

Why Do States Rely on Nuclear Weapons? The Case of Russia and Beyond

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When the Cold War ended, it seemed to many that nuclear weapons would quickly lose their relevance: “doomsday” weapons had no rational role in a world no longer divided by political, ideological, and socioeconomic differences. These expectations did not survive long.

Arsenals of nuclear weapons have continued to shrink: in December 2001, the United States and Russia completed reductions under START I; the United States has completed reductions under the 1991 Presidential Nuclear Initiatives (PNIs),¹ and Russia is reportedly close to completing them.² The May 2002 Treaty of Moscow will also shrink the operationally deployed strategic nuclear forces of both Russia and the United States. But it is only the size of the arsenal that was made irrelevant by the end of the Cold War, not nuclear weapons themselves. Discussions of increased Russian reliance on nuclear weapons dominated the 1990s. The 21st century began with parallel concerns about the increased role of nuclear weapons in U.S. security policy, illustrated by the debate over the use of nuclear weapons during the post-September 11 campaign in Afghanistan and the 2002 Nuclear Posture Review (NPR).

The experience of the last decade has demonstrated that nuclear weapons can maintain a high profile in national security policy in the absence of a profound systemic superpower confrontation. Moreover, nuclear weapons can retain such status even without a plausible nuclear oppo-

nent. In the place of traditional missions assigned to nuclear weapons during the Cold War, new ones have emerged or became relatively more prominent.

Based on the experience of the Cold War, we know that in addition to establishing the basis for mutual assured destruction, nuclear weapons can serve to compensate for the weakness of conventional armed forces.³ Taken alone, however, this explanation does not appear sufficient to account for the continued prominence of nuclear weapons in the security policies of the United States and Russia. In 2000, for example, the Russian government adopted a series of decisions that clearly point at decreasing reliance on nuclear weapons, despite a continued crisis of conventional forces and a new stage of reductions. Recent U.S. discussions about greater reliance on nuclear weapons come at a time when U.S. conventional armed forces have reached an unprecedented level of efficiency. All these puzzles require a fresh look to determine the causes of variation in the reliance on nuclear weapons among states. This exercise can hardly be called academic. Without an answer to this question, for example, we cannot predict whether the role of nuclear weapons in Russian security policy might increase again nor can we predict under which circumstances it might do so.

This article seeks to develop an explanatory framework for determining why states rely on nuclear weapons. Russia is treated as a critical case, primarily because of the considerable amount of data on Russian nuclear policy that

emerged during the 1990s. Preliminary conclusions drawn from the Russian case are then tested on the recent developments in the United States.

OPERATIONALIZATION OF RELIANCE ON NUCLEAR WEAPONS

The notion of greater or lesser reliance on nuclear weapons might seem an oxymoron because their mere existence is fraught with the danger of their use. In fact, there is a major difference between their presence as a status symbol or the weapon of last resort (analogous to Mahan's "fleet in being") and the integration of nuclear weapons into scenarios and missions that are considered likely. In other words, reliance on nuclear weapons can be measured by the likelihood of their use or, put differently, by the "height" of the nuclear threshold.

For the purposes of analyzing the likelihood of the use of nuclear weapons, it is necessary to distinguish between two categories of missions that they can be assigned. One is "core deterrence," i.e., prevention of a large-scale attack (or a first strike, for that matter). Another is the use of nuclear weapons in limited scenarios, such as deterrence of conventional forces or the use of nuclear weapons in an offensive operation alongside or instead of conventional forces.

During the Cold War, both categories were present simultaneously, although even then U.S. and Soviet images of nuclear warfighting were asymmetric, at least for part of the period. Declassified U.S. war planning documents from the 1960s allowed for the use of nuclear weapons for escalation control purposes and counted on limiting the nuclear exchange to a theater of operations and avoiding a full-scale, strategic nuclear exchange. The Soviet Union, in contrast, believed that even limited use of nuclear weapons should be met with an all-out response.⁴ The parallel existence of both types of missions may not always be the case. A country may emphasize "core deterrence" and see battlefield use as irrelevant under some circumstances, but concentrate on limited-use scenarios, relegating "core deterrence" to "dormant" status under other circumstances.

In principle, "core deterrence" can emerge in the relationship between almost any two nuclear powers, but formal attributes of deterrence do not necessarily translate into plans for immediate use of nuclear weapons. During the Cold War, the United States and the Soviet Union believed conflict likely and planned for the use of nuclear

weapons on short notice in case of an attack by the adversary. In contrast, the 1993 Russian military doctrine confirmed that nuclear weapons continued to deter a large-scale attack, but simultaneously classified such conflicts as highly unlikely.⁵ Nuclear weapons were reserved for the case of an unforeseen change in the international environment. It should be noted, though, that the United States continued to serve as a "benchmark" for assessing the deterrence capability of the Russian nuclear arsenal: if Russia could deter the United States, it could deter any other state or coalition of states.

In the relationship between some states, nuclear weapons, while present, play no role at all, as between the United States and Great Britain. Such a relationship cannot be built quickly and might require the presence of certain external environmental factors (for the United States and Great Britain, the Soviet threat played this role). In this respect, attempts to decree the abolition of deterrence in the U.S.-Russian relationship are futile: as long as nuclear weapons exist, deterrence will be present at least implicitly. Its role in U.S.-Russian relations will only gradually disappear as a new quality of relationship is achieved and maintained for a protracted period.

