever the reasons for Gorbachev’s challenges, he laid the groundwork for Yeltsin and Putin’s administrations to continue needed reform. Even if he negotiated arms control on largely American terms, he maintained a viable nuclear deterrent, began modest modernization and found some fiscal breathing room in a failed economy. What’s more, the legacy of improved relations with the United States affected how the former Soviet republics would act in a new, independent, security environment.<sup>43</sup>

Great instability that his personality seemed to exacerbate characterized Boris Yeltsin’s two presidential terms. While the global economy pressed from the outside, greedy businesses, Chechen separatists and political opportunists continually challenged from within. His autocratic

policies seemed only to succeed in keeping the Russian state intact as he survived year after year.<sup>44</sup> The most common criticism of Yeltsin was that he assembled advisors and made economic policy changes without overhauling the underlying political structures. This is perhaps because he and his team felt they had accomplished key goals through the revolution itself.<sup>45</sup> The leadership style and political situation facilitated continued influence of hard-line communists over military strategy. The new constitution, ratified in 1993, gave nearly all authority in defense matters to the president,<sup>46</sup> yet Yeltsin displayed a real lack of interest that permitted military resistance and rampant corruption.

To Yeltsin's credit he signed START II in 1993, which would reduce nuclear weapons by two thirds of their peak number, and he committed to modernization to the extent meager budgets allowed. He also initiated military reorganization that the hardliners resisted until 2000.<sup>47</sup> Putin, in a millennial address to the nation, made a telling compliment of Yeltsin after the latter's resignation:

“The real assessment of how much that man has done for Russia will be possible only some time in the future. However, it is already evident that Russia has taken the path of democracy and reform, has not abandoned that path, and has managed to emerge as a strong independent state. That is his huge service to his country.”<sup>48</sup>

### **Instability or Evolution?**

Gorbachev understood the vast overkill within the nuclear arsenal and the gains reductions would mean for Soviet conditions and in talks with the US. After such an agreement with George H. W. Bush, he unilaterally began in 1991 the dismantlement of artillery shells, mines and tactical warheads, as well as consolidating tactical weapons from the field. Russia completed the process in 1993.<sup>49</sup> Despite stagnation in many areas, reductions continued under Yeltsin. Russia suspended the production of heavy bombers in 1992.

Agreements or changes in strategy are not the sole determiners of comprehensive reductions in numbers of nuclear forces. We have already seen the impact of economic and management crisis on storage and maintenance. An example of the effect of miniscule defense budgets on weapons is in submarines. Failure to fund maintenance not only reduced the fleet by more than half in twelve years, but life spans were curtailed, decimating remaining assets in the past few years.<sup>50</sup> Command and control also suffered significantly, when the scheduled overhaul of the national system stopped dead in its tracks with the USSR's fall.<sup>51</sup>

One should also view the traditional priorities of ICBMs, submarines and bombers, respectively, in light of where the USSR's breakup left defense industry. Approximately 75% of ICBM industry was outside Russia, including 90% of guidance systems, two of three design bureaus and permissive action link production. Onboard computers came from Moldova, and almost all other components were in Ukraine. In contrast, naval missiles and guidance systems, and strategic bomber design and production remained within Russia, and the space program in Kazakhstan. This "extra-national" footing is a major reason why beginning new programs is fiscally staggering, and why nuclear cleanup is a complex issue for leadership.<sup>52</sup>

Maintaining Russia's strategic capability was not limited to warheads and platforms. Items considered included maintaining and modernizing the command and control system, early-warning network and space surveillance system, the latter being plagued with high electricity consumption.<sup>53</sup> The industrial support activity associated with the Soviet era arsenal was also widely viewed as unnecessary. Two of four warhead production facilities closed, and scientists now use safe, non-explosive methods for testing (Russia maintains the ability to test at one site to counter US live tests should it be necessary).<sup>54</sup>

