Nuclear Conflict in the Twenty-first Century

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Between 1992 and 1997, Dr. Kokoshin served as First Deputy Minister of Defense of the Russian Federation and as State Secretary. From 1997 to 1998, Dr. Kokoshin was Secretary of Defense Council and Chief Military Inspector and then became Secretary of Russia's Security Council.

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Nuclear Conflict in the Twenty-first Century

Introduction

Analyzing certain types and characteristics of nuclear conflicts is extremely important in today's world, labeled by some scholars and experts as the "second nuclear age."[1]

A typology of nuclear conflicts would include the following criteria. The first factor is the evaluation of political objectives for which the threat of using nuclear weapons can be used and may be readily employed to achieve. The second factor is the intensity of nuclear conflict—from a statement that hints at the use of nuclear weapons to total war with massive deployment of nuclear weapons. The third factor involves those parties that directly interact in situations when nuclear weapons are being used as an instrument of political force.

In this paper, I define a nuclear conflict as a crisis situation in which one or more parties that possess nuclear weapons are involved, and in the course of which tensions reach the level where one or more then use nuclear weapons as an instrument of political influence.[2] A more advanced phase of a nuclear conflict involves the use of nuclear weapons at different scales—from a single nuclear strike to the use of nuclear weapons on a massive scale.

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1. This part is an extension of a topic that the author discussed in earlier publications, including: Andrei A. Kokoshin, *Nuclear Deterrence and National Security of Russia at the Twenty-first Century's Door* (Moscow: IPMB RAN, 2000); *Nuclear Deterrence and National Security of Russia* // Bulletin of the Russian Academy of Sciences. Vol. 69. No. 10 (1999), 893–904; Kokoshkin, V.A. Veselov, and V.V. Lis, *Nuclear Deterrence in the Second Nuclear Century*. M.: IPMB-IMEMO RAN, 2001; Kokoshin, *Nuclear Conflicts in Twenty-first Century* (Moscow: Media-Press, 2003).

2. The definition offered here is modified in comparison with the one that existed in my earlier works (nuclear conflict may be described as a situation when one or more parties begin to consider the practical possibility of using nuclear weapons). More detailed research of various concrete and historical situations shows that after sufficiently long periods of time it is extremely difficult to explain the use of nuclear weapons. Fixing these or other actions that imply the use of nuclear weapons as an instrument of political influence seems far more promising.

In an earlier piece,[3] I analyzed the potential of nuclear conflict with respect to four major actors in international relations: (1) "old nuclear powers," (i.e., China, Russia, and the United States); (2) new members of the nuclear club (India and Pakistan); (3) a potential multipolar nuclear configuration that may emerge as a result of further proliferation of nuclear weapons and the highly probable emergence of new nuclear states; (4) states* and nonstate actors in the form of radical political organizations that use terrorist methods.**

A central task of international relations scholars is to determine the primary structural elements of the subsystems of world politics and of the character of their interactions. In the nuclear sphere, interaction between corresponding subjects in world politics may be analyzed as a certain subsystem of international relations, with its specific parts interacting with corresponding "entities." This theme remains underanalyzed in the field, having lost importance among both experts and representatives in the international scientific community.

A number of growing conflicts and strategic uncertainty in the world suggest that the probability of nuclear conflict since the end of the 1990s has begun to grow. Moreover, uncertainty is building simultaneously in the political, military, and economic arenas.[4] Strategic uncertainty is intensifying compared not only with the period of the 1990s, but also

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3. See Kokoshin, *Nuclear Conflicts in Twenty-first Century*, pp. 35–42.

* The author assumes here that every situation is not a result of actions by single, consolidated actors with their own, logically determined positions. Rather, every situation is a result of complex configurations of the state apparatus and actions by specific political figures guided by various motives. These motives often diverge significantly from universally accepted representations about rational behavior in conflict and crisis situations—rational behavior that is in accordance with national interests (in their generalized form) of specific countries and with universally accepted (at least regarding East-West relations in the North) norms of nuclear containment. To analyze the process of cooperation of parties in a nuclear conflict, we will use some combination of three basic models that have been developed in a classic work by Graham Allison (in its latest edition published together with Philip Zelikow) on the 1962 Cuban Missile Crisis: "Rational Actor," "Organizational Behavior," and "Governmental Politics" models (see Graham Allison and Philip Zelikow *Essence of Decision: Explaining the Cuban Missile Crisis*, 2nd ed. (New York: Longman, 1999). The authors of the work mentioned above do not use these models in direct operational form; rather, these are meant to provide a certain analytical context.

** The author will reemphasize that the use in the political lexicon of concepts such as "terrorist organization," "international terrorism," etc., seems inadequate from both a scientific and practical point of view.

4. As justifiably noted by M. Zombanakis, a prominent Western European financial expert and public figure, who, when opening the yearly international 2002 "Athens Seminar" for business and political circles, said "We are making frightening steps into the unknown." Zombanakis, *Introductory Comments*, The Athens Seminar. Athens, July 22, 2002, pp. 1–4.

with the 1970s and 1980s—when the world was bipolar. Through trial and error, Washington and Moscow were able to develop a "behavioral code" that allowed them to avoid the emergence of more acute conflict situations, which would have brought them closer to using nuclear weapons.

Nuclear conflicts should be analyzed within the context of other developments in world politics. The probability of nuclear conflict is related to the general state of the system of international relations as well as specific aspects of this system, including the place and role of nuclear weapons for states' national security considerations, as well as in their foreign policy, military strategy, and operational and strategic planning. In turn, the place and role of nuclear weapons are determined by motives and conditions of their use by various countries.* Decisions about whether to use or threaten to use nuclear weapons are made by small groups of individuals acting within the limits of specific state and military apparatuses in the government.[5]

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* One may note the following motives to become a nuclear power: (1) considerations regarding a country's status—this is the first reason in most cases confirmed, in particular, by my discussions with Indian, Pakistani, and Iranian figures; (2) aspirations to compensate for general political and military uncertainty (lack of trust in the reliability of a country's own allies within the political and military bloc and lack of trust in their readiness to risk their own security for the sake of the security of its ally that does not have nuclear weapons—for instance, perception about the unreliability of the U.S. "nuclear umbrella" over France and, in the contemporary situation, over Japan); and (3) aspirations to compensate for a major unbalance in conventional forces in the face of potential opponents (in Israel—in the face of Arabs with slogans of a total war—"to push Israel into the Mediterranean Sea"—that appeared as a reaction to Israel's emergence by force in one of the world's most densely populated regions). In the third example, nuclear weapons often constitute a means of solving specific military, operational, and strategic objectives, i.e., nuclear capability is considered a multiplier of conventional military capabilities on the battlefield. The necessary conditions for the acquisition of nuclear weapons include the presence of a consensus within the governing elite, and also the existence—over the period of several decades—of a stable layer of technocrats who deal with issues regarding nuclear weapons and nuclear energy used for peaceful purposes. One should remember that nuclear weapons continue to develop, new substantiations, objectives, striking means, operational and strategic capabilities emerge; the system of argumentation to justify the presence of nuclear weapons and plans for their development is also developing.

5. According to the Constitution of the Russian Federation, the right to use nuclear weapons is under the authority of the president of the Russian Federation—the Supreme Commander of the Armed Forces. But no president acts in a vacuum. Besides official figures who are in charge of questions of war and peace, other ministers, such as the Chief of the General Staff and a number of his deputies, aides, and advisors also deal with these questions. From a formal viewpoint, many of these people do not have any experience with political and military problems, in particular regarding the nuclear sphere. But they may in fact, in a crisis situation—as history has shown—exert just as much influence as those who are formally entrusted with the responsibility of preparing decisions of higher leadership and ensuring their realization.

Many Russian officials have noted the recent rise of the nuclear factor in international politics. Chief of the General Staff of Russian Armed Forces and First Deputy Defense Minister, Yury Baluevsky, writes that "We are today observing with fear the peculiar revival of the nuclear factor in international relations, which is coming back to the forefront of world politics."[6]

Cooperation between Russia and the United States in the Nuclear Sphere

Russian-U.S. cooperation has a long history, and it contains many important lessons that political elites in both countries have begun to forget. Before the system of ensuring a relatively high level of strategic stability was formed, the United States and Russia had experienced a number of severe crises that pushed them to the brink of catastrophe.

The October 1962 Cuban missile crisis stands out among them. During this crisis, the two sides reached the brink of nuclear war. The crisis was not the result of one side attempting to test the other under circumstances of intensified confrontation. Neither the Soviet nor the U.S. leadership made deliberate preparations to exacerbate the situation around Cuba, nor were they preparing for a direct military clash and limited war—not even total war.

The 1962 Cuban missile crisis is highly instructive in regards to the demands made on the system of strategic command and control at all levels, whether a supreme commander, a pilot of a reconnaissance plane, or a ship's commander. During a nuclear conflict, the following elements are necessary: (1) firm leadership by the highest state officials without delegating, in any significant measure, their authority to lower-level officials; (2) a mechanism for crisis management, preferably developed beforehand with the participation of the top state officials, members of intelligence agencies, members of the diplomatic corps,

6. Y.N. Baluevsky, "Nuclear Deterrence and Reduction of Strategic Offensive Potentials," *Nuclear Control*, Vol. 10, No. 1 (Moscow: PIR Center, 2004), p. 32.

and with the inclusion of the chain of command of the armed forces from the strategic to the tactical level; (3) the political and psychological stability of both the military leadership and those managing the crisis, which should include both hawks and doves;[7] (4) control of the actions of the armed forces—especially those related to nuclear weapons—by reliable persons from the circle close to the highest leadership; and (5) knowledge of the decision-making mechanism and patterns guiding the actions of the opposing side.

It took some time for the United States and Russia to fully comprehend the consequences of using nuclear weapons. Since the 1950s, fear of global catastrophe resulting from the massive use of nuclear weapons has served as the basis for deterrence, yet the path toward full understating of the consequences of such a catastrophe is not easy. Scientific data on what could happen to the planet in the event of a full-scale nuclear conflict took time to appear. In the post-war ear, it seemed to many people—including experts both abroad and in Russia—that, after all, these consequences have a limited character and did not pose a threat to humanity's continued existence. Even today, a significant reduction in the number of strategic nuclear forces may result in a similar perception—fraught, in turn, with unpredictable consequences.[8] Only after a series of crises—as a result of difficult

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7. A member of the Russian Academy of Sciences, A.A. Fursenko, used his research from the Cuban crisis while discussing the report by A.A. Kokoshin on the Russian policy of nuclear deterrence at the meeting of the Presidium of the Russian Academy of Sciences on February 16, 1999, rightly noted that when making a decision with irreversible consequences—despite the strictly defined position of a higher leader—fewer than one or two people may turn out to be crucial. See shorthand reports of the meeting of the Presidium of the Russian Academy of Sciences, February 16, 1999.

8. One of the most important physicists of the 20th century—Petr Leonidovich Kapitz, wrote in the 1950s, using data available at the time: "It may be concluded…that poisoning of the atmosphere following even the most powerful nuclear war will not lead to the end of life on Earth. It should not be forgotten that, as the history of mankind shows, even during epidemics of most lethal diseases there were always people who had natural immunity and who did not die and did not loose vitality." Kapitz's argument turned out to be similar to that of Chinese leader—Mao Tse Tung, who in the 1960s proclaimed that the consequences of a nuclear war should not be feared. Similar "optimistic" estimates served as the basis for military and strategic considerations. In Soviet publications at the end of the 1940s and beginning of the 1950s, a "handicapped" bourgeois strategy was derided for apparently copying the German military strategy of the time. There was a lot of talk that a "nuclear variant of blitzkrieg" would have an even lesser chance of success than the strategy of Nazi aggressors. Stalin emphasized that in a nuclear war, tens and hundreds of thousands – but not millions – of people may be annihilated (see "An Answer of Comrade Stalin to the Correspondent of 'Pravda' on the Subject of Nuclear Weapons," *Military Thought*, No. 10. (1951), p. 4.

Toward the 1970s and the 1980s, the attitude of the world toward the destructive power of nuclear weapons changed. This could be observed especially in social, political and scientific circles of various

negotiations at the beginning of the 1970s—did the Soviet Union and the United States sign fundamental agreements that helped codify relations between the superpowers in the strategic nuclear domain and fix the situation of a nuclear stalemate. Nevertheless, attempts at finding some other particular superiority in nuclear forces and means continued. A glaring example was the large-scale fitting of U.S. intercontinental ballistic missiles, and ballistic missiles on strategic submarines, with multiple warheads. At the same time, there were ongoing improvements in combat readiness systems within nuclear strategic forces. At this stage, the two countries began to pay more attention to preventing the accidental or unauthorized launch of carriers with nuclear weapons.

It is difficult to overestimate the significance of the 1972 Soviet-U.S. Treaty on the Limitation of Anti-Ballistic Missile (ABM) Systems.[9] The idea of limiting ABM systems was

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countries. A considerable contribution to the analysis of the question of possible consequences of a nuclear war for life on Earth was made by civil scientists and experts. In 1972, the same P.L. Kapitz, on the basis of new knowledge about nuclear weapons—given its sharply increased stock – noted: "It is universally recognized that such a war—no matter where it would occur—in a couple of hours could poison the entire earth and to put an end to the life of man" No. 12. (October 1985), pp. 157–158.

At the beginning of the 21st century, the consequences of using nuclear weapons are diverse. These include not only initial factors that follow a nuclear strike, but also secondary and tertiary consequences that in the first half of the 1980s, during the period of another exacerbation of international relations, were researched by scientists worldwide, including climatologists, physicists, physicians, and biologists. In our home science one may note the efforts of G.S. Golitsyn, N.N. Moiseyev, E.I. Chasov, E.P. Velihov, A.A.Ginsburg, V.A. Aleksandrov, and others. (See, for instance, E.I. Chasov, L.A. Ilin, A.K. Guskov, *Nuclear War: Medical and Biological Consequences*. (Moscow: APN, 1984); and *Climatic and Biological Consequences of Nuclear War*, E.P.Velikhov, ed. (Moscow: Mir, 1986). Scientists' estimates were often met with lack of acceptance and criticism from the professional military that preferred to talk only about initial consequences of using nuclear weapons. This resulted in exaggerated estimates of the number of necessary forces and means to conduct military actions, and, as a result, an increase in quantitative "ceilings" of forces called upon to ensure a policy of deterrence.

9. At the end of the 1950s and beginning of the 1960s, intense efforts were conducted to develop systems of antimissile defense in the United States and the USSR. These included using nuclear warheads on the interceptors of combat parts. This was, in particular, one of the highest priority tasks of the well known KB-11 in Sarov (later known as the VNIIEF: All-Russian Scientific Research Institute of Experimental Physics). Soviet nuclear scientists simultaneously worked on combat parts for ballistic strategic missiles capable of withstanding an impact following a nuclear explosion of missiles being part of the enemy's antimissile defense system. See G.D. Kulitschkov, *VNIEEF. Historical Study, 1946–1992* (Sarov: Nuclear Center of the Russian Federation-VNIEEF, 1998), p. 92.

It should be noted that at the turn of the 1960s and 1970s with the building of the "classic" ABM system, a number of scientists and experts introduced the idea of using nontraditional types of weapons based on new principles of physics. For instance, these included ammunition and bundles of charged particles hitting warheads approaching targets. Work in this field began, but did not turn out to be promising and, within some time, was stopped. Abandoned installations on the testing ground around the Balkhash lake became silent witnesses of these efforts. They later on appeared regularly in the U.S. media.

For instance, during that time (i.e., 10 years before SDI), under pressure to catch up in the field of space technology, ideas of a space-based ABM system appeared in the USSR. The first to raise such an idea was

discussed at the highest level for the first time in 1967 in Glasborough by U.S. Secretary of Defense Robert McNamara during a meeting between the Chairman of the USSR Council of Ministers A.N. Kosygin and then U.S. President Lyndon B. Johnson. Initially, the idea of a limitation of ABM systems was rejected by Kosygin in an abrupt public statement. His argument, in essence, strikingly resembles the argument in favor of ABM systems, which in the 1980s was used by U.S. President Ronald Reagan and his administration when putting forward the Strategic Defense Initiative (SDI). The latter has, in turn, been used by the George W. Bush administration.

At his press conference in the course of the meeting, Kosygin asked:

> "Which weapon should be considered as a factor of tension—offensive or defensive? I think that defensive systems that prevent attacks do not seem to be the cause of the Arms Race, but represent a factor on their own when preventing people's death. Some ask the following question: Is it cheaper to have offensive weapons that may destroy cities and entire states, or to have defensive weapons that may prevent such destruction? At the present moment, there are some theories in circulation arguing that only those systems that are cheaper should be produced. Theorists, who ask questions of this kind, even debate how much it costs to kill a human being—$500 thousand or $100 thousand dollars. Perhaps an antimissile system is more expensive than an offensive one, but it is not intended to kill people but to protect human lives … There are other ways of solving the problem of security—far more reliable paths that could really suit humanity. You know that we speak for a definitive end to production of nuclear weapons and destruction of stocks of nuclear weapons …"[10]

At the time, Kosygin was not ready for a serious discussion of problems regarding strategic stability, and neither were those responsible for his preparation at that meeting. Overall thinking on these issues by the Soviet state and party leadership and the High Military Command of the Soviet Armed Forces sharply differed from the thinking shared by McNamara and his "wunderkinder" (who mainly came from the RAND Corporation).

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a member of the USSR Academy of Sciences—G. Budker, but it raised criticisms from other members of the academy—such as L. Artsimovitsa and B. Konstantinova—and was rejected. A second variant of a space-based ABM system was proposed by V. Chelomey as a member of the academy. He described his idea to L.I. Brezhnev, but following a discussion at the highest level, this idea was also rejected. As rightly noted by another member, E.Velikhov, these discussions created certain immunity within the Soviet scientific community toward ideas of "star wars."

10. Izvestia, February 10, 1967. For a more detailed description of the evolution of Soviet and Russian strategic concepts of stability, deterrence and control over armed forces, see A. Savelyev, *Political, Military and Strategic Aspects of START-1 and START-2 Treaties* (Moscow: IMEMO RAN, 2000), pp. 5–25.

Moreover, McNamara's thinking also differed completely from that of the majority of the staff of the High Command of the U.S. Armed Forces.

Within a few years, the position of the Soviet leadership changed radically, which resulted in the signing in Moscow of the ABM treaty in 1972 by Leonid I. Brezhnev and Richard Nixon.[11]

However, in the period of détente that followed the signing of the ABM treaty and the Treaty on the Reduction of Strategic Weapons, crises in Soviet-U.S. relations still took place whenever the nuclear factor appeared on the horizon. This was the case, in particular, during the 1973 Arab-Israeli war (the October war), when President Nixon, on the recommendation of the U.S. National Security Council, raised the level of readiness of the U.S. armed forces to DEFCON 3 (the highest level is DEFCON 1). This included forces that were part of the Strategic Air Command and those of the North American Air Defense Command (NORAD). Moreover, 60 heavy B-52 bombers carrying nuclear weapons were transferred from Guam Island in the Pacific Ocean to the United States. Also, two complementary Air Force Striking Groups (ASGs) with planes carrying nuclear weapons and the aircraft carriers *F.D. Roosevelt* and *J.F. Kennedy* were directed to the eastern Mediterranean to complement the ASGs—led by the aircraft carrier *Independence*—that was stationed there at that time.[12] During this heightened state of alert, the two countries undertook substantial efforts to increase the

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11. Under the treaty, the parties committed themselves not to build, research, or develop systems and components of ABM on a large scale. In accordance with Article III of this treaty, each side had the right to develop an ABM system "within a radius of one hundred and fifty kilometers from their capitals." A second area for the "deployment of the ABM system within a radius of one hundred and fifty kilometers was to be the area of land-based launching pads of Intercontinental Ballistic Missiles." In 1974, the protocol to the ABM treaty declared that there could only be one area of deployment of the ABM system. The Soviet Union chose to defend Moscow. The United States chose the base of ICBMs in Grand Forks, North Dakota. In 1976 a high cost of maintaining the system and its limited capabilities forced the U.S. leadership to shut it down. The main radar of the ABM system in Grand Forks was incorporated into the system of the North American ABM (NORAD). In addition, the treaty envisaged that the ABM system would be only ground-based and stationary. At the same time, the treaty allowed construction of ABM systems and components based "on other principles of physics" ("promising developments"). These were also to be ground-based and stationary, however, and parameters of their development were to be a subject of complementary agreements. Either way, they could only be deployed in one area.

