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# Russia's Nonstrategic Nuclear Weapons

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A decade ago it seemed that nonstrategic nuclear weapons were losing their place in superpower arsenals. In fall 1991, the Bush administration announced a series of unilateral moves to reduce, redeploy and abolish certain nonstrategic nuclear weapon systems. A week later Russian President Mikhail Gorbachev pledged that the Soviet Union, in the chaos preceding collapse, would dismantle all atomic land mines by 1998, all nuclear artillery shells by 2000, half of all surface-to-air missile warheads by 1996, half of all tactical naval warheads by 1995 (with the other half stored ashore) and half of the bombs of the nonstrategic air forces by 1996.<sup>1</sup> In January 1992 President Boris Yeltsin of the Russian Federation announced that Gorbachev's initiatives would apply to Russia. Because nonstrategic nuclear weapons were widely deployed among the successor states, bringing them under Russian control proved a challenge.<sup>2</sup> In 1997 one scholar commented that eliminating nonstrategic nuclear weapons seemed like the logical next step but warned that, in the face of NATO expansion, senior Russian military and political leaders were contemplating reversing the 1991 initiative.<sup>3</sup>

While US-funded programs brought many nuclear weapons into secure storage facilities, two questions arose regarding Russia's unilateral initiatives. The first concern was weapons security and unauthorized transfers to third parties.<sup>4</sup> The second concern was Russian military plans for the other half of its surface-to-air missile warheads, tactical naval warheads and bombs.<sup>5</sup> The emerging answer relates to Russian threat perceptions, national security policy and military doctrine. It also invokes a larger geostrategic issue: was the post-Cold War era of proclaimed strategic partnership ending and a new, interwar era in Russia's relations with the West beginning, in which preventing war gave way to preparing for war?

The NATO air campaign over Yugoslavia sharply deteriorated US-Russian relations. The Russian debate over nonstrategic nuclear weapons shifted from the adequacy of the existing unilateral regimes and prospects for some arms-control and confidence-building measures to the utility of such weapons for theater warfare and conflict management. By early January 2001 the

Russian military reportedly had moved tactical nuclear weapons into the Kaliningrad area.<sup>6</sup> These reports brought a rapid denial from the Russian military.<sup>7</sup> Nikolai Sokov considered such a deployment unlikely unless triggered by a second round of NATO enlargement. Sokov further proposed new negotiations to transform the unilateral regimes into an arms-control agreement.<sup>8</sup> Sokov correctly states that Russian discussions have connected redeployment of nonstrategic nuclear weapons to NATO enlargement. However, in 1999 military discussion of these weapons concerned their potential role in theater warfighting as a counterweight to Russia's declining conventional capabilities. Much of that discussion assumes that the United States and NATO represent the probable or eventual enemy. This article addresses the doctrinal debate that has emerged over nonstrategic nuclear weapons' role in theater war and their utility in de-escalating such conflicts.<sup>9</sup>

### **Strategic Nuclear Forces, Kosovo and Theater Deterrence**

In May 1997 Yeltsin fired retired General Igor Rodionov as Minister of Defense. Rodionov had spent a year fighting with civilian leaders over the proper course of military reform. Pressured to confine reform to the armed forces and focus on personnel reductions, Rodionov warned that NATO expansion could cause Russia to increase a nonstrategic nuclear threat on its western frontiers. "We might objectively face the task of increasing tactical nuclear weapons at our border."<sup>10</sup>

Yeltsin replaced Rodionov with General Igor Sergeev, commander of the Strategic Rocket Forces (SRF). Unlike Rodionov, who had focused on reforming Russia's conventional forces, Sergeev gave top priority to reorganizing Russia's strategic forces and their command and control. Over the next year and a half, Sergeev obtained Yeltsin's support for a series of moves relating to strategic deterrence, culminating in the concept, "Main Policy Guidelines of the Russian Federation in the Area of Nuclear Deterrence."<sup>11</sup> Yeltsin supported Sergeev's plan to merge the space defense troops, ballistic missile defense troops and missile early warning system with the SRF. In November 1998 Yeltsin established the Strategic Deterrence Force, which included the SRF; naval strategic nuclear forces; long-range aviation; and the 12th Directorate of the Ministry of Defense, which is charged with the design, production and control of all nuclear weapons. Sergeev declared these actions necessary to deter large-scale aggression.<sup>12</sup> In July 1998 the Security Council approved the structure of Russia's nuclear deterrence forces until 2010. In December 1998 Russia adopted major new provisions to its nuclear deterrence policy.

