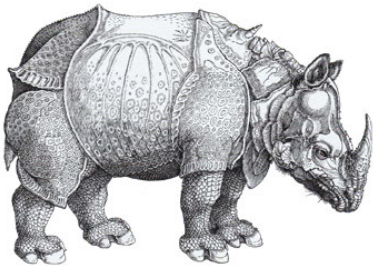

SECURITY INDEX

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Future of arms control: views from Russia

Evgeny Buzhinskiy, Dmitry Stefanovich

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Evgeny Buzhinskiy. U.S.-Russia arms control: where we are and where we are going

The article analyzes the current situation and the future of the U.S.-Russia arms control. The author elaborates on the chances of the New START treaty extension, consequences of dismantling of the nuclear arms control system, and the possible impact of the new Russian nuclear weapons types, such as "Poseydon" and "Burevestnic", on the future arms control agreements. Analyzing the New START treaty and the current situation, the author defines the interests of Russia and the U.S., perspectives of Chinese participation in the future arms control, and gives advice on the ways to reach a new bilateral, legally binding, and comprehensive arms control agreement that would succeed the NEW START.

Key findings:

- **Dismantlement of the entire nuclear arms control system,** even if it may be considered to be outdated, **may lead to an uncontrolled multilateral arms race involving strategic, intermediate-range, and tactical nuclear and non-nuclear offensive and defensive weapons, as well as cyber warfare systems, laser weapons, and other arms innovations.**
- **There is a great deal of uncertainty over the potential impact technological breakthroughs could have on nuclear deterrence. This includes developments** in precision non-nuclear and hypersonic weapons, strike unmanned

aerial vehicles, directed energy weapons, artificial intelligence, and other disruptive technologies **that can undermine command, control, communication, intelligence, and critical infrastructure.**

- **From a technological perspective future arms control will be exceedingly challenging, much harder than during the Cold War.**
- **Chinese participation in the future nuclear arms control will depend on the general state of the U.S.-China relations.**

Read

Dmitry Stefanovich. Broadening the scope of arms control: new strategic systems, "non strategic" arsenals, conventional long-range precision strike, hypersonic missiles, missile defense and space capabilities

This paper is devoted to analyzing practical steps in the field of arms control to be applied by Russia and the United States as a tool to enhance both national and then global security. The author proposes a step-by-step roadmap on the future negotiating process, including a brand new military-strategic and geopolitical elements that were not previously enshrined within a legal framework together with non-legally-binding solutions. Since Russia and the US remain the trendsetters for global arms control, the success on the bilateral track is considered by the author to be the major prerequisite for any multilateral efforts under codifying "disparity" that does not affect strategic stability.

Key findings:

- **Apart from incorporating the new types of weapons or new warfighting (or deterrence) domains, any negotiating framework should include tangible deliverables and working mechanisms, including those focused on compliance dispute resolution to limit the chance of any real armed conflict between great powers.**
- **As a first step, Russia and the USA should reaffirm the 'absence of drivers for a first strike' strategic stability principle and agree on the measures to avoid a major**

nuclear war through high-intensity conventional warfighting.

- **Long-range high-speed** (including but not limited to hypersonic weapons of different sub-types) **high-precision weapons of different basing modes** (including but not limited to space domain) **are the most highly destabilizing weapon systems that require immediate attention under future arms control negotiating framework.**
- **The joint efforts to address new threats bilaterally should be focused on quantitative and geography-based limits,** rather than the destruction of the military capabilities. A good way to start would be to codify the existing deployment practices.
- **A way to codify 'disparity' that does not affect strategic stability might become a blueprint for further multilateral efforts based on trilateral regional solutions and the P5 initiatives.**
- **The self-restraint, as well as the engagement in doctrine discussions and debates on the perceived capabilities and intentions in the form of regular military-to-military and '2+2' consultations, are non-legally-binding initiatives that could improve bilateral transparency and confidence.**

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About the Authors

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Evgeny Buzhinskiy is

Lieutenant-General (Retired) and a Ph.D. in Military Sciences. Gen. Dr. Buzhinsky is the Chairman of the Executive Board of PIR Center and the Co-Chairman of the *Trialogue* Club International and a Vice President of Russian International Affairs Council.

His research areas include political and military aspects of international security, nonproliferation and arms control, Russia-NATO and USRussia relations, military use of the outer space.