12. Raymond L. Garthoff, *Detente and Confrontation: American-Soviet Relations from Nixon to Reagan* (Washington, D.C.: Brookings, 1985), p. 379.

defensibility and survivability of their command posts in the event that nuclear weapons would be used.[13]

Statements about the possibility of "victory" in a war with massive use of nuclear weapons disappeared from the lexicon of political and military figures of both countries only in the mid-1980s. Beforehand then, such statements appeared often in many publications by U.S. military and civil strategists and *Military Strategy*—a Soviet theoretical work edited by the Marshal of the Soviet Union—V.D. Sokolovskii in the 1960s.*

After 1970s détente, a return of the Cold War—including its nuclear dimension—occurred with the entry of the Soviet army into Afghanistan in December 1979. At the beginning of the 1980s, the probability of a sudden disarming, decapitating U.S. nuclear

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13. As noted in, "History of Russia's Military Strategy," the 1970s through the 1980s "saw a thorough preparation of the system of command over all groupings of Armed Forces in the operation of Strategic Nuclear Forces, strategic operation in repelling air and space attack and in strategic operations on oceanic war theaters." V.A. Zolotaryev, ed., *History of Russia' Military Strategy* (Moscow: Kytchkovo Polye, Polygraph-Resources, 2000). Moreover, the accent was put on the high degree of centralization in the use of strategic nuclear forces: "command and control of Strategic Nuclear Forces was organized in a highly centralized way, taking into account specific particularities and various options of possible variants of unleashing a missile and nuclear war. The right to make a decision to use Strategic Nuclear Forces belonged exclusively to the country's higher leadership, and combat tasks—right up to each launching installation, missile submarine and every crew of strategic air force—were prepared by the General Staff. *Flight missions were analyzed by the General Staffs of Special Purpose Missile Forces, Air Force and Navy."*
Orders of the High Central Command to move forces into high alert and full combat readiness, to first launch of missiles and to first initiate combat mission of long-range air force "were intended to be given by the Central Command Point of the General Staff on Automatic Command and Control Systems of the Center of Military Command directly to Command Points of missile units and sub-units, to Command Points of air regiments (at airfields) of long-range air force and missile submarines." Zolotaryev, *History of Russia' Military Strategy* (Moscow: Kytchkovo Polye, Polygraph-Resources, 2000), 494.
"The General Staff also planned how to repel air and space-based offensive. Direct command over units of the country's ABM forces, independent formations of antimissile, anti-space defense and formations of early warning about imminent missile attack rested on the Commander-in-Chief of the country's ABM forces, and forces and means of ABM fronts and fleets – on front (fleet) commanders. The command and control system of the country's ABM forces was built with the use of automated systems at all levels, starting with formations and ending with the Central Command Post." Ibid., p. 495.
* As recalled by the main developer of this work, General-Major V.V. Larionov, Sokolovskii—having been commissioned to prepare this collective work—decided to obtain direct orders from the head of the government and of the Communist Party, Commander-in-Chief Nikita S. Khrushchev. At the time, Sokolovskii was no longer in office; he had resigned the post of chief of the General Staff of the Armed Forces because he was dissatisfied with Khrushchev's policy of reducing the number of the USSR's armed forces while the role of missiles and nuclear weapons increased. Sokolovskii emerged from his session with Khrushchev in a somewhat flabbergasted state. Khrushchev's main directions in Sokolovskii's account were very distinct and clear: "Write the book so that when they read it in the West they'll be scared half to death" (Khrushchev, in his characteristic style, actually used a much coarser expression). The directions (given before the Cuban missile crisis occurred) were successfully carried out. Many years later, this book (having gone through many editions in translation in the West) was used by hawks in the United States and other countries as a basis for their own analogous military strategy and for massive military build ups, especially for those that assumed that it is possible to wage nuclear war and achieve victory.

strike[**] was seriously considered in the USSR. Many U.S. statements, as well as concrete actions to develop U.S. strategic nuclear forces, furthered such perceptions.[*] In turn, many in the United States feared that the USSR could undertake similar actions.

At the beginning of the 1980s, Reagan's "Strategic Defense Initiative" (SDI) became a serious challenge to Soviet-U.S. military and strategic parity. This program of scientific research, design, and testing envisaged a large-scale ABM system that would include cosmic echelon (echelons) and the use of various "exotic" means, including weapons that would use a direct transfer of energy. This program was already preceded by a significant "stock" of scientific and technological experience that originated at the end of the 1950s, when the United States began to consider an ABM "Nike-Zeus" system. During that period, Soviet-U.S. relations worsened due to the deployment of intermediate and mid-range missiles by both sides in Europe.[14]

Soviet-U.S. parity would have been undermined even further—however paradoxical it may sound—if both countries had built large-scale ABM systems.[*] In that case, theoretical incentives for the use of a preemptive, disarming strike during a serious military and political crisis would have increased on both sides.

** In common parlance, the concepts of "first strike" (the infliction of the first strike by the attacking side) and "retaliatory strike" (or second strike) are most often used. This is incorrect. The first strike can be from the side that starts the war or from the side that is carrying out a retaliatory action. Naturally, the side that is being attacked cannot be the first strike in the war as a whole, but the planners of military actions can launch the first retaliatory strike. Thus in principle, there can also be a first retaliatory strike and a second retaliatory strike.

***Despite the external dominance of McNamara's ideas of ensuring mutual assured destruction, each side has actively developed methods of destroying the strategic nuclear forces of the other. Today, it is possible to say with confidence that, if the (military) representatives of Russia surpass those of the United States in rhetoric regarding the possibility of victory in a large-scale nuclear war, the United States was, as a rule, the pioneer in developing various destabilizing weapons for preemptive strikes.

14. See Y. Kvitsinski, *Time and Accident: Notes of a Professional* (Moscow: Olma-Press, 1999), pp. 313–456; and N.F. Tchervov, *Nuclear Cycle: What happened, What Will Happen* (Moscow: Olma-Press, 2001), pp. 86–88, 94–95.

*At that time, the USSR had one comparatively small ABM defense system deployed around Moscow, which was allowed by the ABM treaty (and by its 1974 additional protocol to it). Other versions of ABM defense systems were being worked on at the same time. In the mid-1970s, the United States froze the creation of a similar missile defense system, initially intended to cover one positional region of Minuteman ICBMs. Such a difference of objectives and tasks for ABMs reflected the difference in the political systems of the two countries: in the United States, government leaders could not even allow themselves to create an ABM defense system that would protect the capital without protecting the whole country.

In the USSR, the concept of an asymmetric response to the SDI program was prepared on the basis of theoretical considerations and concrete scientific, technological, operational, strategic, and tactical calculations—which, it should be noted, were being assimilated with difficulty by many within the country's leadership and its military high command. It incorporated basic principles of asymmetric strategy, defined in the 1920s and 1930s by a prominent Russian and Soviet military theoretician, A. A. Svechin, whose work focused on the determination of an optimal line of action for the USSR in future world wars. The concept of asymmetric response was worked out in detail in a series of open scientific publications and in secret documents and scientific research reports and was officially accepted by the Soviet leadership. At the same time, however, symmetric measures were also being developed through scientific research, and sometimes through experimental and design efforts. This included work on developing ABM weapons that used new principles of physics (including weapons using the direct transfer of energy, such as various types of laser and accelerators of neutral particles).**

The enormous amount of money spent in the 1980s on SDI research and development did not lead to any significant increase in ABM capabilities in the face of an adversary that possessed commensurate missile and nuclear arsenals or powerful scientific and technological potential aimed at improving the quality of these arsenals. These efforts, however, led to the construction of a series of prospective means and technologies. These included small-sized interceptors based in space—"shining pebbles" that may be used in 21st

**Those who worked on the concept of asymmetric response to SDI proceeded from the fact that this program was called upon to be used as one of the stimuli for the start of the arms race—more burdensome and dangerous for the USSR than for the United States. Publications that appeared in the United States in the 1990s and later on showed that this idea was correct. A number of authors pointed out the fact that U.S. President Reagan studied exceptionally attentively all evaluations by American experts regarding weaknesses of the Soviet economy and the burden imposed by the Arms Race. In his plans to shatter the state he called the "evil empire," Reagan counted in particular on intensifying the Arms Race. At the same time, stereotypes regarding behavior of the Soviet leadership toward the development of weapon systems were attentively analyzed.

century U.S. ABM systems.* No significant increase in ABM capabilities in the 1980s in intercepting either intercontinental ballistic missiles or cruise missiles was achieved within the framework of SDI. By the beginning of the 1990s, President Bill Clinton quietly shut down the program. At that time, it had already lost its usefulness in wearing down the Soviet Union in an arms race. The Clinton administration used methods very different than the Republican administrations of Reagan and George H. W. Bush in order to stimulate the development of high-technology sectors in U.S. industries.

Thus, by the end of the 1980s, Soviet-U.S. relations were marked by a highly complex system of securing strategic stability. This system included a particular configuration of the parties' forces and means, as well as limitations on the development of specific components of strategic nuclear forces, as determined in a number of treaties. Detailed and mutually binding control procedures (regarding the observance of treaties on the limitation and reduction of offensive and defensive strategic weapons) began to play a very important role in maintaining strategic stability.*

These procedures involved use of national technical means of control and "inspections on site" (something insisted upon, above all, by the U.S. side, considering the closed character of Soviet society). National technical means of control were various and included

* A disinformation myth that research and development of antimissile defense led to a technological jump is still believed to be true. According to this myth, ABM research and development allowed the United States to break away from its main competitors—the USSR, Japan, and Western Europe— at the end of the 1980s and at the beginning of the 1990s. Components of the system and the technology developed within the framework of SDI were solely intended to attain the objectives of antimissile defense. They were of little in attaining civilian or other military objectives. This applied not only to powerful excimer, chemical, and x-ray lasers; lasers based on free electrons; electro-dynamic mass accelerators (electro-magnetic guns); or accelerators of neutral particles, but also to means of target identification and designation, military command, and control.

* The term "strategic stability" includes several basic concepts. On a general level, it is a description of the international situation and mutual relations between the world powers. At the military-strategic level, it is a description of strategic mutual relations between these powers. Until recently, this term applied mainly to Russia and the United States. The level of strategic stability is evaluated by looking at the presence or absence of incentives to inflict a first disarming strike in a crisis situation. Given this, if neither side—even in the most favorable strategic situation—can, by way of a first strike, prevent retribution, then strategic stability is sufficiently high.

spy satellites. In addition, both sides pledged not to put any obstacles in the way of these procedures.

Adhering to this logic, at the beginning of the 1980s both sides renounced de facto development of antisatellite weapons. The moratorium began with the announcement by the General Secretary of the Central Committee of the Communist Party of the Soviet Union, Yury V. Andropov, at a meeting with a group of U.S. senators,[15] that the Soviet Union would not use antisatellite weapons. The United States silently followed in the steps of the USSR, and this moratorium has been in place for more than twenty years.[16] Repeated efforts by Moscow to conclude a bilateral treaty that would prevent construction and deployment of antisatellite weapons that could be used as ABM weapons, as well as means of striking ground, air and sea targets from space, have not been successful.[17] This subject still retains its full importance today—not only for bilateral Russian-U.S. relations, but for the international community as well.

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15. The introduction by the USSR of a unilateral moratorium on tests of antisatellite weapons was announced by General Secretary Y.V. Andropov in May 1983 at a meeting with a group of U.S. senators headed by K. Pell. This action by the Soviet Union was initiated by E.P. Velikhov on the basis of the work by the Committee of Soviet Scientists in "Defense of the World against Nuclear Threat"; a proposal of the declaration by Andropov prepared by Velikhov played an important role in introducing this moratorium. Several crucial employees of the defense industry Department of the Central Committee of the Communist Party realized the danger of escalating rivalry between the USSR and the United States in the field of antisatellite systems.

16. The introduction of such a moratorium and the Soviets' attempt to convince the United States to sign an international treaty banning antisatellite weapons can also be seen as a countermeasure to U.S. ABM systems. The Soviet Union was in favor of this treaty because antimissile defense systems—particular those based in space—unavoidably confer antisatellite capabilities during their development. The USSR leadership, having accepted recommendations of the Committee of Soviet Scientists in Defense of the World against Nuclear Threat, undertook significant international efforts to put pressure on the United States to sign such a treaty that would, in fact, block the realization of the majority of projects within the framework of the SDI program. But this Soviet ruse did not prove to be successful and the United States refused both to change its position and to discuss possibilities of reaching such an agreement.

17. There is a wide range of potential antisatellite weapons. Technologies for their production have existed since the end of the 1970s and the beginning of the 1980s (even earlier, for some types). Antisatellite systems can be land-, water-, air-, or space-based, and can use either kinetic or directed-energy weapons (e.g., lasers and neutral-particle accelerators). At the beginning of the 1980s, the most advanced research and development involved the creation of systems using the MiG-31 and F-15 heavy interceptors in the USSR and the United States, respectively, with two-stage rockets, or "satellite killers." These missiles were to be launched from aircraft in the upper layers of the atmosphere to destroy satellites in low orbits. There is no need to physically eliminate satellites to prevent them from functioning—it is sufficient to "blind" them, to disrupt their communication with the earth, etc.

The treaty on the limitations of ABM systems also played a role in the development of antisatellite weapons based in space, which would be capable of striking most satellites.

The two-to-three year period after the collapse of the USSR was characterized by a decrease in the level of strategic stability. The breakup of the Soviet Union produced four de facto nuclear states: Belarus, Kazakhstan, the Russian Federation, and Ukraine.[18] Moreover, Ukraine nearly became the world's third largest nuclear power after the United States and Russia (based on the size of its nuclear arsenal). This was due to the presence of a large number of Soviet Strategic Nuclear Forces on its territory. Immediately after the collapse of the USSR and the creation of the Commonwealth of Independent States (CIS), it was announced that the leaders of the four states mentioned above had nearly equal control of the "nuclear button." In reality, however, control rested in the hands of the Russian leadership, because the system of military command of Strategic Nuclear Forces was based exclusively in Russia. At the end of 1991, Belarus, Kazakhstan, and Ukraine (and other republics of the former USSR) were deprived of any other nuclear weapons, thanks to the energetic and effective measures undertaken by the Soviet state leadership and military command.[19]

The importance of these measures became clear when credible accounts appeared in both the United States and Russia regarding attempts by the Ukrainian leadership to secure

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18. At the time of signing the START-1 Treaty (1991), Ukraine posessed 220 carriers of strategic weapons deployed with 2416 nuclear warheads, including 176 ICBMs with 1828 warheads (130 S-19s and 24 land-based SS-24s) and 44 heavy bombers (including 19 newer heavy bombers, TU-160), capable of carrying up to 588 nuclear long-range air-launched cruise missiles (ALCM). In Belarus there were 54 mobile ICBM SS-25s ("Sickle") with 54 nuclear warheads. In Kazakhstan there were 104 heavy ICBM SS-18s with 1040 warheads and 27 heavy bombers TU-95 MS, capable of carrying up to 370 nuclear long-range ALCMs. See "Nuclear Successors of the Soviet Union," No. 5 (June 1998), p. 20.

19. Immediately following the end of the August 1991 crisis, I tried to turn the attention of M.S. Gorbachev and B.N. Eltsin to this problem. Y.A.Ryzhov had equally easy access to these two leaders. Ryzhov was a member of the Soviet Academy of Sciences and headed the Committee on Defense of the USSR Supreme Council. Only the presence of simultaneous instructions from leaders of both the USSR and the Russian Socialist Federal Soviet Republic could, during that time, force the military command to undertake an appropriate operation. As it recently became well known, other people in Russia also toward this goal. This is confirmed, in particular, by one of the notes sent to the Soviet leadership by a prominent nuclear scientist and member of the USSR Academy of Sciences, Y.A.Trutnev. See Y.A.Trutnev, *For Russia's Good: 75th Annieversary of the Member of the Russian Academy of Sciences* (Sarov: Saransk, 2003), pp. 330–331.

the technical means that would give it control over the "nuclear button."* An operational analysis of Ukraine's capabilities at that time, undertaken by the defense ministers of the Russian Federation, showed that this would have been possible by employing highly qualified engineers and scientists, trained at the former Soviet Scientific Research Institute and the Design Bureau** on Ukraine's territory. Timely U.S. and Russian efforts succeeded in convincing the Ukrainian side to renounce this very dangerous idea.*** In this example, Russian and U.S. interests completely overlapped, which ensured full success of actions aimed at averting the sudden emergence of one more "big nuclear power" within the international community in the first half of the 1990s.

Since the end of the Cold War, there has been a significant reduction in the probability of exchange of a Russian-U.S. nuclear exchange. Although relations between the two countries have worsened, the probability of a nuclear conflict has not increased. Still, their strategic nuclear arsenals continue to be directed mainly against each other, preserving the powerful inertia created during the years of the Cold War.*

Since the terrorist attacks of September 11, 2001, political relations between Russia and the United States have improved, as demonstrated, in part, by the partnership between the

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* Notably, during the Russo-Ukrainian conflict surrounding the Tuzla Spits in the Azov Sea from the end of 2003 to the beginning of 2004, some nationalistic Ukrainian politicians and the media declared that Ukraine should not renounce its own nuclear weapons.

**As noted by the former U.S. Secretary of Defense, William Perry, and his deputy, Ashton Carter, the January 1999 Trilateral Treaty on Ukraine's Nuclear Disarmament "was very fragile." It "provoked disputes among representatives of the Ukrainian side since some considered that the new state required nuclear weapons to ensure its security." See Ashton B. Carter and William J. Perry, *Preventative Defense, New U.S. Security Strategy*, translation from English (Moscow: Science Publishing House, 2003), p. 20.

*** If the use of strategic nuclear armaments had come under the control of the Ukrainian leaders, the world's military-political configuration would be completely different. Moreover, the danger of accidental and unauthorized use of nuclear weapons would be sharply increased if they were in the hands of Kiev. In such a short period and with very limited financial, technical, and human resources, it would be virtually impossible to create a reliable system for controlling strategic nuclear forces that would meet the highest standards (for "negative control" over such forces).