The first public statements on shifting nuclear roles emerged in 1993, and again in 1997 and 1999. The Russians commented on the remoteness of superpower nuclear war, and hinted instead that a nuclear exchange could result from regional conflicts. It indicated they might adopt a first-strike policy for use on the battlefield, and it seemed the Cold War situation of the West posturing tactical missiles in response to Soviet conventional superiority turned 180 degrees. Now Russian conventional forces were in serious decline and being compensated with nuclear forces.<sup>55</sup> While the Russians view precision tactical weapons as highly desirable, they developed this goal only recently by comparing examples such as US operations in Kosovo and Afghanistan with their own tactical miscues in Chechnya. They must also program funding for the expensive munitions, so nuclear weapons that bridge the capability gap must have their deterrence realized through statements they are willing to use them.<sup>56</sup>

New thinking took its current form when Putin assumed the office of President in 2000. He amended the 1997 Security Concept on January 10, and approved a new military doctrine on April 21. These documents downplay the likelihood of deliberate nuclear war while underlining it as a possible outcome of conventional conflict, emphasize the spread of WMD and delivery systems, and continue to blame the US and NATO for encroachments on Russian territory and rights, and undermining international institutions. They also underscore what Putin told nuclear arms workers is a vital effort and one growing more important.<sup>57</sup> These policies will be discussed in the final section of this paper, and they indicate that no matter what they say Russia sees its nuclear weapons as central to its future security.<sup>58</sup>

### **3. Treaties & the Alliance**

#### **Currently in Effect**

It would be difficult to view Russia's nuclear posture in the years since the breakup of the Soviet Union and today, without considering the progress of arms control, the ideas behind their positions, and what may lie ahead bilaterally and multilaterally. Far from isolated, Russia is a member of the Partnership for Peace, International Atomic Energy Agency, the Missile Technology Control Regime and the Nuclear Suppliers Group. This discussion will focus on agreements with the US as a major determinant of Russian nuclear force levels. It will also include NATO relations, because it is the centerpiece of East-West security and another large impetus for Russia.

The primary difference between arms control treaties, aside from their provisions, is how they are applied. In a few cases, such as the first Strategic Arms Reduction Treaty (START I), they are fully in force. In others, parties may sign the treaty, and one or the other government may delay ratification as a bargaining strategy or in disagreement between executive and legislature. This is the case with START II.<sup>59</sup> A third situation applies to the Strategic Offensive Reductions Treaty (SORT), negotiated between current presidents Putin and Bush in 2002. It serves as a guideline, but awaits ratification.<sup>60</sup>

Observers should not confuse treaties currently in effect with previous efforts. The Strategic Arms Limitations Talks (SALT I and II) had the admirable intention to curb the arms race of the 1950s and 1960s, but contained a major limitation. The agreements, signed in 1972 and 1979, respectively, required reduction of delivery systems but not warheads. SALT I held down missile silos and submarines, but resulted in more MIRVs (multiple reentry vehicles) and bombers; it expired in 1977. SALT II limited bombers, among other things, but stalled when the

Soviets invaded Afghanistan and the Reagan administration vowed to base arms decisions on Soviet threat, versus treaty obligations. A third agreement, the Intermediate Range Nuclear Forces (INF) Treaty, made several positive impacts from 1987 to 1991, and is in force indefinitely. It removed close to 3,000 destabilizing tactical missiles from European soil, including the aforementioned cleansing of Ukraine, Kazakhstan and Belarus, and erected an enduring verification regime.<sup>61</sup>

The US and USSR signed START I in 1991. With a moderate limit of 6,000 warheads (achieved in 2001), it resulted from Gorbachev's and two US presidents' efforts, and brought them to the table after the troubling 1980s. START II, signed in 1993, would have cut the warhead ceiling in half, and would have abolished MIRVs. Unfortunately, when Russia passed a protocol buying four more years for implementation, the parliament attached an anti-ballistic missile prohibition unacceptable to the US. Yeltsin outlined a START III with President Clinton in 1998 that would have cut at least another 1,000 warheads. They tied negotiations, however, to START II ratification. Although Russia's START II ratification in 2000 paved the way for groundbreaking START III discussions on warhead destruction and tactical reductions, the US senate's opposition to ABM stipulations still hindered progress.<sup>62</sup>

