



Nuclear Signalling in Russia's War Against Ukraine

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Key Issues

- Nuclear weapons barely played a role towards preventing Moscow's invasion, but constricted both NATO and Russia's ability to leverage conventional force. Yet data is insufficient to isolate the causal role of nuclear weapons from other possible factors shaping decision-making.
- Data shows that Russia employed a three-fold nuclear signalling approach. It sought to deter foreign military intervention (successful, but potentially unnecessary); to dissuade or at least delay foreign aid to Ukraine (failed on the former, somewhat effective on the latter); and intimidate the government in Kyiv (unsuccessful, and puzzling).
- Arguably, Moscow's reliance on nuclear rhetoric was driven by distrust in the restraint of democracies, concerns over Russia's own conventional weakness and a misjudgement of international reactions. Nonetheless, Moscow's actions and statements suggest a rational approach to nuclear policy.

Since Russia's full-scale invasion of Ukraine in February 2022, policymakers in Moscow have regularly employed nuclear rhetoric to shield and further their war of aggression by leveraging the risks of nuclear escalation. Western supporters of Ukraine, and especially the government of the United States (US), have sought to counter the Kremlin's nuclear strategies – be it through actions that refuted Russia's threats, or through warnings that both restrained Moscow's subsequent behaviour and reassured allied and Ukrainian decision-makers. Nonetheless, Western states also calibrated their actions in response to the reality of Russia's nuclear arsenal and Moscow's nuclear rhetoric. Openly and behind closed doors, NATO allies wrangled over risks and the chances worth taking.

For a recently updated [working paper](#), we traced these actions

and reactions – nuclear signalling between Russia and the West. We identified, evaluated and coded around 165 political interactions with a nuclear dimension. However, our chronology also includes the two sides' attempts at managing and controlling escalation dynamics by exercising deterrence, dissuasion and compellence and dealing with the domestic and international political implications of these nuclear-related processes. Building upon this empirical foundation, this Policy Brief assesses what we know about the role of nuclear weapons in the Ukraine conflict, but it also examines the current limits of knowledge.

Nuclear weapons do deter, but not through sheer existence

Russia's decision to invade Ukraine was enabled by a lack of, rather than a failure of deterrence. While

NATO had been [strengthening](#) its deterrence posture on its eastern flank since 2014, Allies refrained from extending any formal security guarantees to Ukraine that would have placed Kyiv under a nuclear umbrella. What is more, they openly stated that NATO would not intervene conventionally if Russia invaded, provided only limited lethal support to Ukraine and failed to make credible their willingness to bear significant economic and geopolitical costs to respond to Russian aggression. Against this backdrop, it is unsurprising that the West's partial politico-economic steps proved insufficient to convince Russia that the costs of aggression against a non-NATO state were prohibitive. Similarly unsurprising is that the very narrow implicit deterrence inherent to the mere possession of nuclear weapons by Ukraine's supporters could not generate sufficient risks for Russia to abstain.

In contrast, the West successfully deterred any Russian use of force against NATO territory. Beyond a relative nuclear parity, Washington's conventional capabilities widely [overshadow](#) Moscow's military options. Russia's battlefield performance in Ukraine [suggests](#) that even the European balance of power might be tilted against Moscow. In addition to this overwhelming military disparity, the outsized economic gap between the West and Russia, and the formal alliance commitments among NATO states, the West also consistently and repeatedly reinforced deterrence and reassurance. Not only did NATO quickly enhance its eastern presence, but Western leaders also warned Russia dozens of times against a direct attack, pointing to both the conventional costs they would impose and the nuclear risks such a clash would involve. Hence, the Kremlin has refrained from testing NATO resolve, despite claiming that the West would back down easily when faced with the costs of direct confrontation, repeatedly alleging that NATO was already at war with Russia and frequently condemning the supply of military goods to Ukraine.

Nuclear deterrence is a two-way street

The main purpose of the Kremlin's nuclear rhetoric appears to have been to prevent a direct Western military intervention in Ukraine. To this end, Moscow's officials repeatedly pointed out the risk of such an intervention, consistently warning that a direct clash could lead to an all-out nuclear escalation. Such statements were particularly frequent during the

first three weeks of Russia's full-scale invasion, as policymakers in Moscow seemed concerned with Western states' initial response. Russian officials were particularly keen to stress the escalation risks of a potential Western decision to impose a no fly zone over Ukraine, to send a NATO peacekeeping mission or to deliver fighter jets to the Ukrainian armed forces. Such cautioning statements were common throughout the last twelve months, originating from various segments of and at various levels within the Russian government.