In January 1999 General V.M. Baryn'kin addressed threats confronting Russia and appropriate responses to them. Baryn'kin identified four:

- Threats from long-existing East-West contradictions.
- Threats from traditional military-political contradictions between Russia and the United States, Germany, France, Turkey, Japan, China, Pakistan and Iran.
- New threats from interethnic and religious contradictions, especially Islamic fundamentalism.
- Threats from proliferating weapons of mass destruction, including their deployment on Russia's periphery.<sup>13</sup>

Baryn'kin endorsed strategic arms control and reducing strategic arsenals but also emphasized that "Russia's strategic nuclear triad will serve as a reliable deterrent factor."<sup>14</sup>

Sergeev's political victory did not survive long. His emphasis on strategic nuclear deterrence offered political clout since Russia retained its role as a leading nuclear power, but strategic deterrence did not translate into political leverage in crisis situations and seemed quite hollow in the face of NATO's air campaign against Yugoslavia. Prime Minister Yevgeniy Primakov's efforts at counterleverage against the bombing proved initially self-isolating. Yeltsin found little leverage against the West, and it was easy to blame those who had sold the political utility of extended strategic deterrence.<sup>15</sup> In April 2001, Sergeev was replaced by Sergey Ivanov.

The gap between strategic nuclear deterrence and flexible response to conventional aggression now assumed top priority. During NATO's air campaign the Security Council met to discuss nuclear issues, primarily the condition of nuclear production facilities. However, during the first meeting chaired by new council secretary Vladimir Putin, the discussion shifted to nonstrategic nuclear weapons' role in dealing with intervention threats from modern conventional, precision-strike forces.<sup>16</sup>

A month before the meeting, *Military Thought* published an article devoted to nuclear strategy's theoretical foundations. A.V. Nedelin outlined the role of nuclear strategy in re-establishing Russia's place as "a great world power" and called for theory that would consider "constant change in the specter, nature and geography of threats."<sup>17</sup> Nedelin's theory of nuclear strategy included general foundations of nuclear strategy, theory of nuclear deterrence, theory of combat use of nuclear weapons and theory of nuclear armaments. Nedelin's approach to nuclear strategy transcended military and technical issues, introducing ethnogenetic and ethnopsy-chological subjective factors. He said that maritime powers favor sea-based deterrence while continental states favor land-based systems, and he stressed the importance of national willingness to accept losses in pursuing significant goals. He further stressed expansionist sentiments, aggressiveness, steadfastness in assuming burdens and losses in war, and the means to recover after a national catastrophe.<sup>18</sup> By introducing these subjective factors into the risk assessments, Nedelin consciously moved from military-technical criteria for operational success into political calculation.

The NATO air campaign over Yugoslavia served Sergeev's critics in two ways. First, it underscored the limits of strategic nuclear deterrence when interests beyond Russia's frontiers are not worth major war. Second, the air campaign's precision strikes raised the prospect of a similar NATO intervention strategy against Russia's periphery. Russian public opinion saw NATO's actions against Yugoslavia as morally wrong and an indirect threat to Russia. Given the increasing likelihood of renewed hostilities in the Caucasus and NATO's growing interest in the Cas-pian as a result of the emerging "great game" for access to oil and gas, a new military priority raised its head: the ability to engage in theater deterrence.

## **Nonstrategic Nuclear Weapons and De-escalation of Local War**

"De-escalation of military actions" is the Russian term for employing nuclear forces in a local or regional war. It involves using strategic nuclear forces and operational-tactical nuclear weapons

within a theater of military operations (TVD).<sup>19</sup> The concept requires a clear chain of command from the Supreme High Command to theater operations command. Operational-tactical nuclear weapons include "front aviation, naval aviation, air defense aviation, missile and artillery complexes of the ground forces, the missiles, torpedoes of conventional navy, air defense complexes, as well as nuclear mines of the engineering troops, and naval helicopters carrying out antisubmarine warfare missions."<sup>20</sup> These forces are the nonstrategic systems covered by the unilateral regime that Gorbachev spelled out and Yeltsin confirmed in the early 1990s. De-escalation assumes the actual use of nuclear weapons to demonstrate resolve. This task can be performed by employing nonstrategic nuclear weapons, which can exclude an "avalanche-like escalation of the use of nuclear weapons up to the very exchange of massive nuclear strikes with strategic nuclear systems. In this case, it seems to us, that it will be more advantageous to the enemy to stop military actions."<sup>21</sup>