Dmitry Stefanovich
is Research Fellow, Center for International Security, Primakov Institute of World Economy and International Relations, Russian Academy of Sciences. Co-founder of the Vatfor project, Russian International Affairs Council (RIAC) Expert.

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Security Index Editor-in Chief: *Dr. Vladimir A. Orlov*
Managing Editor: *Nikita Degtyarev*

Our e-mail address: **inform@pircenter.org**

U.S.-Russia arms control: where we are and where we are going

Evgeny Buzhinskiy

Now when the U.S. presidential elections are over the fate of the START Treaty and nuclear arms control, in general, has become clearer.

The New START treaty is set to expire on February 5, 2021, and only a few months ago there was little doubt that it would be the end of it. The Trump administration had no desire to extend it unless Russia agreed to "freeze" its nuclear holdings which in fact meant declaration and verification of Russian non-strategic nuclear arsenal. Even a very modest proposal, made by President Putin, to extend START for one year without preconditions and meanwhile to try to find a reasonable compromise, was bluntly rejected by Washington. Moscow, in its turn, made it absolutely clear that it would not plead for START extension, let alone make unilateral concessions to the United States. And that is a pity because the most basic role of arms control regimes is to create mutual predictability, ensuring that no country participating is uncertain about its security both now and into the future. In this way, arms control helps to keep defense spending in check, but it also allows countries to build up mutual confidence, stability, and security.

Only a few months ago I was absolutely sure that after U.S. withdrawal from the INF Treaty nearly fifty years old history of nuclear arms control was coming to its end. In general, the collapse of arms control agreements (such as the ABM Treaty and INF Treaty) has unleashed old arms racing dynamics and generated new ones, and it is far from clear how these can be constrained. It is widely accepted that the arms control architecture that was developed at the end of the Cold War is inadequate in today's multipolar, multidomain environment, but the complexity of the task (plus complacency, suspicion, and numerous other factors) have prevented it from being updated.

Nevertheless, dismantlement of the entire nuclear arms control system, even if it may be considered to be outdated, may lead to an uncontrolled multilateral arms race involving strategic, intermediate-range, tactical nuclear and non-nuclear offensive and defensive weapons, as well as cyber warfare systems, laser weapons, and other arms innovations.

Although, I don't think that this arms race will be quantitative (there is no need to again store thousands of nuclear warheads), rather it will be qualitative. Moreover, dismantlement of the nuclear arms control is certainly introducing a huge dose of unpredictability into the global strategic equation.

So now there is a good chance (of course, if Biden keeps his pre-election promises) that START will be extended for another five years. Although, his promise was made before President Putin made his proposal about the one-year extension. So now there is no 100 percent confidence in Biden's position. But even if the Treaty is extended for five years the future of nuclear arms control and strategic stability is uncertain.

I don't think that U.S will give up its intention to cover by limitations non-strategic nuclear weapons (NSNW) and new types of nuclear weapons like the Russian underwater drone "Poseydon" or nuclear-propelled cruise missile "Burevestnik". I'm not sure about hypersonic weapons, taking into account quite a number of U.S. programs on the development of this kind of weapons.

The issue of "Poseydon" and "Burevestnic" is solvable by means of certain "tradeoffs". But the issue of non-strategic nuclear weapons is more complicated. Probably that is true that START covers 45% of the Russian nuclear arsenal and 92% of the U.S. one. But START deals with strategic offensive nuclear weapons and that was known from the very beginning of the nuclear weapons reduction process. The reason for the above-mentioned asymmetry is the different composition of Russian and U.S. nuclear holdings. The U.S. has more strategic nuclear weapons and much fewer NSNWs, Russia – vice versa – more NSNWs and less strategic ones. For Russia, unlike U.S. non-strategic nuclear weapons is a means of regional deterrence. To include them in a future arrangement without addressing Russian concerns like missile defense and space-based weapons is, in my view, impossible. Moreover, beyond the abovementioned Russian concerns, there are prompt global strike concept and the emergence of strategic non-nuclear systems linked to it as well as the role of cyber tools in the strategic sphere.

Thus, in today's assumption arms control is no longer about numbers of generally similar weapons; it is about the capabilities of a broad range of diverse systems, each of which impacts the strategic calculus.

Placing all this under the effective control and verifying the implementation of agreements will be enormously difficult, if at all possible. So, from a technological perspective future arms control will be exceedingly challenging – much more difficult than it was during the Cold War.[1]

[1] D.Trenin, "Stability amid Strategic deregulation: Managing the End of Nuclear Arms Control", The Washington Quarterly, fall 2020, p. 168-169.