Russia's penchant for cost savings and modernization meant they would negotiate on various bases for more reductions. At one point, they even suggested START III would precede START II.<sup>63</sup> What led President Putin to negotiate SORT, though, was not the reason for its fundamentally changed framework compared to previous agreements. It sets a goal of 1,700 to 2,200 warheads, no requirements for tactical reductions or warhead/delivery vehicle destruction, no forecast for verification, and includes the option to withdraw.<sup>64</sup> The parties have also taken steps to curb deployed weapons, but the paper seems to represent both administrations' national

security strategies to posture nuclear weapons freely in response to perceived threats. SORT's non-binding language and exclusion of the existing verification regime will continue to draw ire from those who expect compliance-based reductions.

Relations between NATO and Russia, propelled in the beginning by the momentum of communism's fall, dipped steeply in the 1990s before getting back on track. The specter of nuclear proliferation was common to all of Europe, and Europe's security depended on a transparent Russia as well as its own weapons, so the state was included in NATO from the very day of its re-birth. The USSR broke apart during a North Atlantic Cooperation Council meeting (a group formed to coalesce former communist countries), and the Soviet member, when he received the call from Moscow, announced to the council that he would only represent Russia from then on.<sup>65</sup>

The traditional marriage between nuclear deterrent forces and regional trust and stability, however, would continue to play a role. NATO and Russia attempted to cement relations through the Founding Act of 1997, which created the Permanent Joint Council and was followed by the establishment of Russia's mission to NATO. Unfortunately, hard line suspicions persisted. The bilateral committee met infrequently, and both sides characterized it as "19+1", implying their unity was less than authentic. Russian leaders viewed NATO's continued enlargement as encroaching—even encircling, and progress faltered because of these factors.<sup>66</sup>

The breakthrough occurred nearly a decade after the first historic meeting. Newly elected Putin met with the NATO Secretary General and, in Lord Robertson's view, indicated a courageous willingness to cooperate in response to common threats. Not long afterward, both sides came together politically and militarily in an attempt to save the doomed sailors of the submarine Kursk. On September 12, 2001, NATO invoked its mutual defense article for the first

time, and it did so alongside Russia in view of the mutual enemy, terrorism. The Secretary General said, “Instead of asking ‘How much cooperation can we tolerate,’ we began to ask, ‘How can we achieve the full promise of partnership—quickly?’”<sup>67</sup> Russia and the West exchanged high-level intelligence to combat terror, and the relationship produced the NATO-Russia Council (NRC) in May 2002.

In contrast to its predecessor, the NRC recognizes Russia as a partner (veto power notwithstanding), seated between Portugal and Slovakia at the table of nations. The council meets monthly at the ambassador/military level, semi-annually for ministers and periodically as a summit. Among its initiatives are nuclear counter-proliferation, interoperable theater missile defense and defense reform. (NATO). The council studies nuclear deterrence requirements, and brought about reduced posture of NATO tactical weapons, which have the dual effect of politically tying the US to Europe and influencing the balance of power between the West and Russia. It also conducts continuing technical consultations, with field exchanges on safety and security, including recent exercises addressing command centers and nuclear accidents.<sup>68</sup> All of these efforts have the intended effect of reducing insecurity.

To be sure, there is still much cynicism in Russian circles—such as cliques within the Duma and reactionary military or academic opinion—based on Western nuclear or conventional strategy. NATO’s, and particularly the United States’, intervention in the Balkans was a primary factor delaying START II ratification.<sup>69</sup> These ideas pose that NATO enlargement is still a threat to the Russian homeland, whether or not such consternation is calculated to benefit military buildup and bolster defense industry.