Here de-escalation includes a nuclear escalation ladder from single nuclear strike, group nuclear strike, concentrated nuclear strike, to mass nuclear strike. Each type of strike is associated with a specific escalation concept: demonstration, deterrence-demonstration, deterrence, deterrence-retaliation and retaliation.<sup>22</sup> Each step reflects distinct assumptions about the military situation. Thus, a demonstration would involve attacks on isolated areas and secondary military targets and would seek to inflict minimal casualties. Each succeeding step uses larger forces against more valuable military targets to influence the course and outcome of combat within the TVD and beyond. Deterrence-retaliation would involve coordinated strikes against enemy forces in a TVD. In an unfavorable defensive operation, it could deter the threat to destroy defenders, decisively change the correlation of forces on the operational direction (directions) and liquidate any enemy breakthrough. Retaliation-deterrence would involve mass strikes to destroy enemy forces throughout the TVD and create a fundamental change in the correlation of forces. Retaliation, the final stage before general strategic exchange, involves mass strikes throughout the entire theater of war to destroy the enemy's military-economic infrastructure.<sup>23</sup>

The Supreme High Command would plan and authorize such strikes; the TVD commander would execute them. The TVD commander could have at his disposal "two to six air regiments of frontal aviation and three to five missile brigades."<sup>24</sup> Such forces are a necessary component of conflict prevention and termination. Only the rational calculation regarding the composition of nuclear strike forces of operational-tactical formations (armed forces in the TVD) of aircraft and missile complexes (missile and artillery forces of the ground forces) will permit effective nuclear destruction in an operation under any circumstances such as guaranteeing deterrence and de-escalation of military actions in a major regional war.<sup>25</sup> Deterrence here embraced a direct link between the escalated employment of nonstrategic nuclear forces and the will to use strategic nuclear forces up to the point of "mutual destruction."<sup>26</sup>

## **ZAPAD-99 and Nonstrategic Nuclear Weapons**

De-escalation was practiced during *ZAPAD-99*, a theater exercise held during June 1999. *ZAPAD-99*, the largest Russian military exercise, involved the headquarters and command structures of five military districts (Leningrad, Moscow, Caucasus, Trans-Volga and Volga) and three fleets (the Northern, Baltic and Black Sea)—about 50,000 command and staff personnel. Set in the Baltic, the scenario envisioned NATO-launched "aggression against Russia and its

allies," including 450 aircraft of the enemy's tactical and strategic aviation and 120 guided missiles striking Belarus. With Kaliningrad's conventional defenses weakened under the impact of these precision strikes, Russia responded with limited nuclear strikes by cruise missiles launched from Tu-95 and Tu-160 bombers "against the countries from whose territories the offensive was launched."<sup>27</sup> The timing of the exercise—the eve of the 48th anniversary of the *Wehrmacht's* launching of Operation *Barbarossa*—was intentional. Only days before 200 Russian airborne troops assigned to Bosnia as part of the stabilization force had driven to Pristina to pre-empt deployment of NATO's Kosovo peacekeeping force into Kosovo's northern region.



**A 555th Fighter Squadron weapons loader at Aviano Air Base, Italy, checks a laser-guided bomb prior to air strikes against Serbian targets.**

Immediately after the exercise, Yeltsin visited senior government and military leaders and congratulated them on a successful exercise but declared that the threat of large-scale military aggression against Russia "is something for sci-fi books."<sup>28</sup> This could be interpreted as a rejection of the exercise's basic premise. Another interpretation is that Russia's concept of de-escalation would function only in the face of limited intervention in a local war. Kosovo seemed to confirm the General Staff's assessment of the operational limitations that would apply to US-NATO intervention in local wars on the Russian periphery. The air campaign, precision-strike weapons, information warfare and the US-NATO concern to reduce the risk of casualties would lead to a new form of combat: "contactless warfare."<sup>29</sup>

Immediately after the NATO military intervention in Kosovo, General Mahmut Gareev, as president of the Academy of Military Sciences (a nongovernment organization closely linked to the Russian Ministry of Defense and General Staff), hosted a conference on the role of military science in determining national defense requirements. In his remarks to the conference, Sergeev explicitly linked studying past military experience to formulating new concepts of military art. He stressed the need to "analyze the forms and means of use of armed forces of the United States and NATO against independent Yugoslavia."<sup>30</sup> Sergeev had observed specific shortcomings in operational and combat training during *ZAPAD-99*. The exercise employed Russian nuclear forces in a pre-emptive strike against an aggressor using advanced conventional forces, underscoring one of Gareev's major points. Nuclear forces would retain their deterrence capabilities and preclude their massed employment, but they could not exclude using advanced conventional weapons in a local armed conflict.<sup>31</sup> What emerged was a focus on the impact of

precision-strike systems on local wars and the employment of nonstrategic nuclear weapons in deterring such attacks.