With NATO states constantly denying any intention to intervene, it remains impossible to establish the causal weight of Russia's nuclear warnings or, for that matter, Moscow's nuclear possession. Nevertheless, considerations related to nuclear escalation appear to have played an important role. During the first month of Russia's invasion, various Western officials rejected the possibility of a direct intervention almost every other day and publicly justified this choice by citing nuclear escalation concerns. Numerous US policymakers seemed wary, often seeking to gauge Moscow's nuclear red lines. Still, non-nuclear explanations for Western non-intervention remain plausible as well. For instance, Western decision-makers might have considered a direct intervention unnecessary to deny a Russian victory, or too costly given competing domestic and international policy priorities.

Better safe than sorry

Moscow's rationales for uttering such public warnings remain difficult to discern. Contributors to Russian military journals have [argued](#) for years that nuclear threats were a valuable tool to deter third party intervention in a local war, and thus prevent an escalation to a regional conflagration with an alliance like NATO. But the mere existence of Russia's diversified nuclear arsenal should have arguably been a sufficient deterrent, especially given the West's repeated declarations of restraint. Two Russian rationales seem salient. First, deeply distrustful of Western restraint, decision-makers in Moscow potentially assessed that, without constant warnings, public pressure within democratic societies could nudge leaders towards intervention even if they were fully aware of the escalation constraints inherent to nuclear possession. Second, it is plausible that Russia's conventional weakness played a decisive role. If Russia had encountered widely superior US conventional forces in Ukraine, it would have quickly

been left with few non-nuclear options – a situation the Kremlin sought to avoid.

Russia's statements and actions are consistent with these two rationales. For one, whenever Western politicians seemed to suggest that an intervention might be on the table, Moscow renewed its nuclear rhetoric. To illustrate, when the then UK Foreign Secretary [Liz Truss](#) said at the end of February that Russia had to be stopped in Ukraine to avoid other countries being threatened, the Kremlin immediately responded with a series of nuclear-related actions and explicitly linked the British politician's statement to its nuclear narratives. For another, Putin's comments often reveal a concern

government almost always backpedalled – by [alleging](#) that the West had malevolently “misinterpreted” benign declarations; by dampening earlier claims, for instance highlighting the restrictions of the nuclear doctrine; or simply by rescinding previous statement, for example declaring that nuclear weapons were “of course” not relevant in Ukraine.

This vague and contradictory rhetoric was most probably an attempt to generate uncertainty regarding the costs of Western actions and thereby to create pressures within democratic societies against assisting Kyiv; but, at the same time, to avoid uncontrollable escalation if NATO states ignored

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with US conventional and nuclear dominance. Already at the conflict's outset, Putin noted that Russia had a [‘certain advantages in a number of the latest types of weapons’](#), but felt compelled to immediately underline that it was also [‘one of the most powerful nuclear powers’](#). More recently, Putin expressed concern over Washington [‘developing a system for a disarming strike’](#), suggesting that Russia should update its own thinking in response.

What else can we deter?

The Kremlin's second goal seems to have been to [limit](#) both support for Ukraine and sanctions against Russia. To this end, Moscow employed vague statements suggesting that additional military deliveries or increased economic pressure could unleash a chain of events leading to nuclear escalation. Sometimes Russian officials argued that certain types of assistance to Ukraine meant that NATO would become a direct party to the conflict, thereby triggering a direct clash between Russia and the Alliance, which would then turn nuclear. Other times, policymakers in Moscow used the vague language in Russia's official nuclear doctrine, claiming that Western support for Kyiv represented an “existential” threat to, or an “act of aggression” against Russia – scenarios [mentioned](#) in the doctrine as leading to nuclear use. Nevertheless, the Russian

Russia's warnings. Critically, throughout 2022, due to constant backpedalling, Moscow's nuclear rhetoric and actions retained a similar level of tension – in contrast to Russia's conventional conduct, where escalation peaked by autumn with the systematic attacks on Ukraine's critical civilian infrastructure. For instance, while Moscow [repeatedly warned](#) in March and April that additional sanctions were an “economic war”, a “total war” to “destroy” Russia “as a whole”, or an “act of aggression”, no further escalation occurred when Western states [decided](#) to impose additional sanctions. A similar dynamic could be observed in the case of weapons deliveries, be they artillery batteries, air defence systems or battle tanks, none of which triggered additional nuclear escalation steps.

