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War against Ukraine: how to make deterrence and arms control work

One year after the Russian invasion of Ukraine, experts from the United States, Ukraine, Germany, Turkey, and France discussed the consequences of the war for the nuclear world order in a workshop¹ organized by the Fondation pour la recherche stratégique (FRS) and the Odesa Center for Nonproliferation (OdCNP). The focus was on the importance and limits of nuclear deterrence policy and arms control, disarmament, and nonproliferation.

Russia's war, shielded by nuclear threats, raised two key questions. Does nuclear deterrence have the effect of promoting or limiting war? Do arms control, disarmament, and nonproliferation still matter, or have they become obsolete after Russia's threats to break the nuclear taboo²? Does its violation of the Budapest Memorandum³ disqualify Moscow as an honest broker for arms control negotiations?

The following analysis does not represent the conclusions of the workshop. Instead, it independently explores the questions that were raised. Taking into account macro-developments in nuclear policy and arms control in the run-up to the Ukrainian war, and looking more closely at the interaction of deterrence and (arms control) diplomacy during the past year, it becomes clear that deterrence must be viewed in a differentiated manner and that arms control must be

¹ Workshop "[War on Ukraine and the Nuclear World Order](#)", Fondation pour la recherche stratégique & Odesa Center for Nonproliferation, February 6-7, 2023.

² Nina Tannenwald, "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use", *International Organization*, vol. 53, n° 3, 1999.

³ Mykhailo Soldatenko, "[Constructive Ambiguity of the Budapest Memorandum at 28: Making Sense of the Controversial Agreement](#)", *Lawfare*, February 7, 2023; Arms Control Today & Mariana Budjeryn, "[When Ukraine Traded Nuclear Weapons for Security Assurances: An Interview with Mariana Budjeryn](#)", Arms Control Association, April 2022.

conceptualized comprehensively to ensure security and strategic balance and to avoid nuclear escalation both between nuclear-weapon states and at the expense of a non-nuclear-weapon state (Ukraine).

The deterrence and arms control prelude to the war against Ukraine

Overstretched extended deterrence and the question of credibility

Prior to the Russian invasion, the nuclear deterrence policies of the five nuclear-weapon states recognized by the Nuclear Non-Proliferation Treaty (NPT) encompassed a series of gradations of nuclear deployment scenarios of varying breadth. At the low end of this scale was a minimalist policy of first-strike renunciation while preserving a second-strike capability (which roughly corresponds to China's nuclear doctrine⁴). In the middle spectrum were nuclear doctrines that included attacks with other weapons of mass destruction (biological and chemical weapons) or vaguely defined threats to (national) state existence as justification for a nuclear counterstrike (with variances and depending on the period; the other four nuclear weapon states can be identified as belonging here⁵). At the upper end was the model of extended deterrence, which included a so-called tactical use of nuclear weapons in the event of a conventional attack by a nuclear-armed adversary and, to bolster the credibility of this scenario, provided for the stationing of corresponding warheads and delivery systems on allied territory. This extended form of nuclear deterrence aimed at maintaining escalation dominance in the event of a direct military confrontation between the two blocs during the Cold War and was practiced by the United States⁶ and the Soviet Union within the framework of the so-called nuclear sharing of NATO and the Warsaw Pact, respectively⁷.

Over the past twenty years, the center of gravity of the two great powers' nuclear deterrence policies has always shifted within the middle and upper ranges of this scale, depending on the government and the state of relations. Most recently, however, a clear trend to expand nuclear deterrence and deployment scenarios prevailed during Donald Trump's presidency. Russia's annexation of Crimea in 2014, its hybrid war in Donbas and its practicing coercive threats towards the Baltic states and Poland contributed to a significant tightening of the U.S. Nuclear Posture Review (NPR) in 2018. This document describes Russia's nuclear policy as relying on the mistaken assessment that "*the threat of nuclear escalation or actual first use of nuclear weapons would serve to 'de-escalate' a conflict on terms favorable to Russia*"⁸. In turn, the U.S. NPR proclaimed the necessity to adapt the US nuclear forces to the tasks of waging regional wars not excluding first use of nuclear forces. In its 2020 nuclear doctrine, Russia moved the focus further to Western threats and regional war scenarios that could lead to nuclear warfare, reserving the right to use nuclear weapons to end conventional military conflicts⁹. Today we know that for Putin, this implies also a "nuclear shadow"¹⁰ providing free hands in dealing with non-nuclear neighbors who do not belong to any alliance.

