= SECURITY PROBLEMS IN CONTEMPORARY WORLD =

STRATEGIC STABILITY AND CHINESE GAMBIT

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Abstract. During the last three years, the prospects of engaging China in the process of nuclear disarmament has moved to the forefront of the arms control agenda. In 2019–2020, it was made the top issue by the Donald Trump's administration when it withdrew from the Treaty on the Elimination of Intermediate-Range and Shorter-Range Missiles (INF Treaty) and refused to prolong the Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms (the New START). As for Beijing, it flatly rejected US demands to join arms control and this position was endorsed by Moscow. Thanks to the Joseph Biden's administration coming to power in January 2021, the New START was extended by five years in February of the same year. In June, the summit of the presidents of Russia and the United States was held in Geneva, and in July, the official dialogue on strategic stability was launched. However, during the same summer, an unexpected event happened. Independent U.S. experts published information from commercial satellites, which revealed an ongoing construction of three large military bases in central areas of China with hundreds of new silo launchers for intercontinental missiles. Afterwards, the Pentagon confirmed this information and predicted that Chinese missiles buildup may reach the level of about 1000 or more nuclear warheads by the year 2030. This news was neither confirmed nor denied by the official Beijing. However, together with continuing Chinese deployment of strategic ballistic missile nuclear submarines, forthcoming introduction of heavy bombers, expanding early warning satellites and tests of antisatellite systems - these developments imply the fundamental shift in the global and regional strategic balances with profound political consequences. American response to China's strategic buildup and Russian reaction to the U.S. military innovations may entail a next massive cycle of arms race and would cause a new stagnation at the negotiations of the two nuclear superpowers – all highly detrimental to international security. Nonetheless, there is still a chance of reinvigorated diplomatic effort at the U.S. – Russian and U.S. - Chinese tracks, which might lay the foundation of the future multilateral framework of strategic stability.

Keywords: nuclear deterrence, arms limitation negotiations, high-precision conventional weapons, intercontinental ballistic missiles, medium-range missiles, sea-based cruise missiles, ballistic missile defense, aircraft carriers, military bases.

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In the summer of 2021, information appeared in the United States about the grandiose construction of three bases and hundreds of silo launchers (silos) for intercontinental ballistic missiles (ICBMs) underway in the central regions of China [1, 2]. Soon this information was made public by the Pentagon [3, p. 48]. It is clear that Chinese missile construction is not occurring in a vacuum, but is superimposed on an exceptionally complex and contradictory state of the military-technical, doctrinal, and negotiating context of strategic stability. Only in this context, can one adequately assess the coming changes in this plane of international security.

HARD START

In July 2021, the long-awaited dialogue between Russia and the United States on strategic arms con-

trol resumed. The path to the present position was long and difficult. It spans more than half a century, including 40 years of tense and almost uninterrupted negotiations between the two nuclear superpowers from 1969 to 2010, which resulted in 10 major treaties and agreements¹. However, after 2010, there was an unprecedentedly long pause in the negotiations. At first, Moscow refused the Obama administration's proposals (in 2013 and 2016 [4, 5]) to go further in reducing strategic arms. Then the Trump administra-

¹ These are the ABM Treaty and the Interim Agreement SALT-1 of 1972, the SALT-2 Treaty of 1979, the INF Treaty of 1987, the START-1 Treaty of 1991, the START-2 of 1993, the START-3 Framework Agreement of 1997, the Agreement on the differentiation of strategic missile defense and war theater missile defense of 1997, the SOR Treaty of 2002, and the START-3 Treaty of 2010.

tion openly took a course to break arms control² and sabotage negotiations in this area.

After coming to power of the democratic administration, START-3³ was extended for five years, and only three days before its expiration on February 5, 2021. In June 2021, a full-fledged summit between Russia and the United States was held in Geneva, which opened the way to the start of consultations on strategic stability. During the first rounds, the parties created two working groups: "on the principles and objectives of future arms control" and "on potential actions that could have a strategic effect".

It is interesting that on the traditionally central issue — limiting and reducing land-based ICBMs, submarine-launched ballistic missiles (SLBMs), heavy bombers (HBs), and their nuclear warheads — there are no fundamental differences, one can only argue about future quantitative thresholds. This is mainly caused by the successful extension of START-3.

It is worth recalling that START-3 limited the strategic weapons of Russia and the United States to a maximum of 1550 warheads⁴ and 700 deployed ICBMs, SLBMs, and HBs. In total, deployed and non-deployed missile launchers and HBs are limited to a maximum of 800 units⁵. All reductions were made by the parties in March 2018 (however, Russia made a number of private claims against the United States regarding the methods of withdrawing weapons from the strategic nuclear forces⁶). By the end of 2021, the Russian forces had 527 deployed delivery

vehicles and 1458 warheads, while the US forces had 665 delivery vehicles and 1389 warheads. Compared to the state at the beginning of deep reductions in 1991 (according to START-1), the strategic nuclear forces of the parties in terms of warheads were reduced by about 6–7 times, and in terms of delivery vehicles – by 4–5 times⁷. The control (verification) system of the Treaty is extremely important, which guarantees its implementation, and also provides significant transparency and predictability in the field of strategic nuclear forces for many years to come.

Nevertheless, on the way to the next START treaty, the parties will have to overcome great difficulties. First of all, since the new dialogue has officially received the sign of "strategic stability", they first need to agree on the essence of this concept. To become the basis of arms negotiations, this concept cannot be reduced to the euphonious thesis "Peace to the world!", but must have a clear strategic meaning.

It was endowed with such a meaning by Moscow and Washington only once in history — in their Joint Statement⁸ in 1990. In it, strategic stability was defined as the strategic relations of the parties, eliminating incentives for delivering a first nuclear strike. Accordingly, the future START treaties were supposed to be built taking into account the relationship between strategic offensive and defensive weapons, while reducing the concentration of warheads on strategic launchers and giving preference to weapons with increased survivability.

These principles were embodied a year later in START-1, and then left a more or less prominent imprint on six subsequent agreements in this area⁹. As dynamic models of the strategic balance of Russia and the USA show [6; 7, pp. 66-68], today the pos-

² During the Trump presidency, the US withdrew from the multilateral agreement on Iran's nuclear program (2018), the INF Treaty (2019), the Open Skies Treaty (2020), was about to withdraw from the Comprehensive Nuclear-Test-Ban Treaty (CTBT), and refused to extend the START-3.

³ Treaty between the Russian Federation and the United States of America on Measures for the Further Reduction and Limitation of Strategic Offensive Arms. April 8, 2010. (In Russ.) Available at: http://kremlin.ru/supplement/512 (accessed February 14, 2021).

⁴ It is important that the START-3 does not refer to "nuclear warheads", but simply to "warheads" of ICBMs (with a range of more than 5500 km) and SLBMs (with a range of more than 600 km), which does not allow missiles to be released from restrictions with conventional ammunition. In contrast, only HBs with nuclear weapons (with a range of more than 8000 km or equipped with nuclear air-launched cruise missiles (ALCMs) with a range of more than 600 km) are taken into account, although their nuclear air missiles and air bombs are counted on each HB as one warhead.

⁵ Non-deployed launchers and associated ICBMs and SLBMs include those located at ICBM or SLBM loading sites, maintenance facilities, ICBMs or SLBMs repair sites, ICBMs or SLBMs storage sites, ICBMs or SLBMs conversion or liquidation sites, training sites, test sites, space launch sites and production facilities, as well as *en route*. Non-deployed HBs include those intended for testing, located at repair sites, or production facilities.

⁶ The term "strategic nuclear forces" (SNF) is roughly equivalent to the term "strategic offensive weapons" (SOW), although

strategic nuclear forces somewhat exceed the quantitative levels of strategic offensive weapons due to actually deployed

carriers and warheads, which are counted less due to the accepted counting rules. As a rule, SNF applies to real nuclear weapons, and SOW applies to weapon systems in a treaty-legal context.

⁷ The spread of indicators occurs as the rules for counting according to START-1 and START-3 are very different, as well as the levels of strategic nuclear forces of the parties by delivery vehicles and warheads for 1991 and 2021.

⁸ Joint Statement on Future Negotiations on Nuclear and Space Arms and Further Enhancing Strategic Stability. State visit of USSR President M. Gorbachev to the USA, 30 May — 4 June 1990. Documents and materials. Moscow, Politizdat, 1990, pp. 197-199. (In Russ.); Soviet-United States Joint Statement on Future Negotiations on Nuclear and Space Arms and Further Enhancing Strategic Stability. June 1, 1990. Available at: https://bush41library.tamu.edu/archives/public-papers/1938 (accessed February 14, 2021).
⁹ These are START-2 of 1993, the START-3 Framework Agree-

ment of 1997, the Agreement on the differentiation of strategic missile defense and war theater missile defense of 1997, the SOR Treaty of 2002, the START-3 of 2010.

sibility of a massive disarming (counterforce) nuclear strike by any of the parties, capable of preventing devastating retribution, is excluded. Thus, according to the logic of the 1990 Statement, the incentive for a first nuclear strike is eliminated, which means that the incentive for a preemptive strike out of fear of a disarming enemy strike is also removed. This fully corresponds to the understanding of strategic stability at that time and over the next 20 years.