While the relevance of "core deterrence" has declined following the end of the Cold War, scenarios that provide for limited use of nuclear weapons have moved to the forefront. These scenarios are inherently more dangerous than Cold War plans for massive nuclear exchanges because the use of nuclear weapons in such scenarios is more likely. Instead of hundreds and thousands of nuclear explosions, as projected in Cold War-era plans, contemporary military and civilian experts who advocate reliance on nuclear weapons deal in single-digit numbers; low-yield nuclear weapons are also becoming increasingly popular. Low numbers and low yields make the use of nuclear weapons psychologically easier to accept, leading to a lower nuclear threshold. One should be sensitive, of course, to the possibility that even very limited use of nuclear weapons can set a precedent, legitimizing their use in a wide range of conflict scenarios.⁶

The degree of reliance on nuclear weapons is clearly related to the presence or absence of the perceived value or even indispensability of nuclear weapons for particular missions. This observation allows us to formulate a hypothesis about the conditions under which reliance on nuclear weapons can increase: the presence of missions that either cannot be achieved at all or cannot be achieved

effectively without nuclear weapons. “Core deterrence” requires reliance on nuclear weapons “by default,” but a similar situation could emerge in more limited missions, such as the NATO policy of deterring Soviet conventional attack on Western Europe without a simultaneous attack on the United States.

By tracking the variation of missions assigned to nuclear weapons, we can gauge variation in Russian reliance on nuclear weapons throughout the 1990s. Another important indicator—change in nuclear posture, i.e., the development of assets necessary to support these missions—is less subject to variation. Nuclear posture cannot be changed quickly because of the time and resources needed to develop or deploy new weapons.

PEAKS IN RUSSIAN RELIANCE ON NUCLEAR WEAPONS

Discussion of increased Russian reliance on nuclear weapons began soon after the breakup of the Soviet Union, especially after the new military doctrine in October 1993 allowed for first use of nuclear weapons, reversing the Soviet no-first-use policy announced in 1982. The 1993 doctrine did not add new missions for nuclear weapons, however, and nuclear posture did not change either; instead, Russia continued to reduce its nuclear weapon arsenal at a pace faster than that dictated by the 1991 START I Treaty.

Attention to nuclear weapons in Russia sharply increased for the first time in 1996-97, in the context of the planned enlargement of NATO. The movement of NATO toward Russian borders created concerns that the alliance was preparing to use force against Russia—not on a large scale, as feared during the Cold War, but for limited objectives, similar to the air strikes NATO conducted against Bosnian Serbs in 1994-95. From the Russian point of view, possible reasons for such NATO intervention included forcing Russia to withdraw from Chechnya (the first war had just ended inconclusively); relinquish influence within the Commonwealth of Independent States (CIS); or other similar goals. NATO assurances that the alliance was not a threat and that no military action against Russia was foreseen were dismissed. Russian leaders claimed that NATO had not sufficiently transformed itself and that it remained a threat or could become one in the future.

Along with this new mission came the search for assets capable of supporting it. Deterrence of a limited conventional attack on Russia presented a conceptual challenge

since Russian conventional forces were in a progressively worsening state, while the nuclear arsenal had been streamlined for the mission of “core deterrence.” The answer was found by emphasizing tactical nuclear weapons as more appropriate for theater-level conflicts. Thus, late 1996 and early 1997 saw the emergence of a new mission for nuclear weapons that previously had not been part of Russian military doctrine.

The Russian Navy was in the forefront of those who demanded deployment of tactical nuclear weapons, even though such a step would have contradicted the unilateral political obligations announced by Mikhail Gorbachev in the fall of 1991 and confirmed by Boris Yeltsin in January 1992. In 1996, former Minister of Atomic Energy, Viktor Mikhailov, proposed the development of a new generation of nuclear warheads, whose low yield and reduced radiation emission supposedly would make them more “usable” than existing types.⁷ Simultaneously, nuclear weapons were assigned another mission—unofficially, since it contradicted Russian obligations under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT)—that of deterrence of threats “from the south.” The threat was perceived by many to be sufficiently acute (in 1996, the Taliban captured Kabul, the capital of Afghanistan, and advanced to the borders of the former Soviet Union in Central Asia) to warrant reliance on nuclear weapons.

The boost in the role of nuclear weapons was short-lived, however, and the Russian government never formalized these new missions. The NATO-Russia Founding Act signed in May 1997 helped to alleviate concerns about NATO enlargement. The U.S.-Russian Helsinki summit meeting in March 1997 opened the prospect that the future START III treaty would address the American weapons Russia considered particularly dangerous: long-range conventional air-launched cruise missiles (ALCMs) and sea-launched cruise missiles (SLCMs).

In 1997 and 1998, the Russian government approved a series of measures that reinstated limited missions to nuclear weapons. “The National Security Concept” (December 1997) and several decrees signed by Boris Yeltsin in July and August 1998⁸ assigned to them only the mission of “core deterrence” and formalized the abandonment of “mutual assured destruction” in favor of the capability to inflict “unacceptable damage.” Yeltsin’s decrees provided for deep reductions in the Russian nuclear arsenal, in accordance with the expiration of the planned

service lives of weapons systems, and limited modernization programs. Still, the debate of 1996-97 had important consequences. It propelled nuclear weapons into the center of attention and created a perception of their high utility. Russian military analysts continued to explore new missions, and when the next crisis struck, the development of new concepts was nearing completion.

The next peak in reliance on nuclear weapons was associated with the war in Kosovo, which began in March 1999. The NATO operation in Kosovo revived and vastly strengthened the impression held in Moscow that NATO had very few qualms about using force and that Russia was not necessarily immune to NATO attempts at coercion. At the end of April 1999, a meeting of the Security Council (the first led by Vladimir Putin as its Secretary) apparently directed a revision of the nuclear doctrine to develop ways to deter a Kosovo-style attack against Russia and adopted a series of decisions aimed at boosting the nuclear arsenal.⁹ The Security Council decided to slow the pace of reductions by extending the service lives of nuclear weapons and acquiring 11 heavy bombers from Ukraine. Reportedly, the council also discussed redeployment of tactical nuclear weapons, but ultimately decided against withdrawing from the 1991-92 unilateral statements of Gorbachev and Yeltsin.