⁴ Tong Zhao, "[China and the international debate on no first use of nuclear weapons](#)", *Asian Security*, vol. 18, n° 3, 2022, pp. 205-213.

⁵ Frans Osinga, Tim Sweijts (ed.), *NL ARMS. Netherlands Annual Review of Military Studies 2020. Deterrence in the 21st Century – Insights from Theory and Practice*, Springer, 2021.

⁶ Paul van Hooft, [The US and Extended Deterrence](#), in *Ibid.*, pp. 88-104.

⁷ Alexey Arbatov, [Chapter 5: Nuclear Deterrence: A Guarantee for or Threat to Strategic Stability?](#), in *Ibid.*, pp. 65-86.

⁸ U.S. Department of Defense, [Nuclear Posture Review](#), February 2018, p. 8.

⁹ Petr Topychkanov, [Russia's nuclear doctrine moves the focus from non-Western threats](#), Commentary, WritePeace blog, Stockholm International Peace Research Institute, October 1, 2020.

¹⁰ Bruno Tertrais, "[Quel avenir pour la dissuasion nucléaire ?](#)", Fondation pour l'innovation politique, October 2022.

The expansion of nuclear deterrence and options for nuclear warfare (including threats of nuclear use) required corresponding material adjustments to maintain credibility. Therefore, both the U.S. and Russian sides launched massive modernization programs to provide appropriate delivery systems and warheads¹¹. Sub-strategic capabilities relevant for scenarios of nuclear regional war have increasingly come to the fore. This shows how closely the development of nuclear arsenals is linked to the existing formulation of nuclear deterrence. However, to ensure the credibility of the re-enforced extended deterrence policy and options of (sub-strategic) nuclear warfare, not only the corresponding nuclear capabilities had to be developed and provided. The arms control framework has also undergone a fundamental transformation that has extended the possibilities of nuclear warfare.

The erosion of arms control in Europe and growing hegemonic conflicts

During the same period, Europe underwent a phase of profound erosion of nuclear arms control. The termination in 2002 by the Bush administration of the ABM Treaty that limited missile defense and the build-up of the National missile defense (NMD) program had global implications on strategic balance. This triggered an arms race¹² and a process of disintegration of arms control policy on the European continent that was subsequently driven by both Russia and the United States. This includes the halting of the update of the Treaty on Conventional Forces in Europe (CFE) due to the second Chechen war, the suspension of the treaty by the Putin administration in 2007¹³, the termination of the INF Treaty for the elimination of intermediate-range missiles in 2020, pushed by President Trump¹⁴, and the abrogation of the Open Skies Treaty for joint surveillance flights in 2021¹⁵. It is noteworthy that until then the dismantlement of the arms control architecture by the two major nuclear powers ran counter above all European security interests. Both the U.S.-Russia strategic dialogue and the arms control agreements on strategic forces, which primarily served the nuclear balance between the superpowers and their strategic security, remained less affected by the disintegration. In early 2021, the New START Treaty was extended for another five years, and the strategic stability dialogue continued by Putin and Biden in Geneva in June 2021¹⁶.

The perishing of Cold War security mechanisms together with the degradation of arms control weakened the European continent's security architecture amid a period of growing geopolitical tensions between the U.S./NATO and Russia, an increasingly nationalistic and imperialistic

¹¹ Hans M. Kristensen, Matt Korda, [10. World nuclear forces. I. United States nuclear forces. II. Russian nuclear forces](#), in Stockholm International Peace Research Institute, *SIPRI Yearbook 2022. Armaments, Disarmament, and International Security*, 2022.

¹² James M. Acton, "[The U.S. Exit From the Anti-Ballistic Missile Treaty Has Fueled a New Arms Race](#)", Commentary, Carnegie Endowment for International Peace, December 13, 2021.

¹³ Paul Schulte, [The Precarious State of Flux of the Conventional Armed Forces in Europe Treaty \(CFE\)](#), Carnegie Council for Ethics in International Affairs, Conference Paper, 2012; Amy J. Nelson, Adam Twardowski, "[How the demise of an arms control treaty foreshadowed Russia's aggression against Ukraine](#)", *Bulletin of the Atomic Scientists*, February 1, 2022. .