TRACKS OF DESTABILIZATION

As a result of a ten-year pause in the dialogue between the Russian Federation and the United States on arms control, the denunciation of important treaties in this area, and the return of Russia and the West to Cold War relations, the parties have diverged far in their understanding of strategic stability and are now following the path of an arms race and military technologies not covered by the START-3 clauses.

The primary trend of destabilization is the development of long-range offensive weapons with conventional warheads and high accuracy based on advanced information and control systems, primarily space-based. These strike weapons acquire the ability to hit the enemy's nuclear forces and command-control centers, which creates the effect of "entanglement (mixing)" of nuclear and conventional weapons 10. It is exacerbated by the development of dual-purpose weapons – with nuclear and conventional warheads. If they are used, the nature of the attack (nuclear or conventional) cannot be determined until the warheads are detonated 11. After the denunciation of the INF Treaty, the deployment of such weapons at forward bases and the reduction to a minimum of their flight time to targets would increase the threat of a first or preemptive strike¹². In addition, supersonic and hypersonic boost-gliding, air-breathing, and ballistic maneuvering missiles of various basing modes are replacing subsonic sea- and air-based cruise missiles 13.

This "entanglement" effect is fraught with the rapid uncontrolled escalation of a conventional local conflict to a global nuclear level.

The danger of non-nuclear offensive weapons and dual-use systems is multiplied by the development of global and regional anti-missile defense systems, anti-satellite weapons, means and methods of cyber warfare, which threaten the functioning of combat command-control and missile attack warning systems. A separate issue is related to the creation of air and underwater nuclear delivery vehicles of unlimited range and time to hit targets¹⁴. Their strategic rationale is still unclear, as is the impact on arms control negotiations.

Thus, in contrast to the concept of 1990, additional incentives for the first nuclear strike may be created by other factors: an attack by high-precision conventional systems of the other party (especially hypersonic ones) against strategic nuclear forces and their information and control systems, the paralysis of the latter with the use of cyber-attacks and space attack weapons of various basing.

It is still impossible to accurately calculate the specific capabilities of innovative systems and technologies, the time of their implementation and their intercorrelation, and the course of rivalry between means of attack and defense, making their effect on strategic stability unclear¹⁵. Therefore, one should not prematurely put an end to arms control¹⁶. Instead, it is necessary to adapt the understanding of strategic stability in a timely manner and apply innovative approaches to minimize future threats through legal and contractual means.

NEGOTIATION DEBUTS

At the negotiations that began in Geneva, the main difference between the parties manifested in the fact that the United States proposed to reduce both

¹⁰ For the first time, this factor was studied in detail in [8].

¹¹ This applies to SLCMs *3M14 Caliber* of the Russian Federation and *BGM-109 Tomahawk* of the United States, airborne cruise missiles of the *Kh-101/102* type of the Russian Federation and *AGM-158B* of the United States, as well as to ground-based missiles of Russia (*9M728* and *9M729 Iskander*).

¹² Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence. Order of the President of the Russian Federation. Moscow, Kremlin, June 2, 2020, no. 355. (In Russ.) Available at: http://publication.pravo.gov.ru/Document/View/0001202006020040?index=2&rangeSize=1 (accessed February 14, 2021).

¹³ These include US air-launched missiles (*AGM-183A, X-51*), sea-based missiles Conventional Prompt Strike (*CPS*), land-based missiles Long Range Hypersonic Weapon (*LRHW*) [9]. Russia creates sea-launched hypersonic missiles *3M22 Zirkon*, aircraft missiles of *9-A-7660 Kinzhal* type. Ramm A., Korneev

D. Hyperdeath approaching. *Voenno-promyshlennyi kur'er*, 23.03.2015. (In Russ.) Available at: http://www.vpk-news.ru/articles/24407 (accessed December 26, 2021).

¹⁴ These are cruise missiles with a nuclear engine of the Russian type *9M730 Burevestnik* system and a partial orbital missile with a hypersonic gliding unit *ICBM RS-28 Sarmat/Avangard* type, as well as an autonomous underwater vehicle with a *2M39* nuclear engine *Poseidon*.

¹⁵ For example, advanced reconnaissance and surveillance assets can undermine the survivability of land-based mobile and underwater deterrent systems, but can also dramatically increase the reliability of monitoring compliance with agreements. Cyber attacks threaten to paralyze the retaliatory strike, but they can also disrupt the first disarmament strike, which requires more effective command and control systems. Quantum technologies and big data analysis can enhance both offense and defense.

¹⁶ For an example of this approach, see: [10].

strategic and tactical nuclear weapons (TNWs) (including those placed in storage) [11, 12], while Russia raised the issue of limiting both nuclear and non-nuclear offensive and defensive strategic weapons, according to its new concept of the "security equation". Its essence was explained by the Deputy Minister of Foreign Affairs and the head of the Russian delegation at the Geneva talks, Sergei Ryabkov: "We propose to expand the strategic agenda and include in it all offensive and defensive weapons, both nuclear and non-nuclear, capable of solving strategic tasks", he emphasized. "At the same time, we consider it necessary to pay special attention to the means used to deliver the first strike to neutralize or weaken the deterrent potential of the other party" [13].

The American hierarchy of priorities was outlined by Bonnie Jenkins, US Under Secretary of State for Arms Control: limiting or banning the latest Russian autonomous nuclear-powered delivery systems for nuclear weapons of unlimited range (for example, a ground-based cruise missile of the *9M730* type *Burevestnik* and underwater autonomous vehicle of type *2M39 Poseidon*); reduction of TNWs tactical nuclear weapons); reduction of traditional SNF (strategic nuclear forces) systems ¹⁷.

The US approach is fraught with great difficulties. Limiting the latest Russian nuclear weapons systems would require not only new definitions, counting criteria (range, type of warhead), and control measures but also agreement on the terms of the "parity". Since the new *Avangard* hypersonic system is boosted by the stages of the old *RS-18* ICBM (its engineering name being *UR-100UTTKh*, the Western designation being *SS-19*), it is already included in START-3, but *Burevestnik* and *Poseidon* will require special negotiations.

In Moscow, these systems are justified by the need to maintain nuclear deterrence through providing a guaranteed ability to overcome the current and any likely US missile defense system¹⁸.

Consequently, any measures in relation to these systems presuppose an agreement on the limitations of the American missile defense system, to which Washington categorically did not agree after withdrawing from the ABM Treaty in 2002. By the way, such an "trade-off" would be fully consistent with

the first principle of strategic stability according to the Statement of 1990 (taking into account the relationship between strategic offensive and defensive weapons) [14].

Even greater difficulties are associated with the US demand to limit TNWs, which goes far beyond the traditional interpretation of strategic stability and the negotiating agenda. First, these assets of Russia and NATO are most of all designed to repel superior general-purpose enemy forces on land, at sea, and in the air, as well as for use against third countries. Second, almost all TNW systems use dual-purpose vehicles (tactical missiles, aircraft, and artillery), that is, unlike strategic weapons, their limitation cannot be controlled through the elimination of launchers and carriers, since this would imply a radical reduction in general-purpose forces of the USA and Russia.

Third, all TNWs, along with reserve warheads of strategic ballistic and cruise missiles, and air bombs, are stored in various types of storage facilities in peacetime. Their contractual and legal limitation involves control directly inside the storage facilities and in the pre-factory warehouses of manufacturers. Such a regime determines an unprecedented degree of openness in the nuclear activities of the powers, even in comparison with the 1990s [15]. It is obvious that the current state of political and military relations between the two countries, which openly declare each other adversaries, is by no means conducive to such confidence.

Moreover, since in Geneva the negotiations are going on strategic stability (that is, strategic relations that eliminate incentives for a first nuclear strike), it is not clear how limiting nuclear warheads in storage can relate to this. In any case, Russia and the United States are not increasing, but reducing the total number of their "non-deployed" nuclear warheads, getting rid of the "surpluses" of the past Cold War and the "left-overs" of a deep reduction in strategic, intermediate-range, and tactical nuclear weapons over the past three decades [16].

