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“Nuclear spring is coming”: examining French nuclear deterrence in response to Russia’s actions in Ukraine

Introduction

On February 24, 2022, Russia’s full-scale invasion of Ukraine ushered in a new era of uncertainty and updated focus on nuclear deterrence. President Putin’s stark warning – “*Whoever tries to hinder us [...] should know that Russia’s response will be immediate and [...] lead you to consequences that you have never faced in your history*” – served as a chilling reminder of the nuclear shadow still looming over international relations and of the significance of nuclear deterrence as an important element of international security¹.

This situation has triggered a “spring effect” for many states in terms of their national nuclear deterrence strategies. Although substantive changes on the ground may not be immediately apparent, the seeds for transformation have already been sown, with the potential to manifest in observable effects later on. While President Putin’s persistent framing of the United States as his primary adversary presented a simplified narrative, his repeated nuclear threats throughout the first year of the war in Ukraine triggered a widespread reevaluation of deterrence strategies among all NATO members possessing nuclear capabilities.

* During the research and interview process for this paper, Polina Sinovets was holding a visiting fellowship at the Fondation pour la recherche stratégique (FRS).

¹ “EU says Putin’s ominous threat to those who hinder him marks ‘critical moment’”, [Reuters](#), February 24, 2022.

The United Kingdom adopted a proactive approach, preemptively identifying Russia as its primary security concern in 2021 and opting to bolster its nuclear arsenal². This decision reflects the UK's commitment to maintaining a credible deterrent through a combination of modernized capabilities and clear messaging. The United States, meanwhile, emphasized the indivisibility of NATO's security, drawing a "red line" against any Russian aggression that could threaten the alliance³. While prioritizing conventional deterrence in the Ukraine conflict, the US has maintained its nuclear umbrella as an ultimate guarantor of security. In this regard, President Biden reiterated the US assurances to stand for the NATO states, and sent a strong message to the Russian leader that any nuclear weapons use against Ukraine would be punished by the conventional retaliation⁴.

Our analysis will examine the nuclear deterrence strategy of a state considered the most pro-nuclear deterrence among all Western allies and, simultaneously, the most independent one: France, a nation with a deeply ingrained nuclear doctrine, which exhibited a more nuanced response. Its "tango-style" approach, marked by simultaneous reassurances and reservations, reflects its unique strategic posture and its focus on diplomatic solutions alongside deterrence.

The reemergence of nuclear deterrence demands careful attention to its core element: credibility. As Bruno Tertrais aptly states, effective deterrence relies on a "magic formula" of three components: potent capabilities, demonstrably credible intentions, and the perceived willingness to use nuclear weapons. Crucial to this equation is the opponent's comprehension of both the capabilities and the intent, achieved through clear communication⁵. This point underscores the inherent psychological nature of deterrence⁶. It resembles a game of poker, not chess, aiming to deter aggression through the credible threat of retaliation⁷. Ultimately, the effectiveness of deterrence hinges on the opponent's belief in the believability of this threat.

In this context, our paper delves into France's nuclear capabilities and credibility, examining its evolving strategic posture in response to Russia's nuclear signaling and the broader geopolitical landscape. Subsequently, it will consider France's nuclear doctrine and vital interests, analyze the effectiveness of its current deterrence strategy, and assess the impact of the Ukraine war on its future direction. Ultimately, we aim to shed light on how France is navigating the current and latent complex challenges, utilizing its nuclear force as a key element of its national security strategy.

France's nuclear capabilities

Unlike the United States, France's focus since its first nuclear test in 1960 has not been on mirroring the Soviet Union's arsenal size⁸. Instead, it embraced a "minimum deterrence" strategy based on countervalue targeting, aiming to deter aggression through the ability to inflict

² Edward Helmore, "Jake Sullivan: US will act 'decisively' if Russia uses nuclear weapons in Ukraine", [The Guardian](#), September 25, 2022.

³ *Ibid.*

⁴ Max Seddon, James Kynge, John Paul Rathbone, Felicia Schwartz, "Xi Jinping warned Vladimir Putin against nuclear attack in Ukraine", [Financial Times](#), July 5, 2023.

⁵ Bruno Tertrais, *Pax Atomica ? Théorie, pratique et limites de la dissuasion*, Odile Jacob, 2024, p. 16.