Careful, very careful, über-careful

While Western allies publicly denied that Russia's strategy had any impact, their behaviour tells a different [story](#). No week has passed without Western officials professing their governments' continuing or increased support for Ukraine. And yet, NATO states only progressively tightened sanctions against Moscow, enhanced financial commitments to Kyiv and delivered more lethal, more complex, and more expensive weaponry to Ukrainian forces. While risk-proneness varied, allies across the board sought

to calibrate their support for Ukraine in a way that lessened escalation risks. To illustrate, Washington altered weapons systems to prevent them from reaching deep into Russian territory, Germany agreed to supply battle tanks only in tandem with the US and even more hawkish eastern European governments refrained from unilaterally handing over complex weapons systems. [Most observers](#) agree that the West is applying “salami” or “boiling the frog” tactics to minimise nuclear escalation risks.

Still, it remains impossible to isolate nuclear escalation concerns as drivers of political decisions from other possible motivations. Overall, observable Western behaviour is also congruent with a number of other explanations. Some governments – or even just factions within various polities – might, for instance, have been primarily interested in a rapid end of the fighting in Ukraine. They might have believed – rightly or wrongly – that delayed, fewer, and less potent weapons would force Kyiv to accept even an unfavourable settlement. Other actors might have sought to avoid being perceived as anti-Russian – both in order to maintain the possibility of positive bilateral relations after the war and due to domestic electoral constrictions. Last but not least, states might have discounted the risks of nuclear escalation, but been keen to avoid a conventional intensification of the war – to minimise casualties in Ukraine, avoid political pressure at home and prevent the conflagration from spreading beyond Ukraine’s borders.

Failing at nuclear coercion

The third aim of Russia’s nuclear rhetoric has been to limit Ukraine’s freedom of movement and, ideally, to force Kyiv to accept unwanted compromises. During the first few months of the conflict, the Kremlin denied any such intentions. Still, it employed vague allusions to fictitious Ukrainian transgressions – narratives suggesting that Moscow could be constructing a pretext for nuclear use. Washington responded with increasingly explicit counter-threats, and Russian narratives subsided. However, by September, when Moscow decided to annex four Ukrainian provinces, it also began to leverage language from its nuclear doctrine to imply that it might use nuclear weapons to defend its newly gained territories. US, European and NATO officials underlined the “catastrophic” consequences Russia would face. Following a

Western diplomatic offensive, both China and India also publicly rebuffed Russia’s coercive attempts. The government in Kyiv, in turn, responded to the annexation and Moscow’s nuclear threats by attacking targets inside Russia and on Crimea, and the Kremlin appeared to relent.

Russia’s attempt at coercion is difficult to explain. [Conceptual](#) and [historical](#) analyses both [find](#) that atomic bullying against non-nuclear states is likely to fail – and fail Russia did. Thus, one can only speculate about Moscow’s rationales. First, policymakers might not share the scholarly consensus – a majority in Russia’s policymaking circles might have believed that coercion could succeed and was, therefore, worth attempting. Second, Vladimir Putin might have made the decision alone, based on a very thin theoretical or empirical foundation. Some [evidence suggests](#) that many of Moscow’s war-related misjudgements happened due to leadership isolation. Third, it is plausible that Russian officials miscalculated the US reaction. Fourth, it is also possible that Moscow did not expect such a global reaction – it might not have considered that either Beijing or New Delhi could defend the current rules-based order. Last but not least, it is conceivable that Russia once more simply misjudged Ukrainian resolve, independent of the reactions of all other involved actors.

The future is uncertain – but not necessarily bleak

Our analysis reveals a cunning but careful method behind Moscow’s nuclear signalling. There is good and bad news to report. On the one hand, these findings indicate that current nuclear risks to NATO states remain small – and even those to Ukraine seem manageable. Except for statements cautioning against a direct Western intervention, Russia’s warnings have remained vague and have often been retracted, suggesting a strong desire to avoid uncontrollable escalation. Faced with concerted opposition, Moscow abandoned its nuclear coercion attempts, and its nuclear rhetoric has since largely subsided. On the other hand, Moscow’s statements indicate that Russia relies on its nuclear arsenal to set clear boundaries. Thus, a change in stakes, for instance if the Russian regime were to face collapse as a consequence of Kyiv regaining Crimea, could result in significant nuclear challenges.



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