For its part, the Russian concept of the "security equation", although it has not yet been publicly prioritized, also raises difficult questions. Arms control has its own strategic and technical logic: for example, the requirement to take into account long-range air-launched cruise missiles (ALCMs) with conventional warheads (more than 600 km) does not allow the same missiles with nuclear warheads and freefall nuclear bombs to be excluded from the count. In START-3 they are counted as one warhead on each nuclear bomber. The US is estimated to have

¹⁷ Under Secretary Bonnie Jenkins' Remarks: Nuclear Arms Control: A New Era? *U.S. Department of State.* September 6, 2021. Available at: https://www.state.gov/under-secretary-bonnie-jenkins-remarks-nuclear-arms-control-a-new-era/ (accessed December 26, 2021).

¹⁸ The President's Address to the Federal Assembly. March 1, 2018, Moscow. (In Russ.) Available at: http://www.kremlin.ru/events/president/news/56957 (accessed January 10, 2021).

300 units of such weapons in the warehouses of HB air bases, and Russia is believed to possess 200 units ¹⁹.

Further, the limitation of non-nuclear ALCMs²⁰ implies the inclusion of their carrier bombers in the treaty restrictions along with nuclear HBs, but the exclusion from counting the same aircraft with conventional bombs would creates additional verification difficulties. The question may even arise about NATO tactical strike aircraft, which is equipped to deliver long-range conventional cruise missiles²¹ and is theoretically capable of delivering strikes deep into Russian territory. The number of non-nuclear long-range ALCMs is in the thousands, which makes it difficult to include them under the ceilings of the future START. It would have to raise its levels a lot, which would be politically awkward, or to reduce nuclear weapons by several times, which would be difficult militarily.

The ban on the deployment of intermediate-range missiles (IRMs) near each other's territories organically fits into the concept of the "security equation" [17]. However, it would be difficult to revive the INF Treaty after its denunciation in 2019. There is a precedent for unresolved controversies over the range of Russian 9M729 cruise missiles, and there is a US intention to deploy IRMs in Asia to deter China (both issues served as a motive of US withdrawing from the Treaty in 2019). However, in case of the refusal to deploy only in Europe, there will be no prohibition of the former Treaty on the production and testing of such missiles, and they can be quickly transferred from one region to another. In addition, the same dual-purpose systems may have different ranges²².

The logic of the "security equation" should, in theory, also cover nuclear and conventional sealaunched cruise missiles (SLCMs) and future longrange hypersonic glide systems (over 600 km). In the US Navy, SLCMs are placed in universal launchers of surface ships (Mk-41), along with anti-aircraft and anti-submarine missiles, and can also be launched from vertical launchers of multi-purpose and modified strategic submarines. In Russia, they are placed in launchers of ships and torpedo tubes of subma-

rines²³. Even with the consent of the parties to their limitation, verification of such an agreement would be an unprecedentedly difficult task²⁴.

The concept of the "security equation", as indicated by Moscow, also affects defensive weapons capable of solving strategic tasks [13]. Supporters of the Biden administration are rather vaguely hinting at the possibility of greater flexibility on this issue [11], in contrast to the strongly negative position of the Republicans. Although Russia has never officially clarified its proposals to resolve the problem, a return to the original 1972 ABM Treaty is hardly possible. Now and for the foreseeable future, the missile defense systems of both countries are incomparable to the SDI program of President Ronald Reagan in the 1980s, but each in its own way went far beyond the limitations of the 1972 Treaty (primarily in terms of the defense of the entire territory, mobility²⁵, and protection of allies).

Even apart from such complex issues as the prohibition of space weapons, cyber warfare, and "legally binding security guarantees", the topics mentioned above demonstrate the enormity of the challenges facing the Geneva Dialogue. Nevertheless, as half a century of agreements in this area has shown, even on the most difficult issues, a compromise is achievable if the parties adhere to the logic of arms control and reach an agreement on which weapons systems to include in the

¹⁹ For the United States, it is about ALCMs of the *AGM-86B* type and *B-61* and *B-83* air bombs, and for Russia – ALCMs *Kh-55*, *Kh-102*.

²⁰ For the United States, it is about ALCMs *AGM-84*, *AGM-158B JASSM-ER*, and for Russia – *Kh-55SM*, *Kh-555*, and *Kh-101*.

²¹ It is about missiles *AGM-158B JASSM-ER*.

²² One such *9M729* type cruise missile can have a range of up to 500 km with a heavy conventional warhead (1000 kg), 1500 km with extra fuel reserve (500 kg) and a lightweight conventional warhead (up to 500 kg) and even 2,500 km with a lighter nuclear warhead (250 kg). See: Ketonov S. Caliber and Kinzhal are landing. *Voenno-promyshlennyi kur'er*, August 13, 2019, no. 31, p. 5. (In Russ.)

²³ Various modifications of the American *BGM-109 Tomahawk* SLCM are meant here, and in the future — the Conventional Prompt Strike (CPS) sea-based boost-glide system. Russia is deploying *3M14 Caliber* SLCM and testing *3M22 Zirkon* hypersonic missiles [18].

²⁴ In history, nuclear SLCMs have been limited only once — under START-1, but not in the Treaty itself, but in the protocol thereto, with a threshold of 880 units for each party, and without verification, but on the basis of transparency and trust measures. Since 1983, the US has deployed 385 nuclear SLCMs (*BGM-109 TLAM-N*), 179 on surface ships, and 206 on submarines. Since 1985, 240 similar *KS-122/3M10 Granat* missiles have been deployed in the USSR, but only on multipurpose nuclear submarines. After 2011, US nuclear SLCMs were decommissioned, as well as, probably, in Russia [18].

²⁵ For example, the ABM Treaty banned mobile anti-missile launchers, but they are provided for the new Nudol anti-missile system, which forms the basis of the new A-235 missile defense system in the Moscow Region. Also, the ABM Treaty prohibited the territorial defense system and limited it to only two basing areas (later one), while the S-500 missile defense/air defense system is designed to protect various regions of the territory of the Russian Federation and, according to a representative of the Ministry of Defense, "will be able to destroy intermediate-range missiles, operational-tactical missiles, as well as shoot down missiles in near space and thus will carry elements of strategic missile defense". See: The S-500 system will be an element of strategic missile defense - Deputy Chief of the Air Force. Military Parity, September 28, 2009. (In Russ.) Available at: http://www. militaryparitet.com/teletype/data/ic_teletype/6203/ (accessed December 26, 2021).

treaty and which to postpone for the future [15]. All this requires political will, realism, and consistency of state leaders, as well as the professionalism of military and civilian specialists aimed at a positive result.

True, in the past, the process was facilitated by its bilateral nature, and if that changes, then the maintenance of strategic stability will face a fundamentally different military-political and military-technical context.

CHINA CHANGES THE STRATEGIC BALANCE

In the uniquely difficult atmosphere of the beginning of Russian-American negotiations, China has presented everyone with a strategic surprise unprecedented in its history. In July 2021, literally on the eve of the first meeting of Russian and American diplomats in Geneva, independent American experts released publicly available data from commercial satellites about the grandiose construction of three bases and hundreds of silos in the central regions of China allegedly as launchers of ICBMs [1, 2], and then the Pentagon published this information [3, p. 48]. Beijing has not yet confirmed or denied it, while Moscow, in the spirit of "strategic partnership", is demonstrating indifference, referring to the US indifference to the nuclear forces of the UK and France.

According to foreign data (in the absence of official Chinese information), the PRC now has 350 nuclear warheads on 372 delivery vehicles of various ranges (including aviation). According to the counting rules of START-3, about 190 land-based and seabased missiles and 270 warheads can be classified as strategic forces²⁶. Missile deployment, discovered in the summer of 2021, according to official American estimates, can increase this number by 2027 to 700 warheads, and by 2030 to 1000 warheads. However, as officially recognized by the Pentagon [3, p. 8], the previous assessments of the Chinese program were underestimated and it is possible that they again, for some reason, underestimate China's capabilities.

Presumably, the newest Chinese ICBMs *DF-41*²⁷ will be placed in the silos under construction, and they

have multiple individually targetable reentry vehicles (MIRVs) and were tested with two or three warheads, but, according to foreign estimates, are capable of carrying up to 10 warheads [20]. Now, 270 silos have been laid at three new missile bases, but, most likely, after the construction of the third base is completed according to the standard of the first two, there will be about 330–340 launchers in total. With a full load of new missiles with warheads, the missile build-up that has begun, together with other ground, sea, and air strategic systems²⁸, is capable of providing China with a strategic arsenal of about 4 thousand warheads in a decade and a half.

Recall that, under the START-3 Treaty, Russia and the United States until 2026 have the right to 1550 nuclear warheads in their strategic forces²⁹. Of course, in addition to strategic nuclear forces, the two superpowers have intermediate-range nuclear weapons and TNWs (in particular, the United States has a total of about 3800 deployed and reserve nuclear warheads, and Russia is credited with 4300 units [19, pp. 339-359]). However, the PRC most likely has many hundreds of weapons of a comparable class (including land-mobile cruise missiles, TNWs for aviation and navy).