Since *Desert Storm*, US analysts have been developing new roles and concepts for high-tech nonnuclear weapons that can destroy strategic targets on the first strike. Thus, the United States can assert the deterrent capabilities of these nonnuclear weapons and has affirmed the plausibility of causing unacceptable damage.<sup>32</sup> The overwhelming US lead in this area suggests that the only effective Russian response is asymmetric deterrence based on conventional and nuclear forces. But there are risks associated with too great an inferiority in conventional weapons. Given asymmetry in conventional forces, the threshold for using nuclear weapons is determined by the potential of one side's conventional forces relative to the opposing side's potential. Hence, a high degree of conventional forces' asymmetry lowers the declared threshold for using nuclear weapons and raises the danger that nuclear weapons will be used, even in low-level conflicts.<sup>33</sup>

Further development of US deep-strike precision systems risks the security and stability of Russia's strategic nuclear forces. One Russian response would be investing in precision, long-range, nonnuclear weapons to prevent nuclear weapons use, increase effectiveness of deterrence and perform important missions in local conflicts.<sup>34</sup> Budgetary constraints might force Russia to rely temporarily on nonstrategic nuclear weapons, but this is not a long-term solution, given the pace and scope of developing deep-strike, precision systems in the United States.

Budgetary priorities (funding to research and develop conventional deep-strike systems versus maintaining nonstrategic nuclear weapons) involve assessing imminent US-NATO intervention in local wars on Russia's periphery. The threat was high in late summer and early fall 1999 as the situation in the Caucasus deteriorated with open combat in Dagestan and Chechnya. Nonstrategic nuclear weapons were seen as a vital element in deterring such intervention and "preventing aggression or the transition of a local war into a large-scale [war]."<sup>35</sup> Others disagreed with relying on nonstrategic nuclear weapons, placed first priority on assuring the deterrence potential of Russia's strategic nuclear forces and were uneasy with the discussion of first-use options.<sup>36</sup> Author Sergey Brezgun proposed breaking out of the Intermediate-Range Nuclear Forces (INF) Treaty (US and Soviet treaty eliminating their intermediate-range and shorter-range nuclear missiles) and deploying a new SS-20 *Pioner* missile with a range of 5,000 kilometers. This was his response to NATO's continued preparations for using tactical nuclear weapons in Europe. At the same time he warned that tactical nuclear weapons should not be considered a "means of conducting actual combat operations."<sup>37</sup>

## **The Putin Era and Nonstrategic Nuclear Weapons**

In fall 1999 the Russian government embarked on renewed hostilities in Chechnya. Secretary of the Security Council Vladimir Putin replaced Sergei Stepashin as prime minister. Putin endorsed a major campaign in Chechnya to break resistance and reincorporate it into the Russian Federation. In a matter of months Putin parleyed the war in Chechnya into national popularity and electoral success. His Unity Party won the December parliamentary elections, and he replaced Yeltsin as president after Yeltsin resigned. In spring 2000 Putin was elected president in his own right. Finally, Russia seemed to enjoy an effective national leader who could coordinate

coherent state policy. Defense and military policy, although dominated by events in Chechnya, enjoyed a high priority. Nuclear deterrence remained a major theme of policy discussions.

In October the Ministry of Defense published a draft military doctrine for discussion and consideration. The draft stressed the threat posed by hegemonic forces in the international system and posited fostering a multipolar world. The draft doctrine contained an extended discussion of nuclear weapons' deterrence and use. Should deterrence fail, Russia will use nuclear weapons to inflict sufficient damage upon its aggressor or coalition of aggressors. Russia pledges not to use nuclear weapons against states that are parties to the Nuclear Non-Proliferation Treaty that do not possess nuclear weapons. This pledge, however, is qualified in the case of a direct invasion of Russia, an attack on the Russian armed forces or other troops, an attack on an allied state that does not possess nuclear weapons or an attack on a nuclear state allied with Russia. The draft specifies that Russia retains the right to use nuclear weapons to counter use of weapons of mass destruction against Russia and to counter conventional forces' large-scale aggression in "situations critical to the national security of the Russian Federation and its allies."<sup>38</sup>