⁶ *Ibid.*, p. 15.

⁷ *Ibid.*

⁸ Sénat français, "L'évaluation de la recherche sur la gestion des déchets nucléaires à haute activité - Tome II : Les déchets militaires", [Rapport n° 179](#), 1997.

unacceptable damage on an adversary's critical infrastructure, even with a smaller arsenal⁹. This “*deterrence of the strong by the weak*” approach, informed by the lessons of the Suez Crisis, specifically sought to prevent nuclear coercion from Moscow¹⁰.

France currently boasts a nuclear arsenal of roughly 290 operational warheads, entirely reliant on its naval and air components¹¹. These forces possess the capability to execute a full spectrum of nuclear missions. Notably, nearly all French warheads are either deployed or readily available for deployment on short notice¹². Furthermore, France stands out among nuclear weapon states in terms of transparency¹³. Unlike many of its counterparts, Paris has consistently disclosed details about its nuclear forces and operations for many years, fostering greater international trust and understanding¹⁴.

France's current nuclear arsenal reflects several adjustments over the past decades. In 2008, then-President Nicolas Sarkozy announced a reduction to below 300 warheads¹⁵. This commitment was reiterated in 2015 by President François Hollande, who specified a stockpile of about 300 spread across submarine-based missiles and air-launched delivery systems¹⁶. Most recently, President Emmanuel Macron reaffirmed the “under 300” pledge in 2020¹⁷. The effectiveness of deterrence is inherently relative and contingent upon the stakes involved in a conflict, considering what is at risk for both sides.

Quantitatively, the current nuclear capability is comparable to that of 1984, the peak of the Cold War, when France aimed to deter the Soviet Union. In qualitative terms, it appears well suited for deterring Russia¹⁸. The effectiveness of deterrence is intrinsically dependent on the stakes involved in a conflict, yet it is sized to be able to inflict unacceptable damage on Russia or any other adversary, and therefore to preclude any nuclear coercion from Moscow and safeguard vital interests in Paris. For example, France's routine air-based nuclear exercises, such as “Poker”, simulate strategic air raids using Rafale aircraft, which carry *air-sol moyenne portée amélioré* (ASMPA) air-launched cruise missiles and air-launched cruise missiles, reinforcing the country's commitment to maintaining a credible nuclear deterrent¹⁹.

⁹ Bruno Tertrais, “French Nuclear Deterrence Policy, Forces, and Future: A Handbook”, *Recherches & Documents*, FRS, n° 4/2020, February 2020, p. 29. The sizing of the French nuclear forces is based on the notion of sufficiency (sometimes described as “strict” sufficiency, even if this qualifier has no particular consequences). In fact, it is close to what the British call “minimum deterrence”. For further insights on this subject from a British perspective, see Claire Mills, “The French Nuclear Deterrent”, *Briefing Paper no. SN04079*, House of Commons Library, UK Parliament, November 20, 2020.

¹⁰ Bruno Tertrais, *Ibid.*

¹¹ *Ibid.*; Emmanuelle Maitre, “French Deterrence in the Third Nuclear Age”, *Recherches & Documents*, FRS, n° 16/2023, December 14, 2023; Hans Kristensen, Matt Korda, Eliana Johns, “French Nuclear Weapons, 2023”, *Bulletin of the Atomic Scientists*, vol. 79, n° 4, July 17, 2023, pp. 272-281.

¹² Hans Kristensen, Matt Korda, Eliana Johns, *Ibid.*

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ Nicolas Sarkozy, “Presentation of ‘Le Terrible’ Submarine”, *Speech by the President of the French Republic*, Cherbourg, March 21, 2008.

¹⁶ François Hollande, “Discours sur la dissuasion nucléaire : Déplacement auprès des forces aériennes stratégiques”, *Élysée*, Istres, February 19, 2015.

¹⁷ Emmanuel Macron, “Speech of the President of the Republic on the Defense and Deterrence Strategy”, *Élysée*, February 7, 2020.

¹⁸ Hans Kristensen, Matt Korda, and Eliana Johns, *op. cit.*

¹⁹ “Poker 2022-04: Strategic Air Raid Simulation for the French Air and Space Force”, *Air & Cosmos International*, December 14, 2022. The most recent “Poker” exercise was conducted in March 2023.

