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# Lessons Learned from Russia's Full-Scale Invasion of Ukraine



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**Lessons Learned from Russia's Full-  
Scale Invasion of Ukraine**

**Edited by**

**David J. Trachtenberg**

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## Preface

At the time of this writing, Russia's full-scale invasion of Ukraine has passed the 500-day mark. While the ultimate outcome of Moscow's unprovoked war of aggression against a democratic neighbor remains uncertain, a number of lessons can be learned from developments to date. These lessons apply not only to Ukraine and Russia but to the United States, its NATO allies, and U.S. adversaries, all of whom are watching progress of the conflict closely and drawing their own lessons from it.

In this *Occasional Paper*, American and European analysts offer their views on the lessons to be learned from Russia's actions to change the borders of Europe through force of arms – the first time this has happened since the end of World War II. James Anderson argues that allowing aggressive major powers to make coercive nuclear threats with impunity undermines deterrence and necessitates a stronger U.S. and NATO response. Marc Berkowitz notes that the Ukraine conflict demonstrates the importance of ensuring accurate intelligence, a resilient industrial capacity, and robust continuity of government preparations, as well as the need to protect space assets that are critical to enabling these requirements. Matthew Costlow discusses the lessons China may draw from the Ukraine conflict and the implications for the security of Taiwan and deterrence in the broader Indo-Pacific region. Michaela Dodge explains how the conflict validates continued U.S. engagement in European security affairs, the imperative of strengthening U.S. alliances and partnerships, and the enduring relevance of nuclear weapons and missile defenses in deterring and defeating aggression. Lukáš Dyčka explains changes in the defense policies of the Baltic states as a result of Russia's aggression against Ukraine, noting the political, economic, military, and societal lessons learned as a consequence of Russia's aggression. Robert Kehler highlights the importance of the U.S. nuclear

modernization program to lower the risk of potential nuclear escalation in the face of repeated Russian nuclear threats. David Lonsdale concludes that the conflict in Ukraine demonstrates that the risk of cyberwarfare has not achieved the anticipated “strategic efficacy” and that “cyber power has still not come of age as a potent instrument of strategy,” as cyber defenses and resilience have proven to be effective tools in blunting the effects of Russia’s cyber attacks. Keith Payne argues that Russia’s actions demonstrate that “the functioning of deterrence is increasingly problematic” and that “Moscow will use force and nuclear first-use threats in its bid to destroy the status quo and restore its empire.” In my commentary, I note that Russia’s war against Ukraine has exposed critical shortfalls in U.S. deterrence planning, defense industrial capacity, and the credibility of extended deterrence, and that U.S. adversaries such as China will take note of the resilience of America’s (and NATO’s) commitment to help Ukraine defend its sovereignty and territorial integrity when considering possible action against Taiwan. And Kenton White concludes that logistics are critical to enable success, arguing that the West’s prior “complacency” has resulted in missed opportunities to confront previous Russian aggression and expansionism, and that “Ukraine is now paying the price” for that failure.

While the final lessons of Russia’s war against Ukraine will not be known for some time, the unique perspectives that the contributors to this *Occasional Paper* have gleaned from the conflict so far provide valuable insights for U.S. policymakers and for Western officials and governments. We hope you find these commentaries both interesting and informative.

We thank the Sarah Scaife Foundation for making this *Occasional Paper* possible and hope you find the perspectives reflected here both novel and informative.

*David J. Trachtenberg*  
Editor

# **Russian Nuclear Threats: Lessons Learned from the War in Ukraine**

**James H. Anderson**

## **Introduction**

Russia has made repeated nuclear threats since its invasion of Ukraine. This alone is concerning since this behavior works to normalize coercive threats involving the world's most destructive weapons. But the fact that Russia has effectively delayed and limited Western military assistance to Ukraine is even more unfortunate. Among other things, Russia is likely to continue making nuclear threats going forward, hoping to replicate its success.

President Vladimir Putin's saber rattling has implications that extend well beyond the conflict in Ukraine. Other nuclear powers, to include China, may well seek to emulate elements of Moscow's strategy in future conflicts. This issue is a grave concern given China's claims to Taiwan and the island's inability to defend itself absent U.S. military assistance. More broadly, Russia's use of nuclear threats may encourage potential nuclear weapons states to accelerate their own pursuit of the bomb, thus complicating counterproliferation efforts.

Given the range of potential consequences, it is critical to understand the doctrinal origins underlying President Putin's nuclear threats before considering options to denude them of their coercive power. At the outset of this analysis, an important caveat is in order. At this writing, the war in Ukraine is still unfolding and its ultimate outcome is far from certain. Russia has threatened to use nuclear weapons but has thus far refrained from doing so. That could change. Readers should thus bear in mind the lessons learned are necessarily preliminary given the ongoing nature of this conflict.



## **Background on Russian Nuclear Threats**

Russia began issuing nuclear threats from the very outset of the conflict, with President Putin warning on February 24, 2022: “No matter who tries to stand in our way or all the more so create threats for our country and our people, they must know that Russia will respond immediately, and the consequences will be such as you have never seen in your entire history.”<sup>1</sup> He has since issued numerous follow-on threats and taken various actions seeking to leverage Russia’s nuclear strength. A small sampling includes the following:

- On February 27, 2022, President Putin publicly announced that he had placed Russian nuclear forces on a higher alert status.<sup>2</sup>
- On April 20, 2022, President Putin used the successful test launch of Russia’s 10-warhead liquid fuel intercontinental ballistic missile “Sarmat” to proclaim: “This truly unique weapon will strengthen the combat potential of our Armed Forces, reliably ensuring Russia’s security against external threats, and will be a wakeup call for those who are trying to threaten our country in the frenzy of rabid, aggressive rhetoric.”<sup>3</sup>

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<sup>1</sup> President Vladimir Putin, quoted in Steve Trimble and Brian Everstine, “Putin Puts Russian Nuclear Forces On Special Alert,” *Aviation Week*, February 27, 2022, available at <https://aviationweek.com/defense-space/budget-policy-operations/putin-puts-russian-nuclear-forces-special-alert>.

<sup>2</sup> *Ibid.*

<sup>3</sup> President Vladimir Putin, quoted in Simon Saradzhyan, “Putin’s Increasingly Loose Talk on Use of Nukes,” Harvard University Belfer Center, November 10, 2022, available at <https://www.belfercenter.org/publication/putins-increasingly-loose-talk-use-nukes>.

- On September 21, 2022, Putin accused the United States and NATO of nuclear blackmail before stating: “Our country has different types of weapons as well, and some of them are more modern than the weapons NATO countries have. In the event of a threat to the territorial integrity of our country and to defend Russia and our people, we will certainly make use of all weapons systems available to us. This is not a bluff.”<sup>4</sup>
- In March 2023, President Putin first announced his intention to ship tactical nuclear weapons to Belarus, which would be the first time Russia has positioned such weapons beyond its borders since the 1990s.<sup>5</sup>

President Putin is not the only Russian official making threats, though his words carry the most weight given his position. Former Russian President and Deputy Secretary of Russia’s Security Council Dmitry Medvedev has chimed in on multiple occasions. On March 23, 2022, for example, he warned that the “nuclear apocalypse” is drawing “closer.”<sup>6</sup>

On occasion, President Putin has dialed down the aggressive rhetoric and struck a more soothing chord. On November 2, 2022, for example, he reaffirmed the familiar Cold War mantra that nuclear war “cannot be won and must never be fought.” Such statements, however, do not reflect any retreat from Russia’s nuclear doctrine, but rather

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<sup>4</sup> Ibid.

<sup>5</sup> Haley Ott, “Belarus now has Russian nuclear weapons ‘three times more powerful’ than those used on Japan, leader says,” *CBS News*, June 14, 2023, available at <https://www.cbsnews.com/news/belarus-russia-nuclear-weapons-war-lukashenko-putin-hiroshima-nagasaki/>.

<sup>6</sup> Deputy Chairman of the Security Council of the Russian Federation Dmitry Medvedev, quoted in Lauren Sukin, “Rattling The Nuclear Saber: What Russia’s Nuclear Threats Really Mean,” *Carnegie Endowment for International Peace*, May 4, 2023, available at <https://carnegieendowment.org/2023/05/04/rattling-nuclear-saber-what-russia-s-nuclear-threats-really-mean-pub-89689>.

reflect an attempt to keep the United States and NATO off-balance.

### **Russia's Motivation**

Russia's nuclear threats against Ukraine, NATO, and the United States should not come as a surprise. Russian threats are a natural outgrowth of its nuclear doctrine, which originated in the early 2000s. President Putin himself has highlighted the importance of Russia's nuclear doctrine, stating on October 27, 2022:

... we have the Military Doctrine, and they should read it. One of its articles explains the cases when, why, in relation to what and how Russia considers it possible to use weapons of mass destruction in the form of nuclear weapons to protect its sovereignty, territorial integrity and to ensure the safety of the Russian people.<sup>7</sup>

Notably, the doctrine lowers the nuclear threshold by identifying situations in which Russia may resort to the first use of nuclear weapons. Often oversimplified as little more than an "escalate to deescalate" mechanism, the doctrine includes situations in which Russia perceives that an adversary's conventional aggression has placed its political survival at risk. Putin reportedly shepherded the development of this doctrine in 1999, before making it official as president in 2000. The doctrine ensured that nuclear threats would play a more prominent role in future Russian conflicts, and the war in Ukraine has, in fact, borne this out.

The war in Ukraine has laid bare the weaknesses of Russia's conventional military forces. President Putin has sought to leverage nuclear threats to cow his foes into more

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<sup>7</sup> Ibid.

conciliatory postures, with a special emphasis on limiting advanced Western military assistance to Ukraine. The threats also serve an important secondary purpose—to remind the rest of the world that Russia is still a great power with which to be reckoned. In short, President Putin’s nuclear threats flowed predictably from Russia’s nuclear doctrine. Unfortunately, the United States and its allies have been largely ineffective in countering his nuclear threats.

### **Effectiveness**

Russia’s nuclear threats have not prevented the United States and NATO from providing Ukraine with military assistance. They have succeeded, however, in limiting the size, scope, and pace of such aid. A clear pattern has emerged: the United States and NATO consider proposals to provide advanced weapons to Ukraine (e.g., tanks, long-range rockets, fighter aircraft) in response to Kyiv’s requests, only to limit and/or delay such assistance in the face of Russian warnings. In sum, Western assistance has been slower and less robust than otherwise would have been the case absent Russian nuclear threats.<sup>8</sup>

### **Learning the Right Lessons**

Biden Administration officials have stated that it takes Russia’s nuclear threats seriously, which is where any response should begin. Ignoring the threats outright would be unwise since Moscow—and other foes—likely would interpret silence as weakness. The problem is that the

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<sup>8</sup> Russia’s saber rattling has impacted U.S. behavior in other ways. In April 2022, for example, the United States canceled an ICBM test, which was a poor decision and a bad optic. Ellen Mitchell, “US scraps missile test to avoid Russian ‘misinterpretation’: report,” *The Hill*, April 1, 2022, available at <https://thehill.com/policy/defense/3256764-us-scraps-missile-test-to-avoid-russian-misinterpretation-report/>.

administration has not developed a more effective response. In essence, the Biden Administration's approach has been to acknowledge the seriousness of Russian nuclear threats, and then drop (or change) the subject.<sup>9</sup> As such, the Biden Administration's responses have been largely consistent with longstanding U.S. declaratory policy, which places a premium on retaining flexibility. The problem is that the administration has not adequately addressed why President Putin believes he can profit from making such threats in the first place.

### Lessons Learned

The war in Ukraine offers several important lessons. First, aggressive states should not be allowed to make egregious nuclear threats with impunity. Giving autocracies such license almost certainly ensures that nuclear threat-making will become even more appealing to future aggressors.

Second, President Putin's nuclear saber rattling has placed nuclear deterrence under stress. More than any other conflict in recent decades, the war in Ukraine has underscored the importance of rethinking deterrence in different regional contexts. Many analysts have categorically discarded the likelihood that President Putin would use nuclear weapons in this conflict. Such confidence may be misplaced. As Masha Gessen put it in a thought-provoking *New Yorker* article last fall:

Although it may be evident to a non-Russian military strategist that the use of a nuclear weapon would be strategically disastrous for Russia, Putin sees his mission in grander and less pragmatic

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<sup>9</sup> The extent to which the United States may have provided Russia with any back-channel warnings about its nuclear threats is likely to remain highly classified for decades.

terms. He believes that, on the one hand, he is facing down an existential threat to Russia and, on the other, that Western nations don't have the strength of their convictions to retaliate if it comes to nukes.<sup>10</sup>

President Putin's behavior reminds us that the clear and compelling logic of nuclear deterrence ultimately resides in the minds of fallible leaders who often operate with limited information under conditions of extraordinary duress.