Robertson answered the question of ties to Russia this way: “Any solution to the security threa But in 2003, Lord ts of the 21<sup>st</sup> century that did not include Russia as an active partner was no solution at all.”<sup>70</sup> Of Russian president Putin, he said:

“He has not shied away from telling the Russian people the truth: that Russia faces grave threats to her security; that the new NATO is no longer in any way an opponent; and that the only way to ensure an effective defense against the security threats of the 21<sup>st</sup> century is through true and trusting partnership between Russia and the West.”<sup>71</sup>

The Russians often echo this sentiment, as Defense Minister Sergei Ivanov did in 2003. He said it would be inaccurate for “anyone in Russia to say NATO is aggressive, offensive or anti-Russia.”<sup>72</sup> Proof is in results, as Russia has greatly supported the NRC with diplomacy and expertise. They are open and willing participants in joint exercises, and there is progress in nuclear proliferation, theater missile defense and the fight against terrorism.<sup>73</sup>

### **Motivational Factors**

An internal policy that showed how critically the Soviets viewed arms control was establishment in 1969 of a Politburo commission on arms limitation talks. Principal government officials initially comprised the group, later expanded to include experts in various areas, and eventually grew into a regime. Gorbachev changed the commission to the USSR Presidential Negotiation Monitoring Commission in 1990. Their tasks, always of high importance, were to ensure negotiations represented all agencies’ interests, and to prepare related agreements.<sup>74</sup>

Despite economic woes that worsened military conditions, the USSR adopted a negotiation strategy with the US that would later yield breathing room in which to improve its capabilities. Soviet openness to reductions would pressure the US to go along, and any concession reached would give the Soviet Union an excuse for cutbacks it desired in any case. An example is nuclear testing, which the USSR unilaterally ceased for a year and a half in the late 1980s.

Although the US interrupted it with a 1987 test, prompting the final Soviet testing ever from 1989-90, Russia again announced support for the Comprehensive Test Ban in 1992. Other nuclear powers signed the treaty in 1996, and Russia's parliament ratified it in 2000.<sup>75</sup>

Another success for Russia was securing the START II protocol during the 1997 "Helsinki Summit". When 1999 parliamentary elections swung the legislative makeup toward the government, they approved START II's extended implementation time and language binding the US to the ABM treaty. Both possibilities (at least pressed in the international arena and media, if not ratified by the US), put Russia in a position to plan and execute needed modernization. This helped satisfy public pressure at home to keep some treaty missiles in service longer as a strategic counterweight.<sup>76</sup> This was the realization of CIA predictions as far back as 1988 that arms control and force decisions were as much to meet military and political goals as economic ones, and the US should not infer Russian nuclear strategy changes.<sup>77</sup>

## **Projections**

Those in US policy and strategy circles who see Russia as a peer competitor should be pleased that Moscow's top foreign affairs priority is political and security dialogue with the US, if for no other reason than the transparency that comes with it. Interpreters of Russian intentions will have to balance the ideas that Moscow openly deals with enemies of the US like Iran and North Korea, while it plainly responds to the same uncertainty in world events that the US does. It desires to act unilaterally in its interest to avoid totally giving in to US dominance. An example is their organization of a military alliance and force among former Soviet republics, while not outwardly rejecting US basing in the Caucasus or inclusion of the three Baltic countries in NATO.<sup>78</sup>

Some believe the Russians will continue to reduce their number of warheads to SORT levels and below, and that US or other external actions will not greatly affect the eventual number (between 1,000 and the SORT goal of 1,200). Even deployment of a US missile defense system—perhaps the most straining bilateral issue since Reagan first launched the initiative in 1983—would probably only keep Russia at current levels and within START II limits.<sup>79</sup> The source of Russia’s baseline is simply “worst case” targeting, the ability in a reactive strike or strike on warning to “inflict the desired extent or a set level of damage” on any adversary’s counter force and counter value sites.<sup>80</sup> A US intelligence community report estimated “even with implementation of the INF treaty and 50 percent reductions of a START treaty, combined with severe constraints on the deployment of ballistic missile defenses, the Soviets could probably meet their worldwide fixed targeting objectives as effectively as with current forces.”<sup>81</sup>