As for the Chinese participation in the future nuclear arms control, it will depend on the general state of the U.S.-China relations. Moreover, I can repeat arguments against the trilateral nuclear arms control arrangement.

First, there is no such concept as multi-lateral deterrence. Each nuclear state has its own subject to deter. So, you can not involve China and not involve India, India without the involvement of Pakistan, and so on.

Second, to start multilateral negotiations between at least seven confirmed nuclear states, that is: U.S., Russia, China, U.K., France, India, and Pakistan, the latter two should be recognized as nuclear states in the framework of NPT.

Third, the U.S. and Russia still possess 92% of the world's nuclear stockpile. How can they convince the other nuclear states (China first of all) to reduce their stockpiles until U.S. and Russia reduce theirs to the appropriate levels?

Forth, the problem of transparency. American and Russian holdings are officially declared and verified. French, British and Chinese levels are declared but not verified (Chinese level of 300 warheads, which has been declared for the last twenty years is not trustworthy). Indian and Pakistani stockpiles are not even officially declared. Israel sticks to its traditional position of no denial or confirmation of its nuclear status.

As I've already mentioned, irrespective of the extension or non-extension of START, sooner or later the U.S. and Russia will have to think of the new arrangements in the field of nuclear arms control. I'm sure that future agreements will have to take into consideration the new technological realities of the 21st century.

There is a great deal of uncertainty over the potential impact technological breakthroughs could have on nuclear deterrence. This includes developments in precision non-nuclear and hypersonic weapons, strike unmanned aerial vehicles, directed energy weapons, artificial intelligence, and other disruptive technologies that can undermine command, control, communication, intelligence, and critical infrastructure. Some of these technologies could have a profound impact on the strategic environment, particularly those that impact situational awareness, speed, accuracy, and survivability.

New technologies could emerge that conceivably could enable an adversary to preemptively negate or largely degrade one's nuclear deterrent. Technologies – digital or otherwise – could operate against space platforms vital for commanding and controlling nuclear

systems. Or, breakthroughs in artificial intelligence and sensors could threaten the survivability of nuclear-armed submarines. This does not suggest an adversary would "wake up" one day and decide to try to destroy a competitor's nuclear deterrent, which if the attempt failed could trigger nuclear retaliation. But technological breakthroughs could make big and rapid leaps in an escalation of conflict more likely.

But meanwhile, I'm sure that both United States and Russia should explore the possibility of a new bilateral, legally binding, and comprehensive arms control agreement that would succeed START, whether it ends in 2021 or 2026. By its terms or in conjunction with separate, less formal arrangements, such an agreement would need to address concerns of one side or the other about missile defenses, conventional strike systems, non-strategic nuclear weapons, offensive cyber and space capabilities, and any innovative weapons systems.

To conclude I must say that while negotiations on new arms control agreements may be a thing of the future, in the meantime, discussions today on strategic stability issues in the form of seminars, presentations, briefings, and the like can generate a much better understanding among adversaries of their opponents' objectives, principles, and strategies. This understanding may not necessarily lead to mutual restraint, but it might help to reduce the dangers of misperception. Restraint, even if unilateral, is absolutely rational; anything that goes beyond what is necessary for deterrence is both useless and provocative. Strategic bomber patrols close to an opponent's borders or surprise major exercises demonstrate capacities and capabilities, but also contribute to escalation and might lead to accidents and incidents.

Transparency is another tool that can be very useful in today's deregulated strategic environment. If deterrence, rather than warfighting, is the name of the game, nuclear powers are interested in demonstrating both their capacity to deter notional adversaries and their intention to keep the peace. Arms control has produced an unprecedented level of mutual transparency between the United States and Russia. While this transparency cannot be matched in the foreseeable future by other powers, particularly in the absence of arms control, a degree of transparency, even unilaterally, should help. The degree of transparency should be safe enough not to undermine deterrence.[2]

[2] D.Trenin, "Stability amid Strategic deregulation: Managing the End of Nuclear Arms Control", The Washington Quarterly, fall 2020, p. 173.

Broadening the scope of arms control: new strategic systems, "non strategic" arsenals, conventional long-range precision strike, hypersonic missiles, missile defense and space capabilities

Dmitry Stefanovich

How would you prioritize the incorporation of new elements into a future arms control negotiating framework?