* Even in the second half of the 1990s, almost ten years after the end of the Cold War, reports appeared in the Western press that the number of targets for the United States' strategic nuclear forces on the territory of the Russian Federation at that period had not decreased, but rather had increased; this was explained by the fact that strategic nuclear forces of the USSR had been eliminated in Kazakhstan, Ukraine and Belarus. The number of warheads in the US's strategic nuclear forces had not been reduced. In the next twelve to eighteen months, the press started to report that the number of facilities on Russian territory, at which the US's strategic nuclear forces were aimed, had decreased. Moreover, as reported by the American media, the number of targets on Chinese territory, marked for destruction by the American strategic nuclear forces, had significantly increased.

U.S. and Russia in antiterrorist activities and by Russia's according special importance to the United States in its "war on terrorism."[20] However, during that time, relations did not improve to the extent that would have allowed Russia to pay less attention to the problems of securing reliable nuclear deterrence, especially given that the United States did not openly demonstrate any far-reaching aspirations toward reducing the role of nuclear weapons in its military policy. Even in the difficult conditions of the 1990s, Russia had to undertake a series of measures to develop forces and means of nuclear deterrence to update its nuclear policy.

The May 2002 Moscow summit saw some positive results. In the course of this summit, President Vladimir Putin and President George W. Bush signed a new Russian-U.S. treaty on the reduction of strategic offensive weapons. The signing of this Treaty—with all of its obvious flaws—represented the most that Russian diplomacy, and allies of preserving of the regime limiting strategic weapons in the United States, could achieve in 2001–2002. This is not surprising, considering the weakening of Russia's national power beginning at the end of the 1980s[21] and the general unwillingness of the Bush administration to be bound by any new agreements in this sphere.

The Moscow Treaty codified reductions of Russia's Strategic Nuclear Forces, which were necessary mainly because of limitations placed on defense spending. Noting the importance of the 2002 treaty, the head of the General Staff of Russia's armed forces, Col.-Gen. Yury Baluevsky, wrote that the "new format of the Treaty is the consequence of the path that our states took together, which reflects the contemporary state of relations between Russia and the United States as well as their understanding of ways leading to further

20. It should not be forgotten that during the entire first half of 2001, the White House placed Russia behind most other priorities of U.S. foreign policy. It is remarkable that Russia was absent during preparations of the "New American Century" project, many elements of which were laid as a foundation of foreign policy and military strategy of the new administration.

21. E. M. Primakov, evaluating the aforementioned agreement, wrote that it was especially important because provided for the preservation of the legal field in mutual relations between the United States and Russia in the strategic nuclear sphere.

reductions in nuclear weapons."[22] As Baluevsky noted, "The absence of concrete quantitative indicators and phases of intermediate reductions… represents… the dignity of the document." He argued that "such a situation allows the two sides to choose the optimal variants of reduction, in the first place from an economic viewpoint."[23]

Former Chair of the Senate Committee on the U.S. Armed Forces Sam Nunn noted, "The Treaty and the accompanying joint announcement secure a substantial basis for excellent relations, in principle, between the United States and Russia. The accompanying joint announcement calls for cooperation in practically all spheres of Russian-U.S. relations—maybe only with the exception of joint celebration of Thanksgiving Day and Christmas. It orientates us in the appropriate direction."[24] Simultaneously, Nunn rightly notes that the treaty is based on "good intentions," and if it is not followed by an entire series of other rich-in-content actions, then it may—in the best-case scenario—turn out to be useless, and—in the worst-case—may turn out to be "counterproductive."[25] As Nunn asserted, it is necessary to precisely and unambiguously deal with questions of verification procedures and to work out the schedule of reductions of both countries' "offensive potential."[26]

The 2002 Moscow Treaty envisaged the development of Russian-U.S. cooperation in the field of antimissile defense.[27] Since then, Russia's science and technology industries, as

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22. Y.N. Baluevsky, "Nuclear Deterrence and Reduction of Strategic Offensive Potentials" *Nuclear Control*, Vol. 10, No. 1 (2004), p. 35.
23. Ibid.
24. S. Nunn, Co-Chairman, Nuclear Threat Initiative (Testimony before the US Senate Committee on Foreign Relations on the Treaty between the United States of America and the Russian Federation on Strategic Offensive Reductions, July 23, 2002), p. 1.
25. Ibid.
26. Preparation of these procedures in the subsequent Russo-American negotiations were met, from the beginning, with considerable opposition by the American side.
27. A joint declaration of the Russian and U.S. presidents concerning the results of the May 2002 Moscow summit mentions that "Russia and the U.S. will undertake steps to reflect, in the military sphere, the changing character of their strategic relations". It was noted that, "Russia and the U.S. acknowledge that the present situation in the sphere of security differs greatly from the period of the Cold War." On this basis, "Russia and the U.S. agreed to introduce a series of measures aimed at strengthening trust and enlarging scope of transparency in the sphere of antimissile defense, including exchange of information on antimissile programs, research tests in this sphere, mutual visits to observe antimissile tests and inspections of antimissile systems.

well as its armed forces, have made significant scientific achievements in this sphere, in particular by exploiting antimissile defense systems (including one that could not be found in the United States).[28]

Many Russian politicians, military figures, and foreign policy experts have expressed doubts as to whether Russian-U.S. cooperation in this sphere can be genuinely equal and mutually beneficial. These doubts appear justified when one considers the enormous asymmetry in financial capabilities and political power between the United States and Russia, as well as the cooperation between the United States and its NATO allies (France, Germany and Italy) in research and development when building an antimissile defense system for Europe from 1990 until 2000 (i.e., the Medium Extended Air Defense System [MEADS] program). At the end of the 1990s, the French abandoned this program and Germany suspended its participation after a special Commission of the Bundestag in 2000 issued strong criticism of the program. Cooperation between the United States and its European NATO partners on ABM questions resumed later on, but in a different format.

The new relationship between the Russian Federation and the United States is characterized by the small probability of nuclear conflict between the two powers. Authors of the "Review of Nuclear Policy," which was published in January of 2002 by the U.S. Departments of Defense and Energy (similar reviews are periodically presented to the U.S. Congress in accordance with U.S. law) dwell particularly on this new relationship.

These measures are also aimed at undertaking steps necessary for the start of a Joint Center of exchange of data from early warning systems". An agreement was also reached to "explore possible directions of cooperation in the sphere of antimissile defense, including joint ABM research, and to determine possible programs of joint research and development in the sphere of ABM technology, taking into account the importance of ensuring mutual protection of confidential information and protection of intellectual property rights." Simultaneously, it was announced that, "Russia and the U.S., within the framework of the Russian-U.S. Council, will study possibilities to develop practical cooperation in antimissile defense for Europe." *Joint Declaration of President V. V. Putin and President Bush*, Moscow, May 24, 2002.

28. The author analyzed estimates of U.S. scientists and other experts who considered that in the 1980s and beginning of the 1990s, Soviet scientists and engineers achieved considerable success in the development of exotic means of hitting a target, such as laser-based, surpassing their American colleagues in this field.

The so-called liberal theory in international relations argues that there are no wars between democracies. Empirical confirmation of this theory refers to the Cold War period when Western states had a common and serious enemy—an enemy that unified them—in the form of the USSR and its allies.

The 1990s demonstrated that Russian-U.S. relations are not immune to periods of crisis. In a number of spheres, the interests of Russia and the United States do not overlap and, in many cases, they conflict.[29] This especially applies to the post–Soviet space. In addition, a high level of mutual mistrust within substantial parts of the bureaucracy and among political elites of both countries remains strong, which is also reflected in public opinion as a whole.

Many in the United States believe that a modern democratic political system has still not been formed in Russia. Accusations of this kind have recently intensified and have been expressed by a number of influential people. President Bush's 2002 "Strategy for U.S. National Security" also expressed doubts about the stability of Russia's political democracy and market economy.[30]

The attitude of Western countries, especially those that consider themselves models of democracy and the rule of law, is—and will be—influential to the development of democracy in Russia. The continued demonstration of commitment by Western countries (and, above all, by the United States) to universally recognized norms of international law, democratic values,

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29. The appearance of American military contingents in Central Asia and later of instructors for the training of armed forces and special services in Georgia caused an appreciable reinforcement of anti-American feeling in the Russian public by the summer of 2002. On the eve of the Russian–American summit of May 2002, up to 70 percent of people polled (according to data from the Russian "Public Opinion Foundation" or FOM) had come to regard the United States as an "unfriendly state." This sharply contrasted with the public attitude, for example, toward Germany (which was regarded in the same period as a "friendly state" by about 60% of the respondents in Russia). The attitude of Russians toward the USA was in even greater contrast to that toward India and China (82 percent and 75 percent, respectively, saw these two large Asiatic countries as "friendly" countries with respect to Russia). On September 11, 2002, in the course of an interactive poll (with about 2000 respondents) during a broadcast of "Echo Moscow," (listeners' calls) with the participation of the author, 70 percent of the people polled said that they did not regard the USA as a state "allied" with Russia. At the same time, public opinion polls in Russia show that a steady, high percentage of Russians (50–60% or more) are in favor of having good, friendly relations with the USA.

30. George W. Bush, *National Security Strategy of the United States of America* (Washington, D.C.: White House, September 2002), p. 27, http://www.whitehouse.gov/nss.html.

human rights, market economy, and free trade is especially important for the stable development of democracy in Russia. Unfortunately, events in recent years demonstrate that the situation is far from ideal. This fact (also with regard to the fight against international terrorism) raises questions within Russia's state leadership about double standards. Such a state of affairs has forced many in Russia to consider whether we have witnessed a substitution of political technologies for democracy that has taken place in Western countries.

Potential conflicts with the United States and the West more generally may have the strongest impact on the fate of democracy in Russia. This is especially true if Russia asserts itself even more in its "near abroad" due to national security concerns. NATO enlargement to the East is a potentially serious threat to the stability of Russia's relations with Western countries. The second wave of NATO enlargement includes former territories of the Russian Empire and the Soviet Union, as well as Lithuania, Latvia, and Estonia. The security, territorial integrity, and sovereignty of these countries could have been fully secured by the international community (with Russia's constructive participation) without their accession into NATO.*

The attitude of Russia's state leadership (as well as that of the overwhelming majority of Russian politicians and the Russian public) toward NATO enlargement remains negative. NATO enlargement to the East seems unjustified given the transformations that have taken place in Russia in the past 12–15 years, the state of political relations achieved between Russia and NATO and Russia and the United States—in particular after the tragic events of September 11, 2001—as well as the creation of the G20 mechanism at the Russia-NATO summit in Rome.

In the future, Russia should reserve the right, depending on the situation (and taking into account the behavior of specific members of NATO, including its "novice" members), to

* One should note that in Latvia, the issue of rights of the Russian-speaking part of the population is an acute problem. These rights are crudely disregarded by the Latvian authorities that refuse to introduce norms supported by the European Union and are characteristic of the majority of other NATO members.

undertake all necessary measures to protect and secure its interests, especially those related to its national security. The above position seems even more appropriate in the light of how national security interests are currently treated in the West. Russia's right to protect and secure its national security interests also includes the use of military force.* At the same time, the Russian political class assumes that those who continue to treat Russia as a state whose capabilities should be limited (especially in the post–Soviet space)—regardless of whether or not Russia is becoming a modern democratic state with a market economy or not—still have significant weight within the American political elite.

The Bush administration's decision to withdraw from the ABM treaty in 2001 damaged Russian-U.S. relations and the system of strategic stability. President Putin called this step a "major mistake."* One may agree with the argument that the ABM treaty is a product of the Cold War and that new circumstances require different methods to secure strategic stability. However, it was incorrect to begin dismantling the existing system before corresponding and appropriate components of a new system were created. The decision by the U.S. president to exit the ABM treaty was taken when neither the Pentagon nor the U.S. National Security Council had appraised the future ABM system, its architecture, or its basic components. A significant part of the project to build the new ABM system is still at the scientific research stage. In many respects, the decision was based not on pragmatic political and military considerations, but on Bush administration's ideological agenda, which mirrors that of the Reagan administration.

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* In response to Ukraine's potential entry into NATO, the question of additional deployment by Russia of tactical nuclear warheads, along with their delivery means, which are characterized by a high level of combat readiness in the European part of the Russian Federation (without targeting Ukraine), is currently being actively discussed within the Russian "National Security Establishment."

* The comparatively mild official reaction of Russia to the United States' abandonment of the ABM treaty was largely due to the fact that the relations between the two countries were improving at that time, and due to the understanding by the supreme Russian leadership that Russia has a wide set of already active and potential resources for overcoming any missile defense that may exist in the foreseeable future. However, the reaction was significantly more negative among the military leaders and a significant part of the Russian political elite.

The U.S. withdrawal from the ABM treaty did not signify a direct military threat for Russia in contemporary international-legal circumstances. The absence of such a threat is due to the large number of nuclear munitions onboard its strategic carriers. This guarantees maintenance of the "dynamic diapason" in the military and strategic balance.[31] The maintenance of such balance depends on the capacity of various components of Russian strategic nuclear forces to penetrate the ABM defenses of the other side.

The removal of limitations on ABM systems nevertheless contributed to an increase in strategic uncertainty in the system of international relations as a whole. The increase in strategic uncertainty is fueled by the ongoing military and doctrinal drift of the United States toward lowering the threshold for the use of nuclear weapons—even if it does not apply directly to Russian-U.S. relations. Even with the elimination of the ABM treaty regime, the "dynamic diapason" allows Russia to accept asymmetries for the time being—in favor of the United States—within the framework of the 2002 Strategic Offensive Arms Reduction Treaty.

The phenomenon of the "dynamic diapason" in the Soviet-U.S. strategic nuclear balance appeared at the end of the 1970s, in particular with the development of the process of "mirving" strategic carriers (i.e., the process of equipping carriers with multiple independent reentry vehicles, or MIRVs). This process sharply increased the quantity of deployed (combat ready) munitions in possession of each country, bringing it to ten to eleven thousand on each side.

Many civil and military experts in the United States and Russia noted the superfluousness of such a high quantity of warheads to effect deterrence through the threat of a responsive strike with "unacceptable damage" for the attacking party.

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31. See A. A. Kokoshin, *V poiskakh vykhoda. Voenno-politicheskie aspekty mezhdunarodnoi bezopasnosti* [In search of a way out: Military–political aspects of international security] (Moscow: IMO, 1989), pp. 72–129.

Head of the General Staff of the USSR Armed Forces and Marshal of the Soviet Union, N. V. Ogarkov, was one an active opponent of "equality in number" for nuclear warheads and carriers and the symmetry according to those indicators at the end of 1970s and the beginning of the 1980s. He also attempted to introduce a more restrained approach toward construction of new systems of strategic weapons because they were being built by the United States. During his discussions with me at the beginning of the 1990s, Ogarkov said that, in his opinion, military and strategic equality with the United States at the end of the 1970s, the first half of the 1980s, and later on could have been fully assured in principle by having three to four times fewer warheads on strategic carriers and by abstaining from building such complexes as the Rail-Mobile Missile System (SS-24) and the sea-based Typhoon system (Shark) with a gigantic submarine of more than 40,000 dead weight tones (DWT).[32]

Ogarkov was arguing for moderation in the development of Strategic Nuclear Forces in the midst of increased construction of newer communication and military command systems as well as newer conventional means of armed combat, in particular "intelligent weapons." Their appearance in the U.S. was called a "revolution in military affairs."

Unfortunately, Ogarkov lost the battle over these fundamental questions of military strategy and military construction to his direct superior, D. F. Ustinov, a member of the Politburo's Central Committee of the Soviet Union's Communist Party and Soviet Defense Minister, and to his first deputy, S. F. Akhromeev, the marshal of the Soviet Union.[*]

Ogarkov's defeat cost the Soviet Union dearly. The Soviets continued the arms ace, competing with the United States on all fronts, while having at least twice as few resources. The arms race (including in the nuclear sphere) became one of the most

32. См. также: Амелько Н.Н. В интересах флота и государства. М.: Издательская группа «БДЦ-пресс», 2002, pp. 137–138.

* One should also keep in mind the deep conflict between D. F. Ustinov and N. V. Ogarkov in relation to the introduction of Soviet troops into Afghanistan in 1979, which Ogarkov opposed as much as he could. This was extremely courageous on his part at that time.

important causes of the collapse of the Soviet economy toward the end of the 1980s and the breakdown of the Soviet state.

Returning to the question of consequences of the U.S. withdrawal from the 1972 ABM treaty, it should be noted that action had consequences for security of weapons and other instruments deployed in space, including important infrastructure elements that secure stability at the strategic nuclear level. The elimination of the ABM treaty also removes a substantial part of the limitations on the use and deployment of various forms of offensive weapons in space (as has been noted, any weapon of this kind will receive antisatellite capabilities before it obtains the capacity to strike difficult targets, such as ballistic missiles).

U.S. policy regarding activities in space that began to be formulated in 2001–02 is ambivalent. On the one hand, systems deployed in space are proclaimed to be of special importance for the fulfillment of civilian objectives. These systems are characterized by substantial vulnerability to antisatellite enemy actions (the growing capabilities of China in antisatellite weapons clearly indicate that). On the other hand, there are clear hints that the United States will not renounce the development of offensive weapons capable of striking space-based assets or the use of military means to defend its own devices in space. It should be noted that building effective object-based means of active defense of space devices is more difficult than developing a limited object-based antimissile defense. It may be thus argued that the debate in the U.S. military strategy may drift toward other weapons that presuppose the possibility of preemptive strikes at forces and weapons of the opposing side when their actions are seen as threatening to U.S. assets in space (and including the principle of preemptive action in the event of a threat to the most important interests of the U.S. national security, as laid out in the “2002 Strategy for U.S. National Security” document.

A separate theme in Russian-U.S. cooperation in the nuclear sphere is the possibility of a mistaken nuclear strike—that is, the accidental or unauthorized use of a nuclear weapon. In the last two decades, but particularly in the 1980s, Russia and the United States have done enormous work to increase the reliability of their nuclear command systems (technical means, procedures and personnel) responsible for the use of nuclear ammunition—from strategic to battlefield warheads. In 1991, the USSR and the United States undertook parallel unilateral measures to radically reduce the quantity of tactical nuclear warheads. Before then, the Soviets had repeatedly raised the question of the strategic role of U.S. tactical nuclear weapons and those of its allies that were deployed along the perimeter of the USSR and the borders of the Warsaw Pact countries.

Efforts by both countries to improve the command and control of their nuclear weapons remain essential today. As the largest members of the nuclear club, Russia and the United States should set the example for states with less experience in this dangerous sphere.

At the same time, the command and control of nuclear forces always includes a built-in contradiction between, on the one hand, demands of combat readiness (specific conditions necessary to achieve combat readiness and to conduct an immediate preemptive, retaliatory or counterstrike), and the demands of reliable “negative control” that prevents the use of nuclear weapons without a common decision and direct authorization by the highest state leadership, on the other. The higher the number of “locks” is within a system securing “negative control,” the lower the operability of use of nuclear weapons. This problem was evident during the Cold War. At that time, both sides were preparing for a sudden preemptive that could have destroyed their nuclear command systems before they could retaliate.

The demand for high combat readiness by those in possession of nuclear forces depends mainly on the state of political relations between opposing powers. The better the

relations between these powers is, and the lower the state of combat readiness to use nuclear weapons, the smaller the probability of political and military conflict.

The system defining rights and responsibilities regarding the use of nuclear weapons was formed during the most intense years of the Cold War, when preparations were being made for a third world war of unsurpassed death and destruction. The concentration of unprecedented authority in the hands of one man (head of state) requires special qualities from that leader. These include, first and foremost, a high degree of stress resistance, knowledge of mechanisms of conflict escalation and de-escalation, and also of mechanisms of command and control over their own country's armed forces (that, as history teaches us, repeatedly tend to spiral out of the control of the civil and political leadership as well as the military command in circumstances of acute crises).