The US and Russia have dialogue, and seek to cooperate on several fronts, including a bilateral initiative on reducing nuclear exports, and reprocessing of highly enriched uranium in the FSU and Central European states. The possibility of a major shift in US crude oil sourcing to Russia could also substantiate ties. Russia’s foreign military sales may continue to thwart progress, but observers will discern two key points. First, the defense industry is almost entirely dependent on exports and is highly successful because the equipment is competitively priced and reportedly of reliable technology. Second, President Putin instituted some controls to mitigate corruption and proliferation. Given incentives, he could reduce the two thirds’ state interest in these companies, thus fostering competition and growth at home.<sup>82</sup>

So where are we going together? James Goldgeier wrote a provocative analogy to the current bilateral relationship in a 2002 essay:

“They (Putin) saw in the new team (Bush) an old realpolitik approach that to them meant the two countries would deal with each other the way great powers do. It

would not be cooperation 1990s style; it would be a return to cooperation 1970s style—some measure of détente on great power concerns like arms control within a framework that had an underlying rivalry, particularly in the Caucasus and Central Asia, if not in Ukraine and the Baltics. In this view, if the United States were feeling magnanimous, it might even implicitly consider conceding Russia a sphere of influence in its region the way traditional great powers do—as Nixon and Kissinger did.”<sup>83</sup>

## **4. Current Snapshot**

### **State of the Arsenal**

In 2003, defense expenditures were US\$10.8 billion, increased by 25% in 2004. Of 860,000 personnel in the armed forces (in disarray and not fully capable of offensive battle), 150,000 are in the Strategic Rocket Forces. “Air defense forces can respond to a missile attack, but suffer from under investment and poor maintenance and their capacity to meet modern missile development challenges are in decline.”<sup>84</sup>

Although attempts to better compensate personnel are only modest, the approach to military funding suggests 2002 finally began a turn-around from a decade of declining readiness. So as not to understate the issue, a report on the Kursk submarine incident revealed “gross negligence, incompetence and mismanagement” within the armed forces at large. Clinging to the monolithic force of the past caused this problem; the focus now is a two-pronged effort to improve readiness while maximizing “value for money.” Since economic and political conditions are allowing larger defense budgets, leadership is making larger shares available for research, development and procurement. In fact, half of current increases are devoted to research and development. The approach in force, driven by antiquated systems, is to envision new weapons, earmark substantial funds for research, and upgrade fielded equipment for the short term.<sup>85</sup>

Also benefiting nuclear forces are personnel improvements foreseen in the military reform program, approved in June 2003 and implemented from 2004-2008. Designed to improve

overall professionalism, it will create a mixed contract and conscript force, reducing compulsory service from two years to one. If salaries continue to increase, and training, lodging and board doubles as expected, morale and troop reliability may rise. Although the largely throwback officer corps resists many of these changes, the president and defense minister are determined to streamline and bring the military up to date. Two of their successes include appointing a former deputy finance minister as deputy defense minister, to oversee budgetary matters, and removing commanders' authority to commission weapons and sign contracts.<sup>86</sup>

In keeping with a more flexible strategy and START II requirements, Russia is trying to move away from reliance on ICBM stockpiles to a more survivable array of weapons. They currently maintain 360 road-mobile, single-warhead SS-25s; 150 10-warhead SS-18s; 150 6-warhead SS-19s; 39 new, silo-launch, 4-6 warhead SS-27s (future rail-mobile versions will have one warhead); and 24 rail-launch, 10-warhead SS-24s.<sup>87</sup> Planned changes include extending the SS-18's life and deploying more SS-24s in the short term, while increasing SS-27 production as much as possible (150 additional). At the same time, they intend to increase the SS-25 by 40 and decrease the SS-19 by 45, and eventually scrap the SS-18 and SS-24 systems, including those 18s and 19s with multiple warheads prohibited by START II. Any additional SS-27s Russia can produce—their goal is 300 total by 2008—could replace SS-19s in service.<sup>88</sup> This would result in a balanced force of around 700 modern, fixed and mobile systems based on the same airframe. An annual report in the *Bulletin of Atomic Scientists* reports over a hundred less fielded launchers, probably reflecting ongoing dismantlement, whereas *Janes* shows three additional SS-27s fielded in 2004.<sup>89</sup>