The debate over the draft military doctrine proved protracted, with nuclear deterrence and the role of nonstrategic nuclear forces as core topics. Critics of the draft included many senior officers who questioned the draft's response to events in Kosovo and Iraq. Retired General-Colonel Viktor Kopylov questioned the draft's threat assessment as insufficient for not considering the increased risk of nuclear war. Kopylov blamed such a risk on NATO and stated that the alliance had shifted from a policy of a "concealed (creeping) nature" to one of a direct approach to war, an "open phase" of "violent excess, when the end justifies any means."<sup>39</sup> Retired General-Major Stepan Tyushkevich, a leading military theorist, stated that the proposed doctrine did not consider the most recent military experience, including Operation *Desert Fox* and the air campaign over Yugoslavia in which one side used advanced weaponry to engage in "no-contact warfare." According to Tyushkevich, declining quality in Russian military theory and military science resulted directly from failing to account for recent experience.<sup>40</sup>

Some analysts proposed that military doctrine consider the reality of contactless warfare and discussed the utility of de-escalation, employing nonstrategic nuclear weapons.<sup>41</sup> Taking issue with the views of Stanislav Voronin and Brezkun, Vladimir Sivolob and Mikhail Sosnovskiy asserted "that a definition of conditions for use of nuclear weapons is by no means a secondary issue, but a very important problem."<sup>42</sup> The authors developed algorithms for nuclear use to reinterpret the quantitative and qualitative ratios of strategic and nonstrategic conventional and nuclear arms and to improve performance in nuclear destruction missions. They identified three situations for employing nuclear weapons:

- Enemy use of weapons of mass destruction or evidence of immediate preparations to do so.
- Enemy effect against strategic (not just military) installations, even by conventional weapons.
- A threat to disrupt stability of a strategic defense.<sup>43</sup>

While the authors noted the role of strategic nuclear forces in deterrence, including mass retaliatory strikes, they warned that: "it is far from always advisable to perform missions of

detering 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>44</sup>

The Russian debate over the response to US proposals on the National Missile Defense Program quickly became entangled in the issue of nonstrategic nuclear weapons. While in early 2000 there appeared to be little room for maneuver between the Clinton and Putin administrations, two contrasting articles appeared in *Voeynnaya mys'* on responses to the US proposals: V.N. Tsygichko and A.A. Piontkovsky propose seeking a cooperative solution, and Colonel S.V. Kreydin rejects any cooperation. The journal's editors invited readers to discuss the issue. Tygichko and Piontkovsky made a strong case supporting negotiated revision of the Anti-Ballistic Missile (ABM) Treaty in Russia's interests such as guaranteeing openness, assuring cooperation, limiting any prospect for breakout and preventing robust strategic ballistic missile defense (BMD). They noted that Russian and US cooperation in creating a theater ballistic system for Europe could be the basis for modifying the ABM Treaty.<sup>45</sup> Kreydin, however, depicted the Clinton administration's limited BMD as the camel nose under the tent—the first step to a strategic breakout and undermined nuclear stability.

Yet Kreydin notes that such a policy faces serious military-technical hurdles since modernized offensive nuclear forces can greatly complicate the defender's tasks. Kreydin concludes that Russia should not construct a modernized, limited BMD system but should put its limited resources into supporting its nuclear potential, which can deter nuclear as well as major conventional threats.<sup>46</sup> While senior Russian political and military leaders might denounce withdrawing from the ABM Treaty as a blow to global political stability and a cause for a new arms race, they support developing nonstrategic theater missile defense systems or defend extended nuclear deterrence as the appropriate response to US efforts to achieve nuclear hegemony as it denuclearized Russia.<sup>47</sup>

Kreydin proposes a fundamental shift in the combat role of nuclear weapons and rejects the basic assumption that the stability of nuclear deterrence depends on the arsenal's survivability. Instead, he introduces the concept of troops' combat stability—their



**Then Minister of Defense General Igor Sergeev with President Vladimir Putin.**

ability to perform the mission under enemy attacks. Citing the emerging realities of deep-precision strikes with conventional forces, Kreydin rejects the notion that Russia can engage in a protracted war of attrition. The only effective counter is nuclear: "Modern day long-range, including non-nuclear, strike resources of the eventual enemy allow him to effectively



accomplish a sufficiently wide range of offensive missions, including those like complete isolation of the theater of war, combating the second strategic echelon, disorganizing and disrupting military production. Under these conditions, our natural argument in the battle for strategic initiative is still nuclear weaponry."<sup>48</sup>