¹⁴ Emmanuelle Maitre, "[What prospects for arms and missile control after the end of the INF Treaty?](#)", *Recherches & Documents*, Fondation pour la recherche stratégique, n° 3, February 2020.

¹⁵ Katarina Kertysova, "[Closing the Open Skies](#)", *The Wilson Quarterly*, Summer 2021; Amy A. Woolf, "[The Open Skies Treaty: Background and Issues](#)", Congressional Research Service, June 7, 2021.

¹⁶ Kingson Reif, Shannon Bugos, "[U.S., Russia Extend New START for Five Years](#)", *Arms Control Today*, March 2021; John Isaacs, Kingston Reif, "[Analysis of the 'New START' Treaty](#)", Center for Arms Control and Non-Proliferation, March 29, 2010. However, in the course of the war in Ukraine, on February 21, 2023, President Putin announced the suspension of Russia's participation in New START (see Heather Williams, "[Russia Suspends New START and Increases Nuclear Risks](#)", Center for Strategic and International Studies, February 23, 2023; Rose Gottemoeller, Marshall L. Brown, Jr., "[Legal aspects of Russia's New START suspension provide opportunities for US policy makers](#)", *Bulletin of the Atomic Scientists*, March 2, 2023).

Russian foreign policy agenda, and virulent territorial conflicts on its borders, including that over Ukraine. While the United States continued to have, at least in theory, allied territory for tactical nuclear warfare, with its nuclear sharing and deployment of nuclear weapons in NATO member states¹⁷, Russia lost this escalation option with the dissolution of the Warsaw Pact and the collapse of the Soviet Union. However, this has not prevented Russia from alluding to its “escalation for de-escalation” option in its nuclear rhetoric, trying to instrumentalize it in its war against Ukraine. In addition, on March 25, 2023, Putin declared his decision to deploy tactical nuclear weapons in Belarus. After unsuccessfully trying to stop increasing Western support for Ukraine by suspending Russia’s participation in the New Start treaty, the announcement of nuclear sharing with Belarus probably aims at the same concessions. Through this arrangement, Russia intends to achieve the ability to launch nuclear weapons missions from foreign territory. In early April, Russia claimed the handover of a nuclear missile complex to Belarus. According to Minsk, training on sub-strategic nuclear weapons has already begun.

Examining the strategic background and evolution of nuclear deterrence and arms control throughout the past twenty years can neither justify nor explain Putin’s war of aggression and nuclear threats. Imperialist¹⁸, chauvinist and, in part, religiously charged¹⁹ motives play a major role in Russian policy regarding Ukraine. However, the nuclear macro-developments of the past two decades need to be taken into account to properly assess the strategic dimension and escalation potential of this war. Preparations for deployment of Russian nuclear weapons on Belarusian territory through joint exercises and deployment of nuclear-weapon-capable delivery systems, the removal of nuclear-weapon-free status from the Belarusian Constitution, and the strengthening of the bilateral military cooperation are visible signs of this strategic dimension²⁰. It was also the strategic miscalculation of a perceived weakened West (illustrated by the U.S. withdrawal from Afghanistan, among others) that, from the Kremlin’s perspective, opened a window of opportunity and at least partly explains the timing of the Russian aggression. All of this shows that the strategic conflict with the West, even if it cannot be seen as the cause of Russia’s invasion of Ukraine, inevitably and increasingly shapes this war on Europe’s borders.

Targeted deterrence and diplomatic arms control in the Ukraine war

Russian deterrence erosion and destabilization

Facilitating its war of aggression on Ukraine with nuclear threats, the Kremlin has left the classical spectrum of nuclear deterrence described above. Russia exploited the “nuclear shadow”²¹ when it started its war against Ukraine in 2022, backing its power projection with active nuclear rhetoric aimed at keeping NATO out of the conflict²². Russia’s breach of the Budapest Memorandum and its nuclear-shielded invasion of its nuclear-weapon-free neighbor have pushed nuclear deployment options to the extreme and thus perverted the concept of

¹⁷ Sascha Hach, “[Cling together, swing together? Arguments for withdrawing from nuclear sharing](#)”, *PRIF Spotlight*, 12/2020.