Third, Putin's calibrated use of nuclear threats has exposed NATO's reluctance to play a more vocal role in reaffirming its nuclear nature. Several NATO members remain queasy about doing so, given that nuclear weapons remain domestically unpopular. This hesitancy does not strengthen deterrence, but rather undermines it.

Going forward, the key question for the United States and its allies is how to denude Russia's nuclear doctrine of its coercive elements. At the very least, the United States should review the adequacy of its own nuclear doctrine given Putin's penchant for nuclear threats, as well as broader geostrategic trends that have accelerated in recent years, to include the increasingly close military cooperation between Russia and China.

The war in Ukraine has demonstrated the importance of tactical nuclear weapons in the context of regional deterrence, and how important it is for the United States to address Russia's numerical advantages in this regard, lest Russia continue to exploit this asymmetry. Russia's behavior has validated the U.S. case for building the nuclear-armed Sea-launched Cruise Missile (SLCM-N), which, if deployed in sufficient numbers, would have the

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<sup>10</sup> Masha Gessen, "Weapons in Ukraine," *New Yorker*, November 1, 2022, available at <https://www.newyorker.com/news/our-columnists/why-vladimir-putin-would-use-nuclear-weapons-in-ukraine>.

virtue of providing U.S. decision makers more deterrent options in future crises.<sup>11</sup>

## Policy Recommendations

The lessons learned from the war in Ukraine yield several policy recommendations to strengthen deterrence.

- **The United States and its allies should impose diplomatic and economic costs on Russia for seeking to normalize coercive nuclear threats.** Broad sanctions are ill-suited to impose costs on those responsible for making nuclear threats. Rather, sanctions should be specifically targeted against President Putin, Dimitry Medvedev, and others who have made explicit nuclear threats.
- **NATO should conduct more frequent and more realistic nuclear wargames.** NATO is a nuclear alliance. As such, it has a responsibility to conduct wargames and exercises that involve nuclear scenarios. It should update and expand the scope of its nuclear exercises, encouraging greater participation among its senior political leaders.<sup>12</sup>
- **The United States should encourage NATO to reaffirm its nuclear deterrence mission during crises.** Nuclear weapons do not “speak” for themselves. It is incumbent upon leaders to

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<sup>11</sup> For a more detailed assessment of the SLCM-N, see John R. Harvey and Robert Soofer, “Strengthening Deterrence with SLCM-N,” Atlantic Council, *IB*, November 5, 2022, available at <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/strengthening-deterrence-with-slcm-n/>.

<sup>12</sup> For more on the importance of involving senior leaders, see James H. Anderson, “The Value of Nuclear Crises Simulations,” *Information Series*, No. 520, April 11, 2022, available at [https://nipp.org/information\\_series/james-h-anderson-the-value-of-nuclear-crisis-simulations-no-520-april-11-2022/](https://nipp.org/information_series/james-h-anderson-the-value-of-nuclear-crisis-simulations-no-520-april-11-2022/).

articulate—in a clear, consistent, and compelling fashion—their rationale for maintaining such weapons and the role they play in NATO’s strategy.

- **Congress must ensure continued funding for the nuclear-armed Sea-launched Cruise Missile (SLCM-N).** The current administration opposes funding this program, arguing that it would not be deployed for more than a decade. Lengthy developmental timelines are nothing new with respect to nuclear programs, however. The unique capabilities provided by this program will strengthen the capacity of the United States to offset Russia’s numerical superiority in tactical nuclear weapons.
- **Rethink traditional modes of deterrence given the dynamics of the Ukrainian conflict.** This reassessment should include how a more robust national missile defense system can strengthen deterrence both globally and regionally. As noted earlier, Western analysts appear quick to discount the possibility that President Putin might follow through with his nuclear threats. They may be correct. But they are not necessarily correct. And, U.S. vulnerability to Russian nuclear weapons is what gives President Putin’s saber rattling its power. Reducing U.S. vulnerability from all forms of nuclear coercion—not just the threat posed by rogue states such as North Korea—is the best means to strip nuclear threats of their coercive power.

## **Conclusion**

Lessons learned are neither ironclad laws nor immutable principles; but when applied with judgment and discernment, they can assist policy makers in navigating



future crises. Conversely, ignoring or downplaying the lessons of the Ukraine War invites the risk of repetition. Nuclear threats are not new. But they have taken on a new salience in light of the Ukraine War. Unless the United States and its allies are willing to impose greater costs on those who engage in nuclear threat-making, this deleterious behavior—and all the attendant risks that come with it—is likely to become more prevalent in the future.

*Dr. James H. Anderson served from 2018 to 2020 as Assistant Secretary of Defense for Strategy, Plans, and Capabilities and as Deputy Under Secretary of Defense for Policy.*

# Strategic Lessons from the Russia-Ukraine Conflict

Marc J. Berkowitz

## Introduction

The 1991 Persian Gulf conflict was called the first “space war” because of the extent to which space systems influenced its course and outcome. Now the Russia-Ukraine conflict is being called the first “commercial space war” as well as the first “social media war” for similar reasons. Indeed, Ukraine has effectively leveraged both commercial space capabilities and social media services to help defend itself against Russia’s unlawful aggression.

Every war is a combat laboratory that provides an opportunity to learn lessons about the consequences of the threat or use of armed force in international relations. What lessons can be learned (or relearned) from the latest interstate conflict in Europe that can be applied to help deter or prevail in future wars? While the ongoing war’s outcome is currently uncertain, there are evident takeaways. This article examines both general and space-related strategic lessons from the Russia-Ukraine conflict.

## General

Nearly all the fundamental strategic lessons from the conflict have been learned (or observed) before. Perhaps the most important, as philosopher George Santayana stated, is that “*those who fail to learn from the past are condemned to repeat it.*”<sup>1</sup> This is, of course, not the first time the world has had to

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<sup>1</sup> George Santayana, *Life of Reason: Or the Phases of Human Progress* (New York, Charles Scribner and Sons, 1905), p. 284.

deal with the reality that *the use of violence as a political instrument is an enduring characteristic of international relations*. As political scientist Hans Morgenthau asserted, “international politics, like all politics, is a struggle for power.”<sup>2</sup>

Moreover, it is not the first time the world’s democracies have learned that *autocracies with revanchist or irredentist aspirations will endanger international peace and security*. In fact, they should have learned from the vast amount of blood and treasure expended by the Grand Alliance to defeat the Axis powers during World War II that *appeasement and isolationism are ineffective policies to achieve security*. While acquiescence to Russia’s annexation of Crimea in 2014 likely emboldened Putin, formerly neutral Finland and Sweden moved to join the NATO Alliance after the recent invasion. A similar lesson is that *while diplomacy, arms control, and deterrence are important instruments of statecraft, they are unreliable tools to prevent armed conflict*.

Russia obviously abrogated its security assurances to respect Ukraine’s territorial integrity and political independence when Ukraine denuclearized and joined the Non-Proliferation Treaty in 1994. (In the wake of the Soviet Union’s dissolution, Ukraine possessed much of its nuclear weapons, delivery systems, and associated industrial base.) It can only be surmised that Russia might not have invaded if Ukraine still had nuclear arms.

Perhaps President Vladimir Putin was “beyond deterrence” in his quest to achieve a political legacy. He said, “the breakup of the Soviet Union was the greatest geopolitical tragedy of the 20th century.”<sup>3</sup> Putin’s desire to restore the Great Russian empire’s “near abroad” and risk-

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<sup>2</sup> Hans J. Morgenthau, *Politics Among Nations* (New York: Knopf, 1944), p. 13.

<sup>3</sup> Vladimir Putin, “Annual Address to the Federal Assembly of the Russian Federation,” April 25, 2005, available at <http://en.kremlin.ru/events/president/transcripts/22931>.

taking propensity were evident in Russia's use of force against Georgia in 2008 and annexation of Crimea. He clearly articulated his disdainful views regarding Ukraine's sovereignty in the run up to the invasion. In this regard, it is edifying to recall the Greek historian Thucydides' observation that the causes of war are "fear, honor, and interests."<sup>4</sup>

When other instruments of statecraft failed to change Ukraine's independent direction, Putin turned to armed force. Prussian General and military theorist Carl Von Clausewitz wrote, "war is an act of violence to compel the opponent to do our will."<sup>5</sup> While Putin attempts to enforce his will, he and others are relearning another of the lessons taught by Clausewitz; that is, "war is the realm of uncertainty...and chance."<sup>6</sup> Russia's hopes of its "special military operation" achieving a swift victory were thwarted and the outcome is now undecided.

Furthermore, Ukraine's effective self-defense against Russia's initial military plan is instructive. A clear takeaway is that *continuity of government preparation is essential to avoid leadership decapitation*. Ukraine's ability to block Russian efforts to assassinate President Volodymyr Zelensky and install a puppet regime were vital to its survival. They were directly related to a key lesson regarding *the criticality of the cognitive domain and human factors such as leadership, political resolve, social cohesion, and morale in warfare*. Indeed, the courage and fortitude of President Zelensky and the Ukrainian people enabled them to gain the respect and admiration necessary to *enlist allies and international partners as a prudent way to offset the state's deficiencies in power*.

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<sup>4</sup> Thucydides, *History of the Peloponnesian War*, William A. Smith, trans. (New York: H.W. Derby, 1861), p. 25.

<sup>5</sup> Carl von Clausewitz, *On War*, Michael Howard and Peter Paret, trans. and eds. (Princeton, NJ: Princeton University Press, 1989), p. 90.

<sup>6</sup> *Ibid.*, p. 101.

A few additional general strategic lessons are apparent. The first is that *credible, timely, and accurate intelligence is a comparative advantage* (to achieve victory or prevent the enemy from achieving its war aims). The strategic indications and warning provided by the United States was critical in convincing Ukraine's leadership as well as America's allies and friends about Russia's malign intentions and the imminence of invasion. Sharing and declassifying intelligence about Russia's war plans was important for maintaining the cohesion of the NATO Alliance as well as associated domestic and international political support in aiding Ukraine.

In addition, *nuclear weaponry and escalation risks are prominent considerations in conflict involving a nuclear power*. Putin effectively instilled caution in the United States and its allies with nuclear saber-rattling. Western decision-making about both its own military activities and assistance to Ukraine have been influenced by the desire to avoid risks that might escalate either the conflict's scope (widening the war into NATO-Europe) and intensity (nuclear weapons use). At the same time, Putin's risk calculus has been influenced by the U.S. and NATO nuclear deterrents. While brandishing threats for brinkmanship, he too has avoided a direct military confrontation with NATO. Nonetheless, the continued stalemate in Ukraine, NATO's willingness to arm Ukraine with longer-range weapons systems, Ukrainian strikes inside Russia, and Putin's repeated nuclear threats might affect Russia's risk calculus and prompt Putin to demonstrate he was not bluffing regarding tactical nuclear weapons use.

Finally, *large-scale conventional interstate-conflict is a test of industrial capacity and logistics*. Both the Russian and Ukrainian arsenals were depleted of munitions and needed to be resupplied. In fact, Russia has had to turn to Iran for the armed drones it is using against Ukraine's civilian population and infrastructure. And Ukraine's spring

offensive was impacted by U.S. and European defense industries' production capacity for replacing ordnance expended at very high rates of fire.

## Space

While space systems increasingly have been integrated into the planning and conduct of military operations, there is little operational experience with hostilities to, in, and from space. Consequently, the empirical evidence from the Russia-Ukraine conflict provides an important basis from which to confirm or draw new space-related strategic lessons. First, *space is now a complex operating environment like the terrestrial domains*. It is populated with thousands of spacecraft used for myriad defense, intelligence, civil, and commercial applications. They are owned and operated by governments, international consortia, and private enterprises. Space technology and know-how have spread around the world and reduced launch costs have lowered the barrier to explore and use space. Moreover, non-governmental organizations, companies, and individuals now have access to space services.

Second, *space operations have meaning only in relation to the course and outcome of terrestrial conflict*. As Lieutenant General John Shaw, Deputy Commander of U.S. Space Command, aptly put it “astropolitics is about geopolitics.”<sup>7</sup> Ukraine has effectively leveraged commercial space and social media capabilities to contribute to its security and defense in the face of Russian aggression. Commercial broadband satellite internet, communications, remote sensing, analytics, and cloud computing services are being used for diplomacy, strategic communications, intelligence

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<sup>7</sup> Lt Gen John Shaw, “Remarks at the National Security Association’s Defense and Intelligence Space Conference,” Chantilly, VA, January 24, 2023.

support, planning and executing combat operations, and critical infrastructure.