The 1990s demonstrated that the post–Cold War environment could still give rise to serious political crises that threaten to escalate into military and political confrontation between Russia and the United States. The 1999 NATO operation in Kosovo that included actions undertaken against the position of Russia and that bypassed the UN Security Council is the most obvious example. A detailed report published by the Center of Military and Strategic Research of the General Staff of Armed Forces of the Russian Federation concluded that, as a result of this operation, "clashes between Russia and the countries of the West—that intensified beginning in the mid-1990s—were transformed into a serious political crisis."[33]

This war included a smaller crisis following inadequate reaction by NATO's Supreme Commander, General Wesley Clark, with regard to the "Dash on Pristina" by Russian peacekeepers from Bosnia. The latter was conducted in accordance with orders

33. Yu. V. Morozov, V. V. Glushkov, and A. A. Sharavin, Balkany segodnya i zavtra. Voenno-politicheskie aspekty mirotvorchestva [The Balkans Today and Tomorrow, Military–Political Aspects of Peacekeeping] (Moscow: Center for Military–Strategic Studies of the General Staff of the RF Armed Forces, 2001), 279.

from the Russian state leadership.* The unjustifiably harsh reaction of NATO could have immediately elevated the conflict between the Russian Federation and NATO. It could have even "soared" to the nuclear level due to the enormous asymmetry in general military forces in favor of NATO and the United States and the simultaneous balance of strategic nuclear forces and other forms of nuclear weapons. This seems entirely possible given the psychological particularities of a number of people who would have been the main participants in this conflict.[34]

As Clark writes, his desire to respond militarily to the Russians was blocked by his direct subordinate in this area—a three-star English general, Sir Michael Jackson, who refused to carry out the order of NATO's Commander (referring to the fact that he had one more line of subordination—i.e. to the Ministry of Defense of the United Kingdom). He told Mr. Clark: "Sir, I will not start a Third World War for you."[35] Soon, General Clark was relieved of his duties for exceeding his authority in the course of this crisis.

The political results of the "Dash on Pristina" were lost in subsequent diplomatic negotiations. The objective of securing a comparatively autonomous position in Kosovo that triggered the "Dash on Pristina" was not realized. The military considered that what had been

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* This "subcrisis" broke out only a few days after this war ended, because of the Ahtisaari–Chernomyrdin mission, without NATO starting a ground-based operation in Kosovo, which would have been extremely difficult and costly for the West in both military and political terms. Moreover, as pointed out by the well-known American political commentator David Halberstam, for the first time in history, a victory was achieved by the actions of aircraft alone. A number of authoritative Western authors justifiably declared that it was Viktor Chernomyrdin's pressure on Serbian President Slobodan Milosevic in accordance with the instructions that he received from the supreme Russian leadership that in fact compelled the Serbian leadership to refrain from further resistance. This likely saved many lives, including U.S. and other NATO country citizens. See, for example, David Halberstam, *War in a Time of Peace: Bush, Clinton, and the Generals* (New York: Scribner, 2001), pp. 476–478.

34. Strobe Talbot, *The Russia Hand. A Memoir of Presidential Diplomacy* (New York: Random House, 2002), p. 347. In his memoirs, former U.S. First Deputy Secretary of State Strobe Talbot states that, on the day when the "subcrisis" surrounding the question of the presence of Russian paratroopers in Pristina was resolved, for the first time in his six-and-a-half years of interaction with Russia as an official, he slept "with real nightmares." Ibid.

35. See W.K. Clark, *Waging Modern War: Bosnia, Kosovo, and the Future Combat* (New York: Public Affairs, 2001), p. 394.

achieved by Russian peacekeepers in their "Dash on Pristina" was later lost by Russian diplomats at the negotiation table.[36]

The lessons of Kosovo have become deeply imprinted in the minds of the Russian national security establishment. Among other lessons, it has resulted in putting greater emphasis on the role of nuclear weapons in ensuring Russia's security and national sovereignty. This change is reflected in a series of official public documents on Russia's military policy.* Corresponding lessons are also being drawn from the war started by the United States and Great Britain against Iraq in 2003. Also, as noted above, one cannot disregard actions by Washington and its allies concerning NATO's enlargement to the east. The last wave seized territory of the former Soviet Union.

Moreover, the attitude of the Russian national security establishment has been extremely negative toward a number of countries, including new NATO members, which began adopting a military infrastructure (mainly airports left behind after the evacuation of Soviet and Russian armies). Such actions by NATO are considered openly unfriendly toward Russia, its allies, and its friends. Russian military experts are seriously worried because NATO's actions result in sharply reduced flying time for vitally important centers of the Russian Federation and Belarus, as well as significantly increased opportunities to gather intelligence in Russian and Belarussian territory. Many experts and political figures see this as a significant threat posed by U.S. forces to objects that are of vital importance to Russia (this includes targets and forces that are part of the system of nuclear deterrence). U.S. forces are stationed on bases in Kyrgyzstan and, until recently, Uzbekistan. Using these bases,

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36. Y.V. Morozov, V.V. Gluchikov and K.A. Charavin, *Works Index*, p. 225. See also A.G. Arbatov, *Security: Russian Choice* (Moscow: EPICENTR, 1999), pp. 248–255.

* In some degree, this was triggered by individual pronouncements on the American side: when Russia's representatives at various official and unofficial forums started saying that concerns had arisen in the Russian "political class" that the next target of such an operation would be Russia (or one of its allies within the CIS, for instance Belarus), Russia's representatives heard in response "Oh, you have nothing to fear [from such actions]; you are a nuclear power."

Western forces conducted antiterrorist operations against the Taliban in Afghanistan after the September 11 terrorist attacks.

It is often emphasized that in contemporary circumstances, nuclear deterrence is important for Russia not only in averting nuclear war or large conventional war, but also in preventing forced pressure on Russia and its allies.[37] Russia's officially declared nuclear policy in the 1990s underwent significant. For instance, according to the authors of a fundamental work—*History of the Russian Military Strategy* (edited by General V. A. Zolotarev), under the "new Russian concept of military strategy, not only retaliatory and retaliatory-counter nuclear strikes are admissible, but also preemptive nuclear strikes are considered permissible." Moreover, "the new doctrine determined conditions under which nuclear weapons could be put into use in case of an armed attack on Russia or its allies by a nuclear state or a state bound by a treaty with a country having nuclear weapons."[38]

As these authors note, "The new strategy implies a rather wide range of situations when a preventive nuclear strike may be used. In practice, however, fixed formal signs may hardly serve as a basis for using nuclear weapons in any quantity and form. Each time, the situation will be carefully analyzed before a concrete decision is made, and direct use of nuclear weapons may be preceded by a preliminary warning."[39] Further, "it is an entirely different situation if the enemy starts a nuclear war by himself. In that case, the decision to conduct a retaliatory nuclear strike will be taken immediately on the basis of data on a missile

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37. Speaking on October 2, 2003, at the conference within the Russian Ministry of Defense and with the participation of the Russian Federation's President—V.V. Putin and other high-ranking state officials and deputies, Minister of Defense of the Russian Federation—S.B. Ivanov, in the following way formulated the objective of strategic nuclear deterrence: "Main objective of the policy of the Russian Federation in the sphere of strategic deterrence is to avert any influence—of any type—based on force and aggression against Russia and its allies. And if deterrence does not work, to guarantee defense of sovereignty, territorial integrity and other vitally important national interests of Russia and its allies. Deterrence will be based on the possibility—in responsive actions—to inflict damage, size of which, would put in doubt the achievement of objectives of possible aggression." S. Ivanon, address given at a conference in the Ministry of Defense of the Russian Federation, October 2, 2003, www.mil.ru/articles/article3667.shtml.
38. V.A. Zolotarev, ed., *History of Russia's Military Strategy* (Moscow: Kychkovo Pole; Polygraph-Resources, 2000), p. 538.
39. Ibid.

attack supplied by the warning system or reliable information about approaching enemy nuclear strikes directed against Russia and its allies."[40]

Between 1990 and 2000, the emerging relationship between Russia and the United States significantly decreased the probability of a nuclear conflict. The maintenance of stable, promising Russian-U.S. relations in the political sphere cannot be guaranteed, and potential for political conflict is significant. The latter has emerged largely as a result of American activity over a number of years in the post-Soviet space aimed at supplanting Russian influence and supporting forces that have clearly expressed a pro-Western orientation. Generally, it should not be excluded that at some point in the future, these Western policies will provoke a serious (perhaps even nuclear) conflict with Russia and its allies.

Concerning the Russian-Chinese "Nuclear Interaction"

Neither nuclear war nor conventional war between Russia and China is likely. Relations between these two countries have grown increasingly positive in recent years. Indeed, in both the political and military spheres, the change in Russian–Chinese relations is embodied in the Good Neighborly Treaty of Friendship and Cooperation, signed in Moscow in 2001. The treaty's stipulation of complete renunciation by both countries of any territorial claims against each other is unprecedented.[41] Given China's traditional sensitivity to its territorial problems, the question of Chinese sovereignty with respect to a number of disputed

40. Ibid.

41. Several Russian experts note that the Chinese are legalists in their approach toward the system of international relations. For that reason they interpret the Treaty signed in Moscow in 2001 on Good Neighborliness, Friendship and Cooperation not as a propaganda trick—a short-term action—but as a document, having important functional content (in the words of Jiang Zemin—as a "program document"). It should also be noted that in the eyes of the Chinese leadership, the Russo-Chinese Treaty on Good-Neighborliness, Friendship and Cooperation is one of the means of "securing rear" when solving one of the most important national problems of the People's Republic of China, i.e. the Taiwanese problem. At the same time, there are voices among Russian experts that one should not put excessive trust and count on precise observance of the new treaty, recalling the fate of the Soviet-Chinese treaty of 1950. The latter talked about recognizing the two sides' sovereignty and territorial integrity that subsequently started to by contested by Mao Tse Tung's leadership of the People's Republic of China.

territories, as well as the increased sensitivity of the Russian Federation to the territorial question since the break-up of the USSR, this posture can be regarded as a pact of special historical importance, especially since China does not have similar agreements with its other neighbors.[42]

By signing this agreement, China renounced any claim to an enormous territory that is part of the Russian Federation, including Primorsky Krai, Khabarovsk Krai, the Jewish Autonomous Region, and Amur Oblast.[43]

The signing of this treaty preceded a number of other important Russian-Chinese agreements that have substantially improved relations between the two countries. Yet, as many experts have noted, the agreement is meant to last twenty years (with the possibility for extension), which is the same length of time established by the Chinese leadership for resolving the Taiwan problem. The Russian-Chinese agreement of 2001 was initiated by China, but it was Russia that insisted on including the proposition to avoid territorial disputes, which had plagued Russian-Chinese relations for many years. For example, in 1989, Deng Xiaoping raised the issue of territorial disputes at his meeting with Mikhail Gorbachev.

Several other Russian-Chinese meetings on improving relations in the military and political spheres took place prior to signing the 2001 agreement. Moscow and Beijing agreed to increase strategic stability on the level of multipurpose forces in the zone where Russia and China share a common border in the Far East, and in the Baikal region, in accordance with the corresponding Russian-Chinese agreement of 1996. The measures substantially limit the offensive capabilities of the corresponding groups of armed forces of both countries. This was done with full understanding that strengthening the strategic stability at the level of

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42. At the same time, it should be pointed out that, beginning in 1996 (especially since the visit of Chinese President Jiang Zemin to India in November 1996), a kind of "disengagement" of the armed forces between China and India in the Himalayas has occurred, the boundary question between China and Viet Nam was settled, and a number of other similar problems were resolved.

43. H. Pirchner Jr., *The Russian-Chinese Border: Today's Realty* (Washington, D.C.: American Foreign Policy Council, August 2002), pp. 4–11.

multipurpose forces (equipped with conventional weapons and tactical nuclear weapons) will also strengthen the strategic stability at the nuclear level, including at the level determined by the capabilities of strategic nuclear forces and by the policy regarding their use (and the threat of their use).[44] As a result of these measures, China and Russia have been able to concentrate their intellectual, organizational, and financial resources on higher priority strategic areas.[45]

The reduction of the two sides' offensive capabilities is a clear example of measures aimed at strengthening strategic stability in post-Cold War international political conditions. This type of measure was seriously considered in the mid-1980s, as it applied to relations between NATO and the Warsaw Pact. Conceptually, these measures were reflected in the new Warsaw Pact military doctrine, which I helped to develop.[**]

One of the most important purposes of formulating the Warsaw Pact's new military doctrine in 1986–88 (and that of the USSR for the European theater) was to prevent a rupture between its defensive character in the political (declarative) sphere and its offensive character in the military–strategic (operational–strategic) sphere. My proponents and I reasoned that a nonoffensive Warsaw Pact in Central Europe would be less burdensome for the economy of the USSR and its allies in the Warsaw Pact. In part, with reference to a number of theoretical developments and historical examples, the doctrine of

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44. It is important to emphasize the improved cooperation between China and Russia not only in the military-technical area (under the existing ban on sales of arms and military equipment to China by the U.S. and European Union), but also in military and political areas. China and Russia have improved their cooperation in the framework of the Shanghai Organization. The importance of this organization increasingly improved after India and Pakistan joined it with "observer status" in July 2005. Prior to joining the organization, India and Pakistan improved their relations dramatically, with special assistance from Russian and Chinese diplomats.

45. Former U.S. Secretary of Defense James Schlesinger declared in 1997 that a Russo-Chinese agreement on the settlement of the "strategic dispute" would mean a fundamental change in the balance of power in East Asia, since it would allow a major part of the Chinese ground forces to be redeployed to the south, making it possible to "project force" with respect to Taiwan, Viet Nam, and the Philippines. See J.J. Dziak, *The Military Relationship between China and Russia, 1995–2002* (Washington, D. C.: American Foreign Policy Council, 2002), p. 3.

** Extremely constructive roles were played here by the head of the General Staff of the USSR Armed Forces, Marshal of the Soviet Union S. F. Akhromeev, by the deputy chief of the General Staff of the USSR Armed Forces, Army General M. A. Gareev, by the chief of the Contract-Law Directorate of the USSR Defense Ministry, General-Colonel N. F. Chervov, by USSR Deputy Minister of Foreign Affairs V. F. Petrovskii, and by the chief of the Directorate of Planning of External Political Measures of the USSR Ministry of Foreign Affairs, L. Ya. Mendelevich.

the Warsaw Pact was successfully reformulated by civilian scholars together with the Ministry of Foreign Affairs of the USSR and the armed forces general staff of the USSR,[46] relying on theoretical research, forecasts and historical examples. Most of this research was based on the ideas of A.A. Svetchin, which were introduced in 1920s.[47]

The stationing of Soviet troops in Germany, Poland, and Czechoslovakia had a pronounced offensive character in its operational and tactical composition (including being furnished with the newest equipment) and the character of its battle readiness and dispositions (shock armies, tank armies, etc.). The second strategic echelon had a similar character, especially the forces in the Carpathians and the Belarussian military districts. NATO forces in Central Europe had the most significant offensive capabilities, especially air force capabilities.

Since the end of the 1960s, the Soviet leaders had had virtually no political plans for using strategic offensive operations in Europe. Soviet policy in Europe (and vis-a-vis the United States) and military–strategic operations remained separate. On the Soviet side, military personnel constantly considered a version of a sudden attack by the West that relied above all on its predominance in air power (assuming the achievement of dominance in the air by Western forces). This perception was also supported by Western officials and analysts.

Unfortunately, regime change in Eastern Europe and the reunification of Germany dismantling resulted in dismantling the tremendous offensive capabilities of the USSR and its

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46. A. A. Kokoshin, "'Plan Rodzhersa' i alternativnye kontseptsii oborony i bezopasnosti v Evrope" ["The 'Rogers Plan' and alternative concepts of defense and security in Europe"], SShA: Ekonomika, Politika, ideologiya, No. 3 (1985), pp. 18–27; A. A. Kokoshin and V. V. Larionov, "Kurskaya bitva v svete sovremennoi oboronitel'noi doktriny" ["The battle of Kursk in the light of modern defense doctrine"], Mirovaya йkonomika i mezhdunarodnye otnosheniya, No. 8 (1987), pp. 32–40; and Andrei Kokoshin and V. Larionov, "Protivostoyanie sil obshchego naznacheniya v kontekste obespecheniya strategicheskoi stabil'nosti" ["Opposing multipurpose forces in the context of ensuring strategic stability"], Mirovaya ekonomika i mezhdunarodnye otnosheniya, No. 3 (1988), pp. 23–31.

47. Interactions between the "monosuperpower," the United States, on the one hand, and the PRC as a potential "second superpower," on the other, become one of the main axes of confrontation in the system of international relations for the long-term perspective. In the last 10–15 years China significantly reduced its economic gap with the United States and increased its political influence in Southeast Asia. This is why the issue about the role and place of Russia, which still remains a nuclear superpower, in the new system of international relations remains important.

allies in Europe (especially in Central Europe). This was performed in such a way that it could not be used for any political bargaining on Russia's part (with the small exception of the reduction of tactical nuclear weapons in the United States and Europe). Later, Russia's military capabilities in the West were reduced even more—to such a great extent that a new military-political environment was established that influenced the global balance of power.

As a whole, it can be concluded that nuclear conflict between the Russian Federation and China are extremely unlikely in the foreseeable future. There are no conflicts that could activate the nuclear argument, and the sides have successfully minimized possible trigger elements that could lead to a situation in which one or both would consider the possibility of using nuclear weapons.

"Nuclear Antagonism" in U.S.-Chinese Relations

The unlikelihood of nuclear war between the United States and China is less certain, though still improbable.[48] It must be kept in mind in this case that China and the United States are two "old nuclear powers" with developed procedures of strategic control, including measures for negative control over nuclear weapons. At the same time, the history of "nuclear interaction" between China and the United States has not experienced an event similar to the Cuban Missile Crisis of October 1962.[49] In addition, there has been no long period of agreement on the problems of ensuring strategic stability, which to a significant extent has been reflected in the series of Soviet-U.S. and Russian-U.S. treaties noted above, on the limitation and reduction of strategic offensive armaments, on medium- and short-range

48. During the course of a joint seminar, conducted by the author and professor Graham Allison at Harvard in October of 2002 on the eve of the 40th anniversary of the Caribbean crisis, Allison noted that in 1962 in the Soviet Union there were only 16–18 combat ready Intercontinental Ballistic Missiles—the same number, for instance, that the People's Republic of China has now.
49. See *China's National Defense* (Peking: Publishing House of the Press Service of the State Council of the People's Republic of China, July 1998), p. 44.

missiles, or on the limitation of ABM systems. The corresponding mechanisms, which include numerous communication channels and procedures for contact between the highest leaders when acute conflict and crisis situations occur (such as those developed between the USSR and the United States), have not been developed between the United States and China.

One should also note China's political declarations concerning nuclear weapons and their usability. An official publication of the State Council of the People's Republic of China (PRC) states, "from the first days of the possession of nuclear weapons, China in all seriousness declared that it never, and under no circumstances, would use nuclear weapons first." Later on, China "with no preconditions engaged not to use nuclear weapons and not to threaten to use them in relation to nonnuclear countries and nuclear-free zones."