The new mission was tested during the Zapad-99 maneuvers in the summer of 1999, which simulated a NATO attack on Kaliningrad Oblast, a small enclave of Russian territory between Poland and Lithuania, similar to the operation against Yugoslavia. Russian troops were unable to resist the attack for more than a few days, and resorted to nuclear weapons, simulating the use of four nuclear-armed ALCMs: two against military targets in Europe and two against undisclosed targets in the United States (the latter was probably a political gesture: a demonstration that the United States would not avoid consequences if NATO were to attack Russia). Subsequent large- and small-scale maneuvers in 1999 and 2000 played out similar scenarios in different theaters and under different conditions. By the end of 1999, the commander of the Russian Strategic Rocket Forces, Vladimir Yakovlev, coined the term “expanded deterrence” to denote the new mission of nuclear weapons: “de-escalation” of limited conflicts.

Zapad-99 and subsequent maneuvers demonstrated a new approach to the development of assets in support of the mission of limited deterrence. Instead of emphasizing tactical nuclear weapons, which would require the expen-

diture of scarce financial resources and incur the political costs of withdrawing from an international regime, the Russian military reoriented part of its strategic capabilities, long-range bombers, toward theater-level tasks (Soviet-era plans had provided for similar uses of long-range bombers, but in the context of a large-scale, strategic conflict). This option was admittedly more cost-effective and consequently more realistic than the earlier, 1997 plans to boost substrategic capabilities through the development of new weapons systems.

A parallel development, which helped to boost the perceived relevance of nuclear weapons to Russian national security, was the formal announcement by the Clinton administration that it was moving forward with the deployment of a national missile defense system and would seek amendments to the Anti-Ballistic Missile (ABM) Treaty. In combination with the war in Kosovo, this decision was viewed in Russia as evidence that the United States planned to invalidate the Russian “core deterrence” capability in order to facilitate the use of U.S. or NATO conventional forces as a means of coercion. The April 1999 decisions of the Russian Security Council with regard to the strategic nuclear arsenal were at least partially motivated by these concerns.

In this area, the Russian military also chose cost-effective options. According to plans developed in 1999, Russia was supposed to maintain a relatively large strategic force by extending the service life of old Soviet strategic weapons and at the same time gradually deploying new land- and sea-based systems.

The new role of nuclear weapons was formalized in the National Security Concept (January 2000) and the Military Doctrine (April 2000).¹⁰ These documents distinguished between four types of warfare: armed conflict (primarily ethnic or religious domestic conflict; other states might be involved indirectly); local war (one or several other states as opponents; the scope and goals of the conflict are limited); regional war (attack by a state or a coalition of states pursuing significant political goals); and global war (attack by a coalition of states; survival and sovereignty of Russia are at stake). The possible use of nuclear weapons was associated with the last two types of conflict. According to Russian military experts, the most likely escalation path was from an armed conflict to a regional war (directly from the first to the third type of conflict).¹¹ This view signaled, for example, that major foreign interference with the “antiterrorism operation” in

Chechnya could have precipitated the use of nuclear weapons. It is worth noting that these documents were developed against the background of the second war in Chechnya, and it was hardly by chance that Russian President Yeltsin referred to the Russian nuclear arsenal soon after an Organization for Security and Cooperation in Europe (OSCE) summit meeting in Istanbul in November 1999, at which Russia was subject to strong pressure to terminate the Chechen conflict.

These two documents envisioned reliance on nuclear weapons as a temporary measure, however, until Russia managed to build up its conventional capability, in particular in precision-guided weapons. In other words, nuclear weapons were viewed as a cost-effective alternative to more expensive and time-consuming conventional modernization. They were also seen as a response to the qualitatively and quantitatively superior conventional forces of NATO rather than as a permanent element of Russian military policy.

This surge in reliance on nuclear weapons was as short-lived as the previous one. In April 2000, Chief of the Russian General Staff, General Anatoli Kvashnin, submitted to President Vladimir Putin a plan that envisaged rapid reduction of the nuclear arsenal and reorientation of defense budget toward conventional weapons. Reorientation proceeded from the perception that threats “from the south” (the continuing war in Chechnya and the pressure of Taliban on Central Asia) were more immediate and urgent than those from NATO.¹²

The nuclear policy that emerged after several meetings of the Security Council endorsed reorientation of the armed forces toward the “south” (none too soon, as it turned out in September 2001).¹³ Reduction of the nuclear arsenal was again accelerated and again linked to the expiration of planned service lives of existing weapons systems, an apparent return to the 1998 policy. By late summer 2001, the last remaining acute concern over U.S. policy began to dissipate as well. Russia adopted a calmer attitude toward the anticipated U.S. withdrawal from the ABM Treaty and the early deployment of a national missile defense system, which had become much more likely under the new U.S. administration of George W. Bush. The new approach apparently reflected the calculation that no missile defense the United States could deploy in the foreseeable future would affect the mission of “core deterrence.”

So far, then, there have been only two cases of noticeably increased Russian reliance on nuclear weapons since the end of the Cold War. Even the most recent decisions involving the 2003 defense budget, which are apparently aimed at revisiting the 2000 policy of “denuclearization” (or, rather, of shifting the emphasis from land- to sea-based weapons), hardly indicate a fundamental reversal of earlier policy. Rather, they seem to represent a revision of decisions that were suboptimal from the point of view of the defense budget: emphasis on sea-based weapons would have been more expensive than continued deployment of intercontinental ballistic missiles (ICBMs).¹⁴ At least formally, however, the 2000 National Security Concept and Military Doctrine remain in force, including the provisions that allow for the use of nuclear weapons in non-strategic, theater-level conflicts. Consequently, it cannot be ruled out that under certain conditions reliance on nuclear weapons by Russia could surge yet again.