Notwithstanding, while the nuclear capability may be deemed credible, questions arise regarding Paris's resolve. This aspect of French deterrence extends beyond sheer military might, which remains unchallenged, to encompass the willingness to employ it.

The will to use nuclear weapons

France's nuclear doctrine and vital interests

Successive French heads of state, from Presidents Sarkozy to Macron, have consistently asserted the strictly defensive nature of France's nuclear doctrine, reserved for extreme circumstances of legitimate self-defense involving vital interests²⁰. However, the precise definition of these "vital interests" remains elusive.

Two crucial elements warrant attention in this context: the officially declared doctrine, and its practical implementation contingent upon various challenges and circumstances.

On the one hand, as emphasized previously, the formal French doctrine asserts the possibility of employing nuclear weapons "*in extreme circumstances of legitimate self-defense*", particularly involving France's vital interests²¹. For example, General Thierry Burkhard, the French Chief of Defense Staff, underscored the ambiguity of the French "red lines", ensuring second-strike capability through resource redundancy and the invulnerability of the sea-based leg²². France, lacking a no-first-use policy, retains the option of a "final warning" – a single, limited nuclear strike to signal an adversary's overstepping or to reinforce the projection of resolve. However, Burkhard reaffirmed that France's nuclear doctrine does not align with either no-first-use or sole-purpose principles, emphasizing that nuclear deterrence neither aims to secure victory nor prevent defeat in a war²³. In the context of Russia's war on Ukraine, Burkhard emphasized the strategic value of nuclear deterrence, highlighting its moderating effect in conflicts involving nuclear powers and the reemergence of a balance of terror reminiscent of the Cold War²⁴.

On the other hand, the notion of vital interests has always been considered to give a clue on what really matters to France and what red lines any potential rival should not cross. France is not a member of the NATO Nuclear Planning Group (NPG), therefore its nuclear strategy and policy is relatively independent and is usually dictated by the president of France²⁵. Within the French system, the head of state holds the ultimate authority to decide on the use of nuclear weapons. Each new president traditionally delivers a speech presenting their country's vital interests, implicitly defining the contours of French nuclear deterrence.

For example, in his 2020 speech President Macron made it even clearer than his predecessors that these interests encompass a "*European dimension*", sparking engagement with the European Union on the role of France's nuclear deterrence in collective security²⁶. Moreover,

²⁰ Bruno Tertrais, "French Nuclear Deterrence Policy, Forces and Future", *op. cit.*

²¹ [Defence and National Security Strategic Review](#), 2017.

²² Audition, à huis clos, du général d'armée Thierry Burkhard, chef d'état-major des armées, sur la dissuasion nucléaire, Compte rendu de réunion n° 31, [Commission de la défense nationale et des forces armées](#), 16e législature Session 2022 – 2023", January 11, 2023.

²³ *Ibid.*

²⁴ *Ibid.*

²⁵ All member countries are part of the consultative process in the NPG with the exception of France, which has decided not to participate. For more background information, see NATO, [Nuclear Planning Group \(NPG\)](#), May 9, 2022.

²⁶ Emmanuel Macron, "Speech of the President of the Republic on the Defense and Deterrence Strategy", *op. cit.*

though president Macron called it just “Europe”, this dimension was mostly interpreted as the European Union territory. However, for French authorities, “*the geographic scope of French vital interests protected by nuclear deterrence is not limited to French territory*” or Europe²⁷.

Despite President Macron’s apparent disavowal of a French nuclear role in a potential Russian nuclear escalation in Ukraine during his late-night TV interview in October 2022 (see below), his statement seemingly aligns with France’s longstanding stance, common among most nuclear powers²⁸. This stance was reiterated at the 2022 Treaty on the Non-Proliferation of Nuclear Weapons Review Conference, emphasizing the deliberate ambiguity in defining circumstances for nuclear weapon use to prevent potential aggressors from calculating attack risks²⁹. In this case, we follow the rationale that “*France is ready for escalation if Russia was to use nuclear weapons in Ukraine, and it does not even have to be nuclear escalation*”³⁰. This idea was also proved in the process of private channel communication with Russia, particularly in response to the potential use of nuclear weapons by Moscow in Ukraine, as discussed in the following pages. However, if a French nuclear escalation happens, there is no “*reason why there would be a change in French nuclear doctrine*”³¹.