China has signed and ratified the Treaty for the Prohibition of Nuclear Weapons in Latin America and in the Caribbean, the South Pacific Nuclear-Free Zone Treaty, and a supplementary Protocol declaring Africa a nuclear weapon-free zone. In April 1995, it issued an official declaration in which it agreed, with no preconditions, to provide to nonnuclear states and nuclear-free zones a passive guarantee of security, and for the first time agreed to provide an active guarantee of security.[50]

China became a signatory to the Nuclear Nonproliferation Treaty (NPT) only in 1992, which provided an opportunity for a number of Western and Indian figures to accuse the PRC that, by not subscribing to that very important treaty earlier, it was helping Pakistan create a nuclear capacity.

China participated in the discussions on the Comprehensive Test Ban Treaty from start to finish and signed this treaty on September 24, 1996—the day the treaty was first opened for signing.

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50. Ibid., p. 45.

In 1994, China transmitted a proposal for a Treaty establishing the principle of no first use of nuclear weapons to the United States, Russia, Great Britain, and France. In the mid 1990s, China and Russia gave each other mutual commitments not to use nuclear weapons first.[51] Since the end of the 1990s, many prominent conservative Republicans in the United States (including some who joined the George W. Bush administration in 2001) have actively cast doubts on the veracity of the Chinese leaders and top military commanders regarding the policy of no first use of nuclear weapons. These doubts were based on the argument that the Chinese strategic nuclear forces have until now possessed inadequate survivability, in the opinion of American specialists, against a massive preemptive strike targeted against them.[52]

This argument is worthy of attention. First, however, there are other estimates of the degree of vulnerability of China's strategic nuclear forces in the case of a preemptive strike by the United States. Second, even if Chinese strategic nuclear weapons had the high degree of vulnerability ascribed to them by a number of American experts, the supreme leaders in Beijing would hardly have any plans to use nuclear weapons first. It is obvious that their first use against Russia or the United States (or their primary allies) would be a total national catastrophe for China. It is possible to hypothesize the first use of nuclear weapons by the Chinese against those states that are not allies of Russia or the United States and are at the same time significantly weaker than China in military power. In the overwhelming majority of cases, though, China can solve its problems with these states without resorting to nuclear weapons and without threatening to use them. The use of Chinese strategic nuclear forces in a counterstrike and response counterstrike is less likely, because China (unlike the Soviet

51. According to various American analyses, the Chinese People's Liberation Army concentrated in the area of Taiwanese Strait several hundreds of ballistic missiles of tactical and operational purpose (above all with nonnuclear equipment), that, as it is intended, may be massively used following the decision by the leadership of the People's Republic of China to use military force to secure its sovereignty over Taiwan.

52. In a retaliatory strike, Chinese forces, even with extremely heavy losses from a preemptive strike from the other side, are capable of using their nuclear weapons to strike a significant number of U.S. and East Asian military targets, as well as several large cities in the United States.

Union/Russia and the United States) has never had a missile-attack warning system, which would inform the Chinese leadership of a missile attack on China with a minimum warning time.

New uncertainty with respect to mutual nuclear deterrence between the United States and China was created by the Bush administration's withdrawal from the Soviet–American ABM treaty. The creation of a strategic ABM defense system is capable of significantly reducing the value of the Chinese potential for nuclear deterrence. The Chinese consider the appearance of components of missile defense systems that might destroy Chinese missiles on the boost section of the missile's trajectory especially dangerous. Deploying relatively efficient U.S. theater missile defense/ABM systems could diminish Chinese efforts to deploy ballistic missiles in the immediate vicinity of Taiwan.[53]

Following the logic of development in China in the last 15–20 years, the Chinese leadership faces a serious dilemma. It can either tacitly agree with the appearance of a "virtual reality" without sharply increasing the number of Chinese strategic nuclear forces and other nuclear forces and facilities intended to deter the United States, or it can vastly increase China's strategic nuclear forces, (expanding the number of deployed warheads on strategic intercontinental vehicles from 18-20 to 200–300 warheads or more). Observers have opined in a number of recent American publications that, when there are several missile defense systems protecting the United States, it will not be a problem for China to increase the number of nuclear munitions on strategic vehicles capable of reaching U.S. territory.

According to some analysts, the U.S. withdrawal from the ABM treaty could be

53. According to estimates published by the CIA in January 2002, toward 2015 China may have 75 to 100 Intercontinental Ballistic Missiles with undersea launch capacity. Reacting to the alarming character of these estimates, one of the Chinese deputies of the Minister of Foreign Affairs announced, "I do not have similar information that this CIA report contains, but, in my opinion, such declarations are unfounded." At the same time, he made an exceptionally important remark about the fact that China intends to strengthen its defense power "in accordance with its own needs." See "China is Reassuring the CIA: Missiles will be aimed at the U.S. Only in Case of Emergency," LENTA.RU: In the World, http://lenta.ru/world/2002/01/10/; and G. Ilin, "Threat from the East: CIA Experts fear the Chinese Nuclear Weapons," *Izvestya*, January 11, 2002, p. 3.

advantageous to China. They suggest that China planned to increase its strategic nuclear power anyway—by MIRVing its MBRs. Under these new circumstances, China's actions are justified. If the U.S.-Russian ABM treaty is maintained, China would have greater difficulty justifying an increase in strategic arms.

The first alternative is preferable in the eyes of the Beijing leadership, which considers an overt buildup of China's military power premature from the standpoint of China's long-term (and super-long-term by European standards) goals. Adherents of such an approach reason that a rapid build up of China's strategic nuclear forces and other components might cause a sharply negative reaction in the U.S. and many other countries, including the Russian Federation.[54] Japan and several West European states would also have a negative reaction to this, since they might consider themselves targets of China's increases in strategic nuclear weapons.

The absence of a Chinese reaction to the creation of missile defense systems in the United States could turn into a loss of face for Beijing in the nuclear sphere, especially in the eyes of China's Asian neighbors. The traditional Chinese political and military-strategic culture decisively goes against this. It is very hard to compensate and restore a loss of face: this can take decades or even generations. Chinese leaders (regardless of whether they belong to the new or old generation, or are conservatives or liberals) will hardly allow such a loss of face. The Beijing leadership knows that relations in the modern world depend on strength and status.

The most serious dilemma for China's state leadership and military commanders in the immediate future is how to strike a balance between not "loosing face" or looking weak in the eyes of a threatening rival (as opposed to a "strategic partner")—the United States—and

54. See D.M. Lampton and R.D. Ewing, *U.S.-China Relations in a Post–September 11 World* (Washington, D.C. Nixon Center, 2002), pp. 19–20.

not providing grounds for a sharply negative reaction to an increase in China's strategic missiles and nuclear strength.

A boost by China in the development of its strategic nuclear might is extremely probable and would be inexpensive for the rapidly growing Chinese economy. An increase in the number of nuclear warheads on Chinese strategic vehicles to 200–300 would first demonstrate the capability of overcoming, even in a weakened retaliatory strike, the missile defense systems which the U.S. plans to create in the next ten to fifteen years. Second, it would mean an enhancement in China's status as a great power, as China would then have greater capabilities than the other two "old nuclear powers" (France and Great Britain), and would approach the Russian Federation, in which a more significant reduction of nuclear arsenals is possible. It is obvious that the United States would not respond positively to such a turn of events. The magnitude and character of Washington's reaction, however, will largely depend on what administration is in the White House, on the composition of the U.S. Congress at the time of the Chinese nuclear "spurt," and on the results of the unfolding "war on terrorism," including what happens in Iraq.

A change in China's nuclear policy would cause a considerable negative reaction in Japan, North Korea, and other nearby countries. One can hardly expect an independent response from Japan or North Korea in the next five to seven years. However, both will continue to be strongly dependent on their alliance with the United States. The more distant future may bring a radical change in the policies of these countries, including a change in the nuclear sphere. For example, changes in public opinion occurred in Japan, generated mainly by domestic circumstances and by the deteriorating position of the United States in the international arena at the beginning of this decade.

The question of a radical reconsideration of Japanese foreign and defense policy has been raised frequently among Japan's core political elite. This includes rethinking Japan's

relationship to nuclear weapons and the possibility of creating a Japanese missile and nuclear arsenal. An example is the statement of the general secretary of the cabinet of ministers of Japan, Yasuo Fukuda when he spoke in early 2002 in favor of the rapid acquisition by Japan of its own nuclear weapons. As noted by attentive observers, recent Prime Minister of Japan Junichiro Koizumi refused to publicly distance himself from the general secretary's remarks.[55] Fukuda's statement went virtually unnoticed in the Russian Federation, but it caused both a strong public and private reaction in China and a number of other Asian states.

The launch of a North Korean three-stage ballistic missile in August 1998 prompted Japan's apparent desire for a nuclear capability. Additional impulses appeared at the end of 2002 in connection with China's declarations regarding its possible withdrawal from the treaty.

Doubts about the reliability of U.S. security guarantees to Japan are being increasingly expressed and may crystallize into a radically different foreign and military policy over the next several years. An attentive observer will notice that the Japanese elite is growing dissatisfied with Japan's lack of complete sovereignty. The U.S. is beginning to regard this with ever greater attention within its national security establishment, where Japan for a long time has been classified as a "threshold country," which assumes that Japan's science and industrial sectors have the capability to quickly develop and deploy nuclear munitions and effective means for their delivery (including those with intercontinental range). [56]

The nuclear issue, the continuing growth of the Chinese economy, and the modernization of the National Liberation Army of China and the Chinese defense industry are causing great anxiety in Tokyo. Japan does not yet have an adequate doctrinal response to

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55. Ariel E. Levite, "Never Say Never Again: Nuclear Reversal Revisited," *International Security*, Vol. 27, No. 3 (Winter 2002/03), pp. 22–71.

56. In Japan, greater anxiety is provoked by openly expressed plans of the People's Republic of China to build a navy with oceanic capabilities – under the Chinese People's Liberation Army – that would neutralize the role of a powerful component of the Japanese "self-defense forces" that already in the 1980s witnessed considerable growth.

these growing concerns, or the necessary financial resources to respond to them.[57] Uncertainty is increasing among the Japanese political elite with regard to the reliability of the United States as Japan's senior partner and strategic protector.

These considerations are not yet capable of radically changing the Japanese national security policy, which depends heavily on the United States. Japan has demonstrated total loyalty to the United States in the war on terror, while using the situation to move forward to eliminate restrictions on its own military activity that have existed for the past decade.

The most likely course of conduct for the Chinese leadership in the next several years will be to demonstrate that China is technically capable of overcoming the proposed U.S. missile defense systems and of increasing the combat resilience of its strategic nuclear forces [including its transition from a monad in the form of intercontinental ballistic missiles (ICBMs) to a dyad consisting of ICBMs plus submarine-launched ballistic missiles]. The Chinese leadership will, in this case, carefully follow the implementation rate of all plans to create missile defense systems—both on U.S. territory and in theaters of war. There is still much that has not been determined in the plans for creating these systems, including the architecture, their main components, the deployment locations of the main complexes, etc. It seems quite possible that, once again, tough opposition may arise to specific plans for creating ABM defenses inside the United States.

A critical factor for the Chinese leadership may be the U.S. decision to create a ballistic missile defense system in which the interceptors are equipped with a new type of nuclear weapon. This could significantly increase the energy of the ABMs built by the United States, as has been discussed ever more frequently in the professional scientific and military-political press in the U.S. There is much that points to U.S. consideration of renewing full-scale nuclear testing to create nuclear weapons with minimal consequences, but above all

57. See Military and Political Problems and Armed Forces of China // Express-Information, No. 1 / Responsible for the publication—A.V.Ostrovsky (Ph.D. in Economics), P.M.Konin (Ph.D. in History): Far East Institute, 2004. PP. 45–52.

with minimal energy output in the form of an electromagnetic pulse (which is capable of doing serious harm to one's own installations, both civilian and military, including radar stations and other detection, guidance, and targeting equipment belonging to one's own missile defense system).[58] Accordingly, the probability of actually "nullifying" the Chinese strategic nuclear potential in this case would increase significantly.[59]

Since the end of the 1990s, China has more than once demonstrated technological achievements in the creation of intercontinental-range equipment. A parade in honor of the fiftieth anniversary of the People's Republic of China in 1999, for example, included the mobile-launched MIRVed solid fuel ICBM Dunfen-31. This ICBM is simultaneously a new method of overcoming and opponent's ABMs and a method of ensuring high viability and combat resilience of China's strategic nuclear forces.

China's long-range submarine-launched ballistic missile (SLBM) Tzulan-2 (*tzulan* in Chinese means "big wave") has undergone successful testing. According to U.S. intelligence data, China is also developing a long-range cruise missile and working on a model of a nuclear submarine missile carrier (project 094) as well as the long-range cruise missile Hong Niao (Red Bird) with a 20–25 year delay with regard to the United States and Russia.[60] As a whole, these tests and demonstration of this equipment, demonstrate that China is capable of acquiring more powerful and less vulnerable strategic nuclear forces. This would materially

58. "The Resolution of the XVI All-China Assembly of China's Communist Party on the Report of the 15th Central Committee" (in Russian), Chinese Internet Information Center, Xinhua News Agency, November 14, 2002, pp. 1–2.
59. Both Japan and South Korea are focusing increasing attention on the possible development of ABM weaponry since, if such weapons are created, the creators of ABM defense will try to guarantee that ballistic missiles are intercepted using nuclear weapons (comparatively "low-yield," with comparatively small energy output in the form of electromagnetic pulses) far from U.S. territory, including extremely close to the territory of leading American allies in the Asiatic-Pacific region and the Russian Federation. In this case, it is possible that, when the warhead of the interceptor missile explodes, the warhead of the intercepted rocket, with a far more powerful warhead (or warheads), will detonate with significant output of energy in the form of an electromagnetic pulse (EMP) and even a "super-EMP" that has a radically more powerful effect on civilian electronic and electrical systems in the corresponding radius of impact.
60. Bush, *National Security Strategy*, p. 27.

corroborate the Chinese doctrinal position on no first use of nuclear weapons.[61] The U.S. national security establishment perceives the creation of such facilities as strengthening the emphasis on nuclear deterrence, specifically with respect to the United States in comparison to what occurred when a strong emphasis was placed on developing the means to restrain the USSR and India.[**]

The period during which China builds up its nuclear forces could be considered a transition process from one state in the system of international relations to another. It has been empirically proven that in both technical and social systems, this period is characterized by the greatest degree of instability and uncertainty.

It should not be ruled out that China will attempt to create its own missile defense system—both to shield the launch sites of the ICBMs and to defend the most important center of governmental and military–strategic control, science, and industry: Beijing. One approach for China in the new structuring of their strategic forces is to build up strategic offensive armaments at a significantly smaller scale (not going beyond the limits, for example, of 100–120 warheads on intercontinental vehicles), placing strong emphasis on the development of an ABM system. In this case, the architecture of the ABM defense system could be such that

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61. The Chinese leadership announced as early as the beginning of the 1960s that it adheres to the principle of the non-first use of nuclear weapons. The leadership of the Soviet Union made a similar announcement much later. Such announcements have never been made by U.S. leaders. In the course of numerous debates on this question between Soviet and American official representatives and scientists, in which the author had occasion to take part, the Americans explained their refusal to unambiguously assume the obligation of the non-first use of nuclear weapons because the USSR and the Warsaw Pact possessed "overwhelming superiority" in Central Europe. According to their logic, the only way to stop a successful attack by Soviet troops and other Warsaw Pact troops was to use various forms of nuclear weapons, beginning with comparatively low-yield "battlefield" weapons (mainly for 155-mm caliber artillery). Both then and now, most experts were inclined to believe that the operational use of the principle of nonfirst use of nuclear weapons, formulated at the highest governmental level (at the supreme-strategy or "big-strategy" level), is not supported in China, as mentioned above, by the corresponding organizational and technical measures and resources at military-strategic, operational, and tactical levels (assuming that one may speak of "tactics" as applied to the use of such supreme-strategy resources as nuclear weapons).

** In the summer of 2002, according to press reports, China tested a modernized medium-range ballistic missile, which is predominantly regarded as a means of restraint with respect to the Russian Federation, India, and a number of other Asiatic states (Japan, South Korea, Vietnam) and with submarines. Moreover, in the eyes of Beijing, this would decrease the vulnerability of Chinese strategic nuclear forces that face a potential preemptive "disarming" strike by the United States and would simultaneously reduce the possibility of a "decapitating strike" aimed at the highest government leadership and the top military commanders.

it would shield not only the administrative-industrial center of the country (Beijing), but also the launch sites of the Chinese ICBMs and bases, if one keeps in mind the military sites on the territory of a number of countries in the western Pacific.

Such a formula for the development of Chinese strategic forces requires more focused work in the areas of missile defense, interceptor missiles, corresponding radar stations, and a system for the tactical control of missile defenses. In any case, China, it would seem, has to start creating its own early warning system, which has been virtually absent—at least in the form possessed by the United States and the Russian Federation.

It should be noted that a missile defense system and a missile attack warning system are significantly more complicated technically than the equipment for strategic offensive forces, which was, until recently, under development in China (even taking into account the extremely high technical level of the new Dunfen-31 ICBM). The integration of an ABM system, combined strike, information, and control components into a unified working structure is highly complex. This means that China is more prepared to make progress in the deployment of its own strategic offensive forces than to create a missile defense system. In fact, missile attack warning systems have not even been created in France and the United Kingdom, for similar reasons.

With all of the scientific and technical difficulties that preclude China from creating a missile defense system, the leadership in Beijing sees development of a deterrence arsenal as preferable to a build up of their strategic nuclear forces. The leadership understands that the creation of a missile defense system in combination with a moderate build up of China's strategic offensive weapons (equipped at the same time with various resources that ensure that they can break through any American missile defense systems in the foreseeable future, including retaliatory measures by the Chinese strategic nuclear forces) will be met with a less

negative reaction in the international community, including India and Russia, than a build up of strategic nuclear forces.

In evaluating Chinese motives for developing their strategic nuclear weapons, it must be kept in mind that many of the political leaders (and top military commanders) in China are convinced that a key strategic mission the U.S. national security establishment is not to limit the external influence of China though containment,[62] but to prevent China from becoming a "second superpower" by bringing about its collapse, as happened with the Soviet Union in 1991.

For at least two decades, U.S. policy with respect to China has been characterized by a complex combination of competition with China in the world economy and cooperation with a country that is both a strategic partner and a rival. The George W. Bush administration initially aimed to enhance the deterrence component in U.S.-Chinese relations. The administration's desire "to stop China before it's too late" was strong. Conservative Republicans mentioned not only the fact that in the 1990s at the time of unprecedented economic growth in the U.S. (which at that time surpassed the European Union and Japan), the rate of China's growth has been even higher,[*] but also the fact that China remained a communist country. The Chinese leadership confirmed its official commitment to communist ideology at the Communist Party Congress in November 2002 .A resolution passed during the congress asserted that the party should seek a revival of the great Chinese nation by relying on national traits, and by following the philosophy and ideas of Marxism-Leninism,

62. One public manifestation of this new emphasis in the U.S. policies with respect to China was the statement by U.S. Secretary of Defense Donald Rumsfeld at the beginning of 2001. Many say that the initial intention of the George W. Bush administration was to strengthen the "containment" component in U.S.-Chinese relations. There was a strong urge to "stop China now, before it's too late." Among conservative Republicans, it was noted that not only did the 1990s bring unprecedented, prolonged growth in the U.S. economy (which allowed it to break away from the European Community and from Japan), but Republicans noted that at the same time, China, having an even higher growth rate than the U.S., substantially reduced its gap with America (the other Asian giant, India, was also able to do this, but not to the same extent as China). At the same time, these conservative Republicans did not fail to note that China "remains a Communist power."