Kreydin's concept for the combat stability of nuclear forces in theater operations did not go unchallenged. His critics accused him of misrepresenting the situation under which nonstrategic nuclear forces might be employed. They said that by emphasizing combat stability, he underestimated the problem of controlling the nature and scale of nuclear exchanges. They remind us that "controlled, limited nuclear war is not one-sided"; enemy response does matter, and with that goes the risk that escalation will lead to radical and unanticipated changes in the conflict's scale.<sup>49</sup> The authors noted that NATO's superiority in conventional and nonstrategic nuclear systems was beyond doubt. NATO would enjoy a 2-1 advantage in nuclear-capable aircraft. Applying existing combat-modeling techniques the authors asserted, "With conventional superiority in the initial phase of war one can expect increasing superiority including nonstrategic nuclear systems as the conflict goes on."<sup>50</sup>

Under such circumstances Russian nonstrategic nuclear systems might be placed in a use or lose situation. Russia will not be able to guide or control such a conflict to a successful military or political conclusion. The only salvation for Kreydin's approach is to assume that nonstrategic nuclear strikes could impose a level of losses the enemy could not accept. This subjective factor cannot be effectively modeled because "the search for a norm of unacceptable losses will not be profitable."<sup>51</sup> Invoking chaos theory and the theory of complex systems, the authors return to the centrality of strategic deterrence and affirm that "nonstrategic nuclear weapons are only a supporting deterrence factor."<sup>52</sup> Investing in their development will only undercut strategic nuclear and conventional forces.

Strategic nuclear forces remain the main means of deterrence, but the presence of nonstrategic nuclear weapons offers a chance (although fragile) to prevent the avalanche-like transformation of a regional conflict into an unlimited global use of nuclear weapons. In these circumstances, nonstrategic nuclear weapons can be employed to destroy military targets in the region. However, if the enemy does not halt aggression, then the target set shifts to "counter-value targets to be attacked by long-range aviation of strategic nuclear forces."<sup>53</sup> The target set becomes nuclear power stations with the threat of inflicting asymmetric damage upon NATO member countries. The addition of more targets only makes equating a sufficient nonstrategic nuclear force more complex under these dynamic circumstances.



**Tu-22M *Backfire* is a medium range bomber, capable of carrying gravity bombs and cruise missiles. Unilateral Soviet declaration of 31 July 1991, limited total holdings to 300 planes, of which 200 could be assigned to naval aviation. In this photo the *Backfire* is armed with the AS-4 Kitchen long-range, air-launched, cruise missile, capable of carrying either a 1,000-kilogram conventional or 350-kiloton nuclear warhead.**

Looming behind these discussions of nonstrategic nuclear weapons was the warning of an even more dramatic transformation of warfare with the development of precision-strike weapons; information warfare; and advanced command, control, communications and intelligence. Proponents of this transformation labeled it "sixth-generation warfare" and associated its appearance with the end of the hegemony of nuclear weapons and deterrence. Retired General-Major Vladimir Ivanovich Slipchenko, one of the most active military theorists in Russia, emerged as one of the chief advocates of sixth-generation warfare.<sup>54</sup> A specialist in radio-electronic warfare and air defense, Slipchenko graduated from the Military Academy of the General Staff in 1988 and then served there as a professor, directing graduate research. Slipchenko viewed applying deep-strike precision weapons during the Gulf War as only a harbinger of a more fundamental revolution in military art.<sup>55</sup> Slipchenko expects sixth-generation warfare to reach maturity between 2007 and 2030.

Slipchenko underscores the radical changes advanced technology has brought to societies, and the ways and means that such societies engage in wars and armed conflicts. However, the impact of new technologies on military art is delayed and uneven. Some states could embrace the new innovations and adopt new forms and methods of armed struggle, while others find themselves responding to changes shaped by the more advanced states. The tendency toward conservatively interpreting such changes has led armies to prepare for past wars rather than to define the nature of and prepare for future armed conflict. Slipchenko's treatment of the first four generations of war is quite short—only enough to show the evolution from iron weapons and close combat through the gunpowder revolution through industrialization to mechanized warfare.<sup>56</sup>