CONDITIONS FAVORING RELIANCE ON NUCLEAR WEAPONS

The preceding analysis of the evolution of Russian nuclear policy in the 1990s suggests that peaks in reliance on nuclear weapons resulted from a combined impact of four variables:

Acute Perception of External Threat

This condition is less obvious than it might seem. Existing theories of nuclear weapon use were developed during the Cold War and consequently take a high level of external threat for granted. The post-Cold War period, however, has demonstrated broader variation in the level and types of external threats faced by Russia. In fact, as was noted above, the threat of a large-scale conflict that would warrant massive use of nuclear weapons no longer exists. Lower-level threats, however, can be perceived as sufficiently acute to cause reliance on nuclear weapons.

The threat does not have to be real; perceptions of a threat can be equally powerful. Paradoxically, attempts to reassure Russia sometimes inadvertently reinforced reliance on nuclear weapons. The author witnessed how American military representatives, in private conversations, tried to convey to their Russian counterparts that no one in his right mind would attack a nuclear power. Consequently, they argued, Russia should not be concerned about its security. Instead of providing reassurance, these statements were interpreted by the Russian military

as evidence that the United States would have attacked had it not been for nuclear weapons.

In addition to the level of threat, the perceived source is also relevant because it can influence decisions about the size of the nuclear arsenal, the choice between strategic or non-strategic weapons, and even the selection of particular weapons systems. For example, the expectation of limited use of conventional forces led Russian military planners in 1997 and 1999 to provide for the use of small numbers (four in the Zapad-99 exercise) of short- or medium-range weapons (or, alternatively, the ability to use strategic weapons at short ranges, such as ALCMs).

Perceived Absence of Alternative Means to Ensure Security

Many security threats can be addressed in ways other than reliance on nuclear weapons. For example, a state that feels threatened can rely on allies, international organizations, or treaties. A state looks for other means to address its security concerns, possibly including nuclear weapons, when the international security framework cannot help. One of the reasons that Russia felt so threatened during the Kosovo war was because NATO effectively bypassed the United Nations Security Council (UNSC). The downgrading of the UNSC meant that non-NATO states could no longer block decisions about the use of force, and thus there were no legal means to prevent the use of force against Russia, its friends, or allies. The enlargement of NATO two years earlier came after the failure of Russian attempts to enhance the status of the OSCE as the leading international security organization in Europe. The need to rely primarily on its own assets quickly led Russia to rely on nuclear weapons as providers of security and influence. As noted above, the explicit public invocation of Russian nuclear capability probably helped Russian President Yeltsin to reduce Western pressure over Chechnya at the end of 1999, or so it seemed from inside Russia.

The relationship between international institutions and reliance on nuclear weapons is not unique to Russia. Other scholars have demonstrated that differences in the Ukrainian and Belarussian perceptions of the ability of the international system to ensure their national security probably accounted for the different approaches each took toward acquiring non-nuclear status in the early 1990s: whereas

Belarus quickly joined the NPT, Ukraine procrastinated for several years.¹⁵

Perception of High Utility of Nuclear Weapons

As noted above, reliance on nuclear weapons is associated with certain types of missions, for which these weapons are believed essential. Formulated differently, reliance on nuclear weapons is high when they are believed capable of achieving a tangible result at an acceptable cost. The notion of tangibility is very broad. During the Cold War, for example, some viewed massive destruction as an acceptable price to pay for denying victory to the other side. In the 1990s, reliance on nuclear weapons in Russia was based on a belief that their use could yield a tangible result at an acceptable cost—the “de-escalation” of a theater-level conflict. Similar limited missions were proposed in some declassified U.S. war planning documents from the 1960s.

The potential utility of nuclear weapons in limited conflicts can stem from a variety of sources. The Russian concept of “de-escalation” was based on the assumption that NATO could not have goals significant enough to risk even a limited use of nuclear weapons. Consequently, a sharp increase in the stakes could prevent NATO from undertaking an attack. Nuclear weapons can also be assigned more traditional battlefield roles, such as destruction of various enemy facilities or breaking through defenses. These roles were routinely assigned to nuclear weapons during the early days of the Cold War, in the 1950s, when they were sometimes seen as just more powerful artillery. It is possible that Russian “de-escalation” scenarios contained elements of similar missions. This conclusion is supported by the simulated use of ALCMs during the Zapad-99 maneuvers against military targets in Europe (at least partially a warfighting role).

Cost-effective Optimization of Military Capability

Nuclear weapons can be perceived as a cheaper alternative to expensive modern conventional weapons. In time of economic stress, nuclear weapons might become “conventionalized”—that is, assigned to support missions that are normally assigned to conventional weapons. This factor was one of the reasons for NATO reliance on nuclear weapons during the Cold War. The Russian 2000 National Security Concept assigned nuclear weapons such missions for a transitional period, until Russia acquires sufficient modern conventional weapons. The risk associated with

such a policy of “substitution” is the inertia of modernization and replacement, which can over time create a nuclear arsenal even better suited for support of “conventional” missions. Gradually, “temporary” missions can become permanent.

It is necessary to emphasize that the weakness of conventional forces, which is routinely viewed as the primary cause of reliance on nuclear weapons by states, is not a sufficient or even necessary condition. For example, reliance on nuclear weapons is unlikely if their utility is assessed as low, whether conventional forces are weak or strong. In that case, a country will simply turn to other security instruments, such as seeking allies or undertaking crash modernization of conventional weapons. Similarly, in the absence of an acute external threat, reliance on nuclear weapons should be low regardless of the status of conventional forces.