First, there are several approaches to defining which "elements" are actually new: some new types of weapons or new warfighting (or deterrence) domains in general, or "new" as opposed to the elements that have been a part of other arms control negotiating frameworks. As currently, we have both the development of new weapons and shift of international "competition" into new domains, and the fact that quite a limited number of "working" negotiating frameworks exist, I suggest we can take the best of "both worlds".

Second, the biggest priority should be to limit the chance of any real armed conflict between great powers, as the path to nuclear escalation will hardly be manageable. But, simultaneously, the arms control provides for "manageability" in itself, so any negotiating framework should include tangible deliverables and working mechanisms, including those focused on compliance disputes resolution.

Third, based on the previous idea the most important new elements that should be considered will have to be:

a) Usable, so the risks of escalation are high and need to be decreased.

b) Devastating, so the escalation itself might lead to unintended consequences, including because of (mis)perceptions by those on the "receiving" end.

c) Perceived by different actors in a similar manner, so those actors find it useful to address these elements.

d) Exist in physical form, so there will be something substantial to monitor and verify.

What is the most highly destabilizing weapon system that requires immediate attention?

Going down to actual destabilizing weapon systems it is appropriate to focus on long-range (starting from several hundred kilometers) high-speed (including but not limited to hypersonic weapons of different sub-types) high-precision weapons of different basing modes (including but not limited to space domain), without an actual focus on payloads.

This might sound like a repetition of traditional official Russian "bogeyman" claims, but in this very domain we are approaching an extremely dangerous situation due to the following reasons:

1. This is the major trend in global military development; more and more countries are acquiring similar capabilities through domestic development, foreign military sales, or a mix of both.
2. Such weapons are natural progress of "classic" subsonic land attack cruise missiles and medium-range ballistic missiles, with a flavour of reconnaissance-strike systems.
3. Regional military conflicts of last several decades and especially last ~10 years demonstrate the ever-growing number of actors that are ready to use conventionally-armed missiles to strike different types of targets, including with "signaling" intentions, but such cases also demonstrate that modern missiles are good tools with rather impressive precision and destructive power.

4. So, when those "tools" are flying your way, there is serious pressure to react, especially if you assess their targets to be your "family jewels" (e.g., nuclear weapons or command, control, and communications nodes)[1].

5. There are more and more platforms capable of firing long-range missiles, and there will be even more. When such platforms (including Russian corvettes and frigates or US destroyers and submarines) will be on patrol near adversary borders, or land-based mobile launchers will be deployed in a pattern that will be considered capable of hitting those "family jewels", the pressure to shift towards first pre-emptive strike doctrine and posture will grow enormously.

What will be the impact of further proliferation of these new elements?

Further proliferation of long-range precision weapons is a reality, and it can hardly be reversed. The main impact will be the increased feeling of threat in most countries in the world. When one feels threatened, naturally, this entity starts to look for solutions. Such solutions can take the form of missile defense, which is expensive and penetrable in any case, and (or) of similar capabilities acquisition (which are also expensive). Another option – going nuclear or shifting focus on nuclear capabilities.

The "sub-total" in this case will be a growing number of offensive and defensive "bubbles" which intersect with each other. Given that the world is in quite a disarray, most countries will find themselves quite uncomfortable, as their neighbours, for different reasons, will obtain the capability to hit them or limit their strike capability, or both – security dilemma at its finest.

And that is why we need arms control solutions, first and foremost because arms control in itself is a tool to enhance national security, not something you engage in for the good of humankind.

What would a negotiating framework look like to address these new elements bilaterally and multilaterally?

For bilateral formats, which, presumably, mean Russia-US negotiations (or consultations, at the very least), the negotiating framework should include several layers.

First, both countries should agree that:

a) A main strategic stability principle – the absence of drivers for a first strike – remains relevant and must be reaffirmed.

b) There is a direct path from minor military incident to a major nuclear war through high-intensity conventional warfighting, and while in any case the sides would try to limit the scope of such conflict, avoiding it in the first place should be a priority.

c) The countries will continue the discussions on destabilizing effects of certain military capabilities.

d) Common security through arms control remains a cornerstone of international peace.

[1] The terminal stage of such threat perception was manifested in the latest version of the Basic Principles of the State Policy of the Russian Federation on Nuclear Deterrence, where detection of ballistic missile launch (without specifying neither range nor payload) against Russian territory is considered a condition that can lead to nuclear use.