¹⁸ Marcel H. Van Herpen, *Putin’s Wars: The Rise of Russia’s New Imperialism*, 2nd edition, Rowman & Littlefield, 2015.

¹⁹ Dmitry Adamsky, *Russian Nuclear Orthodoxy. Religion, Politics, and Strategy*, Stanford University Press, 2019.

²⁰ Isabelle Facon, “[Le nucléaire dans la relation Bélarus-Russie](#)”, *Bulletin de l’Observatoire de la Dissuasion*, n° 97, avril 2022.

²¹ Bruno Tertrais, *op. cit.*

²² Isabelle Facon, “[Guerre en Ukraine : le sens du signalement nucléaire russe](#)”, *Notes de la FRS*, n° 30/2022, July 2022; Benjamin Hauteouverture, “[War in Ukraine: Nuclear Signalling, Coercion and Deterrence](#)”, Canadian Global Affairs Institute, January 2023.

nuclear deterrence. Tragically, this has occurred at a time when the Biden administration was reviewing the aggressive U.S. nuclear posture under Trump and even considering a sole-purpose principle²³ that would have come very close to a no-first-use doctrine.

Reiterating nuclear threats in ever-changing variations (alluding to a nuclear catastrophe in the Zaporizhzhya nuclear power plant, which its military forces have been occupying²⁴, the untruthful accusation against Ukraine of preparing attacks with “dirty bombs”²⁵), and relativizing the nuclear taboo (*i.e.* Putin reminding the U.S. had set a “precedent” with Hiroshima and Nagasaki and thus normalized the use of nuclear weapons²⁶), the Russian president has corroded the shared understanding of nuclear grammar built up over decades of strategic dialogue. Deprived of its predictability, however, nuclear deterrence loses its stabilizing effect, bringing the world on the verge of its most shaky variations, the stability-instability paradox.

On the one hand, the significance of Moscow’s nuclear threats and capabilities increases as Russia’s conventional weaknesses become more apparent²⁷. Missing Russian successes on the battlefield and Ukrainian terrain gains in the wake of the autumn 2022 counteroffensive appeared to increase the risk of nuclear escalation. On the other hand, constant exploitation of Russian nuclear threats gradually exhausts the credibility of Moscow’s nuclear deterrence. The Kremlin’s rampant use of nuclear threats has led to an attrition that has undermined its effectiveness. A culmination of this paradox was reached when, in late September 2022, amid a series of territorial losses, Moscow announced the annexation of the Ukrainian regions of Kherson, Zaporizhzhya, Luhansk, and Donetsk, which it only partially controlled and in which it subsequently suffered further territorial losses. This was coupled with Putin’s threat that the Russian Federation would defend the integrity of its territory by “all available means” to protect Russia and its people²⁸.

Moderation and rehabilitation of deterrence

How have the United States and NATO responded to Putin’s exhaustion of rhetoric nuclear arsenal and this paradox (virulence of Russia’s nuclear signaling and attrition of its nuclear deterrent)? From the beginning, since February 24, 2022, the U.S. and NATO have stressed the need to keep nuclear weapons out of this war and pursued a consistent policy of denuclearization of the conflict. Russian threats have not been reciprocated to avoid a spiral of escalation. In the run-up to the Nuclear Non-Proliferation Treaty Review Conference in August 2022 and at the conference itself, the three Western nuclear powers, the United States, France and Great Britain, contrasted the Russian threatening posture with their stance as “responsible nuclear weapon states” and strictly rejected “coercive deterrence” – regardless of the fact that

²³ Greg Hadley, [“‘Sole Purpose’ Policy Didn’t Make It Into Nuclear Posture Review, but Biden Wants It in the Future”](#), *Air & Space Forces Magazine*, August 5, 2022; Hans Kristensen, Matt Korda, [“The 2022 Nuclear Posture Review: Arms Control Subdued By Military Rivalry”](#), Federation of American Scientists, Strategic Security, October 27, 2022.

²⁴ [“Putin warns Macron of risk of ‘catastrophe’ at Ukraine nuclear plant”](#), Reuters, August 19, 2022.