According to foreign studies, in addition to the stock of 350 nuclear warheads, China has a stockpile of weapons-grade uranium and plutonium (used as triggers for thermonuclear warheads), from which about 2300 nuclear warheads can be made, including for hundreds of *DF-41* missiles. Additionally, it is possible to use plutonium separated at reprocessing plantss from irradiated nuclear fuel of commercial reactors (two new plants are under construction and will be put into operation in 2025–2030, and one is supposed to be purchased from France). Thus, it is possible to produce another 1200, and in total – 3500 nuclear warheads [21].

At the same time, the space constellation is intensively growing (360 Chinese satellites are currently in the orbit, while the United States has 1300, and Russia has 170), autonomous systems using artificial intelligence, ground-based anti-satellite weapons

²⁶ So far, in addition to 140 intermediate-range nuclear missiles and 20 intermediate-range bombers (which do not reach the United States, unlike the territory of the Russian Federation), China has had 26 silo-based *DF-4/5* liquid-propellant ICBMs, carrying from one to five nuclear warheads, and up to 80 ground-mobile ICBMs of the *DF-31* type with a single warhead. There are also 18 new *DF-41* ICBMs (carrying three warheads each) and 6 strategic nuclear submarines with a total of 72 *JL-2* type ballistic missiles with a single warhead [19, pp. 369-372; 3, p. 48].

²⁷ The *DF-41* ICBM in terms of weight and dimensions (80 tons) is somewhat smaller than the old Soviet missile *RT-23 UTTKh*

Molodets (108 tons), silo- and rail-based, and the American *ICBM MX Peacekeeper* (89 tons), but significantly more than the Russian *RT-2PM Topol* missiles (45 tons).

²⁸ In addition to its six strategic submarines, each carrying 12 SLBMs, China is building six more, each with 12 MIRV missiles, and is also developing its first HB for long-range aviation cruise missiles.

²⁹ This follows from the rules for counting under START-3. In reality, the US strategic forces have about 1730, and the Russian Federation has 1600 warheads. As a maximum, under START-3, the United States can load approximately 2200 warheads on such carriers, and the Russian Federation — about 2000 warheads.

(tested against a real orbital target in 2007), electronic warfare and cyber warfare technologies. High-precision anti-ship ballistic missiles and intermediate-range boost-glide hypersonic systems in nuclear and conventional versions are being deployed³⁰, its own missile defense system is being created, and the most advanced air defense systems (S-400) are purchased from Russia.

This was partly known before³¹, but very few predicted the start of a large-scale missile deployment in China³². Most Chinese and foreign experts argued that the PRC would not chase after superpowers, but would "go its own way", adhering to the concept of no-first-use of nuclear weapons, maintaining only "minimal nuclear deterrence" (that is, the ability to inflict some tangible damage on the enemy in retaliation), and will not strive for parity with the two nuclear superpowers. This theory was debunked in the summer of 2021.

In March of the same year, at one of the high forums of the CPC, Chairman Xi Jinping demanded that the party-state and military leadership "accelerate the construction (capacity) of high-level strategic deterrence" [25]. Officially, the PRC has not yet made noticeable adjustments to its public doctrinal guidelines saturated with propaganda, according to which it is "committed to the principles of defense, self-defense and retaliation after an attack (of an enemy)". It takes the position that "we will not attack unless we are attacked, but we will certainly counterattack if we are attacked"33. Information about the sharp acceleration of the Chinese nuclear missile program allows concluding that the concept of "minimum deterrence" has been replaced by the concept of at least parity with the United States (and the Russian Federation), and the doctrine of nuclear no-first-use will receive a very expanded interpretation.

Experts who did not expect such a turn of events are now wondering what missiles are supposed to be deployed at the three new bases, will they be located in all the dug silos, and will they be loaded with the maximum number of warheads [26]? In this regard, the US plan in the late 1970s to deploy MX ICBMs in multiple protected shelters (MPSs) is recalled³⁴. Back then, it was planned that the missiles would periodically move between the silos and the USSR would not be sure of their actual location and would be forced to attack all targets and waste nuclear warheads. However, this analogy is incorrect: at that time, the Pentagon planned to build 4,500 MPSs for 200 MX ICBMs, which would "overload" the nuclear ammunition of the Soviet Strategic Missile Forces³⁵. Then this idea was abandoned due to excessively high cost and fear that the USSR reconnaissance satellites would be able to distinguish empty silos from those containing missiles, while moving ICBMs from one to another during an on-going attack (30 minutes flight-time) was practically impossible.

Now China is building about 350 silos. Three or four of the seven American submarine missile carriers deployed in the Pacific Ocean are capable of covering them with one salvo of *Trident-2* missiles. Therefore, the PRC military command is unlikely to play a "shell game" with the United States (in which silo is the missile?), like the former American MPS project. Apparently, DF-41 ICBMs will be installed in all silo launchers as such missiles are produced, for which silos are built in advance simply because it takes more time (on average, one takes up to a year). For 10-15 years, it is guite within the power of the main rocket-building plant of the PRC to supply missiles for all the silos of three new bases — this is 30-20 missiles per year, while Russia until recently built 50 ICBMs annually [27]. The same applies to the number of warheads on these missiles — their arming will be determined by the rate of production of munitions, and strategic and technical considerations for equipping strategic missiles.

By a large-scale build-up of strategic forces to join the league of nuclear superpowers, China will suffer a loss of image in the eyes of the world community, developing countries, Western liberals, Russian admirers, adherents of the Treaty on the Non-Proliferation of Nuclear Weapons (with its Article VI), and zealots of immediate nuclear disarmament (with their Treaty on the Prohibition of Nuclear Weapons, approved by

³⁰ These are the *DF-21D*, *DF-26* systems, and the latest *DF-17* hypersonic missile-glide system.

³¹ For example, separate estimates from 2012 assumed that the PRC had up to 1,800 nuclear weapons, of which 900 were assigned to various carriers, although in peacetime they were stored separately from them [22, 23].

³² In particular, the author of this paper noted back in 2013: "... The nuclear potential of the PRC is clearly underestimated by the world community. Apparently, China is already the third nuclear power after the US and Russia, which forms its own class, surpassing all the other six nuclear states combined. In addition, China is the only power, apart from the Russian Federation and the United States, that has the technical and economic capabilities to rapidly and repeatedly build up nuclear power" [24].

³³ China's National Defense in the New Era. *The State Council Information Office of the People's Republic of China*. Beijing, Foreign Languages Press Co. Ltd., July 2019, p. 8. Available at: http://english.www.gov.cn/archive/whitepaper/201907/24/content_WS5d3941ddc6d08408f502283d.html (accessed December 26, 2021).

³⁴ This infrastructure was called Multiple Protective Sites (MPS).

³⁵ It was calculated that for a high probability of hitting silos, it is required to aim at least two warheads at each, that is, to use up 9 thousand warheads – significantly more than there were in total in the Soviet strategic nuclear forces.

the UN in 2017). However, apparently, this is seen in Beijing as a sacrifice of "light" figures ("soft power") in exchange for a big gain in "hard power". A powerful and unexpected Chinese "gambit" is capable of significantly strengthening the national defense capability and security, and raising its world status and military-political influence abroad.

In the past, China's missile forces had a low level of readiness (many were kept separate with nuclear warheads, and mobile missiles were hidden in underground tunnels). Henceforth, *DF-41* ICBMs in hardened silos will become much more survivable and constantly in high readiness state, including for delivering a first nuclear strike in response to an attack by American high-precision conventional weapons or for a retaliatory launch-on-warning, which involves the launch of missiles based on information about the attack from satellites and its confirmation by ground-based radars — before the enemy's warheads fall on Chinese missile bases.

Until now, only the United States and the Russian Federation have had such capability, and the Russian President has repeatedly eloquently described it³⁶. China will gain such an option due to the deployment of many combat-ready silo-based ICBMs and the creation of a space-based Missile Early Warning System³⁷ with the technical assistance of Russia [29]. This system, like that of the other two superpowers, is supported by a belt of ground-based early warning radars along the perimeter of the territory [28]. Such a system is combined with the construction of ultra-deep command centers of absolute survivability for the top military-political leadership.

In principle, the concept and means of a retaliatory launch-on-warning do not contradict the doctrine of no-first-use of nuclear weapons, but there is another side to this coin. Such a concept is associated with a high risk of a nuclear strike due to a false alarm of the early warning system (which happened periodically in the past, but was quickly discovered) or an erroneous assessment of the intentions and actions of the enemy, since the decision-making time of the top leadership is reduced to several minutes (or even seconds)³⁸. The transition of the mutual capability to implement launch-on-warning from a bilateral to a trilateral format might entail an exponential growth in the threat of an unintentional nuclear war, espe-

As a "reserve element" for deterrent, Chinese silo-based missiles will be supported by building up a fleet of nuclear submarine missile carriers with multipl-warhead SLBMs. For communication with submarines on sea patrols, a "field" (100x100 km) of transmission cables at ultra-low frequencies is built [30]. Such facilities are available only in Russia and in the past — in the United States. As a result, unlike in previous years, a disarming US strike against Chinese strategic forces will become impossible, at least not with the use of traditional missile and nuclear weapons systems.