In terms of numbers of warheads, analysts believe Russia allocates from 750-1,000 for 63 Tu-95 "Bear" and 15 Tu-160 "Blackjack" bombers, 1,000-2,000 for 13 submarines, and a

disputed number between 1,000 and 3,000 for the Strategic Rocket Forces. The total number of deployed warheads could reach START II limits of 3,500, and it is in their military and economic interest to meet the SORT target of 2,200 by 2012. Although critics malign both sides for maintaining thousands of additional warheads in maintenance status, emphasis on ICBMs would be prohibitively expensive to maintain, and many believe Russia will only be able to deploy about 1,500 of the warheads this year based on its degraded forces.<sup>90</sup> They might achieve much of this reduction through reducing the number of warheads for a smaller submarine force to less than 500.<sup>91</sup>

The weapon systems deploy as follows. Silo-launched ICBMs are in ten sections with a control center, mobile missiles are in nine-launcher units, and rail systems (scheduled for decommissioning) form into three-launcher trains. The TU-95 bomber carries the Kh-55/AS-15 ALCM, and the TU-160 bomber carries the AS-15 variant; the missile is similar to the US Tomahawk.<sup>92</sup> The Navy, with over a third of nuclear assets, places 16 x SS-18 SLBMs on five, Delta-III class submarines, 16 x SS-23s on six, Delta-IV class submarines, and 20 x SS-20s on two, Typhoon class submarines.<sup>93</sup> Most all of the missiles in the triad were successfully tested multiple times in 1996.<sup>94</sup>

Within budget constraints, the Air Force must find a way to upgrade its long-range aviation program. It has only twenty refueling aircraft, little strategic reconnaissance and its bombers are aging. A much-needed boost came in 1999 when Ukraine transferred eight Blackjacks and three Bears to Russia as part of a deal. Russia is also building a pair of Blackjacks (with new cruise missiles) and refreshing a pair of Bears, but plans for a small, stealthy, flexible plane have slipped to beyond 2010.<sup>95</sup> Clearly the weakest leg of the triad, it cannot project airpower well beyond its frontiers, and by then may only have 45 strategic aircraft carrying 360 missiles.<sup>96</sup>

Although it is reportedly the Navy's top priority, strategic submarines suffered from the same conditions as the rest of the military—it can deploy only thirteen SSBNs. Unlike the Air Force, which is focusing on combined arms and precision, conventional weapons, the Navy shares a civilian and military leader vision for power projection from the sea, to include nuclear deterrence. Its budget includes the Bulava next generation SLBM and three new “Borey” class (20-launcher) SSBNs to replace the Typhoons.<sup>97</sup> The operational number of boats, however, could fall to as little as seven in a few years, since the Delta IIIs reached their life expectancy in 2003, the Typhoons' missiles are out of production and the Boreys' missile program was scrapped, driving a complete re-design.<sup>98</sup>

## **Putin**

Although Russia has reduced its antiquated, bureaucratic administration, the rule of law has not been firmly established. For example, Putin's competitors for power in parliament do not have authority over his government appointments, centralizing almost dictatorial rule among his close advisors. He can issue decrees which the legislature can advise, but not overrule. Furthermore, his strong popularity prevents his opposition from wielding an offer of anything counter to Putin's solutions. This is likely a major source of Russia's aggressive foreign policy and strong response to Chechen terrorism.<sup>99</sup>

It is probable that old-school Russians believe Putin is giving in too much to the West, even if state actions are undertaken with Russian interests in mind; an example is the closing of former Soviet posts in Cuba and Vietnam three years ago. The difference between Putin and his predecessor is he has vastly increased executive efficiency (coordination between foreign affairs, defense and intelligence, for example). Moreover, he has the political capital, with which to take risks.<sup>100</sup> He pre-empted a newly elected George Bush with the challenge to reduce arms, and

undertook the previously unimaginable actions already mentioned in this paper, along with banning nuclear testing.<sup>101</sup>