*Space is not a sanctuary from armed conflict because of the value of space assets to Ukraine's self-defense. Indeed, history demonstrates that no domain will remain a sanctuary once it is exploited for political, military, or economic benefit. The decision to extend hostilities to space was made by the adversary; it was not made by political leaders in Kyiv, Washington, or Brussels. Russia targeted the weakest (cyber, terrestrial, or space) link or node to counter the space systems employed by Ukraine. It primarily employed cyber-attacks and electronic warfare with reversible or temporary effects. The targets included, for example, Viasat's and SpaceX's Starlink satellite internet and communications systems. Given that both are American companies with international users, Russia demonstrated that adversaries are likely to be insensitive to targeting U.S. sovereign property in space, even if used by many countries.*

A related lesson is that *third party space assets not owned or operated by either combatant may influence the course and outcome of armed conflict.* Ukraine has been able to leverage commercial space services and innovate with agility to employ space-enabled intelligence and warfighting applications. Consequently, another lesson is that *commercial space assets have dual uses with value for security and defense.* This will likely have significant future political, economic, and military implications. As a result, *commercial space assets may be considered legitimate military targets and thus attacked.* In fact, a senior Russian foreign ministry official asserted (in an ex post facto justification) that commercial satellites “may become a legitimate target for retaliation.”<sup>8</sup>

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<sup>8</sup> Konstantin Voronstov, “Statement at the Thematic Discussion on Outer Space (Disarmament Aspects) in the First Committee of the 77<sup>th</sup> Session of the UN General Assembly, October 26, 2022, available at

In response to threats to the freedom of passage through and operations in space, the U.S. Government has expressed interest in leveraging commercial space capabilities for national security, including integrating such goods and services into “hybrid” architectures with both government and private sector capabilities. Doing so may provide an asymmetric advantage in future conflict. Commercial space assets may add capability, capacity, robustness, and resilience that contribute to deterrence and warfighting. However, *leveraging commercial space capabilities for security and defense will heighten the risk to such assets in crisis and wartime. Consequently, America needs policy, guidance, and rules of engagement regarding protection of U.S. citizens, property, commercial assets, non-U.S. forces, and foreign nationals or property in space.* Additionally, resources may need to be allocated to modify and protect such commercial assets or indemnify them.

The spread of space-enabled remote sensing, associated analytics, and satellite internet services is profoundly affecting the world in general. Regarding the Russia-Ukraine conflict, *space-enabled information creates unprecedented transparency.* A picture is worth a thousand words and commercial imagery products provided by Maxar, Planet, and other commercial remote sensing operators and value-added analytic providers are playing a unique role in observing and understanding the battlespace. Ubiquitous remote sensing and internet communications have provided, among other things, valuable unclassified imagery of Russian force dispositions and battle damage. The high degree of *transparency increases the operations security challenge and raises the strategic communications stakes.* Transparency has helped to counter Russian secrecy and prevent Moscow’s false narratives from unduly influencing public international opinion.



Russia's resort to violence in an effort to change the status quo in Europe has also changed the dynamics of international space relationships. The conflict has *impacted international space cooperation and disrupted civil and commercial space endeavors*. In particular, the European Union, European Space Agency, and its member countries have ended their participation in cooperative space programs involving Russia. Instead, the European Commission, European Investment Bank, and European Investment Fund have pledged to allocate substantial resources to enable development of independent European programs. Similarly, sanctions and export controls have led to the termination of contracts for Russian launch of commercial spacecraft.

Two additional lessons regarding the ongoing conflict are pertinent to the future structure and posture of national security space capabilities. First, even in a conflict between states with contiguous borders mainly involving land and air forces, the value of space capabilities and persistent surveillance is apparent. Activity intelligence enabled by *persistence is essential to maintain custody, tracking, and targeting of mobile and relocatable targets*. This will be important when confronting an adversary whose order of battle includes significant numbers of strike aircraft, drones, and missiles.

Finally, *increased ambiguity or recoupling of space and nuclear deterrence operations is warranted to complicate an adversary's risk calculus and raise the war as well as space thresholds*. During the Cold War, the United States and USSR had a formal agreement not to interfere with National Technical Means of verification when they were being used to monitor strategic arms control agreements as well as a tacit understanding regarding non-interference with space assets for ballistic missile launch detection and nuclear command, control, and communications because of the

attendant risk of igniting the powder trail to global thermonuclear war.

With the end of the Cold War, the increased integration of space capabilities into conventional and irregular warfighting, and the presumed decline of the threat, the U.S. Government decided to “disaggregate” or separate nuclear and non-nuclear missions onto different space platforms. This was based on the theory that it would help to strengthen a “red line” against interfering with space-related nuclear deterrence operations, add a rung in the escalation ladder, and avoid escalation caused by inadvertence, misperception, or miscalculation if a satellite with both nuclear and non-nuclear missions was attacked.

The unintended consequence, however, is to simplify an adversary’s targeting challenge, uncomplicate its risk calculus, and lower the threshold for interfering with or attacking space systems. Force designs that pose difficult targeting challenges and complicate an adversary’s risk calculus contribute to deterrence and crisis stability. Consequently, proliferation, distribution, and diversification are better passive defense levers to enhance the resilience (and deterrence-by-denial) of space mission and systems architectures than disaggregation.<sup>9</sup> While proliferated satellite constellations in Low Earth Orbit have demonstrated operational utility in this conflict and proliferation may be a useful countermeasure against expensive direct-ascent kinetic energy and directed energy anti-satellite weapons, it would be imprudent to draw the incorrect lesson that it is an effective solution against all threats.

The resilience value of proliferation is largely dependent upon cost-exchange ratio. It is only a prudent design approach if it is less expensive to acquire, deploy,

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<sup>9</sup> See Marc Berkowitz, “Redesigning Space Forces for Deterrence and Warfighting,” Occasional Paper (Fairfax, VA: National Security Space Association, February 22, 2023).

and operate spacecraft than for the adversary to target and engage them. This may not be the case for either cyber-attacks (given that proliferation increases the number of threat vectors) or nuclear detonations (given their prompt and sustained effects).

## Conclusion

Important fundamental and space-related strategic lessons can be learned from the ongoing Russia-Ukraine conflict. While many of the general lessons have been observed previously and must be relearned, many of the space-related lessons are new. This is unsurprising given that while the nature of war is enduring, the character of war constantly changes with the introduction of new operations concepts and technology. Nonetheless, both sets of lessons are important since they provide the opportunity to learn about the consequences of the threat or use of armed force in international relations.

Moreover, these lessons are likely to be learned by America's allies and adversaries alike. It is particularly important to understand and consider what our potential adversaries are learning from the conflict. Similarly, it is essential to avoid learning the wrong lessons or inappropriately extrapolating their relevance. Applying the correct strategic lessons from this interstate conflict can help the United States to deter or prevail in future wars.

*Marc J. Berkowitz is a former Vice President for Strategic Planning at Lockheed Martin. Previously, he served as Assistant Deputy Under Secretary of Defense for Space Policy. This essay is adapted from Marc J. Berkowitz, Strategic Lessons from the Russia-Ukraine Conflict, Information Series, No. 549, March 6, 2023, available at [https://nipp.org/information\\_series/keith-b-payne-deterrence-lessons-from-russias-invasion-of-ukraine-one-year-after-no-548-february-27-2023/](https://nipp.org/information_series/keith-b-payne-deterrence-lessons-from-russias-invasion-of-ukraine-one-year-after-no-548-february-27-2023/).*

# Learning from Other's Mistakes: What Lessons May China Draw from the Ukraine War?

Matthew R. Costlow

## Introduction

Otto von Bismarck, Prime Minister of Prussia, once made the (perhaps apocryphal) remark that: "Fools pretend that one learns only at his own expense; I have always striven to learn at the expense of others." What lessons may China learn at the expense of Russia after its full-scale invasion of Ukraine in 2022? I submit that there are three potential lessons China's leaders may learn from Russia's ill-conceived adventure and, if so, the implications for Taiwan and the United States may become more dire. First, Russia's foreign misadventure demonstrates that half measures in war are dangerous things—that is, underestimating the enemy and expecting a quick victory can lead to minimizing the forces sent into battle which, as Russia demonstrated in the earliest days of its invasion, can lead to a more prolonged and uncertain conflict. Second, threats of nuclear employment may be effective in some instances but cannot be relied upon for decisive effect in all areas. Third, Russia did not get to fight the type of war it apparently hoped it would, that is, being allowed the *effective* use of cyber and air power in support of its invasion. Given China's history of learning from others' wars, the lessons it may learn from Russia's invasion of Ukraine will be of great interest to Taiwan, the United States, and others in the Indo-Pacific region.<sup>1</sup>

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<sup>1</sup> On China's history of learning from others' wars, see, Andrew Scobell, David Lai, and Roy Kamphausen, eds., *Chinese Lessons from Other*

## The Perils of Half Measures in Wartime

There are several aspects of Russia's full-scale invasion of Ukraine that, in hindsight at least, appear to have been only partial commitments, or half measures, relative to the actions Russian leaders could have taken. For instance, perhaps in an attempt to prioritize speed and surprise over the full buildup of force, Russia staged its forces on the Ukrainian border as part of a military exercise with Belarus.<sup>2</sup> Indeed, some of the evidence reportedly collected from the battlefield indicates that Russian leaders expected little resistance and projected short timelines for ambitious territorial objectives.<sup>3</sup> Such objectives may have had more basis in reality for a fully mobilized military force, yet the Russian forces that attempted to take Kyiv were plainly not up to the task and received little reinforcement in the initial months of the war.

When it became apparent that Russian forces did not have enough deployed personnel to take over Ukraine in the timeline hoped for, Russian President Vladimir Putin called for the military to draft nearly 150,000 additional soldiers.<sup>4</sup> However, even in this instance and others before it, Putin decided only on a "partial" mobilization of Russian

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*People's Wars*, Strategic Studies Institute, November 2011, available at <https://apps.dtic.mil/sti/pdfs/ADA553490.pdf>.

<sup>2</sup> "Ukraine Tensions: Russia Stages Military Drills with Belarus," *BBC*, February 10, 2022, available at <https://www.bbc.com/news/world-europe-60327930>.

<sup>3</sup> Michael Schwartz, Anton Troianovski, Yousur Al-Hlou, Masha Froliak, Adam Entous and Thomas Gibbons-Neff, "How Putin's War Became a Catastrophe," *The New York Times*, December 16, 2022, available at <https://www.nytimes.com/interactive/2022/12/16/world/europe/russia-putin-war-failures-ukraine.html>.

<sup>4</sup> "Putin Orders to Draft 147,000 Russian Conscripts by July 15," *Bloomberg*, March 30, 2023, available at <https://www.bloomberg.com/news/articles/2023-03-30/putin-orders-to-draft-147-000-conscripts-by-july-15-kremlin?>

war resources, which avoided some measures (specifically concerning the draft) that may have been too unpopular with his base of support among Russian elites.<sup>5</sup>

The United States itself has wrestled with the perceived consequences of partial solutions or half measures – indeed, then U.S. Secretary of Defense Caspar Weinberger presented in 1984 what the press later dubbed the “Weinberger Doctrine,” which was informed by the U.S. experience in Vietnam only a decade earlier. As part of this doctrine, Weinberger stressed that, “... if we decide it is necessary to put combat troops into a given situation, we should do so wholeheartedly, and with the clear intention of winning. If we are unwilling to commit the forces or resources necessary to achieve our objectives, we should not commit them at all.”<sup>6</sup> In essence, a consistent policy of splitting the difference between two strategies, or making half-hearted gestures for signaling, would only increase costs without achieving the objectives.

What lessons might China learn from Russia’s series of half measures in Ukraine? Regrettably, from the Taiwanese, U.S. and allied positions, China’s leaders may perceive more utility in mobilizing and positioning the overwhelming conventional forces necessary for victory than employing a smaller force with potentially greater speed and surprise. On the surface, a larger Chinese mobilization effort would appear to give Taiwan, the United States, and its allies an advantage in tactical

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<sup>5</sup> Andrew Osborn, “Explainer: What Does Vladimir Putin’s ‘Partial’ Mobilisation mean for Russia’s Military Machine,” *Reuters*, September 21, 2022, available at <https://www.reuters.com/world/europe/what-does-vladimir-putins-partial-mobilisation-mean-russias-military-machine-2022-09-21/>.

<sup>6</sup> Caspar Weinberger, “The Uses of Military Power,” *PBS*, remarks delivered to the Washington Press Club, November 28, 1984, available at <https://www.pbs.org/wgbh/pages/frontline/shows/military/force/weinberger.html>.

warning—yet, that advantage is likely minimized or even negated given the vast geographic distances between the U.S. homeland and Taiwan. Even with advanced tactical warning, the United States faces a far greater logistical (and potentially political) challenge to mobilize and deploy its forces over far greater distances in a relevant timeframe.

### Nuclear Threats to What Effect?

It is no exaggeration to say the act of threatening nuclear attacks against Ukraine, the United States, or NATO more broadly, is ubiquitous in Russian society, and especially among political and military leaders.<sup>7</sup> In fact, Russian nuclear attack threats have nearly become, routine, even casual, thus likely reducing their intended effect.<sup>8</sup> Nevertheless, officials in the Biden Administration appear to have been somewhat swayed by these threats, as evidenced by President Biden's oft-repeated warning that certain types of military aid to Ukraine could provoke "World War III."<sup>9</sup> Indeed, the United States has gone out of its way to signal its restraint in the face of Russian nuclear threats, even delaying previously scheduled (and notified) tests of Minuteman III ICBMs.<sup>10</sup> Yet, even given U.S.