This framework yields a rather specific set of conditions under which Russia might either permanently abandon reliance on nuclear weapons as the primary provider of security or resume reliance on them. Of the four variables listed above, two will remain relatively stable in the near future: the perception of utility of nuclear weapons and the cost-saving considerations. The former is deeply ingrained in Russian military thinking and will take considerable time to dissipate. Money will also be in short supply because, even under the most favorable scenarios, economic conditions in Russia will take a very long time to improve enough to generate sufficient resources for conventional modernization. Furthermore, the Putin administration emphasizes economic development and is unlikely to divert significant funds toward defense spending.

Whether Russia again turns its latent nuclear capability into an operational one depends on the perception of external threat and the availability of alternative means to ensure security. Resurgence of reliance on nuclear weapons can be prevented by avoiding actions that might be interpreted as a threat and/or by helping Russia become a member of the “Western club” so that U.S. or NATO actions are no longer seen as a threat.

U.S.-Russian cooperation in the war against international terrorism after September 11, 2001, as well as the new institutionalized NATO-Russian relationship within the “NATO at 20” format established by the May 2002 Russia-NATO agreement, can create the necessary preconditions to permanently remove nuclear weapons from the agenda of relations between Russia and the West.¹⁶

Much will depend on the implementation of the decisions made in 2001-2002, in particular whether Russia is truly integrated into the decisionmaking mechanisms of the Western community of nations. It is worth remembering that even very careful explanation of the merits of the NATO position on Kosovo did not prevent the resurgence of reliance on nuclear weapons.

For its part, Russia also needs to change its policies and perception of the West: Its role cannot be that of a passive recipient of Western offers of cooperation. Part of the blame for the inefficiency of the Russia-NATO Permanent Joint Council, which was established by the 1997 Founding Act, belongs at its door. It took an unreasonably long time to appoint a Russian military representative to NATO; the Russian military staff remained too passive for too long and did not utilize even those limited opportunities it had. Russia also needs to address Western concerns more constructively, such as questions about its nuclear cooperation programs with Iran and other states. Consequently, one should not be excessively optimistic or complacent about current Russian nuclear weapons policy. There is still a long way to go.

THE CASE OF THE UNITED STATES

The majority of variables that explain Russian reliance on nuclear weapons during the 1990s also appear applicable to recent developments in the United States. The ongoing U.S. debate revolves around two interrelated themes: the possible use of nuclear weapons against certain types of targets (in particular deeply buried, fortified bunkers) and the creation of new types of nuclear weapons to support these and possibly other missions.

The view that nuclear weapons were essential for deterrence of other weapons of mass destruction (WMD) programs emerged in the United States during the mid-1990s.¹⁷ By the end of the decade, that position had gained popularity, and in 2000, Stephen Younger, an associate director of the Los Alamos National Laboratory, in an instantly famous statement, called for the development of a new, low-yield nuclear weapon that could be employed for destruction of hardened underground targets, including WMD factories and storage facilities. Subsequently, similar thoughts were expressed by the director of Sandia National Laboratory, Paul Robinson.¹⁸ (It is worth noting that this statement was made four years *after* similar proposals made in Russia by former Minister of Atomic Energy Viktor Mikhailov.)

The slowly emerging image of useable nuclear weapons received a sharp boost after the September 11, 2001 terrorist attacks. Low-yield nuclear weapons were proposed as an effective method of destroying Taliban strongholds in the caves of Afghanistan.¹⁹ For some time, according to various unconfirmed reports, nuclear weapons even remained part of the war plans drawn up by the Pentagon. This impression was strengthened by what appeared to be calculated ambiguity about the issue displayed by Department of Defense officials in response to media inquiries.²⁰

The Nuclear Posture Review (NPR), which was issued in January 2002, proposed integration of nuclear weapons into a “new triad,” eventually creating integrated “non-nuclear and nuclear strike capabilities.”²¹ Subsequent publications in U.S. media, admittedly based on leaks from informed sources, speculated that the NPR provided for “the development of a new generation of nuclear weapons.”²² The combined effects of these developments might result in the placement of nuclear weapons onto the standard menu of options U.S. military planners will choose from, arguably making the use of nuclear weapons in future conflicts more likely.²³ The debate quickly entered a more tangible area of legislation: the House version of the FY2003 Defense Authorization Bill (HR4546) provided for development of a “bunker busting” nuclear weapon, as well as for laying the groundwork for speedy resumption of nuclear testing. The Senate version of the same bill (S2514), however, excluded funding for these activities.²⁴ As of July 2002, it remained unclear whether funds for these projects would be included in the final FY2003 defense budget.

It is easy to detect differences between the Russian and American cases with regard to reliance on nuclear weapons. The most obvious difference concerns new missions assigned to nuclear weapons. For Russia, these missions boiled down to deterrence of small- or medium-scale conventional attacks; for the United States, the issue is destruction of small, deeply buried targets.

In the case of Russia, peaks of reliance on nuclear weapons were short lived and so far have not involved new R&D programs specifically designed to address new missions; proposals for such programs remained unheeded by the government. Instead, Russian military planners settled on adapting existing weapons to new missions. In contrast, in the United States, the debate developed more slowly, but also in a more sustained fashion. It quickly

concentrated on the development of new assets, whether using the same “physics package” or a new one.