Evaluating the French strategic posture in response to Russia’s actions

In October 2022, responding to concerns about broadening French nuclear doctrine, because of Russia’s threat of using nuclear weapons against Ukraine, President Macron clarified in a late-night TV interview that France’s vital interests “*would not be at stake if there was a nuclear attack in Ukraine or the region*”³². While intended to alleviate the potential anxiety among the French public, this statement sent mixed messages to both Russia and European allies³³.

To Russia, it could imply that France does not consider Ukraine an integral part of Europe, potentially weakening perceived French resolve to support the Ukrainian nation. This aligns with Macron’s previous statements emphasizing non-confrontation with Russia and avoiding its defeat³⁴.

This lack of clarity creates challenges for European allies seeking strong French commitment to deterring Russian aggression. To ensure effective European security cooperation, France may need to refine its messaging to communicate a firm deterrent posture while maintaining diplomatic avenues. The term “the region” could encompass their own territories, creating a deficit of trust in the EU’s sole nuclear power.

President Macron’s explanation that France’s vital interests would not be triggered by a nuclear attack in Ukraine or “the region” sparked concerns due to its ambiguity. For Central European

²⁷ Interview, Senior official from an EU NATO member state, Paris, November 2023.

²⁸ “L’événement avec Emmanuel Macron”, [France TV](#), October 12, 2022.

²⁹ 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons, “National Report Pursuant to Actions 5, 20 and 21 of the Final Document of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons: 2015–2022”, Report submitted by France, [NPT/CONF.2020/42/Rev.1](#), August 1, 2022.

³⁰ Interview, Senior Official from an EU NATO member state, Paris, November 2023.

³¹ *Ibid.*

³² “L’événement avec Emmanuel Macron”, *op. cit.*

³³ Benjamin Hautecouverture, “War in Ukraine: Nuclear Signalling, Coercion, and Deterrence”, [Canadian Global Affairs Institute](#), January 2023.

³⁴ “‘Нельзя унижать!’ Макрон решил, что Франция не будет выступать за разгром России” [‘You can’t humiliate!’ Macron decided that France would not advocate the defeat of Russia], [Alternatio.org](#), February 19, 2023.

NATO members, the term “the region” could encompass their own territories, creating a deficit of trust in the EU’s sole nuclear power. Furthermore, this statement contradicts France’s 2020 initiative to discuss European nuclear deterrence. It raises questions about how Paris would fulfill extended deterrence, the 95 % of which, according to the popular expression of the former British Defense Minister Denis Healey, hinges on allies’ assurance of protection³⁵. Can robust European strategic autonomy emerge under these circumstances?

In addition, Macron’s statement sends a confusing message to Ukraine, currently fighting for European recognition and against Putin’s “*common nation*” claims³⁶. If Europe constitutes France’s vital interest but excludes Ukraine, what does Paris signal to Kyiv? Certainly, the United States has never explicitly threatened the use of nuclear weapons in response to a potential Russian nuclear aggression against Ukraine. However, this narrative may be susceptible to misinterpretation and could be construed as an appeasement strategy.

While appeasement concerns linger regarding France’s political stance during the early stages of the war, its communication strategy projects a contrasting message. Further analysis is needed to reconcile these seemingly contradictory approaches and assess their impact on European security and deterrence.

First and foremost, France’s commitment to nuclear deterrence was prominently displayed through the swift deployment of three nuclear-armed submarines following Russia’s invasion of Ukraine³⁷. This marked the first such action over the last thirty years, literally since the Cold War’s conclusion, when only one French nuclear submarine was on guard³⁸. In contrast to the United States, which postponed a ballistic missile test in March 2022 to avoid provoking Russia, France proceeded with its strategic exercises as planned, even shifting them from nighttime to daytime. This steadfastness symbolized resolve, indicating to Russia that the dialogue between Paris and Moscow, from the war’s outset, would be developed as between equal nuclear powers. This became particularly evident and important at the peak of Putin’s nuclear threats against Ukraine in autumn 2022.