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<sup>7</sup> For specific examples, see, Liviu Horovitz and Martha Stolze, *Nuclear Rhetoric and Escalation Management in Russia's War Against Ukraine: A Chronology* (Berlin, GE: Stiftung Wissenschaft und Politik, August 2023).

<sup>8</sup> For more on this phenomenon, see, Matthew R. Costlow, "If Russia's Nuclear Rhetoric Turns Real, Will the West Believe It?," *The Hill*, October 6, 2022, available at <https://thehill.com/opinion/national-security/3672738-if-russias-nuclear-rhetoric-turns-real-will-the-west-believe-it/>.

<sup>9</sup> Steven Nelson, "'That's called World War III': Biden Defends Decision not to send Jets to Ukraine," *NY Post*, March 11, 2022, available at <https://nypost.com/2022/03/11/thats-called-world-war-iii-biden-defends-decision-not-to-send-jets-to-ukraine/>.

<sup>10</sup> Jake Thomas, "U.S. to Ease Nuclear Tensions With Russia, Cancel 'Minuteman' Missile Tests," *Newsweek*, April 1, 2022, available at

restraint in some areas of military aid to Ukraine, the aid that is arriving in Ukraine appears to be having a devastating effect on the Russian military as evidenced by their reported casualties. Thus, the record on Russian nuclear threats appears mixed—the United States has undoubtedly refrained from providing certain types of weapons, but the sheer volume of weapons that it has provided to Ukraine has caused massive Russian casualties.

What lessons, then, might China's leaders learn from the effects of Russian nuclear threats? One possibility is that Chinese leaders perceive U.S. military aid—even indirect aid (i.e., without committing to combat)—as highly effective once established during a conflict. If this is the case, then China's leadership may have potentially powerful incentives to employ nuclear threats in the earliest stages of a conflict, potentially even to the level of a demonstrative strike. There is a certain logic behind this course of action: the best time to threaten or even employ nuclear weapons in a limited manner may be early on in a conflict before the United States has solidified political support or even mobilized military forces sufficiently, thus providing U.S. political leaders a plausible justification for not intervening.

Alternatively, if China's leadership wants to reserve nuclear employment for scenarios when China's military is on the brink of defeat or stalemate, it could still learn from Russia's behavior and use its *threats* of nuclear employment less frequently and in a more tailored fashion. For instance, in contrast to Russian leaders' frequent threats to employ nuclear weapons, China's leaders could opt to refer obliquely to nuclear employment or, if explicit, then far less frequently than Russia. China's leaders might, correctly, infer that Russia's nuclear employment threats became less credible over time because of their frequency and lack of enforcement. To deter the United States from intervening in



a Taiwan conflict, Chinese leaders may couple their nuclear employment threats with visible changes to their nuclear force posture, a step Russian leaders apparently neglected to take.<sup>11</sup>

### **War, But Not As Expected**

A final lesson China may learn from Russia's conflict with Ukraine is that even highly-touted military capabilities are not guaranteed to have strategic effects. In Russia's case, its air forces and cyber capabilities were both fairly well-regarded before 2022 but, over the course of the war, their effects on Ukraine appear quite limited. For instance, U.S. Air Force Chief of Staff, Gen. Charles Brown Jr., remarked that it was surprising Russia's air force has not performed better considering how Ukraine employs many of the same air defense systems that Russia has, and could presumably train against.<sup>12</sup> Similarly, Russia's vaunted cyber offensive capabilities appear to have had limited effects against Ukraine.<sup>13</sup> In short, the Prussian strategist Carl von Clausewitz seems to have been proven right once again: "In

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<sup>11</sup> Joe Gould, "No Changes Coming to US Nuclear Posture after Russian Threat," *Defense News*, March 1, 2022, available at <https://www.defensenews.com/pentagon/2022/03/01/no-changes-coming-to-us-nuclear-posture-after-russian-threat/>.

<sup>12</sup> Christopher Woody, "Top US Air Force General says the Russian Air Force's Struggles in Ukraine are Surprising because Russia is Fighting its 'Own Systems,'" *Yahoo News*, June 23, 2022, available at <https://www.yahoo.com/news/russian-air-forces-struggles-ukraine-215905223.html>.

<sup>13</sup> Jenna McLaughlin, "Russia Bombards Ukraine with Cyberattacks, but the Impact Appears Limited," *NPR*, March 3, 2023, available at <https://www.yahoo.com/news/russian-air-forces-struggles-ukraine-215905223.html>.

war more than anywhere else things do not turn out as we expect.”<sup>14</sup>

The lessons China may draw from this Russian experience in particular are unclear. One lesson seems to be that reliance on any one military instrument is inherently high risk. An invasion of Taiwan would, by necessity, rely heavily on troop transports and missile strikes, but seems likely to also involve attacks against U.S. space and cyber capabilities as enabling factors. The more Taiwan, the United States, and its allies can appear to China to present a redundant set of survivable capabilities that threaten China’s theory of military victory, the more likely that deterrence may hold. On the other hand, should China’s leaders perceive they have the advantage in a set of overlapping military capabilities, even in the event that one or more of them prove less effective in combat, then they may believe there are multiple paths to victory.

## Conclusion

Despite their reported “friendship without limits,” China’s leaders are certainly not above learning from the mistakes of their partner and its invasion of Ukraine. The question facing U.S., Taiwanese, and allied leaders is whether the lessons China’s leaders may learn will help or harm the chances of deterrence holding in the Taiwan Strait. For instance, Russia has learned the hard way that half-hearted war efforts may reduce political risk in some areas, but the costs may still be unacceptable. Additionally, Russian leaders have demonstrated that repeated nuclear employment threats can have significant effects, at least on the United States, but those effects may not prove decisive when the threats become non-credible over time. Finally,

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<sup>14</sup> Carl von Clausewitz, author, Michael Howard and Peter Paret, editors and translators, *On War* (New York: Alfred A. Knopf, 1993 edition), p. 227.

Russia's experience in Ukraine illustrates how military theories of victory that rely too heavily on one or more specific capabilities can cripple an operation when those capabilities do not perform as expected.

It is too soon to tell whether and how China's leaders will react to these developments and the lessons they will draw, but it is prudent for U.S. officials to consider the possibility that China may not accept the lesson that it should be deterred from taking military action against Taiwan. Indeed, China's leaders may, in fact, believe that they have drawn the "correct" lessons from Russia's invasion of Ukraine, made the necessary adjustments, and grown more confident in their capabilities. The task before U.S., Taiwanese, and allied officials now is first, understanding the lessons China may draw from Russia, and second, disabusing China of those beliefs that weaken rather than reinforce deterrence.

*Matthew R. Costlow is a Senior Analyst at the National Institute for Public Policy.*

# Will We Heed Lessons from Russia's War in Ukraine?

Michaela Dodge

After more than a year, the West continues to grapple with the implications of Russia's unprovoked and brutal invasion of Ukraine. While the conflict is ongoing, lessons learned must remain tentative for the foreseeable future. Nevertheless, some preliminary observations are possible, chiefly among them that the United States must nurture its alliances and partnerships and that nuclear weapons play an increasingly important role in an active conflict. The war also exposes the fallacy that it is wise to leave one's populations vulnerable to missile attacks. Quite to the contrary, missile defenses are an important component of societal resilience.

## **The United States Must Nurture and Protect Its Alliances and Partnerships**

Russia's war in Ukraine underscored the importance of the indivisibility of the North Atlantic Treaty Organization's (NATO's) security. While Russia's narrative has been that NATO enlargement presents a threat to which Russia must "respond" – Russia's euphemism for aggressive operations against its neighboring states – in reality Russia moved a majority of its conventional forces away from NATO's borders to prosecute its war in Ukraine.<sup>1</sup> Russia made clear that its objections were not based on a genuine perception of the threat of NATO invading, as evidenced by its actual

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<sup>1</sup> Robbie Gramer and Jack Detsch, "Russia's Stripped Its Western Borders to Feed the Fight in Ukraine," *Foreign Policy*, September 28, 2022, available at <https://foreignpolicy.com/2022/09/28/russia-ukraine-war-nato-eastern-flank-military-kaliningrad-baltic-finland/>.

actions. Indeed, the idea that NATO would attack Russia's territory to conquer it is quite fantastic. Without NATO, it is entirely plausible that the Russians would attack smaller and relatively weaker Baltic States, if not the rest of Central and Eastern Europe, long before attacking Ukraine – leaving the West to contend with perhaps a stronger and further emboldened aggressor in the long run. As it is, nothing destroyed the myth of Russia's invincible army as quickly as its dismal performance on the Ukrainian battlefield, even though it is highly unlikely Russia would fight a war with NATO the same way.<sup>2</sup> Russia's barbaric aggression toward civilians and disregard for international laws and obligations show that it cannot be expected to abide by the same moral and ethical standards the West has come to expect of other civilized and modern states.

Russia's activities ought to have implications for negotiations with Russia, including on arms control, despite Secretary of State Anthony Blinken's insistence that the United States remains "ready to talk about strategic arms limitations at any time with Russia irrespective of anything else going on in the world or in our relationship."<sup>3</sup> Russia takes for granted that its aggression will not impact discussions about nuclear weapons – and it is time that the United States broadened the competition with Russia into the nuclear realm. In practice, this begins by foregoing nuclear force declarations under the New Strategic Arms Reduction Treaty (New START), given Russia's refusal to provide a similar degree of transparency, a step the Biden

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<sup>2</sup> Michael Kofman and Rob Lee, "Not Built for Purpose: The Russian Military's Ill-Fated Force Design," *War on the Rocks*, June 2, 2022, available at <https://warontherocks.com/2022/06/not-built-for-purpose-the-russian-militarys-ill-fated-force-design/>.

<sup>3</sup> U.S. Department of State, "Secretary Antony J. Blinken Remarks to the Press," February 21, 2023, available at <https://www.state.gov/secretary-antony-j-blinken-remarks-to-the-press-7/>.

Administration has recently taken.<sup>4</sup> It continues by reassessing the U.S. nuclear posture to take into account Russia's advantage in tactical nuclear forces, its nuclear weapon development outside of New START's framework, and China's rapid nuclear expansion. Having warm production lines means that buying more nuclear delivery systems in quantities above those set in the program of record would be relatively less expensive than starting from scratch, but the United States has a limited window to make a decision to do so.

Ukraine's heroic defense provides time for the West to better prepare for the next conflict with Russia and build up capabilities to continue to deter Russia's attack on NATO across the spectrum of conflict. Needless to say, despite the Obama Administration's effort to "reset" relations between the two countries, Western countries were not entirely successful in deterring Russia's hostile acts on their territories before Russia's full-scale invasion of Ukraine. Moscow's disinformation operations ran rampant, it murdered citizens of NATO countries, and Russia conducted hostile attacks on NATO's territory, including blowing up an arms depot in the Czech Republic in 2014.<sup>5</sup> But even if Russia suffers a significant setback in Ukraine, it is unlikely it would disappear as a hostile actor in European security. The issue would then be how long before Russia could reconstitute its strength—and attack again. "To our region, Russia will always be a threat, and not only because of its leaders," said Director General of the Latvian State

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<sup>4</sup> Matthew Lee, "US retaliates for Russia's suspension of New START treaty by revoking visas of nuclear inspectors," *ABC News*, June 1, 2023, available at <https://abcnews.go.com/International/wireStory/us-retaliates-russias-suspension-new-start-treaty-revoking-99773286>.

<sup>5</sup> "A Look Back At The Deadly 2014 Czech Depot Blast That Prague Is Now Blaming On Russian Agents," *RadioFreeEurope/RadioLiberty*, April 18, 2021, available at <https://www.rferl.org/a/czech-republic-russia-depot-blast-gallery-expulsions/31209726.html>.

Security Service Normunds Mežviets.<sup>6</sup> After all, historical and structural drivers of Russia's desire for territorial expansion and brutal conquest have been ingrained so deeply that change is unlikely anytime soon.<sup>7</sup>

### **A U.S. Presence in Europe's Security Structure Will Remain Essential Even if European States Spend More on Defense**

Even if European countries rearm to the point where Russia's military does not present a serious challenge, the requirement for U.S. engagement in European security affairs will be enduring. That is because the United States can smooth out political differences among European NATO members that they themselves have a difficult time managing; in other words, the nature of the requirement for U.S. presence in Europe is political as much as it is military. Russia's war in Ukraine exposed fissures between some NATO members with regard to their willingness to support Ukraine's armed resistance, with those closer to Russia's borders being generally more forthcoming in responding to Ukraine's calls for military assistance and others, like Hungary, France, and Germany, dragging their feet.