²⁵ [“False Flag? Russia says Ukraine plans to detonate a ‘dirty bomb’”](#), Al Jazeera, October 23, 2022; J. Andrés Gannon, [“If Russia Goes Nuclear: Three Scenarios for the Ukraine War”](#), Council on Foreign Relations, November 9, 2022.

²⁶ [“Putin: United States created nuclear precedent by bombing Japan”](#), Reuters, September 30, 2022.

²⁷ Isabelle Facon, [“Guerre en Ukraine : les faiblesses de l’armée russe au grand jour”](#), in Anne de Tinguy (ed.), *Regards sur l’Eurasie. L’année politique 2022*, *Les études du CERI*, n° 266-267, février 2023, pp. 21-26.

²⁸ Jon Gambarell, Hanna Arshirova, [“Putin annexes Ukrainian regions, vows to use ‘all means’ to protect territories”](#), *The Times of Israel*, September 30, 2022.

deterrence policies of Western P5 members also contain coercive elements and do not rule out first strikes. *De facto*, they have pursued a no-first-strike policy in the Ukraine war, referring to the joint declaration of the five NPT nuclear-weapon states, or P5, in January 2022 that “*a nuclear war cannot be won and must never be fought*”²⁹. The expansion and attrition of Russia’s nuclear threats were met with a finely tuned deterrence policy of nuclear restraint.

The effectiveness of this policy became evident in the reaction to Putin’s declaration of annexation of the partially occupied territories. For the first time, the White House used an ambivalent formulation of deterrence in the Ukraine war that could be interpreted in both conventional and nuclear terms, with Biden warning of a “nuclear Armageddon”³⁰ in the event of nuclear weapons use by Russia. The U.S. did not rule out the possibility of a nuclear response and at the same time made clear that it is ready and, also, capable of intervening directly in the war with a massive conventional strike. Corresponding proposals were discussed, primarily targeting Russian nuclear bases that could be considered for an attack on Ukraine³¹. At the same time, the U.S. and Russia maintained private channel talks³² and some time later the Russian authorities denied the intention to attack Ukraine with nuclear weapons³³. Against this confusing background, there is a risk that at some point the perception can prevail that no matter what happens, Russia will not be inclined to start a nuclear conflict with the West. In contrast, the threat of direct U.S. entry into war, backed by capabilities and concrete operational plans, was credible precisely because of the combination of ambivalent deterrence and strategic proportionality, and was thus able to help keep Moscow at bay in the months that followed.

Thinking arms control broadly during a crisis

Maintaining direct contact and dialogue between French President Macron, Chancellor Scholz and Putin was no less important for escalation management during the first phase of the war, as well as military contact points between the U.S. and Russian general staffs to avoid miscalculation and unintended escalation. Using channels of communication and risk-minimizing measures is part of the broad repertoire of arms control that takes on a prominent role, especially in times of crisis and in the absence of classical disarmament, arms limitation, and verification instruments. Another central element for containing the potential for nuclear escalation has been the expansion of de-escalating diplomacy beyond the bilateral level, through diplomatic demarches at the highest levels of government, particularly toward Russian sympathizers and friends, China and India.

In a meeting in November 2022, Chancellor Scholz and Chinese President Xi Jinping both stated that any threat or use of nuclear weapons in the Ukraine war would be unacceptable³⁴. A short time later, both China and India expressed clear criticism of Russia’s nuclear threats. At the G20 summit in Indonesia, a joint statement succeeded in significantly increasing pressure on Moscow

²⁹ [“Joint Statement of the Leaders of the Five Nuclear-Weapons States On Preventing Nuclear War and Avoiding Arms Race”](#), Ministère de l’Europe et des Affaires étrangères, January 3, 2022.

³⁰ [“Nuclear ‘Armageddon’ threat back for first time since Cold War, Biden says”](#), *Le Monde*, October 7, 2022.

³¹ Paul Sonne, John Hudson, [“US. has sent private warnings to Russia against using a nuclear weapon, The Washington Post”](#), September 22, 2022; Matthew Kroenig, [“How to deter Russian nuclear use in Ukraine – and respond if deterrence fails”](#), Memo to the President, Atlantic Council, September 2022.

³² Edward Helmore, [“Jake Sullivan: US will act ‘decisively’ if Russia uses nuclear weapons in Ukraine”](#), *The Guardian*, September 25, 2022.