* India also tried to progress in this area but has not been as successful as China.

Mao Zedong, and Deng Xiaoping.[63]

Current U.S. policy with respect to China is aimed at the collapse and fragmentation of China and the elimination of the communist regime, and significantly raises the stakes in the vent of a standoff between China and the United States. The nuclear sphere is similarly affected. For the Chinese leadership and millions of civil servants in the state machine, the party, and the command staff of the Chinese National Liberation Army, confrontation with the United States would be a fight not only for their political, but also their social, economic, and physical survival. It could lead to a mobilization of resources for the purposes of defense in a country that yields ever more economic might, of a sort that virtually no one in the United States can anticipate today.[64]

Moreover, such high stakes in conflict situations for the Chinese political and military elite (and the business elite, given its close association with China's political and military elites in modern China) may mean that China is prepared for higher degrees of escalation in the course of potential conflicts, including threatening the use of nuclear weapons.

The Bush administration's of forming a new foreign policy strategy with respect to China (with a military, including nuclear, component) was, to a certain extent, disrupted by the events of September 11, 2001. After that date, the focus of attention in the U.S. leadership shifted to the war on terror, in which China declared its support for the United States with almost the same speed as the Russian Federation. China, in this case, undertook a series of political and diplomatic efforts in support of the United States that were extremely important from a practical viewpoint, including efforts that were little known in Russia but met with strong approval among the U.S. leadership.

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63. Ibid., p. 27.

64. The defense efforts in China have been on a much smaller scale than those in the U.S. China's military expenditures are estimated to be at most about $60 billion (including all secret budget items), whereas the U.S. military budget is about 5.5 times that sum. The technical equipment of China's armed forces lags behind not only that of the armed forces of the United States, but also that of the Russian Armed Forces by two and sometimes three generations.

In the Bush Administration's National Security Strategy of the United States of America, published in September 2002, China was not regarded as an opponent or a "rival." This document states, "We welcome the emergence of a strong, peaceful, and prosperous China." It also states, however, that "the democratic development of China is crucial to that future," and that after twenty-five years of reform, "China's leaders have not yet made the next series of fundamental choices about the character of their state."[65] It can be concluded from such caveats that if China refuses to follow the path of Western democratic development, the United States will not welcome the appearance of a strong China.

Many in China considered that the Bush administration would, in fact, refuse to allow China the right to further strengthen its military power. The National Security Strategy states that by developing "advanced military capabilities," China is following an "outdated path," which does not correspond to the tasks of developing "national greatness." It made no mention of the United States' lack of willingness to cut military forces and military expenditures. On the contrary, by the time Bush introduced the 2002 National Security Strategy, the United States had already raised its military expenditures dramatically. Such an approach to the development of Chinese national might, and to the reinforcement of the military component therein—in the absence of any proposals for the restriction of U.S. military might confronting China (except for the reduction of combat readiness of the strategic nuclear forces in accordance with the Russian–U.S. agreement on strategic offensive potentials)—could lead only to an increase in American–Chinese antagonism. This antagonism is already at a

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65. As it has already been noted, decisions of the XVI Assembly of the Communist Party of China that took place in November of 2002, do not envisage by any means any radical changes in the character of the Chinese state—changes expected by the authors of George W. Bush's *2002 Strategy of the US National Security*. When talking about direction in foreign policy formulated at the Assembly of the Communist Party of China, it is emphasized that the People's Republic of China "needs to continue conducting independent and sovereign peaceful foreign policy, together with the world's nations in order to protect interests of all the humanity, *to actively stimulate multi-polar character of the world, to oppose all forms of hegemony and policy by force…*" (text in italics highlighted by the author.). See *Resolution of the XVI All-China Assembly of the Communist Party of China on the report of the 15th Central Committee* (Beijing: Publication of the Central Committee of the Chinese Communist Party, 2002), pp. 3–4.

67. Thomas Donnelly, "Preserving PAX AMERICANA," *Outlook*, Vol. 3. No. 1 (January 2001), pp. 4, 7.

significant level because of the Taiwan problem, which intensified after the Bush administration came to power.

Thomas Donnelly of the "Project for the New American Century," writes that, during the Cold War, the central front was Europe, where the Warsaw Pact and NATO stood over the Fulda Gap on the German plain, but that strategic rivalry for the U.S. has now shifted to China. "It is taking place in East Asia, with the Taiwan Straits as the Fulda Gap of the present day," writes Donnelly. He further asserts that one of the main components for reform of nuclear forces in the United States today is to ensure the "possibility of carrying out combat operations and of achieving decisive victory."[67] Thus, U.S. neoconservative figures are prepared to (at least verbally) proceed to nuclear war, just as a number of U.S. figures once considered the possibility of using nuclear weapons in the case of combat operations in Central Europe, including in the Fulda Gap.

On the whole, many signs indicate that the current U.S. position regarding containment of China will continue and may even gain momentum. This policy will have a more pronounced nuclear dimension, as will China's.

The more serious conflict in U.S.-Chinese political-military relations deals with the U.S. military presence in Central Asia that emerged after the September 11 attacks. Some Chinese experts believe that this presence is long-term and represents the strategic encirclement of China. This belief was one of the main reasons to include a provision regarding U.S. military presence on the territory of the five Central Asian states (all members of the Shanghai Organization) in the Declarations of Rights for Shanghai Organization member states in July 2005.

U.S. and Chinese positions on Taiwan are best perceived from the opinion exchanges between the Chairman of the Communist Party of China, Jiang Zemin, and U.S. Secretary of State Condoleezza Rice in July 2004. Hu Jintao, president of the People's Republic of China,

also made a declaration. In a message to the Chinese media, Jiang stressed that Taiwan remained the most sensitive issue in U.S.-Chinese relations, and that some recent actions by the United States, particularly its supplying Taiwan with modern weapons, angered and disappointed China. A press release stated that "the Chinese people want peace, not war," and that they stand for "one state–two regimes." The idea of Taiwanese independence is unacceptable for China; its sovereignty and territorial integrity is too important. If the Taiwan leadership starts an independence campaign with foreign states' assistance, China will strongly oppose it.[68]

The press release also referred to the U.S. position, noting that National Security Adviser Condoleezza Rice stressed that President Bush paid special attention to developing relations with China and expected to further expand bilateral cooperation. He understood the concern of the Chinese government regarding Taiwan, and opposed conflict in Taiwan's territory. However, his position did not support any actions that would lead to a change in the status-quo in the Taiwan Strait.[69] Thus, the U.S. demonstrated that it does not support returning Taiwan to full Chinese jurisdiction.

Summing up U.S.–Chinese relations in the recent years, Zemin said that it would be important to follow basic guiding principles. First, it is important to exercise foresight. Both the United States and China are large and influential world superpowers, and it is important to improve U.S.-Chinese relations. Second, it is important for the two countries to accept and respect changes and distinctions, and look for similarities. The world is prosperous and diverse; therefore, different civilizations and social systems should peacefully coexist and jointly develop, trying to find common interests and approaches. Third, it is important to comply with the provisions of the joint Chinese-Russian communiqué and treat the Taiwan issue carefully. Chinese-American relations are growing, cooperation is expanding, but

68. Meeting of Jiang Zemin with Condoleezza Rice, Embassy of the People's Republic of China in the Russian Federation, July 8, 2004, http://www.chinaembassy.ru/rus/xwdt/t143127.htm, p. 1.
69. Ibid, p. 2.

obstacles arising should be surprise. The main way to treat them is with mutual respect, balance and equality of rights.[70]

A lesser-known but still important issue between the United States and China regards Tibet. The United States has expressed doubts in Chinese sovereignty over Tibet, which caused the Chinese Ministry of Foreign Affairs to issue a statement in response to the United States on the Tibet question in conjunction with the U.S. Congressional bill "On State Department Authorities for 2003."

The foreign ministry statement says that, "Tibet is an indivisible part of China, and issues related to Tibet are the issues of China's domestic policy. The United States report developed in accordance with the U.S. domestic legal system supported the dissident activity of the Dalai Lama, contradicts key norms of international relations and principles of three U.S.-Chinese joint communiqués, and is an intervention in China's internal affairs. China's government policy regarding the Dalai Lama is simple—it can cooperate and negotiate with the Dalai Lama if the latter avoids championing Tibetan independence, restrains from dissident activity, and declares Tibet and Taiwan to be legitimate parts of China. The Chinese government requires the U.S. administration to respect the facts, comply with official documents and obligations, and to stop intervening in China's internal affairs."[71]

In conclusion, the instability of nuclear deterrence at a global level will increase in the next seven to ten years because of radical changes in the Russia-China-U.S. triangle. Being territorially and geopolitically a Eurasian state, Russia is deeply interested in maintaining friendly, mutually favorable relations simultaneously with the United States and China. Russia in this case is free to exert substantial influence in ensuring that relations between China and the United States do not deteriorate and that their conflict potential is not realized.

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70. Ibid, p. 1.
71. A representative of the Ministry of Foreign Affairs of the People's Republic of China, Tschan Tsiye, answered a question of journalists regarding the second address of the U.S. President on the Tibetan question. See the Embassy of the People's Republic of China in the Russian Federation, http://www.chinaembassy.ru/rus/fyth/t143129.htm.

Russia's experience in ensuring nuclear and nonnuclear strategic stability, its experience in negotiating, and its know-how in responding to crisis situations make Russia a valuable and influential partner in the case of a nuclear threat.

Potential Nuclear Conflicts between Members of the "Nuclear Club"

In 1998, India and Pakistan joined the nuclear club.* Since the Second World War, these countries have been in a permanent state of tense relations with the very real threat of developing into an all-out war from the moment they acquired independence in 1947.

Their acquisition of nuclear weapons and the means to deliver them was a lengthy and complicated process, with many fits and starts.[72] Until the moment of acquisition of nuclear

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* Many Indian authors note significant differences in political systems of the two countries, in the first place the fact that in Pakistan ,political power for a long time was in the hands of the military, when India was and remains a parliamentarian republic.

72. In Indian political and academic circles, several main arguments are raised in favor of building nuclear weapons. Among them, there are also insufficient efforts by superpowers to radically reduce their own nuclear arsenals ("if they do not want to become such nonnuclear as us, then we should become nuclear in the same way as they are") and the Chinese nuclear factor, in existence already from the moment China conducted its first own nuclear test. The fact that the main motive was especially the Chinese factor is confirmed by the evolution of the Indian military nuclear program. Such factors as the situation in Tibet at the end of the 1950s, India's defeat in the 1962 border conflict and subsequently continued territorial dispute, transformation of China in a nuclear power in 1964, continuation of the confrontation in the 1960s, served as convincing arguments in favor of acquiring its own nuclear potential by India. And, on the contrary, weakening of tensions in Indo-Chinese relations in the 1980s was the main reason that provoked lengthening of periods between the first and subsequent Indian nuclear tests.

Important successes in normalization of Indo-Chinese relations were achieved in recent years, more particularly during the course of the visit in India of President of the People's Republic of China—Jiang Zemin, in the autumn of 1996. This was helped in an important measure by the efforts of the Russian side that is not interested in an Indo-Chinese conflict. It should not be forgotten that the two sides are important strategic partners of Russia; Russia in particular cooperates on a large scale with these two countries in the sphere of military technology (of course, not in the missile and nuclear spheres). Results of this visit by Jiang Zemin can still be seen today. However, they did not receive timely and due support and were not developed, otherwise a different result regarding Indian and Pakistani missile and nuclear programs could have been achieved.

The level of conflict intensity in Indo-Chinese relations remains indeed considerable. India constantly reminds that China retains under its control a part of India's territory, captured after the armed conflict of 1962. China, however, does not acknowledge India's sovereignty over Sikkim. A potentially more important zone of conflict interests of India and China may become South-East Asia (it is enough to recall the characteristic name of the peninsula—Indo-China), but at the same time rivalry of the two Asian giants here is not military but mainly economic in character.

It should be recalled that attempts by the Indian leadership to pose in front of the leaders of the international community the question about the necessity to find some other, nonnuclear solution to the problem of India's anxiety about the fact that its dangerous neighbor, China, acquired its own nuclear weapons. Indian leadership repeatedly attempted to initiate discussion among leaders of the world's leading countries (above all

status by these countries, many scientists and other experts suggested that the appearance of nuclear weapons in the hands of the Indians and Pakistanis would lead to a significant reduction in political and military conflicts between them.

The 1999 Kargil incident demonstrated convincingly that the notion that the presence of nuclear weapons in the hands of two antagonists increases their restraint toward the use of military force—when a conflict is still far from the "nuclear threshold" up until the moment of nuclear weapons' use—was groundless.[73] Moreover, it all began with a relatively small armed conflict.

The Kargil incident occurred shortly after India and Pakistan signed the Lahore declaration in February 1999. This declaration required the two parties "to undertake urgent steps toward lowering the risk of accidental or unauthorized use of nuclear weapons and to discuss concepts and doctrines from the point of view of preparing measures of trust, aimed at averting a conflict with the use of nuclear and conventional weapons." The memorandum on mutual understanding that accompanied the declaration contained a stipulation for the adoption of limited measures of transparency, but none of these measures have been put into practice.

In 2001 and the first half of 2002, India and Pakistan came dangerously close to crossing the "nuclear threshold" on several occasions. Pushing them in that direction was the terrorist attack against the Indian Parliament in December 2001. Both countries deployed

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the United States and Great Britain) on complex questions of nuclear disarmament and nuclear guarantees of India's security. The majority of these questions have remained unanswered.

Attempts by Pakistan to build its own nuclear potential proved an even more important argument for the Indian leadership in favor of building nuclear weapons. Moreover, people in India are deeply convinced that Pakistani nuclear systems were built with direct participation of Chinese experts and with the help of Chinese technologies, although prominent experts from other countries have different points of view on this issue. Such statements are also issued by many Western experts.

As a whole, it can be observed that practically simultaneous appearance of nuclear weapons in both India and Pakistan was, if one is to use classical models of balance of power, advantageous to China. As a result, a new "nuclear triad" was clearly formed after 1998: People's Republic of China–India–Pakistan.

73. See more particularly Scot D. Sagan, "The Perils of Proliferation in South Asia," *Asian Survey*, Vol. XLI, No. 6 (November/December 2001), pp. 1064–1086.

substantial conventional forces along the Indian-Pakistani border. Testimonies about the increased degree of readiness and dispersion of their nuclear forces appeared in the media.

A nuclear exchange between India and Pakistan could have led not only to the deaths of tens of millions of people in South Asia, but also to high quantities of radioactive fallout on Russian territory and on other post-Soviet states, causing serious harm to the health of millions of Russian citizens, the environment, and agriculture.

In analyzing the possible ecological and climatic consequences of an Indian-Pakistani nuclear exchange, one should assume that, as prominent Russian expert on this matter A.S. Ginzburg has remarked, they would differ significantly from the large-scale atmospheric changes and consequent ecological disasters that were analyzed in the 1980s within the framework of the "nuclear winter" phenomenon. These differences are related to the mountainous terrain, subtropical climate, and high population density in the two countries. Moreover, compared with the Russian Federation and the United States, the total power of India and Pakistan's nuclear warheads is small (according to the estimate by Ginzburg—approximately 1 megaton in the TNT equivalent). Notwithstanding specificity of the situation in this region, the aforementioned author concludes, "It may be argued undoubtedly that local and regional meteorological and ecological effects may damage the life of the population and the demographic situation in the region more acutely than direct destruction from nuclear explosions."[74]

Russia and India are linked by a long-standing mutual partnership, which includes cooperation in the military and military technology spheres. From the 1990s to the beginning of this decade, because of the prohibition (commensurable with the same prohibition in China) on newer arms and military technology sold to India, the Russian military-industrial complex survived, securing by the same token the preservation of Russian sovereignty.

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74. See A.S. Ginzburg, *Pryamye i kosvennye ékologo-klimaticheskie posledstviya vozmozhnogo yadernogo indo-pakistanskogo intsidenta* [Direct and indirect ecological and climatic consequences of a possible nuclear Indo-Pakistani incident] (Moscow: Institute of Atmospheric Physics, RAN, July 2002), p. 2.

Nuclear war would cause enormous damage to one of Russia's most important strategic partners, thereby weakening Russia's position on the international stage and harming Russian interests.

The development of relations with Pakistan in recent years is an important achievement of Russian diplomacy, especially because it has not come at the expense of Russian-Indian relations. The efforts undertaken in June 2002 by President Putin in Almaty, Kazakhstan, at a meeting with the leaders of India and Pakistan (and also in the course of the visit of Pakistan's President Pervez Musharraf in Moscow in February 2003) were fully justified given the degree of tension in the Indian-Pakistani conflict. And despite the opinion of many skeptics in Russia and abroad, these efforts yielded results.

The absence of reliable mechanisms and rules of behavior were evident in the behavior of the India and Pakistan during their latest conflict.[75] It is one thing to prepare the scientific and technological bases for nuclear weapons (and their means of delivery) and to build such weapons, but it is another to incorporate them into the new system of national security transformed as a result of the acquisition of missile-based weapons and nuclear weapons, and to secure appropriate control over corresponding components of the strategic command and control system.[76] An even more difficult task for the new nuclear powers is to contribute to strategic stability in the world.

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75. As noted, for instance, by a Pakistani researcher—Jamal Hussain—nuclear factor in Indo-Pakistani relations began to play an active role starting in 1985 "when both India and Pakistan by means of purposeful leaks were making each other understand that they reached nuclear threshold and have at their disposal nuclear weapons—this without conducting nuclear explosions." J. Hussain, "The Nuclear Factor in the Nature of Future Wars in South Asia," *Defense Journal* (October 2003), p. 43. In May of 1998 India and Pakistan "took their nuclear weapons out of the closet." Nuclear explosions removed previous "nuclear ambiguity."

76. Indian technocrats with understandable pride emphasize that both missile-based carriers and nuclear weapons were built in India on their own. For India, missile-based and nuclear weapons—as in its own time for the USSR, France, China—represent to a large extent not only an instrument of the defense policy but also a symbol of their country's mastery of high technologies. Pakistani authors also emphasize that nuclear weapons and means of their delivery were built independently by Pakistan. They also argue that India built its nuclear potential, at least, with the connivance of Western states, and in many respects thanks to greater technological help it received in developing its civilian nuclear science and industry.

Many experts have also expressed doubts regarding the presence within India's and Pakistan's nuclear forces of the technical means and procedures to ensure centralized control over their nuclear warheads and means of delivery.* At the same time, India and Pakistan have made every effort to show that their nuclear forces and delivery means are in reliable hands.

India's prime minister Atal Bihari Vajpayee, in an interview with London's *Financial Times*, declared that his country's nuclear means are under the reliable control of civilian leadership. He stated, "We have built a complex and modern command and control system for our nuclear weapons under full civilian control, with all checks and balances that are present in a democratic system." Vajpayee declared, however, that India repeatedly offered to begin negotiations with Pakistan (a country where nuclear weapons are in the hands of the military) that would result in measures to decrease the danger of accidental or unauthorized use of nuclear weapons.