Differences notwithstanding, one can also see considerable similarities:

(1) U.S. leaders perceive an immediate threat emanating from terrorist organizations around the world, including those attempting to acquire WMD; a number of states that are suspected of developing WMD are also viewed as a threat. This concern predates the September 11, 2001 terrorist attacks, but has become particularly acute since then. The threat is perceived as sufficiently serious, so that for many in the United States, it justifies the use of extreme means, including nuclear weapons. Psychologically, the current threat could be compared to the level of threat perceived in the late 1950s, when the continental United States became truly vulnerable for the first time following the invention of ICBMs. That feeling is half-forgotten now; the younger generation is simply not familiar with such an acute threat, hence the state of profound shock following the terrorist attacks.

(2) There is also widespread perception in the United States that traditional international security mechanisms cannot help reduce the terrorist threat in the near future. Resolution of various conflicts (in particular in the Middle East), economic development, establishment of democratic regimes, and other similar tasks all take time, whereas the threat of new terrorist attacks, including those with WMD, is more imminent. Under these conditions, sheer force seems to many U.S. leaders as a more appropriate and efficient response to the current terrorist threat.

(3) In recent years a specific mission has emerged: the use of nuclear weapons in a limited role and capable of yielding immediate tangible results—specifically, the destruction of the WMD capabilities of “rogue states,” which might share these weapons with terrorists. A particular challenge presented by the possible terrorist use of WMD is unconventional methods of delivery, which are difficult to counter

using traditional defense assets. It is widely accepted that deterrence does not really work against terrorists, that they are not likely to use traditional WMD delivery systems like missiles or aircraft, and that they will not wait until their state sponsors develop such weapons. Consequently, the task of eliminating WMD research and development, production, and storage facilities—in effect, eliminating the threat at the source—has acquired greater urgency than ever. In addition to tangible results, the potential use of low-yield nuclear weapons for this mission is also considered by their proponents as sufficiently limited to keep potential ecological and political fallout under control. The combination of expected benefits and controlled consequences creates the perception of high utility of nuclear weapons and makes their use psychologically acceptable. The mission also drives the pressure for development of a new weapon that is supposed to fit the mission perfectly, i.e., to achieve the goal and limit the consequences.

(4) Cost-effectiveness is the only factor that does not seem relevant for the case of the United States, unlike Russia. The United States has modern, powerful conventional weapons, the necessary delivery systems and infrastructure, and can afford to use these weapons on a large scale. Instead, the issue is military efficiency—the ability to destroy the target in one strike and with greater probability of success.

The ongoing debate in the United States clearly demonstrates that compensation for weakness of conventional forces, which, based on the Cold War experience, is usually considered the chief cause of reliance on nuclear weapons, is not the only variable at play. U.S. conventional forces are currently the most advanced and powerful in the world. They are also better optimized for contemporary warfare than any other army in the world. Nevertheless, nuclear weapons are making a comeback in U.S. military doctrine.

It is not yet clear whether this trend will reach its logical conclusion—that is, whether the United States will, indeed, explicitly adopt new nuclear missions and develop weapons to support them. The case of Russia demonstrates that reliance on nuclear weapons is reversible. It is

possible that we may witness a reversal in the case of the United States as well.

CONCLUSION

Without a doubt, the full development of the framework for analysis of the phenomenon of reliance on nuclear weapons offered in this article requires further research. By way of conclusion, the following outstanding issues require examination:

First, out of the four conditions that generate reliance on nuclear weapons, how many are needed to generate that result? We have seen that in the case of the United States, only three were at work, while the fourth was present only to a small degree, if at all. Intuitively, at least three conditions are necessary to produce the effect. Of them, the first two (perception of acute threat and perception of utility) are required at all times, plus one of the remaining two (either the absence of alternative security mechanisms or cost-effectiveness).

Nuclear weapons are still seen as weapons of last resort not to be used lightly. As a result, they are likely to remain on the back burner of policy and military planning unless there is overwhelming need to credibly threaten adversaries with their use. Furthermore, the benefits of their use should clearly outweigh the costs and thus only be considered for very specific, clearly defined missions. Still, one can imagine a choice in favor of employing nuclear weapons even when there are alternative means to achieve the same goal if they allow achieving that goal faster and in a more direct fashion. Alternatively, as we have seen in the case of the United States, costs might not be a problem at all, but there is a perception that no alternative means are available to address an urgent threat.

Second, it is necessary to learn more about the conditions that can cause a reversal of reliance on nuclear weapons. In the Russian case, the reversal resulted from a change in two variables—perception of an external threat and perception of availability of alternative security mechanisms. The Russian perception of the utility of nuclear weapons for particular types of missions and their role as at least a temporary substitute for conventional modernization remains unchanged. In this regard, it is still unclear whether a change in just one variable would be sufficient to produce the same result (intuitively, this seems to be the case) and, even more important, how one can achieve long-lasting reduction in reliance on nuclear weapons. It was argued above that a return to a “pro-nuclear”

policy in Russia cannot be ruled out. What should be done to guarantee that these weapons remain “virtual”?

Third, the proposed framework could be tested against another recent case, that involving the nuclear standoff between India and Pakistan. The threatened use of nuclear weapons was reported during at least two conflicts since the acquisition of openly declared nuclear status in 1998. Still, it is not completely clear whether the nuclear brinkmanship during the 2000 Kargil crisis and the 2001-2002 crisis triggered by the attack on the Indian Parliament was genuine or merely represented political posturing.

One can hypothesize that Pakistani policy on nuclear weapons use is motivated by the desire to compensate for the inferiority of its conventional forces in comparison to those of India. Pakistani nuclear weapons are probably assigned the mission of “escalation control” or of termination of a conventional conflict. In this sense, reliance on nuclear weapons in Pakistan is probably greater than that in India, and the probability of their use is greater as well. For India, nuclear weapons probably serve as a means of preventing Pakistan from resorting to nuclear weapons and simultaneously support the mission of “core deterrence” vis-à-vis China.