Upon Putin’s declaration of the annexation of four Ukrainian regions, coupled with a pronounced nuclear threat stating that “*if Russia feels its territorial integrity is threatened, we will use all defense methods at our disposal, and this is not a bluff*” – a statement that was construed as a highly suggestive indication of potential nuclear weapon use³⁹. This raised significant concerns among Western nuclear powers, prompting a decisive response through private channels by the United States, the United Kingdom, and France⁴⁰, which conveyed a strong message that any nuclear use against Ukraine would be met with conventional retaliation by the three nations. Although there was no explicit nuclear signaling, the united deterrent signal effectively contributed to curbing Russia’s subsequent nuclear threats. Later that autumn,

³⁵ David Santoro, Brad Glosserman, “Healey’s Wrong: It’s L’*événement avec Emmanuel Macron*”, *op. cit.*’s Deterrence, Stupid”, [War on the Rocks](#), October 14, 2016. Benjamin Hautecouverture, “War in Ukraine: Nuclear Signalling, Coercion, and Deterrence”, [Canadian Global Affairs Institute](#), January 2023.

³⁶ Vladimir Putin, “On the Historical Unity of Russians and Ukrainians”, [Kremlin](#), July 12, 2021.

³⁷ Fabrice Wolf, “Avec 3 SNLE à la mer, la posture de dissuasion française au plus haut depuis 1983”, [Meta-Defense.fr](#), March 18, 2022.

³⁸ *Ibid.*

³⁹ Vladimir Putin, “Address by the President of the Russian Federation”, [Kremlin](#), September 21, 2022.

⁴⁰ Max Seddon, James Kynge, John Paul Rathbone, Felicia Schwartz, “Xi Jinping warned Vladimir Putin against nuclear attack in Ukraine”, *op. cit.*

Putin and the Ministry of Foreign Affairs ruled out the possibility of Russia carrying out a nuclear attack on Ukraine. This seems to suggest that the allies' deterrent messaging was strong enough to get Russia to back down⁴¹. Certainly, one could also consider the potential role of China and India in influencing the Russian position. However, according to the official sources, China's signals discouraging Russia from using nuclear weapons in Ukraine appeared in March 2023 during Xi Jinping personal visit to Moscow⁴². In contrast, the allied signaling and the subsequent Russian reaction took place in autumn 2022. Therefore, it is plausible that the potential military operation was the primary driving force affecting the general reduction of nuclear escalation messaging coming from the Kremlin. Meanwhile, France's participation in this mission highlighted its role in the collective effort to defend Europe, of which Ukraine is a part, and emphasized the importance of the global nuclear order.

France's proactive stance aligns with its longstanding principle, shared and adopted by NATO as a whole in 1995, that any use of nuclear weapons must have a strategic character, fundamentally altering the nature of a conflict⁴³. Notably, France's actions need to be contextualized within the evolving geopolitical landscape. A Politico article underscored Macron's shift over the past year, from acknowledging past mistakes in underestimating Russia's brutality to providing Ukraine with advanced weaponry like the "Scalp" long-range missiles⁴⁴. Despite Putin's objections, France remains committed to supporting Ukraine and reinforcing its nuclear deterrence role.

Pursuing this path, France not only pledges support to Ukraine but also announces the dispatch of a new package of "Scalp" missiles in 2024, accompanied by security guarantees akin to those recently provided by the United Kingdom⁴⁵. One more dimension to the French resolve was added by President Macron at the conference in Paris on February 27, 2024, stating that *"sending western troops to Ukraine could not be ruled out"* since the West should do *"everything needed so Russia cannot not win the war"*⁴⁶.

These measures unfold against the backdrop of Putin expressing public regrets over a perceived breakdown in communication with the French leader⁴⁷. Macron's decision to distance himself from Putin reflects an understanding that continued dialogue may undermine France's policy credibility and his own reputation, emphasizing the imperative to stand firm against coercive tactics and demonstrate Western unity.

Conclusion

The recent political developments offer insights into certain dimensions of French nuclear deterrence. Most French experts contend that the war between Russia and Ukraine has not fundamentally altered Paris's deterrence posture, as it has consistently factored in

⁴¹Polina Sinovets, "Fifty Shades of Red: Where Does Russia Draw the Line?", NATO Defense College, 2023.