By itself, this potential, due to the number of launched warheads, will be able to overcome ("overload") the current and any predicted missile defense system of the United States and its Pacific allies. However, China goes further: in the same summer of 2021, it tested the latest "hybrid system" in history, combining a partially orbital ballistic missile (fractionally orbital bombardment system – FOBS) with a hypersonic glide unit [31]. This missile puts the warhead into low Earth orbit, being capable of attacking the United States from the south (where they do not have warning radars and anti-missiles interceptors) and approaching the target along unpredictable trajectories³⁹. In the coming years, this makes it impossible for the missile defense system to intercept it even if delivering single strike. Although Beijing officially denied this information and stated that it was just a reusable spacecraft that had been tested, those abroad did not believe the explanation, concluding that China was ahead of both Russia and the United States in this military-technical area.

STRATEGIC MOTIVES AND CONSEQUENCES

As is usually the case, it is easy to explain in hindsight any unexpected developments (as a sharp turn in China's military policy), and this is being presently done by the experts who have previously followed Chinese "minimum deterrence" propaganda. First, Beijing is concerned about the development of the American missile defense system at the global level

cially since the trajectories of Chinese and US ICBM strikes against each other, according to the laws of ballistics, are projected over the territory of Russia.

³⁶ The Valdai International Discussion Club Conference. October 18, 2018. (In Russ.) Available at: http://www.kremlin.ru/events/president/news/58848 (accessed December 26, 2021).

³⁷ Previously, the PRC occasionally launched short-lived reconnaissance spacecraft into low orbits (ZY and JD series), and now it constantly has an early warning satellite in geostationary orbit such as Yaogan-30 type [28].

³⁸ The Valdai International Discussion Club Conference ...

³⁹ Such ICBMs of the heavy type *RS-20 (R-36 orb)* were created by the USSR in 1968, but then they were banned by the SALT-2 and START-1 treaties. The new Russian heavy missile *RS-28 Sarmat* can also be partially orbital. Now, it is possible that the PRC has equipped its new FOBS instead of a free-falling ballistic warhead with a hypersonic glide unit, which makes it even more difficult to accompany its flight in the atmosphere with the help of radar and intercept on approach to the target.

and in the Asia-Pacific region. The predominant part of the US anti-missile potential is indeed deployed in the region, although its individual elements are of global class⁴⁰. These missile defense systems are justified by the task of protecting against the missile threat of the DPRK, but China (like Russia) projects the potential of American defense onto itself.

Second, the PRC constantly feels the Damocles sword of the striking power of nuclear and high-precision non-nuclear offensive weapons of the United States⁴¹. The combination of the US offensive and defensive capabilities, with a growing emphasis on confrontation with China, makes Beijing wary of a massive, precision-guided conventional strike to which it cannot retaliate with nuclear weapons if it honors its no-first-use commitment. A disarming nuclear strike by the United States under the current conditions would most likely leave China with no surviving means to retaliate.

Previously, China partly made up for the strategic superiority of the United States with its intermediary-range missiles, which held American military bases and allies in Asia hostage. The same model of Chinese containment was applied to the Soviet territory beyond the Urals during the years of confrontation between the two states. By the way, such a strategy was practiced by the Soviet Union in relation to the allies of the United States in Eurasia in the 1950s, when it did not yet have intercontinental nuclear launchers. However, now, having created a new generation of strategic weapons, the Chinese leadership has decided to shift the focus from indirect to direct nuclear deterrence of the USA, as the USSR did after launching a satellite in 1957 and creating an ICBM force in the 1960s.

Third, Beijing is laying the groundwork for a significant change in its favor in the balance of power in

possible negotiations with Washington on arms control (which will be discussed below).

Fourth, the high-level motive is China's desire to bring its military power in line with the achieved economic potential and become not only an industrial but also a military-political global power, in no way inferior to the United States [25].

Whatever the reasons for the Chinese missile program, if its foreign assessments are true, then in the next decade, a truly tectonic shift in the world order is planned: the PRC will become a full-fledged military superpower, and this will have both global and regional consequences. By gaining superiority in general-purpose forces⁴² and IRM systems in the Western Pacific, and then reaching parity with the United States in strategic forces, China will effectively challenge American security guarantees to their allies and partners in the Asia-Pacific region. It will try to displace American influence and achieve dominance over the zone, which it considers its "historical sphere of influence" (primarily Taiwan, as well as the islands, natural resources, and maritime communications of the South China and East China Seas). Then the influence of the revived Empire will expand to the Indian Ocean basin (in Diibouti there is already a naval base), and later to the Arctic (China builds a large icebreaker fleet and declares the resources of this ocean a global property).

Unlike during the Cold War and the last three decades, the United States will no longer be able to deter possible Chinese military action and political pressure against the countries of the Asia-Pacific region by threatening a massive non-nuclear air attack, and then a nuclear strike based on its strategic superiority. This may encourage US allies and partners (Japan, South Korea, and Taiwan) to either submit to China or go down the path of building their own nuclear deterrence capability by withdrawing from the Nuclear Non-Proliferation Treaty.

Against this background, the establishment of the US-UK-Australia (AUKUS) trilateral alliance with the supply of the latest technology for the construction of eight nuclear attack submarines, which made a lot of agitation, has a purely symbolic meaning due to the insignificance of the fleets of the named US allies⁴³. The only tangible effect of the AUKUS

⁴⁰ Here, three out of five large missile defense radars, three out of six transportable X-band radars, 44 strategic anti-missiles (in Alaska and California), 16 out of 23 ships with the *Aegis* missile defense system are deployed, plus six Japanese ships with the *Aegis* missile defense system, as well as on the Japanese territory, the *Patriot* missile defense system [32].

⁴¹ Eight out of 14 *Trident* strategic missile submarines (SSBNs) are based and patrolling in the Asia-Pacific Region, possibly some of the 400 *Minuteman* ground-based missiles and 60 *B-52* and *B-2* HBs are aimed at the PRC. Two of the four converted *Trident/Ohio* submarines, 30 attack nuclear submarines, and 45 large ships are equipped with non-nuclear high-precision *Tomahawk* cruise missiles in the Asia-Pacific region. About 70% of all American missiles of this type are deployed in the Asia-Pacific region – more than 2,000 units. Also, for non-nuclear strikes are the carrier-based aviation of aircraft carriers (6 out of 11 in the Pacific Ocean) and part of the HBs based in Hawaii and Guam. With a priority orientation on the PRC, hypersonic boost-gliding ground, sea, and air-launched missiles in conventional equipment are being developed [33].

⁴² In terms of the number of ships in the Navy, China took the 1st place in the world (except for aircraft carriers), and in the Air Force – the 3rd place in the world after the USA and Russia, but being the 1st in the Asia-Pacific region.

⁴³ The UK will be able to have one or two nuclear submarines and one or two destroyers or frigates in the Pacific. Even if Canada joins the alliance, it will add three diesel submarines and five frigates.

is that theoretically a precedent will be created for a non-nuclear state (Australia) to become involved in military high-grade nuclear materials (as fuel for marine reactors), which could trigger the proliferation of nuclear weapons in the region and the rest of the world⁴⁴

In addition, India will accelerate its nuclear missile program in response to the new Chinese course, Pakistan will respond to it, the DPRK will join them, and now the UK has also announced raising the cap on its nuclear forces (from 180 to 260 warheads). Against the backdrop of Chinese measures, these plans do not look very ambitious, but they will also have an impact on the regional military situation, and even more so on the prospects for arms control.

It is clear that for Russia, such changes will be of great importance both in the regional and global aspects. Radical shifts in the ratio of the weight categories of the Russian Federation and the PRC cannot but affect the degree of equality of the "strategic partnership" of the two powers. This also applies to the prospects for non-proliferation of nuclear weapons, and even more so to negotiations between Russia and the United States on strategic stability.

HOW WILL RUSSIA AND THE USA RESPOND?

Moscow's reaction to the Chinese missile program was understandably restrained, despite the controversial history of relations between the two powers. Until about the late 1980s, they were ardent enemies⁴⁵, entered into border armed conflicts, helped the parties at war with each other in Asia and Africa, and had approximately the same strategic relations that are now present between China and the United States, with an even greater advantage in forces in favor of the USSR.