Fourth, it is possible that the same variables can go a long way toward explaining the acquisition of nuclear weapons by non-nuclear states. The common explanation, the pursuit of status, does not appear sufficient: some states (such as Sweden or Switzerland) terminated their nuclear programs or left them in limbo for decades, suggesting that status considerations might be sufficient to launch a nuclear program, but insufficient to explain why states are willing to assume the political and economic costs of completing it. The sheer cost of the exercise should require the presence of several variables discussed above and, even more important, their weight should be greater than in the case of nuclear states for the simple reason that increasing reliance on the weapons the state already has requires fewer resources than their acquisition. For example, the perceived external threat should be far greater than the threats that would push a nuclear state to increase its reliance on nuclear weapons.

In the final analysis, the risk that nuclear weapons might be used will continue to exist as long as nuclear weapons exist. That risk, however, is not a constant condition: it can be greater or smaller depending on a combination of rather specific conditions. The knowledge of these condi-

tions can help reduce the probability that nuclear weapons ever make the transition from virtual to actual instruments of security.

¹ In the fall of 1991, George Bush and Mikhail Gorbachev exchanged unilateral parallel statements with regard to tactical nuclear weapons; Boris Yeltsin subsequently confirmed and slightly expanded Gorbachev’s statement. Pursuant to these statements, both the United States and Russia retain only a limited number of short-range, air-based weapons in deployed status, whereas all other categories of tactical nuclear weapons are either subject to elimination or have been moved to central storage facilities.

² Russia was expected to complete reductions under PNIs in 2000, and in the spring of that year reported that these reductions were “almost complete” (see Statement of the Minister of Foreign Affairs of the Russian Federation Igor Ivanov at the 2000 NPT Review Conference, Press Release of the Permanent Mission of the Russian Federation to the United Nations No. 38, April 25, 2000). In the spring of 2002, it was reported, however, that these reductions would not be completed until 2004—and even then on the “condition of adequate financing” (see the Statement of the Delegation of the Russian Federation at the First Session of the Preparatory Committee for the 2005 NPT Review Conference, April 11, 2002).

³ Deterrence of Soviet conventional forces was the primary mission and justification of NATO non-strategic nuclear forces. For a concise description of this mission, see George Lewis, “The Future of US Nonstrategic Nuclear Forces,” in Michelle Flournoy, ed., *Nuclear Weapons After the Cold War* (New York: Harper Collins, 1993) and James DeNardo, *The Amateur Strategist: Intuitive Deterrence Theories and the Politics of the Nuclear Arms Race* (Cambridge: Cambridge University Press, 1995).

⁴ It is instructive to compare two recently declassified documents dating back to the 1960s: “A Study of the Management and Termination of War with the Soviet Union, prepared by the Staff of the Net Evaluation Subcommittee of the National Security Council,” November 15, 1963, Top Secret (declassified in 1997), National Archives, Record Group 59, Department of State Records, Records of Policy Planning Council, 1963-64, box 280, file “War Aims”; and “Material on the development of military art under conditions of conducting a missile-nuclear war according to contemporary views,” a letter from Petr Ivashutin to Mikhail Zakharov, August 28, 1964, No. 1689c, Top Secret, published by the Center for Security Studies and Conflict Research, Zurich, Switzerland, <http://www.isn.ethz.ch/php/documents/collection_1/docs/ivashutin-I.pdf>. The U.S. document allowed for limited use of nuclear weapons in response to a limited conventional offensive by the Soviet Union. The Soviet document, in contrast, treated limited nuclear war as a means to limit damage to the U.S. national territory and advocated globalization of nuclear exchange to ensure that the United States would not be able to emerge unscathed. Both documents allow for the possibility of a “victory” in a nuclear war—a view characteristic for the 1960s.

⁵ Osnovnye Polozheniya Voennoi Doktriny Rossiiskoi Federatsii [The Basic Provisions of the Military Doctrine of the Russian Federation], *Izvestiya*, November 18, 1993, pp. 1, 4.

⁶ This point was made by Thomas Schelling in the 1950s in the context of the Korean War. Thomas Schelling, *Nuclear Weapons and Limited War* (Santa Monica: RAND, 1959). Unfortunately, this work remains half-forgotten today, whereas Schelling’s subsequent writings, which emphasized the deterrence value of demonstrated readiness to use nuclear weapons, have become more widely known.

⁷ Viktor Mikhailov and Aleksandr Chernyshov, “NATO’s Expansion and Russia’s Security,” *Vek*, September 20, 1996, p. 5.

⁸ National Security Concept of the Russian Federation (1997), Russian Security Council <http://194.226.83.2/documents/decrees/1997/_1300-1.html>. The 1998 decisions included a decree of Russian President Boris Yeltsin: “On urgent measures toward reforming the Armed Forces of the Russian Federation,” (July 1997), and two Security Council documents: “The Concept of Development of Nuclear Forces until 2010” and “The Foundations (Concept) of State Policy in the Area of Defense Development until 2005” (July-August 1998). The texts of these documents remain classified, but their general thrust

can be gleaned from Russian newspaper analyses; see "Sovet Bezopasnosti RF Reshil Sokhranit Trekhkomponentnyi Sostav Strategicheskikh Yadernykh Sil," *Interfax*, July 3, 1998; "Russia to be Major Nuclear Power in 3rd Millennium—Official," *ITAR-TASS*, July 3, 1998; Ivan Safronov and Ilya Bulavinov, "Boris Yeltsin Podnyal Yadernyi Shchit," *Kommersant-Daily*, July 4, 1998; Yuri Golotyuk, "Yadernoe Razoruzhenie Neizbezhno," *Russkii Telegraf*, July 11, 1998; Yuri Golotyuk, "Moskva Skorrektirovala Svoi Yadernye Argumenty," *Russkii Telegraf*, July 4, 1998; Anatoli Yurkin, "Perspektivy Voennogo Stroitelstva," *Krasnaya Zvezda*, August 5, 1998, pp. 1, 3; Oleg Falichev, "V pervye So Vremeni Miluykovskikh Reform," *Krasnaya Zvezda*, August 18, 1998, pp. 1, 2.