Newer data show India and Pakistan's nuclear forces are highly vulnerable to preemptive strikes, which differentiates them from the strategic nuclear forces of the United States, Russia, Great Britain, and France. This vulnerability could cause Indian and Pakistani state leaders and military commanders to use nuclear weapons in a preemptive strike, if only out of the fear of loosing their own nuclear weapons if they delayed in taking action.

With regard to their political and military cooperation after their acquisition of nuclear weapons, India and Pakistan find themselves in a situation similar to that in which the USSR and the United States in the 1950s. When the vulnerability of their nuclear was considered a possible motivation for a preemptive strike (the linkage between vulnerability and

* The author can testify that optimized procedures for controlling nuclear forces and equipment, optimally combining "positive" and "negative" control, have no less significance than the technical equipment proper.

preemption was first noted by the American scientist Albert Wohlstetter, who in the 1950s laid several cornerstones in the theory of nuclear deterrence).[77]

An analysis of the parameters of Indian and Pakistani multipurpose forces shows that the situation at the up to the nuclear level leaves much to be desired from the viewpoint of general strategic stability. The two sides continue to increase conventional offensive means (tank divisions and formations, offensive air force, missile-based means of hitting nonnuclear equipment, etc.). Since December 2001, following the terrorist attack in the Indian Parliament, Indian-Pakistani strategic stability at the level of multipurpose forces has worsened as the armies of the two countries moved closer to a potential line of military conflict.[*]

Moreover, the experience of the USSR and Western countries from 1970 to 1980 in Central Europe, where the Warsaw Pact and NATO forces faced each other, as well as the Russian-Chinese experience of the mid-1990s in increasing strategic stability at the level of multipurpose forces, were until recently disregarded.[78] Much of what was developed to increase strategic stability at the nonnuclear level in Central Europe (and that in reality began to materialize in the second half of the 1980s), however, has lost none of its significance in the context of the circumstances surrounding India and Pakistan today.

The degree of restraint exercised by India and Pakistan in the quantitative development of their nuclear forces and means will depend, in many respects, on how the

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77. For that, as argued by some Western authors, Pakistani nuclear warheads (with high degree of probability) do not comply with the same high standards of security as Soviet (Russian) and American nuclear warheads do. This creates principally different probability of their accidental explosion that may serve as a point of departure for the start of a nuclear war between India and Pakistan. Analysts note that "accidental explosion of a Pakistani nuclear warhead may be interpreted by Pakistan as a part of an Indian first (nuclear. – *A.K.*) strike…." See L. Feinstein, C. Clad, L.A. Dunn, and D. Albright, "A New Equation. U.S. Policy toward India and Pakistan after September 11," Nonproliferation Project, Global Policy Program, No.27 (May 2002), pp. 10–11.

* In October 2002 after elections were held in Kashmir, the Indian deployment of multipurpose forces along the Indian-Pakistani border began to be reduced.

78. See A.A. Kokoshin and V. V. Larionov, "Protivostoyanie sil obshchego naznacheniya v kontekste strategicheskoi stabilnosti" [Opposition of multipurpose forces in the context of strategic stability], Mirovaya ékonomika i mezhdunarodnye otnosheniya, No. 3 (1988), pp. 23–30; and A.A. Kokoshin, "K voprosu o vnezapnosti" [Concerning the question of surprise], Voennaya mysl', No. 1, (1989), pp. 63–68.

evolution of U.S.-China nuclear policy and on the likely transformation of Iran into a nuclear power.

The most important role in this scenario, however, will be played by India's and Pakistan's membership (as observers) in the Shanghai Cooperation Organization, which they joined in July 2005. The same can be said about the aforementioned experience of the Russian-Chinese measures of the 1990s in increasing strategic mobility at the level of multipurpose forces and means.

In any event, India will probably develop nuclear intercontinental forces to keep pace politically with China.* If China sharply increases its strategic nuclear forces, India will be all the more ready to follow this path. But, at the same time, the development of India's nuclear forces aimed at confrontation with Pakistan will still continue.

It is still too early to predict whether Pakistan will attempt to develop an intercontinental missile capability. As many Pakistani figures and a number of American experts argue, for Pakistan—from the political and military viewpoints—nuclear weapons appear mainly as an equalizer of its combat capabilities in relation to India. The importance of status seems to have played a lesser role in the development of Pakistan's nuclear forces than it has in India. It cannot be excluded, however, that this could change, particularly if a religious and ideological aspect strengthens within this policy under the influence of changes in Pakistan's internal situation and in international relations,[79] under the influence of a

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* An analysis of the political and military situation suggests that the real level of political and military antagonism between India and China in 2002-2003 was significantly less than many in both Russia and the West think (especially after the statements by Indian Defense Minister Fernandes after the nuclear tests in India in 1998, when he publicly demarcated the anti-Chinese vector of Indian nuclear policy).

79. Many analysts noted the strengthening of Islamic radicals in Pakistan following the autumn 2002 elections, made the situation of the government of Pervez Musharraf and his own position more complicated. As a whole, a number of experts note that the fate of Pakistan (and its corresponding nuclear arsenal) as never depends on this leader's "political and physical well-being."

general radicalization in the Muslim world.* Moreover, the crucial role of Pakistan in the Central Asian region should be noted, in particular with regard to Afghanistan.

Many U.S. analysts consider—not without foundation—that given Pakistan's vulnerability on both the political and economic fronts, the country will not be able to avoid collapse, not only in the case of the fall of President Karzai's government in Afghanistan, but also in case the situation of an unstable balance of power between various ethnic, tribal, and regional groups that appeared there after the defeat of the Taliban is simply preserved in Afghanistan. In reality, a modern state—even in its minimalist form—does not exist in Afghanistan. Destabilization of the situation in Pakistan and the threat to its existence as a functioning state may lead to a serious increase in the probability of immediate nuclear confrontation with India.

Future Nuclear Configurations and Global Stability

Iran will very likely become a nuclear state within this decade. Russia has had long-standing good relations with Iran, although conflicts continue to arise over the issue of rights to the Caspian Sea and its energy resources.[80]

Following the 1987 Islamic Revolution (when Iran ceased to be a monarchy with special ties to the United States, which were reflected by massive purchases of U.S. weapons and military technology), Iran and the United States have had unstable, conflicting relations.*

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* Various Pakistani public figures have issued statements declaring Pakistan as the most powerful state in the Islamic world, namely because of its possession of nuclear weapons.

80. See V.O. Guseinov, "O nekotorikh aspektakh kaspiiskoi problemy" [Concerning some aspects of the Caspian problem], Vestnik analitiki, No. 3 (2002), pp. 116–131; and A. P. Chumakov, *Kaspiiskaya neft' i mezhnatsional'nye otnosheniya* [Caspian petroleum and international relations] (Moscow: TsIMO, 2000), pp. 34–42, 212–224.

* For instance, at the end of the 1970s and the beginning of the 1980s, the U.S. actively supported the Iraqi leader in his protracted war with Iran, shutting its eyes to the use of chemical weapons by Iraq against the Iranians.

Iran plays a significant role in the Organization of Petroleum Exporting Countries (OPEC), which has regained its position as an influential coalition in the past three to four years, not only in the world economy, but also with respect to international politics, due to the special significance that oil, oil prices, and supply conditions have held for more than half a century. (Iran has 9.4 percent of the world's proven oil reserves—significantly more than the share of all the countries of the former Soviet Union combined, which account for about six percent.)

The revival of OPEC took place at the end of the 1990s with the participation of Iran. This largely resulted from the appearance of a new formula for interaction in the OPEC "triangle," which includes Venezuela, Iran, and the Persian Gulf states (mainly Saudi Arabia and the United Arab Emirates). OPEC was largely outside the influence of the United States, despite the international predominance of U.S. military, financial, and economic. The restoration of OPEC's power has been compensated for, however, considering the United States' control over the world oil market, and following U.S. victory in the Persian Gulf in 1991.

The emergence of OPEC was overlooked in Washington for several reasons, the most important of which were the unprecedented growth of the U.S. economy (beginning in the early 1990s) and the economic growth of China and India under conditions of significantly lower prices for petroleum that began to appear at the end of the 1990s and the beginning of this decade.

Under these new conditions, the attitude toward this question is beginning to change radically, not only because of the worsening economic situations in the United States and other highly developed countries, but also because the of the new military-political situation, which, among other things, has been greatly affected by the terrorist attacks of September 11.

Control over the world's main energy reserves (above all petroleum) and the guarantee of the uninterrupted supply of petroleum at reasonable prices have again become a central concern in the foreign and military policy of the United States. Indeed, it is one that could involve the use of nuclear weapons if a conflict were to occur over access to these reserves. In this regard, Iran's role in the world, including its status as a potential nuclear power, must be carefully considered, as should the role of Russia, which also possesses significant energy reserves.[81]

No expert doubts that, within the last 10-12 years, Iran has created the technical basis for creating missiles for both civilian and military purposes. Many experts note that the series of tests of medium-range missiles carried out by Iran makes only if these missiles are fitted with warheads equipped with weapons of mass destruction, primarily nuclear munitions. It does not make sense to equip this type of ballistic missile with conventional munitions—the ratio between the cost of the target hit and the cost of the missile itself would be very low. The presence of such rockets would have no political effect if they were not armed with nuclear warheads and would add little to Iran's international status.

Iran's nuclear efforts have a history almost as long as India's and Pakistan's. The shah of Iran, Mohammad Reza Pahlavi, made the decision in the 1970s to develop nuclear energy. Hundreds of Iranian specialists were sent to the best Western colleges and universities, some in the United States.

Iran's acquisition of nuclear weapons would lead, not to a nuclear China-India-Pakistan "triangle," but to a China-India-Pakistan-Iran "rectangle," or even more likely, a pentagon (China-India-Pakistan-Iran-Russia) or possibly a "hexagon" (China-India-Pakistan-Iran-Israel-Russia). No system has yet been considered, let alone constructed, with the aim of

81. However, Russia's national strategy in this most important area has only now begun to form. The substantial differences in the policies of the leading (private) oil companies of the country, including policies with respect to OPEC (of which Russia, as is well known, is not a member) hinder the development of such a strategy.

avoiding mutually annihilating nuclear conflicts in such complex configurations. Without the appropriate framework, preventing nuclear conflict in any of these scenarios would be a matter of luck.

Construction of a "dyad" system of mutual nuclear deterrence, similar to the one in place during the Cold War for the Soviet Union and the United States, would have little value for the interactions between the vertices of a pentagon or a hexagon. Moreover, the equalization of the USSR-United States-China nuclear "triangle" from the 1960s to the 1980s cannot serve as an analogy because China's nuclear arsenal was much smaller than the nuclear forces and facilities of the two superpowers. China's possession of only a few warheads on intercontinental ballistic missiles (plus 150 or 200 nuclear warheads on medium- and short-range vehicles, capable of destroying targets on the territory of the former Soviet Union and American military targets in the Asiatic–Pacific region) presented several possibilities for deterring the United States and the USSR (possessing the capability of inflicting "unacceptable damage" in a retaliatory strike); however, on the whole, it was in the shadows of the United States–Soviet Union "dyad" system of deterrence. The equalization of relations in the Russia-China-India-Pakistan-Iran-Israel hexagon cannot be reduced to the sum of the relations in the dyads that make up this hexagon.[82]

One should keep in mind the high probability of rapid transformation of this hexagon into a heptagon if Saudi Arabia acquires nuclear weapons. Saudi Arabia, according to more recent data, has already acquired the delivery means as it purchased ballistic missiles from China with the range of several hundred kilometers. The majority of experts believe that Saudi Arabia will not build a bomb, but will acquire one from a second country. Many signs point directly to Pakistan. Evidence suggests that Saudi Arabia helped finance Pakistani production of nuclear weapons. In addition, according to Graham Allison, for decades Saudi

82. It should also be noted that the problem of securing strategic stability in the circumstances of a "triad"—i.e., when three states that have nuclear weapons and are in antagonistic relations toward each other—represent a 'terra incognita'" for the overwhelming majority of experts working in this field.

Arabia supplied Pakistan with free oil worth $1.2 billion annually.[83]

Without an active policy for this important issue in Russian national security, Russia will be a hostage of the behavior of one side or another in the rectangle, pentagon, or hexagon, whichever may appear. There is much that indicates that the Russian political class and military commanders do not yet adequately appreciate the threat of such a development of events in the immediate vicinity of Russia's borders.[84]

The appearance of a nuclear-armed Iran could force a deterioration of Russian-Iranian relations, as occurred between the USSR and China after the latter acquired nuclear weapons. Russian-Iranian relations can also become more strained with regard to the Caspian Sea problem. Among other things, Iran's acquisition of its own nuclear weapons could compensate for (at least in a political/psychological respect, which in many cases is decisive) the build up of Russia's military might in this region.

The appearance of nuclear weapons in Iran could therefore be a direct threat to Russia's national security interests (including the fact that the Shehab-3 missile, already tested by Iran, has an attack radius that makes it possible to reach many Russian cities).[85]

This Iranian threat cannot be dealt with purely through military measures. The most desirable solution would be to achieve a situation in which Iran would dismantle its nuclear weapons program and convert development in the area of missile resources into the

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83. Graham T. Allison, *Nuclear Terrorism: The Ultimate Preventable Catastrophe*, (New York: Times Books, 2004), pp. 76–77.

84. It must be pointed out that the Russian "political class" unfortunately includes active supporters of the appearance of new nuclear states, including Iran (including, for example, State Duma Deputy L. Mitrofanov from the Liberal Democratic Party, the well-known political scientist A. Migranyan, etc.). Their starting point is that the appearance of nuclear weapons in a large number of states will prevent the USA from acting in a spirit of "unilateralism" and will prevent the actions that the United States planned to undertake with respect to Iraq. At the seminar in Moscow on October 2, 2002 (chaired by A. Pushkov), Migranyan tried to prove that Iran, possessing nuclear weapons, will ensure reliable deterrence of those who otherwise would be Russia's direct opponent to her south. Such feelings became stronger in the Russian public in the autumn of 2002, in reaction to the growing belligerency in the USA's behavior in connection with the situation surrounding Iraq.

85. Some reports appeared at the beginning of October 2004 indicating that Iran tested a new ballistic missile—"Shehab-4" with a range of 2000 kilometers. These reports appeared following statements by the Israeli side that Israel acquired special bombs, built to strike highly protected objects ("bunkers"). In such objects, according to suggestions of the Israeli Special Forces and the General Staff, work aimed at creating Iran's own nuclear weapons may be conducted. In turn, these statements of the Israeli side are related to the decision of the Iranian government to continue uranium enrichment program.

nonmilitary use of the developed vehicles. Russia has done much to move Iran in this direction,[86] including convincing Iran to agree to sign the International Atomic Energy Agency Complementary Protocol on the need for international control of its nuclear program.[87]

Despite such progress, the possibility that Iran could become a nuclear power remains a serious danger,[88] and preventing this outcome will require cooperation between Russia, the United States, China, and Europe. Among other things, Iran must be given guarantees of security that would cover to a maximum extent its need to create its own nuclear forces of deterrence from a political–military viewpoint.[89] Many opportunities for the creation of such

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86. On September 24, 2004, Russian President V.V. Putin announced that Russian categorically opposes enlargement of the club of nuclear powers. "Iran should meet demands and comply with rules of the IAEA," said Putin, answering questions from participants of a Moscow Congress of Intelligence Agencies. Expressing his own personal opinion, he said, "I am deeply convinced that Iran does not need nuclear weapons. This does not solve even one problem, including ensuring security in the region." Putin said that to achieve security in the region "it is necessary to follow other paths—to achieve security, patience and persistence are necessary." The President of the Russian Federation reminded that the Iranian leadership repeatedly announced that the country does not attempt to come into possession of nuclear weapons. "We welcome such position but it needs to be supported," said V.V.Putin. RIA "Novosti," September 24, 2004.

87. The Council of Directors of the IAEA, in its report on February 24, 2004 welcomed the decision by Iran's leadership to show greater transparency and control over its nuclear program. At the same time, the report noted that an inspection by the IAEA revealed traces of activity aimed at obtaining highly enriched uranium, which "puts in doubt all information obtained from Iran about its activity in enriching uranium with the use of centrifuges." See Internatioanl Atomic Energy Agency, "Implementation of the NPT Safeguards Agreements in the Islamic Republic of Iran," report by the Director-General, Gov/2004/11, February 2004; and "IAEA Board Adopts Resolution on Nuclear Safeguards in Iran," staff report, March 15, 2004, http://www.iaea.org.

88. As noted by a well-known Russian expert, V. Orlov, on problems regarding nonproliferation of nuclear weapons, a July 2004 report by the IAEA states that Iran presented "still not very convincing clarifications on the topic of traces" of uranium-235 (enriched in 30 percent) found in works in Kalaye and Faraylida in some parts for centrifuges, supplied earlier to Iran from other countries. V. Orlov, "Iranian Nuclear Program Arouses Serious Questions," *Nuclear Control*, Vol. 10, No. 3 (2004), p. 100. Within the IAEA, as remarked by Orlov, there are also several questions for Iran regarding its imports, production and scale of the use of centrifuge equipment; "An answer by the Iranian side to some key questions has not been disclosed so far, and suspension of activities aimed at enriching uranium does not appear to be fully embraced [by the Iranian leadership]." Ibid. "The history of Russo-Iranian nuclear dialogue is also worrying," writes Orlov. He notes that the "Iranian side in recent years has repeatedly misled the Russian side or, to put it simply, have misinformed Russia regarding the scale of its own nuclear program." Moreover, as Orlov writes, "taking into the account that Russia today is the only partner of Iran in the development of its nuclear energy program, Moscow has the right to expect a greater degree of transparency from Iran." Ibid. Orlov concludes that "the revelation by the IAEA of disparity and Iran's violations force today Russia to approach the cooperation with Iran with greater care than earlier." Ibid., p. 107.

89. Putin, when talking about the problem of security guarantees regarding the realization of provision of the Treaty on the Nonproliferation of Nuclear Weapons, noted that "existing international treaties in the sphere of non-proliferation of weapons of mass destruction do not contain mechanisms to guarantee security of both individual countries and the world as a whole. These agreements should not be called universal and measures that have been undertaken are not fully appropriate to respond to the level of corresponding contemporary threats." RIA "Novosti," December 3, 2003.

cooperation have been missed in preceding years, in some cases because of the United States' position that Iran has received nuclear and missile technology from Russia. However, the possibility of serious Russian-U.S. cooperation still remains, and Iranian development of missile and nuclear weaponry should not be thought of as inevitable. Efforts by Russia and the United States, and other permanent members of the UN Security Council, could prevent the complication of the entire "strategic configuration" in the region, and the world as a whole, due to the appearance in Iran of its own nuclear missile weaponry. [90]

Nuclear Weapons and Megaterror

The tragic events of September 11, 2001, gave the leadership of the U.S. government and the business community reason to believe that the United States is threatened by the use of weapons of mass destruction, including nuclear weapons, by terrorists.[91] This perceived threat led to the refinement of a doctrinal position that envisages the use U.S. of nuclear weapons in a preemptive strike.[92] This was ultimately reflected in George W. Bush's 2002 *National Security Strategy*.[93]

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90. Also, a number of eminent Western experts rightly note the necessity for this kind of cooperation. See, for instance, Geoffrey Kemp, *Iran's Bomb: American and Iranian Perspectives* (Washington, D.C.: Nixon Center, March 2004), p. 11.