⁴²Max Seddon, James Kynge, John Paul Rathbone, Felicia Schwartz, "Xi Jinping warned Vladimir Putin against nuclear attack in Ukraine", *op. cit.*

⁴³Bruno Tertrais, "What Future for Nuclear Deterrence?", *Fondapol*, October 2022.

⁴⁴Clea Caulcutt, "Macron's slow but bold U-turn on Ukraine", *Politico Europe*, September 12, 2023.

⁴⁵Rudy Ruitenberg, "France to give Ukraine more cruise missiles, plans security pact", *Defense News*, January 17, 2024.

⁴⁶Leila Abboud, Henry Foy, "Macron says sending western troops to Ukraine cannot be ruled out", *Financial Times*, February 27, 2024.

⁴⁷Eva Hartog, "Putin says Macron stopped calling him", *Politico Europe*, December 14, 2023.

considerations related to Moscow⁴⁸. However, the conflict has brought to light certain aspects previously concealed. Notably, the European dimension of French deterrence was vividly demonstrated through the collective decision, alongside the United States and the United Kingdom, to respond with conventional operations to counter any potential use of nuclear weapons by Russia against Ukraine⁴⁹. While some argue this is more about preserving the longstanding norm of non-use of nuclear weapons since 1945, there is merit in acknowledging both dimensions, as it provides a clearer understanding of France's current deterrence posture compared to the early stages of the war.

Therefore, we contend that while Russia's war on Ukraine may not have directly influenced the substance of French nuclear deterrence, it has indirectly compelled Paris to unveil certain facets of its vital interests, taking a step toward enhancing the credibility of its deterrence posture. This represents an initial response, and France may find itself increasingly occupied with broadening its deterrence posture in response to evolving challenges. In particular, the potential return of President Trump to power in Washington raises the imperative to bolster European nuclear deterrence⁵⁰.

This urgency arises from the growing concerns surrounding the United States' commitment to European security, fueled by the unpredictability of US politics. While US troop deployments remain a valuable contribution, Europe's reliance on American intelligence and air capabilities has been exposed by its limited production capacity, as seen in aiding Ukraine and replenishing its own stocks⁵¹. This reality demands a reevaluation of European defense investments, moving beyond Cold War assumptions and embracing a more comprehensive approach to ensure its own security in an evolving geopolitical landscape⁵².

Furthermore, the dramatic expansion of China's nuclear arsenal, now characterized by a full-fledged triad and a burgeoning industrial base, elevates it to the world's third nuclear superpower⁵³. This development strains the US nuclear arsenal, crucial for European security, as it must now deter two peer competitors simultaneously. This intensifies the growing concern regarding the credibility of the US extended deterrence in the Indo-Pacific, potentially destabilizing the European security equation by enabling China to exert pressure on strategic partners like South Korea and Japan⁵⁴. This could not only undermine the United States' European security guarantees but also exacerbate calls for French leadership and increased reliance on its nuclear deterrent.

All these scenarios would likely necessitate certain modifications to fundamental principles, including, at the very least, reevaluating the scope of French vital interests and the strategies employed to ensure them.

⁴⁸ Interviews with Bruno Tertrais, Francois Heisbourg, Emmanuelle Maitre, Paris, November 2023.

⁴⁹ Bruno Tertrais, *Pax Atomica ? Théorie, pratique et limites de la dissuasion*, op. cit., p. 139.

⁵⁰ Jakob Hanke Vela, Nicolas Camut, "As Trump looms, top EU politician calls for European nuclear deterrent", [Politico Europe](#), January 25, 2024.

⁵¹ Arancha González Laya, Camille Grand, Katarzyna Pisarska, Nathalie Tocci, Guntram Wolff, "Trump-Proofing Europe: How the Continent Can Prepare for American Abandonment", [Foreign Affairs](#), February 2, 2024.

⁵² *Ibid.*

⁵³ Hans M. Kristensen, Matt Korda, Eliana Johns, Mackenzie Knight, "Chinese Nuclear Weapons, 2024", [Bulletin of the Atomic Scientists](#), vol. 8, n° 1, pp. 49-72.

⁵⁴ Alexander Mattelaer, "Rethinking Nuclear Deterrence: A European Perspective", [CSDS Policy Brief](#), 13/2022, May 23, 2022.

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