Now the parties again, as in the 1940s–1950s, are in a state of peace and friendship, which is now called not "brotherhood forever", but in a newfangled manner – "strategic partnership" [29]. However, in the military aspect, these relations still lag behind the alliance of the 1950s⁴⁶, as well as the US alliance with the UK and even with France within the framework of NATO. Although the Russian Federation and the PRC often conduct joint military exercises, raids of warships, and flights of long-range aviation, they do not have military bases on each other's territory, do not plan a common military strategy, and are not burdened with obligations to fight for each other (for example, for the Crimea, Donbass, or Taiwan).

Although objectively, most of the nuclear weapons of the two countries can be used against each other, their relationship cannot be defined as "mutual nuclear deterrence" in the light of the broad military-political cooperation between the two powers. Perhaps it entered a qualitatively new stage in the fall of 2019 with the announcement of a plan for Russian assistance in the creation of the Chinese missile attack early warning system [29]. Presumably, the project is about space-based assets, although the specifics, as is customary on both sides, are kept secret. Cooperation in such a cardinal sphere of national security is characteristic of the closest military-allied relations of states (as between the USA and the UK, Canada, and Denmark⁴⁷).

In terms of strategic forces and TNWs, Russian superiority will remain in the coming years, but in terms of IRMs and general-purpose forces, the balance in the Asia-Pacific region is noticeably changing in favor of China. Regardless of the intentions of the parties, objectively, Russia has in the past been capable of delivering an effective disarming strike against China's nuclear forces and their command and control centers. However, as China goes on with missile build-up, this opportunity will be lost, while China, using its intercontinental and even intermediate-range missiles, will be able to jeopardize the main administrative and industrial centers located in the European part of Russia, and even the most important missile, naval, and air bases of strategic nuclear forces.

⁴⁴ Until now, non-nuclear states do not have nuclear submarines or ships. Highly enriched uranium used in marine nuclear engines could theoretically be used to produce nuclear warheads, especially if non-nuclear countries get the opportunity to independently handle such material or create uranium enrichment plants for marine engines. Brazil and Iran have already made attempts to follow this path, and South Korea, Japan, and other states may follow their way.

⁴⁵ After armed clashes in the Far East and Central Asia, the USSR created a half-million military grouping in the Trans-Baikal Territory and the Maritime Territory (comparable to the grouping in Central and Eastern Europe against NATO) and was seriously preparing for a big war with China, which the author could personally see when visiting the Pacific fleet in the mid-1970s. At the same time, the Chinese threat justified the modernization of the *A-135* missile defense system of the Moscow Region and the deployment of about a third of the latest IRMs *RSD-10 Pioneer* (*SS-20*) beyond the Urals.

⁴⁶ In those years, the USSR virtually re-equipped the PRC army and created Chinese industry from scratch, including the nuclear sector; both states fought together against the United States in the Korean War of 1950–1953 (China with an army of "volunteers" – openly on land, and the USSR – behind the scenes in the air).

⁴⁷ The United States and Canada are included in the North American Air Defense Command, and on the territory of the UK and Denmark (in Greenland) American early warning radars are deployed.

As the historical experience of the last half-century teaches, the political relations of states change periodically, but the nuclear potential remains and grows, if not limited by international treaties. At the same time, long-standing contradictions put on the shelf can at the right time return to the forefront under the pretext of "restoring historical justice" ⁴⁸.

It is obvious that at present, Russia will in no way respond to China's missile deployment by military means, at least openly. Accordingly, the two states do not have a subject for negotiations on arms limitation, just as the United States does not have it with the UK and France. Specifically, Moscow does not have weapons systems that it could reduce in exchange for appropriate moves by Beijing, which is the essence of negotiations of this type. However, indirectly, Russia will probably have to respond to the changing situation, primarily in terms of response to the actions of the United States. In the same way, it will need to adjust its line in the Geneva dialogue, depending on how the US negotiating position changes in the new strategic situation.

Another story is Washington's reaction to the Chinese program, which can be described as close to panic. This is understandable, since relations between the US and China have a pronounced nature of mutual nuclear deterrence, although the US still has multiple superiority at the global level, with the regional nuclear missile advantage of China. In addition, unlike US-RF relations, this dynamic balance of power is not regulated by arms control treaties (except for US strategic nuclear forces, limited by START-3 with Russia).

Depending on the further evolution of the Chinese missile program, the military response of the United States may include several directions and stages. The toughest option is a rapid build-up of American strategic nuclear forces by returning to strategic delivery vehicles of non-deployed nuclear warheads previously transferred to storage during the reductions under START-3⁴⁹. This "reconstitution" potential is about

1300 warheads⁵⁰, that is, it allows increasing the strategic nuclear forces to about 3450 units (including fully equipping HBs with air missiles). All these activities can take one year and cost about USD 100 million [34] — very little by the standards of the US military budget (USD778 billion for FY2022).

However, for such a build-up of forces, Washington will be forced to withdraw from the extended START-3 ahead of schedule (February 2026). Then Russia, too, will have to respond to the change in the strategic situation. However, its "reconstitution" potential, due to the technical differences of the Russian strategic nuclear forces, is estimated at about 500 warheads⁵¹, which will increase the number of nuclear warheads to approximately 2500 units. As a result, strategic parity will be violated, and the 30% superiority of the United States will have a negative political significance for Moscow.

However, such a response from Washington is unlikely⁵², since Chinese missile buildup is unlikely to reach an impressive scale until 2026, when the extended START-3 expires⁵³. By that time, a broad modernization of the entire American strategic triad will already begin, designed for the next two decades and estimated at a cost of USD1.7 trillion [35]. It is on this program that Chinese missile deployments can have the most direct impact — in terms of its acceleration and expansion. Initially, this program was within the START-3 limits, with a margin for reductions in case the next START Treaty would be concluded. In particular, to replace the previous gen-

⁴⁸ For example, in the Chinese press and the academic, historical, and educational environment, lamentations continue about the allegedly unequal border treaties with Russia from the middle of the 19th century, which tore away 1.5 million km² of the Far East from China.

⁴⁹ START-3 allowed carrying out reductions in warheads down to 1,550 units not by eliminating launchers, but by removing MIRV warheads, in particular, from *Trident-2* SLBMs (three or four out of eight warheads), *Minuteman-3* ICBMs (two out of three), counting nuclear bombs and ALCMs on bombers as one warhead, as well as through the conversion of HBs for non-nuclear missions and their removal from limits (700 deployed missiles and bombers).

warheads per 200 *Minuteman-3* ICBMs and three to four warheads per 240 *Trident-2* SLBMs. However, there are higher estimates: bringing the US strategic nuclear forces to 7130 warheads by returning 50 *Minuteman-3* ICBMs and 48 *Trident-2* SLBMs to launchers, equipping them with the maximum number of warheads (8–14) and returning to the strategic nuclear forces of *B-1B* bombers when all aircraft are equipped with the maximum number of ALCMs and air bombs. See: Vil'danov M. Strategic tricks of the Pentagon. *Nezavisimoe voennoe obozrenie*, September 29, 2017. (In Russ.) Available at: https://nvo.ng.ru/armament/2017-09-22/1_966_usa.html (accessed December 28, 2021).

⁵¹ The estimate assumes maximum loading of HBs and additional loading of *RSM-54 Sineva* and *RSM-56 Bulava* SLBMs, as well as *RS-24 Yars* ICBMs See: Gundarev V. France was not ordered. *Nezavisimoe voennoe obozrenie*, September 5–8, 2016, no. 33, p. 2. (In Russ.); Baklitskiy A., Buzhinskiy E., Orlov V., Semenov S. If the START Treaty is not extended: scenarios for Russia. *PIR-Center*, 2020. (In Russ.) Available at: http://www.pircenter.org/media/content/files/14/15917054160.pdf (accessed December 28, 2021).

⁵² The only exception can be the likely return of warheads to parts of SLBMs in the Pacific Ocean, since the commissioning of new submarines will begin only in the 2030s.

⁵³ As mentioned above, according to the Pentagon estimates, by 2027, the level of Chinese strategic nuclear forces will reach 700 warheads.

eration of naval missile forces (18 Ohio/Trident class submarines with 24 Trident-2 SLBMs each), a more compact component was planned (until the 2040s, it was planned to build 12 Columbia class submarines, carrying 16 SLBMs each). Now the program will most certainly be expanded in terms of the number of submarines and the number of warheads on their missiles, especially since the sea-based forces in the Pacific Ocean are the most optimal component of the US nuclear potential against China. In addition, in view of the buildup of Chinese ground-based missile forces, the discussion in the United States on replacing obsolete *Minuteman-3* ICBMs with the next generation of ground-based missiles will come to naught. As a result, the new system (GBSD⁵⁴) will be given a green light from the early 2030s or even earlier.

Serious decisions are also possible in terms of non-strategic weapons systems. During the Biden campaign, the Trump administration's decision to return sea-launched nuclear cruise missiles to the Navy (withdrawn in 2011 by the Obama administration) was criticized, but after coming to power, the Democrats were in no hurry to cancel it. Now the probability of deploying nuclear SLCMs, primarily against China, is increasing [18]. The program of a sea-based hypersonic boost-glide system with a conventional or nuclear warhead will also receive an impulse ⁵⁵.