In this context, it is worth noting that U.S. allies in Europe have divergent views regarding the People's Republic of China (PRC) and its influence on the continent; some states are more wary of caveats that come with doing business with China while others advocate for increased business ties regardless of the consequences for national

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<sup>6</sup> Eero Epner, "Human Life Has No Value There': Baltic Counterintelligence Officers Speak Candidly About Russian Cruelty," *Eesti Express*, October 11, 2022, available at <https://ekspress.delfi.ee/artikkel/120083694/human-life-has-no-value-there-baltic-counterintelligence-officers-speak-candidly-about-russian-cruelty>.

<sup>7</sup> *Ibid.*

security and coercive leverage such engagement gives to China. They argue that because their economies suffer as a result of sanctions on Russia, they cannot absorb more losses related to decoupling from China.<sup>8</sup> For example, French President Emmanuel Macron articulated his “strategic autonomy” vision on his trip to the PRC during which he explicitly distanced himself from U.S. and some European states’ policy on China arguing that, “The worse thing would be to think that we Europeans must become followers on this topic and take our cue from the U.S. agenda and a Chinese overreaction.”<sup>9</sup>

Meanwhile, German Chancellor Olaf Scholz overruled his defense minister and permitted a China-backed company to buy 24.99 percent of shares in a Hamburg port terminal, creating a dependency on an authoritarian state in the heart of Germany’s critical infrastructure, as if Germany has not learned any lessons from fostering business ties with Russia prior to Russia’s invasion of Ukraine.<sup>10</sup> That the PRC will not hesitate to use these economic dependencies for coercion is already clear. The country is using its economic leverage to pressure Central and Eastern European states that are strengthening their relationships with Taiwan. For example, China stopped importing

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<sup>8</sup> Judy Dempsey, “Europe’s Dangerous Dependence on China,” Carnegie Endowment for International Peace, April 4, 2023, available at <https://carnegieeurope.eu/strategieurope/89448>.

<sup>9</sup> Jamil Anderlini and Clea Caulcutt, “Europe must resist pressure to become ‘America’s followers,’ says Macron,” *Politico*, April 9, 2023, available at <https://www.politico.eu/article/emmanuel-macron-china-america-pressure-interview/>.

<sup>10</sup> Hans von der Burchard, “Germany doubles down on China port deal despite new security concerns,” *Politico*, May 10, 2023, available at <https://www.politico.eu/article/germany-doubles-down-china-port-deal-cosco-hamburg-new-security-concerns-olaf-scholz/>.



Lithuanian goods following the opening of a “Taiwan Representative Office” in Lithuania.<sup>11</sup>

The underlying political nature of differences among European states means that, even if states in Europe spend more on defense and increase their military capabilities, the requirement for U.S. leadership attention, and for U.S. military deployments that are a visible demonstration of that leadership, will not subside, even if the United States may be able to deploy fewer forces over time. Weakening U.S. alliance structures in Europe would weaken the United States in competition with China, and that is partly why calls to focus on Taiwan at the expense of Ukraine are misplaced.<sup>12</sup> Ukraine is not a U.S. formal ally, even though the United States committed to its sovereignty and independence in the 1994 Budapest Memorandum. But its defeat would undermine U.S. alliances in Europe and around the world, partly because U.S. allies in Europe would see themselves as being in more immediate danger of becoming victims of future Russian aggression and partly because, strategically, it is better for U.S. interests that China be aligned with a weak Russia than a stronger emboldened Russia. Deterring a strong Sino-Russian entente would necessitate more U.S. attention and resources than would otherwise be the case.

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<sup>11</sup> Stuart Lau and Barbara Moens, “China’s trade attack on Lithuania exposes EU’s powerlessness,” *Politico*, December 16, 2021, available at <https://www.politico.eu/article/china-trade-attack-on-lithuania-exposes-eu-powerlessness/>.

<sup>12</sup> For an example of this argument, see Elbridge A. Colby and Alex Velez-Green, “To avert war with China, the U.S. must prioritize Taiwan over Ukraine,” *The Washington Post*, May 18, 2023, available at <https://www.washingtonpost.com/opinions/2023/05/18/taiwan-ukraine-support-russia-china/>.

## Nuclear Weapons Will Continue to Matter

Since Russia's full-scale invasion of Ukraine, hardly a week goes by without Russia's government and government-affiliated officials issuing nuclear threats against NATO and Ukraine.<sup>13</sup> Russia has successfully leveraged its threats to cause doubts in Western minds about the scale of support for Ukraine. Western states delayed deliveries of important weapon capabilities because of fears of potential nuclear escalation, providing Russia with time and space to secure its initial territorial gains, replenish and consolidate its forces, and weaken Ukraine's defenders. The West's lack of resolve unequivocally to defeat Russia owes much to the fact that Russia is a nuclear power, as its leaders like to remind the world.

Russia sees its nuclear weapons as an equalizer, given its conventional forces inferiority relative to NATO. Dmitry Rogozin, Former Deputy Prime Minister of the Russian Federation, stated "Well on the whole it needs to be said that in accordance with our doctrine we are fully entitled to use tactical nuclear weapons because that's exactly why they exist. They're a great leveller for the moment when there is a clear disparity in conventional forces and hardware in the enemy's favour."<sup>14</sup> The value Russia places

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<sup>13</sup> For example, former President Medvedev stated, "The defeat of a nuclear power in a conventional war may trigger a nuclear war. Nuclear powers have never lost major conflicts on which their fate depends. And this should be obvious to anyone. Even a Western politician with any trace of intelligence." For reference, see Tom Watling, Tim McNulty, Sean Meleady, "Putin ally threatens West with nuclear war if Russia defeated in Ukraine," *Express*, January 20, 2023, available at <https://www.express.co.uk/news/world/1723253/Russia-war-Ukraine-tanks-T-14-Ramstein-putin-Volodymyr-Zelensky>.

<sup>14</sup> Francis Scarr [@francis\_scarr], former deputy prime minister, and former Roscosmos state space agency director, Dmitry Rogozin, say Russia should use tactical nukes to "destroy" Ukraine's counter-offensive because "at the present moment there is no other option"

upon nuclear weapons is likely to increase further as its conventional forces are severely diminished in Ukraine.

### **In War, Quantity Has a Quality of Its Own**

Despite overconfident (and wrong) claims<sup>15</sup> that Western weapons would not make a difference in Ukraine, Russia's war has clearly demonstrated a maxim that has been somewhat forgotten in the post-Cold War military drawdowns and defense industrial base consolidations in the West: quantity has a quality of its own.<sup>16</sup> And, Western nations are lagging badly to replenish ammunition supplies they diverted to Ukraine to assist its heroic defense. For example, the rate of ammunition consumption during the war has been incredible. In February 2023, a year into the war, NATO Secretary General Jens Stoltenberg told reporters that "the current rate of Ukraine's ammunition expenditure is many times higher than our current rate of production—this puts our defense industries under strain."<sup>17</sup> The Ukrainian military reportedly fires 7,700 155-mm artillery shells a day, whereas the U.S. pre-war

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[Tweet], *Twitter*, 7:45 AM, May 4, 2023, available at [https://twitter.com/francis\\_scarr/status/1654089966836695043?s=20](https://twitter.com/francis_scarr/status/1654089966836695043?s=20).

<sup>15</sup> Samuel Charap and Scott Boston, "The West's Weapons Won't Make Any Difference to Ukraine," *Foreign Policy*, January 21, 2021, available at <https://foreignpolicy.com/2022/01/21/weapons-ukraine-russia-invasion-military/>.

<sup>16</sup> Vasabjit Banerjee and Benjamin Tkach, "Munitions Return to a Place of Prominence in National Security," *War On the Rocks*, March 16, 2023, available at <https://warontherocks.com/2023/03/munitions-return-to-a-place-of-prominence-in-national-security/>.

<sup>17</sup> Luke McGee, "NATO allies worry about dwindling ammo stockpiles as they try to keep Ukraine's troops firing," *CNN*, February 14, 2023, available at <https://www.cnn.com/2023/02/14/europe/western-ammo-shortage-ukraine-intl-cmd/index.html>.

production rate was about 14,000 a month.<sup>18</sup> Between February and October 2023, Ukraine used up 13 years' worth of Stinger antiaircraft missiles and five years' worth of Javelin missiles.<sup>19</sup> The challenge is not confined to ammunition only; the United States would have an incredibly hard time replacing its aircraft or ships and carriers in a potential conflict with China.

Congress is taking steps to address the issue and strengthen the U.S. ability to surge munitions production but the process will take years, which is highly problematic given current rates of consumption—even assuming no other major conflict occurs between now and then.<sup>20</sup> Weapon manufacturers in European countries are not much better off, hampered by political disagreements over how funding made available to improve the defense industrial base and long-standing national competitions should be spent.<sup>21</sup> A related challenge will be whether the United States is able to incorporate modern technologies into its operational concepts faster than its adversaries, as wars traditionally spur innovation in both doctrine and capabilities.

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<sup>18</sup> Missy Ryan, "In race to arm Ukraine, U.S. faces cracks in its manufacturing might," *The Washington Post*, March 9, 2023, available at <https://www.washingtonpost.com/national-security/2023/03/08/us-weapons-manufacturing-ukraine/>.

<sup>19</sup> *Ibid.*

<sup>20</sup> Bryant Harris, "Congress supersedes munitions production with emergency authorities," *Defense News*, December 13, 2022, available at <https://www.defensenews.com/congress/budget/2022/12/13/congress-supersedes-munitions-production-with-emergency-authorities/>.

<sup>21</sup> Ilya Gridneff, "Why Europe's defense industry can't keep up," *Politico*, October 11, 2022, available at <https://www.politico.eu/article/europe-defense-military-industry-keep-up-demands/>.

## Missile Defenses Will Be Indispensable in Future Conflicts

Russia's large-scale use of missiles against targets in Ukraine, particularly its deliberate targeting of civilian objects, should once and for all put to rest the myth that missile defenses are destabilizing. The Ukraine conflict reveals the lack of wisdom in leaving one's population vulnerable to an adversary intent on destruction. Russia has launched thousands of missiles and loitering munitions against civilian targets since the war started.<sup>22</sup> While there is some evidence that Russia's rate of missile consumption is unsustainable,<sup>23</sup> it is unlikely to run out of them anytime soon.

Missile defense has made a significant difference for the Ukrainians, who are no longer as vulnerable to Iranian-made suicide Shahed loitering munitions as they were when Russia first started using them. This has forced a change of tactics and imposed a greater expense on Russia. Russia now has to use a much larger number of loitering munitions and missiles in a coordinated attack to hope a few will "get through." This increases the cost and complexity of the operation, making it more difficult for the Russians. And, even though the Ukrainians are not able to protect all of their territory and have to prioritize how to use them, missile defenses, far from being destabilizing, have contributed to societal resilience. The key questions for the upcoming months and years will be: what is the best path

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<sup>22</sup> Igor Kossov, "How many missiles does Russia have left?," *The Kyiv Independent*, January 13, 2023, available at <https://kyivindependent.com/how-many-missiles-does-russia-have-left/>.

<sup>23</sup> Tim Martin, "Weapons tracing shows Russia firing new cruise missiles at Ukraine just weeks after production," *Breaking Defense*, May 10, 2023, available at <https://breakingdefense.com/2023/05/weapons-tracing-shows-russia-firing-new-cruise-missiles-at-ukraine-just-weeks-after-production/>.

forward to keep up with the threat, and does sufficient political will in the West exist to build enough missile defense production capacity to sustain a more robust system?<sup>24</sup>

## Conclusion

Even the most optimistic international relations scholars cannot deny that the post-Cold War optimism regarding war being obsolete as an instrument of state power was misplaced. To paraphrase Hans Morgenthau, human nature and geopolitics are immutable, at least on timeframes meaningful for national security planning purposes. Ukraine's heroic sacrifice gives the United States and allies time to better position themselves for a future war, whatever and wherever it might occur. It is incumbent upon the West's leadership to not waste this opportunity.

*Dr. Michaela Dodge is a Research Scholar at the National Institute for Public Policy.*

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<sup>24</sup> Mark Santora, "'We Have No Days Off.' The Nonstop Work of Ukrainian Air Defenses," *The New York Times*, June 1, 2023, available at <https://news.yahoo.com/no-days-off-nonstop-ukrainian-173744106.html>.



# The Baltic Response to the Russian-Ukrainian War: A Multi-Dimensional Analysis of Defense Policy Changes

Lukáš Dyčka

Experiences from the Russian-Ukrainian war are widely discussed today from many angles. That is, of course, also the case for the Baltic states of Estonia, Latvia and Lithuania (often referred to collectively as 3B). As the North Atlantic Treaty Organization (NATO) region most exposed to the Russian threat, these countries feel the need to implement lessons learned very urgently.<sup>1</sup> But, given the limited size of their population (and, correspondingly, their militaries), defense policy in the 3B states always depends on a comprehensive approach<sup>2</sup> in which the military is just one of the actors in a robust network of other institutions. Thus, focusing solely on the military or Ministry of Defense (MoD) response to the Russian-Ukrainian conflict does not tell the whole story. One must understand how the armed forces are integrated with the activities of all the governmental ministries and the participation of the general society in national defense in order to assess the effect of the war on the defense policies of the 3B states in the political, military, economic and societal domains.