This sets the stage for what he calls the anomaly of fifth-generation warfare—nuclear weapons, the destructive power that broke the link between political ends and military means. If the first four generations of warfare were evolutionary, growing out of one into another and gradually transforming battlefield tactics, the fifth generation's leap in destructive power broke the Clausewitzian logic of war as a continuation of politics. Deterrence replaced warfighting as the core of fifth-generation warfare since actual use of such weapons was confined to the atomic attacks on Hiroshima and Nagasaki. Sixth-generation warfare involves advanced conventional

weapons, incorporating automated control systems, radio-electronic combat, precision-strike capabilities and weapons based on new physical principles. Slipchenko argues that the Gulf War was both the end of an era and the harbinger of sixth-generation warfare.<sup>57</sup>

True sixth-generation warfare will involve systematic attacks on opposing sides' economic potential and infrastructure using precision and information strikes in contactless warfare. Ground forces will lose their traditional role of defeating enemy field forces and occupying enemy territory. The capabilities inherent in advanced conventional systems have undermined the deterrent capacity of nuclear weapons since their very destructive power would be difficult to control and would risk uncontrolled escalation that would be lethal to the belligerents and the rest of humanity. This condition Slipchenko describes as "nuclear helplessness."<sup>58</sup>

Under this different conceptual position on nuclear weapons, Slipchenko discusses the end of extended deterrence for Russia. Possessing nuclear parity in strategic arsenals did not prevent NATO's expansion or preclude its military interventions in Bosnia, Herzegovina, Yugoslavia and Kosovo. Strategic nuclear forces cannot sustain Russia during general economic decline and social crisis. Indeed, sustaining a nuclear arsenal diverts resources from developing advanced conventional weapons for sixth-generation warfare.

Nuclear weapons will not deter wars of the sixth generation but will render the civil economy and infrastructure vulnerable targets, the destruction of which would be horrendous. Sixth-generation warfare will recast military art, introduce new means and methods of conducting contactless warfare and bring a radical armed forces reorganization.

Slipchenko makes a capital observation regarding using such warfare to achieve political objectives. Because of uneven economic, scientific and technological development, some states will make the leap to sixth-generation warfare immediately; less-developed states will take longer; and, for some, sixth-generation warfare will be possible only in the distant future, if at all. For the most advanced states, including the United States, there will be a window when sixth-generation warfare will allow war to once again become an instrument of policy. Sixth-generation warfare's main goal will be to destroy economic potential and change political regimes. Given Russia's current inferiority in conventional forces and its slow conventional modernization, Slipchenko's concept leaves significant residual utility to non-strategic nuclear weapons as a temporary counter, while fourth-generation nuclear weapons can be integrated into sixth-generation warfare. Slipchenko notes that tendency and warns of the grave risks associated with deterrence by first use, which will bring with it more uncertainty than utility.<sup>59</sup>

Critics have accused Slipchenko of being a "technological determinist" who makes a fetish out of a weapon system without examining the problem dialectically—in its totality and interconnections. Like Giulio Douhet for air power and J.F.C. Fuller for mechanization during the interwar years, Slipchenko extrapolates on the Gulf War and Kosovo. However, he ignores the fact that one side enjoyed overwhelming quantitative and qualitative superiority. What would be the result of a major conflict if both sides possessed such weapons? Analyzing both conflicts, Slipchenko's critics emphasize the disconnect between the success of advanced weapons in combat and their impact on the political outcome of the conflicts. In neither conflict did NATO achieve its goal to destroy the state's economic potential and change the political regime.<sup>60</sup> In a

future regional war, there is no reason to exclude the use of nuclear weapons or suppose ground forces will disappear. What will change are their respective roles. In no case will such a conflict be a bloodless technological contest decided by advanced weapons. The human factor inherent to the practice of military art will be more and not less important in such conflicts.<sup>61</sup>

Debate on using nonstrategic nuclear systems seems to have been part of a power struggle between Sergeev and Chief of the General Staff Anatoliy Kvashnin. The struggle became public in July 2000 with a series of official leaks regarding Kvashnin's proposals to "denuclearize" Russian strategy, subordinate the SRF as a component of the air force and dramatically shift toward improving conventional armaments.<sup>62</sup> Debate on this issue within the collegium of the Ministry of Defense proved stormy, and the bureaucratic conflict moved to the Security Council to resolve.