³³ [Vladimir Putin Meets with Members of the Valdai Discussion Club. Transcript of the Plenary Session of the 19th Annual Meeting](#), Valdai Discussion Club, Moscow, October 27, 2022.

³⁴ [“Xi, Scholz warn against ‘irresponsible’ nuclear threats over Ukraine”](#), Reuters, November 4, 2022.

to renounce nuclear threats. Similar formulations condemning nuclear threats³⁵ and the use of nuclear weapons can also be found in the final declaration of the first meeting of states parties to the TPNW, which was adopted in June 2022 and backed by 66 non-nuclear-weapon states³⁶. Pressure from the international community, but especially from the ranks of the BRICS states and partners, did not leave Moscow unimpressed. For much of the fall and winter of 2022-2023, it had succeeded in substantially reducing the risk of nuclear escalation. Success or failure of arms control and diplomatic containment depend on whether dynamics of social pressure (group dynamics) can be manipulated in favor of risk aversion.

Conclusion

The hypertrophy of deterrence and the progressive erosion of arms control in Europe over the past twenty years are not sufficient explanations for Russia's aggression against Ukraine and its obsession with having to defend itself against a perceived Western hegemony and threat. However, they do shape the strategic backdrop on which Russia's war against Ukraine plays out, thus the potential for strategic escalation. The significance of the loss of strategic stability at the (geopolitical) macro level increases with the duration of the war. Obviously, the causal connection with the U.S. expansionist policy, with which Russia tries to justify the war, is constructed. However, the Russian narrative succeeds in convincing numerous actors, including China, India, South Africa, and Brazil, for historical reasons and convergence of strategic interests. Thus, overstretched deterrence and simultaneous erosion of arms control provide fertile ground while serving as a strategic justification foil for Russia's war against Ukraine. The decoupling of deterrence and arms control have made the pre-war security environment fragile. Hypertrophic extended deterrence, rearmament and dismantling of arms control in Europe have created favorable conditions for the war of aggression.

This war shows further that it is not possible to say across the board whether nuclear deterrence has a stabilizing or de-escalating effect, whether it promotes or restrains war. We have to distinguish what kind of deterrence we are talking about in what (arms control) context. By extending its nuclear threats, Russia has repeatedly tried to manipulate the course of warfare in its favor and has so far failed to do so. Instead, clear signs of wear and tear on its nuclear deterrent are emerging, coupled with a loss of credibility. The U.S. and NATO in turn have succeeded in reducing the risk of escalation by consistently tabooing the use of nuclear weapons in the Ukraine war. Three factors were decisive in this: the Russian nuclear threats were not imitated, China and India as well as the G20 were diplomatically engaged into an anti-nuclear war alliance and this was combined with an ambivalent deterrence focusing on conventional counterstrike options.

Throughout the past year we have seen that nuclear arms control must be thought of more comprehensively than regulation and limitation of warheads and delivery systems. Especially in the context of a war with global escalation potential, creating the conditions of crisis stability and avoiding behaviors that increase the risk of nuclear escalation are crucial. Military points of contact, strategic risk reduction, risk mitigation, and preventing unintended escalation due to misinterpretation are central. At the same time, given the loss of trust in relations with Russia

³⁵ "[G20 Bali Leaders' Declaration](#)", Bali, Indonesia, 15-16 November 2022.

³⁶ "[Report of the first Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons](#)", United Nations, Vienna, 21-23 June 2022.

and its lack of reliability, other actors, especially China and India, but also other BRICS states, must be consistently engaged in de-escalation and arms control efforts. Countries outside the transatlantic area are becoming increasingly important for arms control arrangements in the future. Therefore, a reorientation of arms control policy towards multilateralization is necessary. The risk of actual use of nuclear weapons by Russia has varied significantly during the war. Risk management and substantial de-escalation have been successful through a precise formulation of U.S./NATO deterrence policy (nuclear restraint, credible conventional deterrence) in combination with bilateral contacts with Russia and diplomatic initiatives toward third parties sympathizing with Moscow. So far, nuclear (de)escalation management has worked out. But it has also shown the limits of deterrence and arms control policy: only together, and if credible, precise and complementary, can they have their stabilizing effect.

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