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<sup>1</sup> This article was informed by interviews with numerous practitioners from within 3B defense sectors, including the MoD and Armed Forces' top leaderships, who mostly wished to remain anonymous. As a rule, if there is no source provided, the information comes from such interviews conducted by the author during the spring of 2023.

<sup>2</sup> Jan van Tol, Chris Bassler, Katherine Kjellström Elgin, and Tyler Hacker, *Deterrence and Defense in the Baltic Region* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2022), available at <https://csbaonline.org/research/publications/deterrence-and-defense-in-the-baltic-region>.



## **Point of Departure – Stable Planning Assumptions**

To an outsider, Lithuania, Latvia and Estonia may seem to function as a unified regional Baltic group, but they differ significantly from each other in various aspects. These include language, religion, the size of their Russian minority populations and, to some extent, their approach to defense policy.

However, all three countries share a common threat perception that has been noticeably consistent and predates the latest Russian invasion of Ukraine in 2022. Unlike in many other NATO countries, due to historical reasons (particularly the Soviet occupation), Russia has been perceived as a major threat by the Baltic countries since their re-independence in 1991. As a result, prior to Russia's 2014 invasion of Ukraine, the governments of all 3B states were seen as Russophobic for constantly and consistently pointing out the threat of Russia. This narrative – originally propagated by Russia – was also present in many European states.<sup>3</sup>

However, Russian President Vladimir Putin's 2005 quote calling the collapse of the Soviet Union "the greatest geopolitical catastrophe of the century"<sup>4</sup> is often regarded as an indication of the Russian threat – which was markedly felt in the region from 2006 onwards. The 2008 war in Georgia, in which Russia intervened to support pro-Russian elements, was perceived as a direct threat by Latvia and Estonia – both with sizeable Russian minorities encompassing roughly one-fourth of the population. It did

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<sup>3</sup> Cieślak, Eugeniusz. "Putting Comprehensive Defense to Work," *Politeja*, Vol. 19, No. 4 (2022), pp. 73–93, available at <https://journals.akademicka.pl/politeja/article/view/4781/4298>.

<sup>4</sup> "Putin: Soviet Collapse a 'Genuine Tragedy,'" *NBC News*, April 25, 2005, available at [http://www.nbcnews.com/id/7632057/ns/world\\_news/t/putin-soviet-collapse-genuine-tragedy/#.XcHMgOgzZPY](http://www.nbcnews.com/id/7632057/ns/world_news/t/putin-soviet-collapse-genuine-tragedy/#.XcHMgOgzZPY)

not have the same effect in Lithuania with a much smaller Russian minority (around six percent).<sup>5</sup>

The Russian actions against Ukraine and occupation of Crimea in 2014 had a much greater impact. However, here again, the perception of the 3B states and the rest of NATO may have differed slightly. Since the Baltic countries have always perceived Russia as a threat and an enemy, the Ukrainian experiences from 2014 did not come as such a great surprise to them as elsewhere in Europe. In Estonia, particularly, it was not even deemed necessary to amend the 2011 edition of the *National Defence Strategy*, because it had already identified Russia as an enemy and was considered still valid, requiring no update well into 2018/2019.<sup>6</sup> Furthermore, while the 3B states by no means discounted the threat of Russia in their defense planning, they did not overlook the fact that Russian operations in Ukraine tied up sufficient Russian forces to enable NATO to shift its centre of gravity further south to the Suwalki corridor on the border between Lithuania and Poland.<sup>7</sup> As was convincingly demonstrated during the Russian exercise Zapad 2017, any likely Russian thrust would go through Latvia and Lithuania and thus decrease the threat of cross-border conflict for Estonia. This prospect of Russian forces tied up and exhausted in Ukraine, thus presenting a less imminent threat to the Baltics in the short term, is also a factor in the

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<sup>5</sup> Jakub Odehnal, Jiří Neubauer, Lukáš Dyčka, and Tereza Ambler, "Development of Military Spending Determinants in Baltic Countries – Empirical Analysis," *Economies*, Vol. 8, No. 3 (2020), p. 68, available at <https://doi.org/10.3390/economies8030068>.

<sup>6</sup> Estonian Ministry of Defence, *National Defence Strategy* (Tallinn: Ministry of Defence, 2017), available at [http://www.kaitseministeerium.ee/sites/default/files/elfinder/article\\_files/national\\_defence\\_strategy.pdf](http://www.kaitseministeerium.ee/sites/default/files/elfinder/article_files/national_defence_strategy.pdf).

<sup>7</sup> Baltic Defence College, *Baltic Security Net Assessment 2018* (Tartu: Baltic Defence College, 2018), available at <https://www.baltdefcol.org/files/files/publications/BalticSecurityNetAssessment2018.pdf>.

current thinking of Baltic political-military elites—despite official rhetoric that may paint a more dramatic picture of the Russian threat to the region.

### **Political Domain – David and Goliath**

Despite a politically strong anti-Russian stance, party politics in the Baltic states has always had some pro-Russian sentiment encoded in its DNA. This was partially due to the presence of large Russian-speaking minorities in Estonia, Latvia and, to some extent, Lithuania. Russian aggression against Ukraine in 2022, however, surprisingly quickly eradicated large portions of pro-Russian sentiment in these countries. This was most visible in Latvia in the parliamentary elections in October 2022, where for the first time since Latvia's independence in 1991 the pro-Russian party, Harmony Centre, did not pass the five percent threshold. Instead, the pro-European New Unity Party rose from eight to 24 seats in Latvia's Parliament.<sup>8</sup> In Estonia, the war in Ukraine exacerbated hatred for Russia, and alleged pro-Russian sentiment of the Estonian Centre Party made it an easy target to blame for the collapse of the ruling coalition in Estonia in June 2022. Even though the real reason for the government's collapse was most likely the passing of an education bill that aimed to make the Estonian language mandatory in all schools, to the perceived detriment of the Russian-speaking minority, the Estonian Centre Party's ties to Putin's United Russia Party made advocating for Russian minority rights difficult.<sup>9</sup>

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<sup>8</sup> "Election Results in Latvia," *LSM.LV*, October 3, 2022, available at <https://www.lsm.lv/velesanas2022/rezultati/>.

<sup>9</sup> "Estonian Prime Minister Dismisses Junior Coalition Partner from Government," *ERR*, June 3, 2022, available at <https://www.err.ee/1608228958/estonian-prime-minister-dismisses-junior-coalition-partner-from-government>.

In foreign politics, the Baltic states have been the chief supporters of Ukraine since the Russian annexation of Crimea in 2014, but their assistance to Ukraine has reached unprecedented levels after Russia's full-scale invasion in 2022. Not only did Estonia, Latvia and Lithuania become leading advocates for the Ukrainian cause in both the European Union (EU) and NATO, but the 3B states also sent military aid to Ukraine averaging one percent of their GDP.<sup>10</sup> They also recalled their ambassadors from Moscow at the end of January 2023.<sup>11</sup>

Overall aid to Ukraine, however, is not seen merely as a sympathy gesture by 3B governments. Especially in the first weeks of the war, there was a widespread and genuine sense of urgency both within society and the political leadership that, if Ukraine falls, Russia's next logical target may be the Baltics. Thus, in the words of Estonian prime minister Kaja Kallas, the Baltic states "clearly see that our defense right now starts also from Ukraine because Ukraine is fighting with the same threat... So as long as they are fighting there, they are weakening the same enemy as we have."<sup>12</sup> Providing aid to Ukraine is thus a way to improve the 3B security situation. It also supports the faster integration of Ukraine into Euro-Atlantic structures. The Lithuanian parliament called for such a move as early as February 24, 2022, by adopting a resolution condemning the Russian invasion of Ukraine and calling on NATO and the EU to grant EU candidate status to Ukraine, and to offer it

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<sup>10</sup> "Ukraine Support Tracker," Kiel Institute for the World Economy, available at <https://www.ifw-kiel.de/topics/war-against-ukraine/ukraine-support-tracker/>.

<sup>11</sup> "Rising Diplomatic Tensions as Baltic States Clash with Moscow over Ukraine," *Euronews*, January 24, 2023, available at <https://www.euronews.com/2023/01/24/rising-diplomatic-tensions-as-baltic-states-clash-with-moscow-over-ukraine>.

<sup>12</sup> "Blog: Russia-Ukraine Crisis – a View from Estonia," *Estonian World*, January 25, 2023, available at <https://estonianworld.com/security/blog-russia-ukraine-crisis-a-view-from-estonia/>.

potential entry to the Alliance under the NATO Membership Action Plan.<sup>13</sup> The Estonian parliament made a similar move on May 17, 2023, approving a statement supporting Ukraine's wish to join NATO as the only way to ensure a rules-based world order, a lasting peace and the security of the democratic countries of Europe.<sup>14</sup> For the same reason, the Baltic states enthusiastically welcomed Finland's membership in NATO in 2023. Moreover, as all 3B states are land-centric in their military capabilities, Finnish accession provides vital protection to the sea and airspace, effectively sealing off Russia in St. Petersburg.

These steps ultimately should be viewed in a wider domestic political context. For small nations living their entire history under the shadow of foreign oppressors, the recent hardline stance on Russia is a chance to strengthen their national identity and to provide a sense of national pride. That would obviously not be possible without NATO membership, as the examples of other post-Soviet countries of similar size show (e.g., Moldova and Georgia). As one high-ranking Baltic officer in a private discussion eloquently stated: "being in NATO gave us small nations [the] chance to poke a bear (Russia) and still get away with it, hoping that the bear looks elsewhere for his next meal."

Thus, for the 3B countries, probably the most valuable political lesson learned from the war in Ukraine is that being a member of a functioning alliance—rather than being neutral—allows for more options in an anarchic international system and does not necessitate painful compromises.

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<sup>13</sup> Kuczyńska-Zonik, Aleksandra, "Baltic States' solidarity with Ukraine," *IEŚ Commentaries*, No. 531 (2021), pp. 1–4, available at <https://ies.lublin.pl/wp-content/uploads/2022/03/ies-commentaries-531-179-2021-.pdf>.

<sup>14</sup> "Blog: Russia-Ukraine Crisis—a View from Estonia," *op. cit.*

## **Military Domain – Impossible “Game of Numbers”**

Lithuania, Latvia, and Estonia have a combined population of less than seven million, making their militaries significantly smaller compared to Russia. However, these countries have demonstrated a visible and concentrated military response to the Ukrainian war, with many steps being preplanned and their implementation expedited as a result of the Russian invasion.

The first lesson learned by these countries is the importance of numbers. Even Lithuania, the largest Baltic country, has one of the smaller armies within NATO, with 11,500 regulars, 3,800 conscripts and 5,300 volunteers. The main strength of its ground forces consists of two brigades: the mechanized Iron Wolf Brigade, comprising three mechanized battalions and an artillery battalion equipped with self-propelled PzH-2000 howitzers, and the motorized Žemaitija Brigade, consisting of three battalions and an artillery battalion with M-101 guns. Additionally, the reserve infantry brigade Aukšaitia was activated in 2017 in response to Russia’s actions in Ukraine. While this composition is a standard for the armed forces of a small state, the Lithuanian political leadership approved plans in May 2023 to establish a division and formalize its establishment the same year. However, this move would require increasing the number of troops to approximately 18,000,<sup>15</sup> which is roughly 30 percent more than the current strength of the entire land forces. On the positive side, Lithuania has a Land Forces Headquarters (HQ), and is theoretically capable of setting up a divisional HQ. However, there is a lack of trained and educated personnel,

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<sup>15</sup> “Lithuanian Military Division to Be Formally Established This Year, Says Defence Minister,” *LRT.LT*, January 26, 2023, available at <https://www.lrt.lt/en/news-in-english/19/1984442/lithuanian-military-division-to-be-formally-established-this-year-says-defence-minister>.

as officers are primarily educated and prepared for brigade-level operations.