⁹ For details of this meeting, see Nikolai Sokov, "The April 1999 Russian Federation Security Council Meeting On Nuclear Weapons," NIS Nuclear Profiles Database, Center for Nonproliferation Studies, Monterey Institute of International Studies, <<http://www.nti.org/db/nisprofs/over/rfsecmtg.htm>>.

¹⁰ "Konseptsiya natsionalnoi bezopasnosti Rossiiskoi Federatsii. Utverzhdena Ukazom Prezidenta RF ot 17 dekabrya 1997 g. No. 1300" (v redaktsii Ukaza Prezidenta RF on 10 yanvarya 2000 g. No. 24) <<http://www.scrf.gov.ru/Documents/Decree/2000/24-1.html>>; "Voennaya Doktrina Rossiiskoi Federatsii. Utverzhdena Ukazom Prezidenta RF ot 21 aprelya 2000 g. No. 706," <<http://www.scrf.gov.ru/Documents/Decree/2000/706-1.html>>.

¹¹ V. Prozorov, *Yadernoe Sderzhivanie v Teorii Primeneniya RVSN* [Nuclear Deterrence in the Theory of Use of the SRF] (Moscow: Pyotr Veliki Military Academy, 1999), p. 19.

¹² Kvashnin declared that Russian security was guaranteed in the west (vis-à-vis NATO) and east (vis-à-vis China) by political agreements. The sincerity of that statement is questionable, of course, coming from a man who conceived and implemented the "march to Pristina" in June 1999, which almost resulted in a direct clash between NATO and Russian troops. Contrary to his spring 2000 statements, Kvashnin argued in September 2001 that the presence of U.S. troops in Central Asia, even only for post 9/11 antiterrorist operations, would be a major threat to Russia.

¹³ For details of the 2000 debate and the meetings of the Security Council see Nikolai Sokov, "'Denuclearization' of Russia's Defense Policy?," Center for Nonproliferation Studies, Monterey Institute of International Studies, July 17, 2000, <<http://cns.miiis.edu/pubs/reports/denuke.htm>>; and Nikolai Sokov, "The Fate of Russian Nuclear Weapons: An Anticlimax on August 11," Center for Nonproliferation Studies, Monterey Institute of International Studies, August 14, 2000, <<http://cns.miiis.edu/pubs/reports/denuke2.htm>>.

¹⁴ Vladimir Mukhin, "Minoborony Podkorrektiruet Svoi Plany Razvitiya v Ramkakh Buydzheta-2003," *Strana.Ru*, June 20, 2002, <<http://www.strana.ru>>; Vladimir Georgiev, "Armiya-Pravitelstvo: 1:0 v Polzu Raket," *Nezavisimaya Gazeta*, June 20, 2002, p. 2.

¹⁵ Suzette Grillo, "Young States and Foreign Policy: Nuclear Status in Belarus and Ukraine," paper presented at the Annual Meeting of the International Studies Association, Chicago, Illinois, February 1995.

¹⁶ David E. Sanger, "NATO Formally Embraces Russia as a Junior Partner," *New York Times*, May 29, 2002, p. 1.

¹⁷ For an analysis see Nikolai Sokov, "Tactical Nuclear Weapons Elimination: Next Step for Arms Control," *Nonproliferation Review* 4 (Winter 1997), pp. 20-21.

¹⁸ Stephen Younger, *Nuclear Weapons in the Twenty-First Century*, Los Alamos National Laboratory, June 27, 2000 (LAUR-00-2850), <<http://www.fas.org/nuke/guide/usa/doctrine/doe/younger.htm>>; Paul Robinson, "A White Paper: Pursuing a New Nuclear Policy for the 21st Century," March 22, 2001, <<http://www.sandia.gov/media/whitepaper/2001-04-Robinson.htm>>.

¹⁹ See, for example, the interview of Congressmen Stephen Buyer and Robert Wexler on CNN, October 24, 2001, <<http://www.cnn.com/TRANSCRIPTS/0110/24/wbr.02.html>>.

²⁰ For a list of statements in this regard see Dana Milbank, "U.S. Pressed on Nuclear Response," *Washington Post*, October 5, 2001, p. 16.

²¹ The unclassified version of the Nuclear Posture Review can be found at <<http://www.defenselink.mil/news/Jan2002/020109-D-6570C-001.pdf>> and <<http://www.defenselink.mil/news/Jan2002/d20020109npr.pdf>>.

²² Walter Pincus, "Nuclear Plans Go Beyond Cuts," *Washington Post*, February 19, 2002, p. 13.

²³ Concern about such a development was explicitly expressed by Senator Joseph Biden, among others. Joseph Biden, "Don't Raze the Nuclear 'Firewall,'" *Los Angeles Times*, May 16, 2002.

²⁴ Pat Towell, "New Wave of Nuclear Weaponry Sure To Spur Explosive Conference," *Congressional Quarterly Weekly*, June 1, 2002, p. 1469. It should be noted, though, that this debate also involves giving an existing "physics package" new features that would enable it to penetrate earth to greater depths than existing nuclear bombs. See, for example, Miguel Navrot, "Nuke Bunker-Bomb Faces Delay," *Albuquerque Journal*, June 8, 2002, p. 1. Discussion of a completely new nuclear weapon that would be designed "from scratch" continues in parallel.