Second, if and when the sides will be ready to discuss future arms control arrangements, the path forward can be two-fold:

a) Search for a joint understanding of the "factors affecting strategic stability".

b) Search for ways to address some of those factors (especially the aforementioned element of the highest priority), as a general treaty covering all "concerns" is improbable, if not impossible.

Third, destruction even of some of the military capabilities is next to impossible to agree on (at least as long as those capabilities are considered military and (or) politically useful), so the focus should be on limits. Such limits can be quantitative and geography-based but cannot be qualitative. Probably a good way to start would be to codify at least some of the existing deployment practices. There is also a traditional challenge of geographical limits with regard to mobile systems, but given the current capabilities of intelligence-gathering technologies, including but not limited to national technical means, a substantial and untraceable change of deployment pattern leading to regional destabilization seems unlikely.

After both sides agree on limits and live with those for some time, they will, hopefully, realize, that the sky still does not fall, so we can move towards gradual reductions.

One of the major challenges would be to find appropriate verification techniques, both for "extended" nuclear and non-nuclear domains. Relevant research might be politically problematic, so the relevant efforts should be extremely cautious. But this work will have to be done.

Russia and the US remain and will remain the trend-setters for global arms control, so success on the bilateral track is, probably, the major prerequisite for any multilateral efforts. But, simultaneously, in the current multipolar, polycentric world, it is impossible for Moscow and Washington to totally disregard other countries and their interests.

There is no "one size fits all" solution, but if we take the "multi-layer" approach explained for the bilateral format to the multilateral one, bringing other countries on board for the "joint understanding" might be something achievable, as well as multilateral discussions on strategic stability factors[2].

Multilateral limits are much more challenging, as hardly any country would agree to codify its inferiority. However, (yet again based on the priority of long-range precision strike weapons) there is a chance to find some trilateral regional solutions if, for example, Russia, China, and the US agree on the number of launch platforms or missiles in a given sector of the Earth surface without specifying the payloads.

Finally, as there is some room for asymmetric arms control even between Russia and the US, should our countries find a way to codify "disparity" that does not affect strategic stability, it might become a blueprint for further multilateral efforts. One field where this might be possible is to try to address the deployment patterns of SSBNs: within the P5, and even between Russia and the US, the practices and capabilities are very different, but still provide deterrent effect (or at least considered as such).

[2] To a limited extent, such discussions already take place within the P5 process.

Are there other instruments or mechanisms -- short of a legally binding treaty -- that could improve bilateral transparency and confidence?

The domestic political climate in the US forces everyone to search for such instruments, and there is a menu of those.

We all remember Presidential Nuclear Initiatives, which were imperfect, but led to a substantial decrease in nuclear stockpiles (although for different reasons, which can be boiled down to the lack of missions or lack of funds to make those stockpiles sustainable). So, unilateral measures, even unverifiable[3], might work, but, of course, provide room for accusations and counteraccusations.

An important tool is a self-restraint. In the Russian case, despite the US skepticism, the self-restraint regarding post-INF developments is an important example; there are no deployments, there are no tests.

The self-restraint mentioned above is a part of a moratorium initiative, which also provides for a non-legally binding solution. It is very unfortunate that the interest in looking deeper into this initiative is very limited, to say the least, as such arrangement ("we do not do something somewhere as long as you refrain from such actions") can be a draft for many areas. Of course, there is a huge challenge of verification, transparency, definitions, etc., but those can be sorted out if there is a political will.

Restraint and moratoria codification might be in the form of joint declarations or agreed statements, which will make those politically-binding. Such tools are imperfect, but they can serve as crutches until "proper" arms control is back on the table.

Another useful mechanism to improve bilateral transparency and confidence is engagement in doctrine discussions and debates on the perceived capabilities and intentions. The best way to do this is to hold regular military-to-military and "2+2" consultations, but if this is impossible due to political reasons, even Track 1.5 will be good enough. Through such consultations threat perceptions between the adversaries can become clearer to each other, so a chance of inadvertent escalation will be somewhat lower.

Finally, any chance of practical contacts between militaries should be used, including regional deconfliction mechanisms, to achieve a greater level of general trust between servicemen. This might not look as fancy as talks between Presidential Representatives, but, again, the effect of better mutual understanding is hard to overestimate. Such practical contacts should be multilateralized, so the people involved will obtain real-world experience of looking for joint solutions.

[3] In fact, even the resolution of the Cuban Missile Crisis can be defined as unilateral non-verified measures.