Crucially, many divisional assets are also missing. There is no reconnaissance battalion essential for a division-level unit; there are severe limitations in engineering capabilities, and only two artillery battalions. Similar limitations exist regarding equipment, despite Lithuania's efforts to modernize its weaponry over the years. The most significant acquisition has been the purchase of German Boxer armored transporters, with 90 units obtained so far. In response to Russia's war on Ukraine, a contract for an additional 120 units has been concluded. The latest acquisition includes French Caesar self-propelled howitzers, which will supplement the previously procured German PzH-2000s, as well as the purchase of U.S. Joint Light Tactical Vehicles (JLTVs). Although Lithuania lacks tracked infantry fighting vehicles (IFVs), the Boxer armored transporters are expected to fill this role. The planned acquisition of eight American High Mobility Artillery Rocket System (HIMARS) rocket launchers is particularly important for the newly envisaged division, as their long-range capabilities will enable the Lithuanian army to operate at greater distances.<sup>16</sup> The same can be said about the planned procurement of 600 pieces of Switchblade loitering munitions. However, the Lithuanian army still lacks in several categories of weapon systems, primarily air assets (helicopters) and tanks. The country was also seeking to acquire at least one tank battalion, consisting of 54 tanks (M-1 Abrams or Leopard 2), but this number would have been inadequate. In comparison, Poland is currently forming a new division from scratch with a calculated cost of EUR 17 billion, and the number of tanks

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<sup>16</sup> "AČR: Armáda České Republiky - Litva - Divize - Pozemní Vojsko," *Armyweb.cz*, January 27, 2023, available at [https://www.armyweb.cz/clanek/acr-armada-ceske-republiky-litva-divize-pozemni-vojsko?utm\\_source=www.seznam.cz&utm\\_medium=sekce-z-](https://www.armyweb.cz/clanek/acr-armada-ceske-republiky-litva-divize-pozemni-vojsko?utm_source=www.seznam.cz&utm_medium=sekce-z-).

could exceed 100.<sup>17</sup> This vastly surpasses Lithuania's capabilities. There were indications that the original plan was to have the tanks provided by allies, such as Germany or the United States. However, both allies quickly dismissed this idea and, consequently, Lithuania recently abandoned the idea of its armored element altogether. That reflects difficulties with the creation of a division for such a small state. So far, the plan seems more like an exercise in strategic communications to convince the population that the defense sector is responding to the Russian threat.

The lessons learned in the Estonian defense sector from the Russian war on Ukraine in 2022 have highlighted several key points. As summarized by Commander of the Estonian Defense Forces General Martin Herem, "Deterrence was just a show and it didn't work. We cannot deter Russia—but Ukraine shows us that we can stop them."<sup>18</sup> His own assessment is that Russia will need around three years to rebuild its military capabilities after the end of the war in Ukraine to again present a credible threat to NATO's Eastern flank. Following that logic, Estonia updated its National Defense Development Plan (RKAK) and prioritized procurement and development programmes that can deliver capabilities fast.

Despite having an armed force three times smaller than Lithuania, Estonia is responding to the war in Ukraine by forming a national division-level unit. For Estonians, it quickly became evident that participation within the framework of NATO's Multinational Division North was no longer sufficient, and Estonia created its divisional HQ as a first step toward a divisional structure in December 2022.<sup>19</sup>

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<sup>17</sup> "Despite Struggling to Field Full Brigades, Lithuania to Create a Military Division," *LRT.LT*, January 28, 2023, available at <https://www.lrt.lt/en/news-in-english/19/1983858/despite-struggling-to-field-full-brigades-lithuania-to-create-a-military-division>.

<sup>18</sup> Discussion with author.

<sup>19</sup> "Maj Gen Veiko-Vello Palm Appointed Estonian Division Commander," *ERR News*, January 29, 2023, available at



However, as the 2023 exercise *Spring Storm* showed, there is an acute lack of trained and educated personnel, necessitating external assistance in setting up the division. Collaboration with the United Kingdom, and possibly the United States, was considered, while Germany was unable and unwilling to provide support. As agreed at the NATO Madrid Summit in June 2022, the newly created Estonian division can be assigned to NATO's chain of command at any time. Such a decision was made, and the Division has been transferred to Multinational Corps Northeast.<sup>20</sup> In terms of available forces for the newly established division, Estonia plans to assign the 1st Infantry Brigade, 2nd Infantry Brigade, Logistics Battalion and Headquarters Support and Signal Battalion, as well as a brigade-size U.K. Enhanced Forward Presence component. To date, equipment is also an issue. Due to the focus on procurement of ammunition and a preference for speedy deliveries of capabilities over the long term, Estonia excluded from its National Defense Development Plan procurement of a tank battalion, division and brigade drone countermeasures, combat engineering, and joint intelligence, surveillance, target acquisition and reconnaissance (JISTAR) capabilities.<sup>21</sup> But much like Lithuania, Estonia recently ordered six M142 HIMARS launchers,<sup>22</sup> although the idea to use them as a divisional

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<https://news.err.ee/1608851900/maj-gen-veiko-vello-palm-appointed-estonian-division-commander>.

<sup>20</sup> "Estonia Transfers Its Newly Established Division to Multinational Corps Northeast's Chain of Command," NATO Multinational Corps Northeast Newsroom, January 30, 2023, available at <https://mncne.nato.int/newsroom/news/2023/estonia-transfers-its-newly-established-division-to-multinational-corps-northeast-s-chain-of-command>.

<sup>21</sup> "Estonia Amends 10-Year Defence Plan to Sharply Increase Ammunition Stocks," *ERR News*, January 31, 2023, available at <https://news.err.ee/1609003109/estonia-amends-10-year-defence-plan-to-sharply-increase-ammunition-stocks>.

<sup>22</sup> U.S. Department of Defense, "U.S., Estonia Defense Leaders Pledge to Do More for Ukraine," *Defense.gov News Stories*, February 1, 2023,

asset came only ad hoc, and the original motivation may have just been their success in Ukrainian service. Fortunately, Estonia avoided the rash procurement of certain equipment, such as the Bayraktar unmanned aerial vehicle, despite some political pressures to do so. Thus, at least in the Bayraktar case, the 3B countries understood that lessons learned too early can be potentially too costly.

In a generic sense, the Ukrainian experience echoed within the Estonian military and highlighted the significance of intelligence, air defense, artillery, and logistics. More specifically, Ukraine's sinking of the Russian cruiser *Moskva* was hailed as significant. Partially as a result of this, Estonia raised its ambition in case of war from mere sea denial to (participating in) elimination of the Russian Baltic fleet. Robust training of reserve personnel is being recognized as a necessity to build a wartime military, but it poses significant demands. In the fall of 2023, 10,000 former conscripts in higher age groups will be recalled for refreshment training. Conscriptio overall works well, with about half of the military age population serving, and half of them volunteering. Even then, however, Estonia's military force is small, numbering around 7,000 soldiers (professional and conscripts together). Autonomous systems have been explored as a means to address recruitment challenges through automation and to reduce the number of personnel required to operate modern equipment, but that is just a partial solution. Finally, while there is a view among some in the Estonian military that NATO tends to be inefficient in establishing common training and exercises, in a moment of crisis the Estonian military found it relatively easy to set up training programs for the Ukrainians quickly despite the language barrier. It

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available at <https://www.defense.gov/News/News-Stories/Article/Article/3192506/us-estonia-defenseleaders-pledge-to-do-more-for-ukraine/>.

seems that this lesson learned is valid for many other NATO countries.

The high tempo of changes and urgency of tasks has resulted in some negative effects, too, with overloaded personnel and leadership in the mid-level ranks being the most visible. Despite high motivation, it seems that the persistent external threat not only has benefits for the armed forces but has some detrimental effects too.

For Latvians, the lessons learned from the war have resulted in arguably the most significant change in their defense policy in the last two decades – the reintroduction of conscription. Prior to 2022, Latvia maintained a fully professional volunteer army, which saw a slight increase of 500 professional soldiers to a total of 7,100 following the 2022 invasion of Ukraine. By the end of 2022, the reserve component – the so-called National Guard – had grown to approximately 10,000 personnel from the previous year’s 8,000, reflecting the heightened perception of Russia’s threat.<sup>23</sup>

Despite the influx of personnel into the National Guard in recent years, Latvia continues to struggle with filling approximately 400 professional soldier positions, indicating that the military, despite the high threat perception, is not seen as an attractive employer. The war in Ukraine provided a way out of this personnel crisis, leading to a rapid shift in the position of political elites towards supporting conscription. The Ministry of Defense promptly established a plan to implement mandatory military service for men aged 18 to 27 within the next five years, with the first conscripts expected to join in the summer of 2023.

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<sup>23</sup> Leon Hartwell, Agnė Rakštytė, Julia Ryng, and Ēriks Kristiāns Selga, “Winter Is Coming: The Baltics and the Russia-Ukraine War,” *LSE IDEAS Reports*, No. 5 (2022), pp. 1-12, available at <https://www.lse.ac.uk/ideas/Assets/Documents/reports/2022-12-05-BalticRussia-FINALweb.pdf>.

Preliminary numbers indicate that there are already 450 volunteers.

However, it may come as a surprise that the top military leadership of Latvia is not entirely enthusiastic about abandoning the professional model of the military. Concerns arise mostly regarding the infrastructure demands for conscripts, the need for instructors (non-commissioned officers) to train them, which will require personnel to be taken out of professional units, and a range of other issues. Nevertheless, one positive aspect of conscription, unofficially mentioned by the leadership of the Latvian National Armed Forces, is the anticipated increase in recruitment potential and subsequent filling of empty positions within the professional military ranks. Experiences from neighbouring Baltic countries indicate that previous experience with mandatory military service is an effective motivating factor to join the professional armed forces.

In connection with the war in Ukraine, Latvia garnered wider attention for a specific reason. Leaked Pentagon files from 2022-2023 suggest that Latvian Special Operations Forces are present in Ukraine, along with several other NATO allies. Latvia's Defense Ministry initially denied, then later confirmed in April 2023, that its military personnel were indeed in Ukraine. However, the Latvians stated that their purpose was limited to tasks such as guarding the Latvian embassy and facilitating cargo shipments.<sup>24</sup> Whether this is the full extent of their activities, or if there is any truth to rumors from within the defense communities of 3B countries suggesting a far broader and direct military involvement, is beyond the scope of this article.

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<sup>24</sup>US, Latvia confirm military presence in Ukraine but not on battlefield," *Kyiv Independent*, February 2, 2023, available at <https://kyivindependent.com/us-latvia-ukraine-military/>.

## **Economic Domain – Defense Is a Costly Necessity**

The most visible response to the war in Ukraine is typically seen in increases in defense spending. The 3B governments had already committed to allocating two percent of their GDP to defense prior to 2022, but even that is now regarded as insufficient.

In Estonia, the economic reaction involves mobilizing its own resources and urging NATO allies to do the same beyond the two percent threshold. The Minister of Defense, Hanno Pevkur, has announced that Estonia will increase its defense budget by 42 percent in 2023, allocating three percent of its GDP to defense.<sup>25</sup> However, the government's decision to provide weapons and ammunition to Ukraine has faced criticism from the radical right populist Estonian Conservative People's Party (EKRE). The party argues that it has depleted Estonia's defenses and stripped Estonian Defense forces of large stocks of equipment, most notably in terms of anti-tank weapons. The magnitude of Estonia's assistance to Ukraine is indeed significant; in 2022 it donated nearly 40 percent of its annual military budget, equivalent to more than 0.8 percent of its GDP, the second highest per capita donation after Latvia.<sup>26</sup>

Similarly, Latvia and Lithuania have also reached political agreements to gradually increase their defense budgets. In 2023, Lithuania's national defense budget will amount to at least 2.52 percent of its GDP. The parliament has also approved the allocation of additional funds for defense in 2023, which will increase the defense budget to three percent of GDP. In absolute numbers, Lithuania's

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<sup>25</sup> Hartwell, Rakštytė, Ryng, and Selga, "Winter Is Coming: The Baltics and the Russia-Ukraine War," *op. cit.*

<sup>26</sup> "Ukraine Support Tracker," Kiel Institute for the World Economy, available at <https://www.ifw-kiel.de/topics/war-against-ukraine/ukraine-support-tracker/>.

defense spending in 2023 will reach EUR 1,774.6 million, an increase of nearly EUR 127.6 million compared to 2022.<sup>27</sup>

Latvia's defense budget is expected to be 2.25 percent in 2023, 2.4 percent in 2024, and gradually increase to 2.5 percent of the country's projected GDP in 2025. In 2023, the amount allocated to defense will reach EUR 886.4 million, rising to EUR 1,002.4 million in 2024, and reaching 2.5 percent of GDP in 2025, equivalent to EUR 1,103.9 million.<sup>28</sup> As for the budget structure, 77 percent of the increase will be allocated to procurement, a trend observed in all three countries. However, there are concerns within the defense sector that despite the motivation stemming from Russia's threat, salaries often do not match the importance of the tasks at hand, leading to dissatisfaction among both civilian and military personnel.

The war in Ukraine has prompted some NATO countries to strengthen their domestic defense industry, but this is not the main direction for the Baltic states. They see building a robust domestic arms industry as a drain on personnel from other segments of the economy, and having limited utility for ensuring sufficient military stockpiles. The 3B states have learned that the only stockpiles that matter are those already procured and stored in dispersed locations before a conflict starts; however, this is obviously very costly. Moreover, there is significant disagreement over whether large defense infrastructure projects are more of a liability and a potential target than an asset. Therefore, there is a noticeable focus on

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<sup>27</sup> "Lithuania's Defence Spending Is Growing with Space for More Military Infrastructure Financing," Ministry of National Defence, Republic of Lithuania, May 4, 2023, available at <https://kam.lt/en/lithuanias-defence-spending-is-growing-with-space-for-more-military-infrastructure-financing/>.