Still others believe Putin may have anticipated aligning with the West, and shrewdly kept his plans from the government until the 9/11 terrorist attacks afforded the opportunity for vastly improving relations. This extension of the openness created in 1987 is a very pragmatic alternative to two realist doctrines: cut itself off from the West or continue to try to compete with it. Putin has clearly chosen to engage, the only choice to Russia's benefit.<sup>102</sup>

The statesman also put his diplomatic assertions into practice, since Putin from the beginning enjoined the West to see even mention of adversarial relations or an aggressive Russia as counter to progress. He insists Russia is an integral part of Europe and that "strategic interests of any specific region means above all the interests of the people who live in that region,"<sup>103</sup> as contrary as the notions are to history. In addressing the Russian Federal Assembly in July of 2000 on the subject of national vision, Putin spoke of strength not against external actors, but with them.<sup>104</sup>

What people observe of Putin, whether they are satisfied with the speed of progress, has been characterized as a particularly Russian centralization of state power. While he speaks of democracy and his actions belie autocracy, he admittedly is taking actions necessary to preserve the state in order for those changes not made under Yeltsin to begin. Analysts suggest Russia is stable enough that no extreme changes may result in the near term, due to factors such as resource constraints. "There are simply too many countervailing forces in Russian society," according to Thomas Graham, Director of Russian Affairs on the US National Security Council.<sup>105</sup> What we should see is resolution of certain problems and rolling back of others, so

that Putin's replacement can take Russia and its nuclear weapons to the next level: a stable, effective deterrent force.

### **Nature of a Nation**

Based on media accounts of life within 1990s Russia, it is easy to assume things are getting worse, as opposed to better. The reforms Putin undertook in his first administration, however, went far in addressing economic perils. Political and market stability is facilitating growth in foreign investment, living standards and income, while unemployment and poverty decrease.<sup>106</sup> This is not to say serious social, environmental and other problems do not persist, but as Russia reforms the military and increases its capability, it is likely to counter proliferation and increase the safety of its nuclear weapons.

Military improvements stemming from economic ones raises the issue of what role nuclear weapons will play in future security strategy. Russian leadership does not identify a foreign nation as a security threat, despite the military's continued focus on the US and NATO. In a 2003 Federal Assembly address, Putin identified WMD proliferation as the second of three major threats, along with terrorism and local conflict.<sup>107</sup> He echoed his Defense Minister's interpretation of new security doctrine in 2000, who named religious extremism, separatism and international terrorism as the biggest threats.<sup>108</sup> It is therefore questionable whether significant distractions, such as illegal immigration and drug trafficking, may force a reformed military to focus on border and internal security, turning the emphasis away from nuclear forces.

In any case, as indicated in previous sections of this paper, deterrence is effectively inseparable from national security strategy. Whereas agreements and reduced economic and industrial capacity all exerted downward pressure on forces, other factors such as conventional inferiority, increased dependency on effective deterrence for Russia's future freedom of action.

Examples of leveraging weapons credibility include development of the “Iskander”, a 300km range, nuclear-capable missile (smaller than those prohibited by INF) with precision and mobility.<sup>109</sup> Putin also caused wide concern in the Fall of 2004 by announcing tests of a hypersonic, maneuverable-warhead variant of the Topol prior to a 20-nation summit. The missile has the advantage of negating most US missile defense concepts, but the message to its detractors may be that if they have reason to believe they are a focus of the deterrent, then perhaps they are.<sup>110</sup>

A 1997 speech given by the deputy chair of the Duma defense committee may help explain why Russian strategy is taking the form it is. As Georgi Arbatov pointed out, they are facing the same challenge the United States is in a post-Cold War world. They must prepare for a variety of contingencies, large-scale or small, global or local, with allies or alone, sophisticated or primitive. Hawks in Russia or the US, employing a traditional, threat-based approach, reason that a menacing superpower could return to the fore. Arbatov’s prescription to not plan for war with the West, trim force levels, comply with START and maintain a nuclear deterrent, is more capabilities-based, and not unlike what both powers pursue today.<sup>111</sup> They don’t plan against one another exclusively, but seek a multi-purpose nuclear force while keeping an eye on other nuclear powers.