Kvashnin's initiative in forcing the matter raised serious questions about the military chain of command such as the relationship between the minister and his nominal subordinate, the chief of the General Staff. One critic, noting Kvashnin's pretensions to serve as military commander in chief, questioned the need for Russia to retain its General Staff, which he compared unfavorably with the US Joint Chiefs of Staff. The author argued for civilianizing the post of Minister of Defense to ensure civilians control any decision to use the military.<sup>63</sup> The outcome of the debate appears to have been a bureaucratic compromise.<sup>64</sup> Both Sergeev and Kvashnin retained their respective positions. Strategic nuclear forces were not going to be abandoned. Russia would pursue reductions and sustain its arsenal by extending the warranty on some systems. Conventional forces would receive additional funding for their modernization. Nonstrategic nuclear weapons will have an expanded role in theater warfare, emphasizing their use as a means of conflict de-escalation.

The renewed emphasis on nonstrategic nuclear weapons in theater warfare should be seen as the result of factors shaping Russian military doctrine over the past four years. Primary importance must go to the perceived decline in conventional military capabilities, which is a function of Russia's economic crisis and the increasing obsolescence of many weapon systems created for mechanized theater war. Equally important has been the perception of Russia's vulnerability to US-NATO intervention in local armed conflicts on its periphery. Russian doctrine emphasizes using nonstrategic nuclear weapons to deter intervention and de-escalate conflict by air or with precision deep-strike systems.

The Kosovo syndrome has far deeper roots than the actual NATO campaign. NATO's use of military power against Yugoslavia served as a watershed among Russian political and military elites in popularizing the perception of NATO as the eventual enemy. Some Russian analysts are concerned about what lies beyond the threshold of actually using nuclear weapons. Others, however, believe that the nuclear genie has become powerless to deter conflicts that will be increasingly dominated by the revolution in military affairs.

Jan de Bloch's insights a century ago on the supposed dominance of the offense proved an illusion in large-scale warfare. Russian military and civilian leaders now seem dominated by self-perceptions of weakness and vulnerability, and have embraced nonstrategic nuclear weapons as a temporary solution, a fourth-generation augmentation of combat power to support sixth-

generation warfare. But there are solid grounds for doubting these scenarios that stress the dominance of the offense, the bloodless nature of such conflicts and their short duration. Faulty forecasts about threats and warfare can lead to profound and costly miscalculations.

Russia has good reason to abandon the existing unilateral regime for nonstrategic nuclear weapons and will not likely embrace a formal bilateral or multilateral version of it without concessions from the United States and NATO on other arms-control issues. This is largely a direct consequence of the leadership's perception that the post-Cold War period has ended, and the world has entered another interwar period. As Aleksei Arbatov stated, "The bombing of Yugoslavia revived the worst instincts of the Cold War" among the Russian civil and military leaders.<sup>65</sup> More exactly, Russia's isolation and NATO's willful disregard of its interests confirmed the assumptions of NATO hostility that only a few years before had been confined to the extreme nationalist and communist circles.<sup>66</sup>

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  6. Bill Gertz, "U.S. Yet To Query Moscow On Nukes," *The Washington Times*, 4 January 2001.
  7. "Russia Denies Moving Nuclear Arms," *The Associated Press*, Moscow, 4 January 2001.
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  9. Nonstrategic nuclear weapons refers to any warhead and delivery system with a range of less than 5,500 kilometers or systems not covered by the existing strategic arms agreements between Russia and the United States. Nonstrategic nuclear weapons were initially envisioned as integral parts of theater-strategic operations, although there was intense debate about their utility in offensive operations because their employment could reduce attacking forces' rate of advance and lead to unanticipated consequences, including strategic escalation. Aleskei Arbatov has estimated the size of the Soviet nuclear arsenal in the early 1980s at more than 10,000 strategic

warheads and approximately 30,000 tactical warheads. Aleksei Arbatov, "The Transformation of Russian Military Doctrine: Lessons Learned from Kosovo and Chechnya," in *The Marshall Center Papers*, No. 2 (Garmisch-Partenkirchen, GE: The George C. Marshall Center, 2000), 4. Estimates of the size of Russia's contemporary arsenal vary widely. Nikolai Sokov, who analyzes this issue, recently sized the arsenal at 8,000 warheads, admitting that, "In the absence of hard data, analysts are reduced to guesswork. In the absence of official figures on this arsenal, assessments of Russia's stockpile vary between 2,000 and 18,000 warheads. A more realistic estimate is in the middle: about 8,000 warheads early last year, when implementation of the 1991-92 unilateral statements was almost complete." Sokov, "The Tactical Nuclear Weapons Controversy."

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