91. At the beginning of 2002, American multimillionaire Warren Buffett ("the second richest man in the world") made the statement that terrorists will inevitably use weapons of mass destruction on the territory of the USA in coming years. Because of this, he recommended that insurance companies do not insure risks associated with such terrorist acts. (Buffet's main interests are in the insurance sector, which took large losses as a result of the events of September 11, 2001).

92. In explaining the new aims of the George W. Bush administration with respect to the use of nuclear weapons, D. Simes, the president of the Nixon Center (in Washington), which is close to this administration, stated that "While nuclear weapons should obviously be used as weapons of last resort, and only against those whom we are convinced are our enemies, we should be ready to deploy them if we reach an informed conclusion that a state has sponsored chemical or biological attacks against the United States, or provided chemical or biological weapons to terrorists who have done so. Governments facilitating such attacks should not be allowed to hide behind their civilian populations any more than Nazi Germany and Imperial Japan were allowed to do so." Later, Simes writes that "While the United States should strive to limit innocent deaths to the extent possible, our war-fighting strategy must be defined primarily by the need to prevail." See D. Simes, "What War Means," Vestnik analitiki (published by the Institute of Strategic Evaluations and Analysis, Moscow), No. 1 (7) (2002), p. 16. The removal of Cuba from this "blacklist" was promoted by former US President Jimmy Carter, who, soon after including this country among the members of the "axis of evil," visited Cuba and spoke extremely positively, concerning a number of Cuba's achievements (including in medicine and

The question of where terrorist organizations could obtain weapons of mass destruction remains extremely ambiguous. U.S. officials primarily point to the non-democratic countries included in the "axis of evil" (the "first wave" in 2002 included Iraq, North Korea, and Iran, while the "second wave" included Syria, Libya, and Cuba).[94]

It is extremely doubtful that any state would voluntarily or deliberately transfer nuclear weapons to a terrorist organization. The experience of the post World War II years indicates that, for a state, specific governmental leaders, or political elites, nuclear weapons are above all a symbol of status for the state that ensures its prestige and sovereignty. They are not just equipment that increases the combat capabilities of the military. As indicated earlier in this work, this was true for the USSR, China, India and Pakistan. This was clearly expressed in the policies of France in the 1950s and 1960s. Status considerations were intrinsic to a lesser degree for the creators of Israel's nuclear weapons program, who adhered to a policy of "bombs in the basement."

It seems far more realistic that radical political forces using terrorism as a tool in their struggle might obtain nuclear weapons as the result of a sudden destabilization of the domestic political situation in a particular country, or by destroying a country's system of strategic control, including the system for controlling nuclear weapons. This fear was widespread in the United States in 1991–92, following the collapse of the Soviet Union and the uncertainty surrounding control over the Soviet nuclear arsenal, especially Soviet tactical

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in pharmaceutics). This largely removed the suspicion that Cuba was developing bacteriological weapons. Syria has become more and more firmly fixed on the "blacklist" in the eyes of Washington, making it likely that it will be next after Iraq as an object of strikes by the USA.

93. Bush, *National Security Strategy*, pp. 5, 6, 14, 15.

94. The interpretation of Russian scholar Yu. A. Pisarev is very worthy of attention. He has studied how, by whom, and for what political motives the murder of Archduke Francis Ferdinand in Sarajevo in 1914 was organized. Thus, for example, the conspiratorial Serbian organization "Black Hand" (the "Union or Death" association) did not have a well-defined political program. (This author provides an explicit citation from the Serbian Social–Democratic Party's newspaper Rodnichka noviny on October 29, 1911: "We have secured the 'Black Hand'! This is the mystical organization of Serbian patriots, a group of officers and intelligentsia with patriotic, and perhaps with neo… ideology.") See Yu. A. Pisarev, Tainy pervoi mirovoi voiny. Rossiya i Serbiya v 1914–1915 [Secrets of the First World War. Russia and Serbia in 1914–1915] (Moscow: Izd. Nauka, 1990), pp. 28–29.

and operational-tactical nuclear weapons. These fears were exacerbated by the fact that the West did not have sufficient knowledge of the urgent and effective measures for removing all nonstrategic nuclear weapons to Russian territory from former republics of the USSR at the end of 1991; I, among others, participated in the resolution of this problem. More recently, fears of this sort are most often expressed with respect to Pakistan, especially in conjunction with the black market transfer of Pakistani nuclear technologies to other countries by Pakistani scientists, which was discovered in 2004.

At the same time, the transfer of nuclear weapons and delivery facilities into the hands of a terrorist organization by one state or another cannot be completely ruled out. Such a decision could be associated with at least two circumstances: (1) when an extraordinary situation arises for the leadership of a state that possesses nuclear weapons; (2) when there is close interaction between a state and a radical nongovernmental organization prepared to use nuclear weapons. Moreover, the force and influence of this organization must be at least commensurate with the force and influence of the governmental machinery of the state. A country that possesses nuclear weapons can regard the threat of strikes against its nuclear installations by external forces as just such an extraordinary situation. When a threat is perceived, it can be assumed that the possessor of nuclear weapons, fearing their possible loss, may decide to "disperse" them by transferring them into the hands of terrorists who are prepared to use them on the territory of the state that is prepared, in the opinion of the threatened state, to make preemptive strikes against such nuclear installations.[95]

There have been numerous historical circumstances in which close entanglement of secret terrorist organizations and official governmental organs has occurred. Such was the case, for example, in Serbia on the eve of World War I. The assassination of Archduke

95A series of studies carried out in the United States after the events of September 11, 2001 showed that the likelihood of the delivery of nuclear weapons (or of a "dirty bomb," meaning a radioactive or bacteriological weapon) remains very, very high, despite all the immense measures to assure the internal security of the U.S. The "internal security" system remains incomplete, with an enormous number of gaps.

Francis Ferdinand, an Austro-Hungarian, in 1914 triggered Word War I, and was the result of the activity of radical organizations using terrorist methods in their struggle, which had deep roots in the Serbian General Staff.[96]

President Musharraf, who chose to make Pakistan a member of the antiterrorist coalition headed by the United States in 2001, needed to carry out a large-scale purge of the upper echelons of his special services, who were closely associated with the Taliban and, through the latter, with al-Qaida. As a result, the danger of nuclear munitions falling into the hands of radical terrorist organizations was significantly reduced. However, a number of U.S. experts doubt the effectiveness of Musharraf's actions.[97]

The probability that radical political organizations with messianic aims will use nuclear weapons in their terrorist acts has recently increased due to the surge in anti-

96. The leaders of one of the organizations that participated in the Sarajevo terrorist act. (the "Black Hand" or the "Union or Death" association) were Colonel Dragutin Dimitrijevic (alias Apis, intelligence chief of the General Staff), Major of the Serbian Army Velimir Vemic, and Voislav Takosic. This was a very serious organization; on May 29, 1903 it organized a palace revolution with the assassinations of Serbian King Alexander and Queen Draga Oborenovica. The Black Hand in fact returned the Karageorgevic Dynasty to the throne. The Black Hand's proscription lists also included the Bulgarian Tsar Ferdinand, King Constantine of Greece, Prince Nicholas of Montenegro, and finally the heir to the throne of Austria, Archduke Francis Ferdinand. This organization had very complex relations with the Serbian government, which was headed by N. Paљic. Russian Emperor Nicholas II, and the tsarist government as a whole, were opposed to the activity of the Black Hand, since they clearly understood that the activity of this organization could lead to a large-scale collision of Russia with Austria–Hungary, with which Russia was not prepared to go to war (preparedness for war with Austria–Hungary and Germany came in the period 1917–18, and not in 1914). See Yu. Pisarev, *Tainy pervoi mirovoi voiny. Rossiya i Serbiya v 1914–1915* [Secrets of the first world war: Russia and Serbia in 1914–1915] (Moscow: Nauka, 1990), p. 29. In the final analysis, the Black Hand achieved its goal. Yugoslavia arose on a "Serbocentric" basis, including fragments of the Austro–Hungarian Empire, and existed up to the beginning of the twenty-first century. This was achieved at the cost of the breakup of three empires—the Russian, the Austro-Hungarian, and the German—and the immense human losses of World War I, as well as the defeat of Serbia and Montenegro in 1914–15.

97. An entire series of American studies on the problems of the activity of radical Islamic organizations note the presence of deep, decades-old connections between a number of these organizations and the Pakistani armed forces and their special services, including interdepartmental intelligence. These connections were especially actively cultivated during the Soviet-Afghan War, when numerous mujahidin from many countries were trained in Pakistan for battle operations in Afghanistan against the Democratic Republic of Afghanistan and Soviet troops. They were trained predominantly with American money, but the Pakistani armed forces and special services of Pakistan largely worked at resolving their own issues, by no means always allowing Americans to control what was taught in such camps, to whom, and by what methods. See Y. Bodansky, *Bin Laden: The Man Who Declared War on America* (New York: Prima Publishing, 2001), pp. 17, 21–22, 41–50, 127.

Americanism in the Islamic world after the invasion of Afghanistan, and as a result of the Palestinian-Israeli conflict.[98]

Having established in principle the right of the United States to use nuclear weapons against terrorists and the forces supporting them, the Bush administration formulated a series of fundamentally new positions, involving not only U.S. military doctrine, but also international law. The United States can engage in preventive strikes (including with nuclear weapons) anywhere in the world but, above all, against forces that are preparing for terrorist acts using weapons of mass destruction. This constitutes a radically different approach to the definition of aggression and to the right to self-defense than that found in similar United Nations documents. From a purely operational-strategic viewpoint, determining the target for a preventive strike using nuclear weapons presents a problem of enormous complexity and a high degree of uncertainty.[99]

The events of September 11, and the actions taken in the war on terror show that new threats to U.S. security are not adequately met by the resources and methods for obtaining vital intelligence, and that there are weaknesses in the intelligence services, including how different government organizations interact and coordinate, especially when making political and military decisions involving national security. The operations in Afghanistan, judging from available information, are being carried out without good intelligence data, which directly affects the quality of the targeting. (As a result, several thousand innocent Afghans have already died, repeating the tragic history of the Soviet war in this unfortunate country.)

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98 It has been asserted in the Arab world that the current U.S. administration, having initially attempted to distance itself from this conflict, later unambiguously occupied a position that supports the hard line of the government of Ariel Sharon with respect to the Palestinians. This viewpoint remains the prevailing one, even though the current American administration distinctly and unambiguously (unlike their predecessors) voiced support for the creation of an independent Palestinian state, which is traditionally perceived negatively by a significant part of the Jewish community in the United States.

99. The prominent American journalist and investigator Thomas Friedman validly notes that the presence of a global information-communication network (the internet), as a part of the globalization process, greatly promoted the appearance of the phenomenon of figures like Osama bin Laden, whom he ranked among "superpowerful persons." See Thomas Friedman, *The Lexus and the Olive Tree: Understanding Globalization* (London: Harper Collins, 1999), pp. 11–13.

In principle, it would be rash to rely only on intelligence data when making political and military-strategy decisions concerning the use of nuclear weapons against terrorist organizations on the territory of a sovereign state, especially considering the current standard of efforts by the U.S. intelligence services. Many Western experts and politicians believe that the quality of the activity of these efforts can be expected to radically improve only in the medium term, and only under the most favorable circumstances.[100] The enormous inertia of the Cold War (both in the military and military-industrial machine) is still present in many special services of the world, and this weakens their capabilities in the struggle against terrorists.[**]

The United States' use of intelligence data on Iraq's supposed development of WMD to justify the 2003 invasion has turned out to be a major scandal.[***]

Al Qaida and other radical organizations are able to skillfully utilize the modern information environment, including the internet and methods of disinformation and psychological war, to point their opponents toward false targets. These methods are capable of being used to orient the United States and its allies toward false targets for preemptive strikes using nuclear weapons.

It is just as difficult to determine targets for inflicting retaliatory nuclear strikes after new acts of megaterror occur, even if the intelligence data surrounding all possible targets for such purposes are complete. Determining the target in this case fundamentally differs from nuclear planning in the USSR, the United States, and other nuclear powers with respect to each other and to states allied with the other side. What is more, a state's own people,

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100. The French special services, for example, look more convincing here, since for several decades they have specialized mainly in the struggle with extremists of various factions, including Islamic extremists. In particular, the French special services were able to thwart an act of megaterror in the mid 1990s that was targeted at the Eiffel Tower in Paris, similar to what occurred in the United States on September 11, 2001.

*** Some U.S. federal leaders blamed "intelligence reports" for their actions and behavior. However, not only information found in these reports, but also the way in which they were interpreted by the political establishment led to these particular conclusions.

including relatives and loved ones of the government leaders who decide to use nuclear weapons, ultimately become hostages of the actions of these same government leaders (even for purely technical reasons, it is impossible to hide them all in a bunker ahead of time). Retaliatory strikes were planned to include a carefully determined set of military and nonmilitary targets, industrial installations, energy and transport facilities, and, finally, population centers. (A precedent for this was created by the Nazi bombings of London, and later by the massive strikes by British and U.S. strategic bombers against Hamburg, Dresden, Cologne, Magdeburg, and other large German cities, as well as the U.S. nuclear bombings of Hiroshima and Nagasaki in 1945. The USSR also attempted to carry out strategic bombings of Berlin in 1941, but they were soon halted because of an insufficient number of long-range heavy bombers and the loss of the necessary airstrips as a result of the rapid attack by the Nazis.)

Again, it is far more difficult under modern conditions to seek such obvious targets for retaliatory strikes after they are used by radical terrorist organizations, and, in fact, it may be impossible. Besides the high degree of uncertainty in choosing targets from a political viewpoint, a significant degree of uncertainty is intrinsic to the very action of carrying out nuclear strikes. These are characterized by errors and malfunctions in control, which are more likely to happen in operations involving nuclear weapons than conventional arms (due to either human or technical components).[103]

Proponents of the use of nuclear weapons against terrorist organizations believe that their use, since it will be single, not massive, can be significantly better controlled than a war would have been between the USSR and the United States, or between the Warsaw Pact and NATO. The emphasis in this case is concentrated on super-low-yield nuclear weapons

103. See Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket, eds., *Managing Nuclear Operations* (Washington, D.C.: Brookings, 1987), pp. 614–617.

(mininukes), which could be used against highly protected terrorist cells with almost none of the consequences that characterize the use of nuclear weapons as a whole.[104]

In 1994, the U.S. Congress prohibited allocating research and development resources for the production of nuclear weapons with less than 5 kilotons of power to preserve the boundary between nuclear and conventional weapons, and to maintain the low probability of the use of nuclear weapons.[105] As early as the end of the 1990s, however, pressure increased in the United States in favor of repudiating such limitations. Information appeared in the press in October 2002 that the U.S. Congress had lifted the 1994 bans mentioned above.

As noted by one of the managers of the Lawrence Livermore Laboratory, a prominent American physicist, Stephen Younger, who is responsible for the development of nuclear weapons (and who in 2001 occupied the post of director of the Defense Threat Reduction Agency of the U.S. Defense Department), low-yield nuclear weapons can be maintained in a battle-ready state with a greater degree of reliability and at significantly less cost than the nuclear weapons currently in the U.S. nuclear arsenal.[106]

The authors of the Pentagon's *Nuclear Posture Review*, which appeared in January 2002, are unambiguously in favor of the development of such weapons. The authors of this document tried to argue (including in conversations with they had with me) that this does not signify a reduction of the nuclear threshold as a whole, including in Russian-American or Sino-American military-political relations, but only as applied to countries in the "axis of evil" and radical terrorist organizations. This argument is with good reason doubted by many prominent experts and politicians in the United States and Western Europe. These doubts have a valid basis, because it is very hard under modern conditions of globalization and the

104. For more details, see A. A. Kokoshin, V. A. Veselov, and A. V. Liss, *Sderzhivanie vo vtorom yadernom veke* [Restraint in the second nuclear age] (Moscow: IMЙMO-IPMB RAN, 2001), pp. 40–41.
105. S. Goldstein, "Bill Would Give Push to Mini-Nuke," *Philadelphia Inquirer*, October 16, 2000, p. 6.
106. S.M. Younger, "Nuclear Weapons in the Twenty-First Century,"Los Alamos National Laboratory, Los Alamos, New Mexico, LAUR-00-2850, June 27, 2000, p. 1.

contraction of the entire “strategic space” to draw a distinct boundary between nuclear thresholds for different international actors and different situations.

At the same time, the threat of using mininukes can in some cases be an instrument of deterrence. The use of such an instrument, however, requires an extremely high level of strategic control from the side that issues such a threat and the presence of a deep mutual understanding between the nuclear power, the United States and Russian Federation, and also between the permanent members of the UN Security Council. In evaluating the prospects of the appearance (and use) of mininukes, it must also be kept in mind that there is continued, rapid development of high-accuracy and powerful conventional weapons that approach low-yield nuclear weapons in their destructive capability (which attracted the attention of such prominent military figures in the USSR as N.V. Ogarkov, V.M. Shabanov, and V.P. Mironov even at the end of the 1970s and the beginning of the 1980s).

From the four groups of interrelations mentioned above, I conclude that it is impossible to exclude the possibility of the use of nuclear weapons in the next few years—both single use and the use of many. The probability of the use of nuclear weapons remains lower than during the Cold War, but it is increasing. There is much that justifies observations that this threat appears significantly more real today than it did not only in the 1990s, but also in the 1970s, and even in the first half of the 1980s, when a definite recurrence of the Cold War—including in its nuclear dimension—was observed. This is occurring because of an increase in the overall strategic uncertainty in the international system, simultaneously in a military-political and in an economic respect (with an obvious deterioration of the economic situation in this decade compared with the 1990s).

Indications of the probability of new nuclear conflicts are showing up in the political sphere, in operational-strategic thinking and planning, in the sphere of international law, and in the development of the means of armed attacks. A shift in psychology relative to the use of

nuclear weapons, both among the elite and among the masses, can be observed in a number of countries, above all in the United States.

The nuclear taboo has once again ceased to exist in the public consciousness of the United States and many other countries. The assessments of scientists (especially U.S., Soviet, and Swedish scientists) in scholarly works that appeared in the 1980s on the ecological and medical-biological consequences of nuclear war have been half forgotten by both the political elite and the public, despite the extremely strong effect that they had at the time.[107]

There is no adequate response in the international community today for the prevention of nuclear conflicts. Many components of that system of international security (and of the assurance of strategic stability) are no longer active today or have virtually ceased to exist. There is still no design for a new system. Increasing international military-political instability and strategic uncertainty requires political, diplomatic, and technological methods for solving these problems among the major powers, including Russia.

Preventing fissile materials, their components, radioactive materials, and the services and information necessary for producing nuclear weapons, from falling into extremist or terrorist hands requires special attention.[*] The development of cooperation between Russia and the United States—not only in the sphere of nonproliferation of nuclear weapons but also in deterring their use—has fundamental significance. This mechanism, however, has yet to be perfected.

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107. It should be kept in mind in this case that when the ecological and medical/biological consequences of nuclear war were studied in the 1980s (including the "nuclear winter" effect), the scholars adopted as a basis the scenario of massive use of nuclear weapons (primarily strategic weapons) by the United States and the Soviet Union. As pointed out above, under the conditions of the first two or three decades of the twenty-first century, one is dealing with significantly smaller scales of the use of nuclear weapons, with different consequences for the ecology, the climate, and human health.

* The most developed program of international community action (primarily in the United States and Russia) is published in one of the most famous works by Harvard University professor Graham Allison. See Allison, *Nuclear Terrorism.*

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