Another area of containment of China is the planned deployment of land-based IRMs in the Asia-Pacific region under Trump's presidency. It is significant that this decision has not been canceled by the Biden administration. A number of systems are being considered as candidates⁵⁶ for deployment in Japan, South Korea, Taiwan, the Philippines, the Diego Garcia Islands, Guam, and the Palau Islands. For domestic and foreign political,

as well as operational reasons, this was previously considered difficult, but in connection with the Chinese military programs, this situation may change in the future.

In the context of the formation of strategic parity with China, the deployment of IRMs with a short flight time at close approaches to the potential enemy can be regarded in the United States as a key option for maintaining military superiority, since, for geostrategic reasons, China will not be able to respond symmetrically. An analogy arises with the deployment of American IRMs in Europe in the 1980s, when the USSR secured parity with the United States in strategic arms.

It is clear that after such an unfavorable shift in the military balance, on the part of China there may be a harsh reaction in the form of accelerated deployment and equipment of its strategic missiles and intermediate-range systems with the maximum warheads numbers. Also, Russia will have to take retaliatory measures in its current and future military programs, since these American weapons systems will either have a global reach or objectively pose a threat to the Russian territory from the Asia-Pacific region. Therefore, the Russian Federation will probably respond via both strategic nuclear forces and all types of sea and land-based IRMs⁵⁷ in the Far East, especially in the case of the appearance of American IRMs in South Korea and Japan⁵⁸.

In addition to these weapons programs, the United States will undoubtedly significantly increase funding for the latest esoteric weapons systems and military technologies: space information and control systems and weapons, unmanned AI vehicles, electronic warfare and cyber warfare, quantum technologies, and big data analysis. Some expansion of land- and sea-based missile defense systems is also not ruled out. Both China and Russia, in turn, will respond with symmetrical and asymmetric countermeasures in accordance with their scientific, engineering, and economic capabilities.

⁵⁴ GBSD is ground-based strategic deterrence.

⁵⁵ This Conventional Prompt Strike (CPS) missile will be installed on new Virginia-class multi-purpose nuclear submarines in special vertical launch modules, and each submarine will be able to carry 40 *Tomahawk* SLCMs or 16 hypersonic missiles (CPS type). In total, 74 destroyers and 37 submarines will be equipped with such modules, most of which will be located in the Pacific Ocean. See: Ketonov S. The new arguments for the first strike. *Voenno-Promyshlennyi Kur'er*, November 24, 2020. (In Russ.) Available at: https://vpk-news.ru/articles/59644 (accessed December 28, 2021).

⁵⁶ These are Precision Strike Missile (PSM) systems with a range of 700 km, *Tomahawk BGM-109G* with a range of 1,000 km, ground-launched intermediate-range ballistic missiles with trajectory shaping vehicles (TSVs). Deployment is possible in 2023–2024 [9]; Ketonov S. Lockheed Martin was Bypassed at Hypersonic. *Voenno-Promyshlennyi Kur'er*, 10.09.2019. (In Russ.) Available at: https://vpk-news.ru/articles/52363 (accessed December 28, 2021).

⁵⁷ These are systems 3M14 Caliber and 3M22 Zircon, which can be equipped with nuclear warheads such as TK 66-02 (200 kt), TK-66-05 (250 kt), TK-60 (10 kt) [18].

⁵⁸ For example, such missiles of the Russian Federation can be deployed against Japan and South Korea in the South Kuriles and Maritime Province, and against the United States – in Chukotka, from where they can keep missile defense bases and early warning radars, other military and industrial facilities in Alaska under attack, as well as in northern California. See: Shirokorad A. The Doomsday Weapon. *Nezavisimoe Voennoe Obozrenie*, June 7, 2019. (In Russ.) Available at: https://nvo.ng.ru/realty/2019-06-07/6_1047_day.html (accessed December 28, 2021).

EFFECT FOR ARMS CONTROL

Starting in 2019, the Trump administration has sounded the alarm about Chinese intermediate-range and shorter-range missiles, which have been counted there up to 2,000 units and which were capable of hitting American aircraft carrier formations and any sites in Japan, South Korea, Taiwan, and Guam [36]⁵⁹. At first, Washington tried to seat Beijing at the negotiating table on the INF. Then the inclusion of the PRC in arms limitation became Trump's condition for the extension of START-3 [37].

President Biden removed this obstacle, extended the current Treaty, and agreed to negotiate the next agreement without preconditions. However, as noted above, the Democrats did not cancel the plan to deploy IRMs in Asia, apparently hoping to force the PRC to reduce or completely eliminate IRMs — by analogy with the USSR's agreement to start negotiations on the INF Treaty in the mid-1980s, which followed the beginning of the deployment of US missiles in Europe.

Until the summer of 2021, Washington did not plan negotiations with Beijing on the limitation of strategic arms, relying on its strategic superiority. Under Obama, consultations with China were only about comparing views on strategic stability and expanding the transparency of its nuclear forces and programs [38]. These contacts yielded nothing, except perhaps the compilation of an American-Chinese dictionary of strategic terminology. Now, in the not too distant future, Washington's priorities are sure to change. Henceforth, not Chinese IRMs, which are beyond the reach of the United States, but the large-scale deployment of ICBMs, which radically changes the strategic balance, will become the main "head-ache" overseas.

Traditionally, China has made a condition of its participation in such negotiations: US and Russia's reduction of nuclear forces to about China's level, although that level has been and is still kept secret. Now Beijing, apparently, has decided to unilaterally align the balance of strategic forces with its global rival. One cannot but notice that the Russian position regarding the multilateral limitation of both IRM and START demonstrates a fair amount of flexibility. For many years, Moscow has insisted on switching from a bilateral to a multilateral format of dialogue on nucle-

ar weapons⁶⁰. However, since 2019, it has supported Beijing's refusal⁶¹ to join the dialogue, pointing out its great lag behind the two superpowers in terms of nuclear potential⁶².

It is likely that in the near future, the United States will again put forward the condition for China to join the arms limitation for the period after the expiration of the extended START-3 in 2026. Despite still being significantly behind the United States in strategic nuclear forces, China has secured an exceptionally favorable position for itself in possible future negotiations. Beijing has left the Pentagon guessing: how many silos will be built and whether their construction will be limited to the three current bases, how many and what types of ICBMs will be deployed in them, how many warheads will be installed in their MIRVed upper stage, what combination of accuracy and yield they will have (and will they be able to hit the hardened command posts and ICBM silos)? The range of forecasts for 2030 ranges from a minimum of about 1,000 [3, p. 8] warheads to a maximum of 2,000, and by 2035 – to a level of about 4000 units⁶³.

Thus, Washington has the strongest incentive to reach an agreement with Beijing and set the threshold on the Chinese missile program as low as possible, and time is on the side of China. This is reminiscent of the situation on the eve of the 1970s, when the intensive buildup of Soviet land-based and sea-based missile forces (in response to the US missile spurt in the 1960s) forced Washington to recognize parity, negotiate with Moscow on an equal footing, and make concessions regarding the deployment of the Safeguard missile defense system, which culminated in historic agreements at the Moscow Summit in 1972.

So far, the US reaction has been vague and contradictory, since China has created a most difficult political and strategic dilemma for it. It is clear that

⁵⁹ Remarks at a UN Security Council Briefing on Threats to International Peace and Security. United States Mission to the United Nations, August 22, 2019. Available at: https://usun.usmission.gov/remarks-at-a-un-security-council-briefing-on-threats-to-international-peace-and-security/ (accessed December 28, 2021).

⁶⁰ Prime Minister Vladimir Putin meets with experts in Sarov to discuss global threats to national security, strengthening Russia's defenses and enhancing the combat readiness of its armed forces. Government of Russia, February 24, 2012. (In Russ.) Available at: http://archive.government.ru/special/docs/18248/ (accessed December 28, 2021).

⁶¹ Foreign Ministry Spokesperson Geng Shuang's Regular Press Conference on July 16, 2019. Consulate-General of the People's Republic of China in Jeddah, July 16, 2019. Available at: https://www.fmprc.gov.cn/ce/cgjed/eng/fyrth/t1681503.htm (accessed December 28, 2021).

⁶² Plenary session of the Eastern Economic Forum. September 5, 2019. (In Russ.) Available at: http://www.kremlin.ru/events/president/news/61451 (accessed December 28, 2021).