These aspects of a new Russian worldview could arguably come from a genuine opinion that as a great power in their own right, they can afford to be self-interested. General George Seignious, former SALT delegate and President of the Atlantic Council, reported after meeting with Gorbachev’s advisors in 1989, “Under their new thinking, they say it has been determined that Soviet goals and Soviet aspirations cannot in today’s world be achieved by the use of military force.”<sup>112</sup> The new military doctrine has as main principles firm civilian control and a

refusal to damage international security and the national security of other countries. Those who doubt Russia's sincerity usually have the tables turned on them, as evidenced by two general officers recently commenting on US fears of reinvigorated Russian nuclear forces. One said the Americans can only devise such rhetoric for a potential enemy, and the other said it is either genuine misunderstanding or deliberate speculation.<sup>113</sup>

Perhaps the seminal moment in realizing the new relationship was during a May 24, 2002 press conference with Presidents Bush and Putin after SORT signing. Both answered the question of why the two countries still needed thousands of weapons by saying numbers aren't the focus, they should be viewed as a milestone on a path from astronomical Cold War levels, and with an eye for other nuclear states and those who desire them. Then reporters asked why they continued to target one another. Bush said, "Our military has no aims at Russia. There may be old vestiges in place, but Russia's not an enemy. Russia is a friend, and that's the new thinking." Putin replied, "Speculations in the press are nothing but expression of domestic political infight either here or in the US...we have no concern whatsoever in this regard."<sup>114</sup>

## Conclusion

Although this analysis may appear dove-like, an appropriate take away is that it is acceptable to regard Russia as a world power with disagreeable policies and security concerns. Both Russian and US national security strategies contain liberal and realist elements, calling for engagement with “eyes-open” decision-making. Western political and military planners should therefore not use a Cold War lens, or the day’s news report. They should consider what Russians are saying and doing, and make informed moves. One US think tank stated, “It may be preferable to have an economically weak or domestically entangled Russia as long as this does not precipitate violent disintegration or the destabilization of neighboring countries.”<sup>115</sup> This vindicates many Russians who think they are thought of this way, and official views should not be similarly closed-minded.

One should also consider Russian overtures to the West have not always been the best indicator of their plans. Rather, they are sometimes perfectly calculated for effect. Their current statements, however, at least give a clue that there has been a sea change in the overall approach where nuclear weapons are concerned. Finally, while the transparency of close bilateral and multilateral work allows both sides to focus resources on mutual problems, the ingredient of time must be added. As above descriptions of each Russian president show, and as one author noted, “The problems of the Cold War are too deep and intractable to be resolved in a short period of time by one administration.”<sup>116</sup>

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- <sup>52</sup> *Ibid*, pp. 220-22.
- <sup>53</sup> *Ibid*, p. 225.
- <sup>54</sup> Podvig, p. 579.
- <sup>55</sup> Voskressenski, pp. 137, 140-41.
- <sup>56</sup> Zaloga, p. 228.
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<sup>77</sup> CIA (1988), p. 6.

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<sup>79</sup> Podvig, p. 579.

<sup>80</sup> Black, pp. 131, 170.

<sup>81</sup> CIA (1988), p. 15.

<sup>82</sup> Vatanka, pp. 476, 532.

<sup>83</sup> Kuchins, p. 285.

<sup>84</sup> Vatanka, p. 442, 457.

<sup>85</sup> Ibid, pp. 479, 481, 528.

<sup>86</sup> Ibid, pp. 480-81, 531.

<sup>87</sup> Ibid, p. 490.

<sup>88</sup> Podvig, pp. 30-31.

<sup>89</sup> Norris, p. 73.

<sup>90</sup> Vatanka, pp. 490, 520.

<sup>91</sup> Podvig, p. 577.

<sup>92</sup> Ibid, p. 362.

<sup>93</sup> Vatanka, p. 519.

<sup>94</sup> Vosressenski, pp. 154-5.

<sup>95</sup> Vatanka, p. 502.

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- <sup>105</sup> Kuchins, pp. 54, 57.
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