⁶³ It is assumed that in addition to the existing strategic nuclear forces, by 2030, the PRC will equip *DF-41* ICBMs with a MIRV stage with five warheads, and by 2025 with 10 warheads, and will also build six more submarines with MIRVed SLBMs (three warheads each) and will deploy 20–30 new HBs with long-range cruise missiles and even hypersonic glide systems.

if Beijing agrees to negotiations, it will not go for the treaty-based legalization of its current inferiority in strategic nuclear forces, but will demand fixing parity – at least for those weapons systems that will become the subject of the agreement. This is the historically established logic of limiting strategic arms over half a century of dialogue and a dozen agreements between Washington and Moscow. Like any other power, China will participate in negotiations and agreements only if they provide it with a more favorable strategic position than otherwise. However, for political and strategic reasons (superpower status, security guarantees for allies in the Asia-Pacific region, demands of nuclear deterrence against both the PRC and Russia at the same time), it will be extremely difficult for any administration in the White House to recognize parity in advance with a global rival catching up with the United States in all respects.

The search for an American solution to this dilemma is now on the path of opening a "broad dialogue on strategic stability, discussion of traditional nuclear strategy, doctrines, military potentials ... exchange of information and elimination of miscalculations regarding new technologies... discussion of the dangers of cyberattacks against nuclear control and communication centers, modernization of missile defense systems or the effects of hypersonic missiles". At the same time, "the main task is to prevent an arms race" [38].

All this is very exciting and can even be useful. The only problem is that this is not a solution to the main problem, but a departure from it. Beijing will gladly resume military disputes, in which it is difficult to compete with the birthplace of the strategic thought of mankind, which dates back two and a half thousand years from the treatises of the great strategist Sun Tzu. In the meantime, Chinese missile development will continue until the US moves from scholastic debate to equal talks on practical arms control.

For the current US-Russian consultations and possible future START negotiations, the ongoing changes create huge additional difficulties. First, US attention will continue to turn more and more to China, and negotiations with Russia will be relegated to the background, as well as concerns about Russian weapons programs. While, having a new acute problem with the PRC, Washington could be interested in quickly resolving the familiar controversial issues with Moscow. However, the fact is that the United States, for the most part, cannot separate its strategic forces and military programs into those directed toward Russia and those directed toward China.

Second, many of the weapons systems that have been placed at the forefront of restrictions in the Russian concept of the "security equation" are acquiring a more important role for the United States in countering the growing potential of the PRC. First of all, these are high-precision offensive conventional weapons (including hypersonic ones) of various basing modes, a global missile defense system, freedom of hands in the development of space systems of protection against anti-satellite weapons of the other two powers⁶⁴. The same applies to plans to deploy IRMs in the Asia-Pacific region, which are seen as an important asset in containing China and in possible negotiations with it.

The designated priorities of the United States in the current negotiations with the Russian Federation will not change much in relation to the limitation of the latest Russian systems (*Poseidon, Burevestnik*) and TNWs. What can be reconsidered is a significant reduction in strategic nuclear forces, to which the United States will not agree in the light of the buildup of Chinese strategic forces and uncertainty about the prospects for their treaty-based limitation.

In the aggregate, the Chinese "gambit" seriously complicated the already difficult strategic dialogue between Russia and the United States. Besides the fact that the PRC will (wittingly or unwittingly) push the Russian Federation out of its historically privileged position in the global nuclear balance and in exclusive diplomatic interaction with the United States.

The prospects for a formal tripartite dialogue are very doubtful [7]. In view of the specifics of Russian-Chinese strategic relations, it is difficult to imagine negotiations between these two states on arms control. In addition, over the past half-century, Moscow and Washington have agreed on a huge treaty-legal toolkit for START: definitions, criteria, counting rules, and verification methods. China, most likely, will not accept it as a "compulsory assortment", but will wish to reshape this apparatus in line with its strategic and cultural specifics.

Another option is two bilateral dialogues, involving negotiations between China and the United States, as well as between the United States and Russia, with some degree of informal interaction. After all, the United States is unlikely to agree to limit its

⁶⁴ In this regard, the test on November 15, 2021 of the Russian anti-satellite system with the destruction of a real target in the form of an old spacecraft is unlikely to increase the chances of concluding an agreement with the United States in this area. The fact is that the position of the Russian Federation will certainly be based on the Russian-Chinese draft "Treaty on the Prevention of the Placement of Weapons in Outer Space, the Use of Force or the Threat of Force against Space Objects" (PPWT), presented in 2008 at the Geneva Conference on disarmament. However, this draft just does not affect the systems that were tested by Russia in 2021 and China in 2007.

strategic-class systems in negotiations with the PRC, if at the same time similar forces of the Russian Federation are not limited. Likewise the achievement of agreements with Moscow may henceforth be made dependent by Washington on the limitation of the relevant Chinese armaments. Two parallel (but, of course, not synchronous) negotiation tracks will have different subject agenda and control and limitation measures.

It is hardly appropriate to propose options for Chinese-American agreements on arms limitation this is the business of Washington and Beijing. Only in a purely hypothetical aspect one can, for example, think about an agreement between the United States and China the equal limitation of the number of land-based launchers and ICBMs (but not their warheads) in total with intermediate-range groundbased missiles, which were the subject of the INF Treaty between the USSR and the USA (both nuclear and conventional). Since, according to American data, China has many hundreds of such IRMs, the preservation of sufficient intermediate-range forces would put a limit on the deployment of Chinese land-based intercontinental missiles. This would moderate Washington's main concern at the global level and resolve the dilemma: non-recognition of parity with the PRC or restriction of its missile buildup.

For China, such an agreement would be the legalization of parity with the United States, at least in two components of the global and regional balance. The deployment of American IRMs in Asia being the main threat to China would be severely limited, since the US would have to reduce its ICBM forces accordingly. Moreover, such a treaty would not require intrusive verification measures, for which Beijing may not yet be ready. In other traditional and modern areas of military development, the parties would have kept a free hand. By the way, this was exactly what happened at the first stage of the strategic dialogue

between the USSR and the USA⁶⁵. Some kind of agreement on the transparency and predictability of the US missile defense program would increase the incentives for an agreement on the part of Beijing (as well as for Moscow at the Geneva talks).

Perhaps from the American point of view, Russia's inclusion in such a partial agreement would not be necessary if their next START treaty would cover the strategic and other systems of the two states as a whole. A verifiable moratorium on the deployment of IRMs by both powers in Europe (according to Moscow's initiative of October 2020) would significantly strengthen strategic stability in a bilateral format.

* * *

It is not yet clear whether Beijing's attitude toward participation in strategic negotiations will become more positive as a result of a major buildup of its ICBMs and other components of the strategic nuclear forces. However, the future depends not only on the PRC but also on the reaction of the United States (indirectly, of Russia as well) to the Chinese missile construction and their desire to negotiate in fundamentally new conditions.

No matter how the situation with China develops, in the coming years, there is no reason to refuse to continue bilateral diplomatic cooperation between Moscow and Washington – neither to overload it with new conditions. For it, over the past decade, many urgent tasks have accumulated, the solution of which is vital for the security of Russia, the United States, and the rest of the world. Maintaining this process, among other things, is an indispensable condition for maintaining the prospects for a transition to an in-depth military-technological agreements and to a multilateral arms control format in the more distant future.

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⁶⁵ At that time, under the SALT-1 Interim Agreement of 1972, there were no limitations on heavy and medium bombers, warhead numbers, MIRV systems, missiles' throw-weights, and many other areas and parameters of the strategic balance, which later became the subject of the SALT/START agreements.

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СТРАТЕГИЧЕСКАЯ СТАБИЛЬНОСТЬ И КИТАЙСКИЙ ГАМБИТ

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ных научных проектов по приоритетным направлениям научно-технологического развития (Соглашение N = 0.75 - 15 - 2020 - 783).

Аннотация. Перспектива подключения Китая к процессу ядерного разоружения в последние три года вышла на передний план тематики контроля над вооружениями. В 2019—2020 гг. его "поставила ребром" администрация Дональда Трампа, выйдя из Договора по ракетам средней и меньшей дальности (ДРСМД) и отказавшись продлить Договор о мерах по дальнейшему сокращению и ограничению стратегических наступательных вооружений (ДСНВ-3). Со своей стороны Пекин категорически отверг эти требования, в чем его поддержала Москва. Благодаря приходу к власти в 2021 г. демократической администрации Джозефа Байдена в феврале того же года был продлен на пять лет ДСНВ-3, в июне прошел саммит президентов России и США в Женеве, и уже в июле там начался официальный двусторонний диалог по стратегической стабильности. Однако тем же летом произошло событие, которое чревато новой стагнацией переговоров двух ядерных сверхдержав и может иметь долговременные военно-политические последствия глобального и регионального масштаба.

Ключевые слова: ядерное сдерживание, переговоры по ограничению вооружений, высокоточные обычные вооружения, межконтинентальные баллистические ракеты, ракеты средней дальности, морские крылатые ракеты, противоракетная оборона, авианосцы, военные базы.

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