<sup>28</sup> "Latvian Parliament Approves of Increasing Defence Budget," *Baltic News Network*, February 5, 2023, available at <https://bnn-news.com/latvian-parliament-approves-of-increasing-defence-budget-234131>.

enhancing the resilience of civil infrastructure to enable rapid deployment of Allied forces in case of a crisis.

The projected defense spending for the 3B states may appear impressive on paper; however, when considering the cost of war—if Russia’s 2022 invasion of Ukraine is any indication—it may prove to be grossly insufficient. According to an on-background assessment made by the Estonian Defense Forces, in the event of a conflict with similar intensity to that in Ukraine, one day’s worth of supplies for the Estonian military would cost EUR 100 million, primarily for ammunition. In 10 days of fighting this amount would already represent exactly three percent of GDP. Based on this calculation, it becomes evident that if the Baltic states truly perceive Russia as an existential threat, political elites will soon face the challenging decision of whether to allocate further resources for national defense.

### **Societal Domain – Learning from Your Own Student**

Ukraine responded to the Russian attack not only militarily but also in a whole-of-society way. It may be argued that much of the initial Ukrainian success was due to improved cross-societal resistance, which was at the centre of its national defense. All military and security agencies were placed under a single command supported by the civilian population.<sup>29</sup> Incidentally, that is also what Estonia, Latvia, and Lithuania expect to do, according to their long-term defense plans, and there are strong indicators that the Ukrainians adopted many elements of this comprehensive approach from the 3B states.

Well over a year into the war, Ukraine has taught the 3B states that resilience is of the utmost importance with respect

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<sup>29</sup> Hanna Shelest, “Defend, Resist, Repeat: Ukraine’s Lessons for European Defence,” European Council on Foreign Relations, November 22, 2022, available at <https://ecfr.eu/publication/defend-resist-repeat-ukraines-lessons-for-european-defence/>.

to the survival of the civilian population. Some of the elementary needs include shelters, evacuation capabilities, stockpiles of essential goods, and overall coping mechanisms in an armed conflict. Additionally, societal resilience includes creating the ability to, for example, put out fires on one's own (because the firefighters may be overwhelmed), provide first aid and, above all, maintain high morale and the will to defend.

Domestically, a very visible symbolic manifestation of defiance against Russia's actions within the 3B countries was the removal of hundreds of Soviet-era monuments. Those were seen by Estonians, Latvians, and Lithuanians as a symbol of the Soviet occupation rather than a victory over Nazi Germany; however, for local Russian minorities these monuments were a source of pride. First to take this action was Lithuania in April 2022, with Latvia and Estonia following later the same year.<sup>30</sup> While there were initially concerns regarding the reaction of the Russian minority populations, the protests were relatively modest, and even the Russian Federation's reaction was rather subdued—probably due to Moscow's focus on its war in Ukraine. For an outsider, it was absurd to watch the so-called Victory Monument in Riga spectacularly demolished while the site was being guarded by Russian-speaking Latvian policemen. This above all symbolizes the schizophrenic situation in which Russian minorities in the 3B countries find themselves after Russia's invasion in Ukraine.

## Conclusion

In analyzing the Baltic response to the Russian-Ukrainian war, it becomes evident that defense policy changes in these

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<sup>30</sup> "Shooting Red Star: Baltic States Rid Themselves of Soviet Memorials," *TVP World*, February 7, 2023, available at <https://tvpworld.com/65378934/shooting-red-star-baltic-states-rid-themselves-of-soviet-memorials>.



countries encompass various dimensions. By considering these dimensions, a comprehensive understanding of the Baltic response emerges.

From a political standpoint, the Baltic states have exhibited a strong anti-Russian stance, rooted in their historical experiences and perceptions of Russia as a major threat. The war in Ukraine has further solidified this perception and resulted in increased support for Ukraine within the Baltic states. There was also a rise in the sense of national identity and pride, with NATO membership playing a crucial role in strengthening the Baltic nations' sense of security and ability to confront Russia.

In the military domain, the Baltic states, despite their limited resources, have demonstrated a concentrated military response to the Ukrainian war. They have recognized the importance of numbers and have made efforts to bolster their armed forces through increased recruitment, reintroduced conscription, and the establishment of division-level units. However, challenges persist, such as the need for training and equipment acquisition, highlighting the ongoing demands faced by these countries.

Economically, the war in Ukraine has prompted the Baltic states to reassess their defense budgets. They have committed to allocating a higher percentage of GDP to defense and have actively sought support from NATO allies. While defense spending has increased, concerns remain about the sufficiency of resources in the face of a potential conflict. Emphasis has also been placed on the resilience of civil infrastructure to facilitate the rapid deployment of allied forces.

In the societal domain, the Baltic states have drawn lessons from Ukraine's whole-of-society approach to defense. Resilience and preparedness at the societal level have become priorities, encompassing shelter capabilities, evacuation plans, and the fostering of a strong morale and will to defend. Symbolically, the removal of Soviet-era

monuments has represented a defiant stance against Russia's actions, symbolizing the Baltic nations' rejection of the Soviet occupation.

Finally, however, one clear lesson that 3B political elites have yet to learn is whether the defense policies of Estonia, Latvia, and Lithuania are truly national policies, or merely policies of (and for) ethnic Estonians, Latvians and Lithuanians. If the latter view dominates, then it will be only a matter of time before General Herem's fear of Russian military revival within three years will find alienated Russian minorities eager to support a new round of invasion – and this time in the Baltics.

*Lukáš Dyčka is a lecturer at the Baltic Defence College in Estonia and the University of Defence in the Czech Republic. He specializes in defense policy analysis.*



# Observations on U.S. Nuclear Posture and the War in Ukraine

C. Robert Kehler

The war in Ukraine will soon be one year old with no end in sight. The much-anticipated lightning-quick Russian operation to neutralize the Ukrainian armed forces, overthrow the elected Ukrainian government, and install a puppet regime aligned with Moscow has been a stunning tactical and strategic failure. Over the months of war, significant combat losses have forced Russia to de-scope its objectives and reorient its forces in an attempt to secure the southeast corner of Ukraine (the Donbas area) and control the Black Sea. Despite a partial mobilization ordered by President Putin to offset his enormous losses of men and material, Ukrainian operations have forced the Russians to retreat from occupied areas in the north and from important positions in the south. However, the Russians still hold significant territory in the Donbas and the war has become a stalemate where both sides are reconstituting their forces for renewed offensive operations in the spring.

Nuclear weapons are playing a significant role in this conflict. While Russia has not employed nuclear weapons in combat, it has actively and publicly used its nuclear weapons in an influence campaign designed to fracture the NATO alliance and coerce its leaders into inaction and acceptance of a new status quo. This influence campaign began long before the invasion. Russia's investment in modern and novel nuclear capabilities has been the hallmark of Putin's tenure. He has personally participated in highly visible nuclear exercises, has overseen tests of nuclear delivery systems, and approved a new Russian nuclear doctrine that includes the potential use (perhaps first use) of nuclear weapons to compel the outcome of a regional conflict in Russia's favor (perhaps the very scenario

unfolding in Ukraine). Within days of the start of the invasion, Putin placed Russian nuclear forces on a previously unheard level of high combat alert (“special regime of combat duty”) and within weeks followed that with the high-profile test launch of a new nuclear-capable ICBM. As the invasion unfolded, Russian media and some senior Russian officials issued bellicose warnings threatening the potential combat employment of nuclear weapons and pointed to NATO’s support for Ukraine as the possible trigger for such an action. Russian denials to the contrary were tepid and unconvincing, almost lending credence to the warnings. Despite some change in tone over the ensuing months, Russian leaders and media personalities continue to raise the specter of nuclear war growing from the U.S and NATO’s support to Ukraine.

As with other aspects of the Ukraine invasion, Russia’s nuclear coercion campaign has also failed to achieve its main purpose. Ukraine continues to fight. Western governments have levied unprecedented economic sanctions on Russia and continue to resupply Ukraine with a vast number of modern and increasingly sophisticated weapons. In a remarkable show of resolve and despite Moscow’s dire warnings (to include the threat of deploying nuclear weapons near the Baltic States), NATO is expanding its membership with the addition of Sweden and Finland on Russia’s northern flank. Russia is increasingly isolated and criticized on the world stage. Most importantly, Russia has not crossed the threshold for the combat employment of nuclear weapons.

It’s premature to draw lessons or, worse, conclusions from this unprecedented conflict on NATO’s borders where nuclear armed powers are directly and indirectly involved. Beyond a coercion campaign, we cannot dismiss the possibility that Putin will at some point “escalate to de-escalate” and order the employment of nuclear weapons out of a sense of desperation. But to date, the NATO alliance

remains strong, the United States and NATO have taken critical support measures in the face of Russia's nuclear threats, and the threshold for the combat employment of nuclear weapons has not been crossed. In my estimation, that's not an accident; on the contrary, I believe the Ukraine war is validating the foundational importance and continued effectiveness of U.S. nuclear policies, alliance commitments, force structure, and force posture and offer six observations to support that view.

### **Observation 1**

#### **No Other Weapons Have the Same Deterrent Effect as Nuclear Weapons**

While it's impossible to know all the factors that went into Putin's decisions regarding the invasion and subsequent war, hints from open sources suggest the unpredictable risks and fear of nuclear escalation were a significant factor that limited Russia's initial tactical and operational goals and continue to constrain ongoing operations. Similarly, public statements from U.S. and NATO leaders suggest the risk of nuclear escalation is a significant factor shaping NATO's careful responses as well. Each side is well aware of the nuclear capabilities possessed by the other and the inconceivable destruction and unpredictable escalation that would likely occur if those weapons were used in combat.

Nuclear weapons do not prevent all conflicts; however, nuclear weapons have prevented direct conflict between the major nuclear powers since 1945. As ugly as it is, the war in Ukraine remains a limited conventional conflict being fought for limited aims. Russia is going to extraordinary lengths to avoid direct conflict with the United States and NATO; NATO is going to similar lengths to avoid a direct military conflict with Russia while, as President Biden has stated, drawing a line around "every square inch" of NATO territory.

Without question, the poor performance of Russia's conventional military has been a major factor that forced Putin to de-scope his war objectives and restrain from escalating the conflict beyond Ukraine's borders. U.S. and NATO conventional forces have always played a major deterrent role in Europe and at this point it is clear Russia can ill afford a conventional conflict with NATO that it is unprepared to fight and likely to lose. However, what was true through the decades of the Cold War remains true today—the unique risks posed by nuclear weapons still cause leaders to pause and ponder the potential for and consequences of escalation before they act.

## **Observation 2**

### **U.S. Nuclear Policy Serves Contemporary Deterrence Objectives**

Deterrence exists when adversary leaders calculate they will not be able to achieve their objectives, will suffer unacceptable consequences if they try, or both (and, in some cases, when leaders calculate that the benefit of restraint outweighs the advantages of using the weapons). U.S. nuclear declaratory policy presents Russian leaders with a conundrum in their decision calculations. While U.S. policy sets a credible threshold for considering the combat employment of nuclear weapons (i.e., extreme circumstances involving vital national interests) and the manner in which they might be employed (i.e., flexibility and adaptability), the policy remains intentionally ambiguous regarding the exact scenarios that would lead to their use (i.e., primarily to respond to adversary use of a nuclear weapon but including the potential for nuclear use in certain other extreme cases).

Assessing U.S. and NATO political will to use nuclear weapons is a difficult task for any adversary. Russian leaders may believe the United States and NATO lack the

political will to employ nuclear weapons in a conflict; but rational decisionmakers cannot overlook the extraordinary risk of acting on that belief in the face of U.S. declaratory policy and a continued nuclear commitment to NATO backed by ready and capable forces. During the Ukraine conflict U.S. and NATO leaders have reinforced policy with clear public and, reportedly, private statements that Russian use of nuclear weapons would be a grave mistake with severe consequences. Nuclear weapons remain the “elephant in the room” that introduces significant risk that a conventional war between nuclear-armed adversaries could quickly escalate into the combat use of those weapons. To date, Russia’s behavior in Ukraine suggests that the risk of uncontrollable nuclear escalation has kept Russia’s use of those weapons to overheated rhetoric.

Contrast this situation with the potential difference in Russia’s risk calculations if the United States had adopted “sole use” or “no first use” policies as some advocates proposed. Such policies would have made Russian calculations of conventional war with the United States and NATO far less risky, with unintended consequences for deterrence.

### **Observation 3**

#### **The U.S. Nuclear Deterrent Force Presents Russia With Insurmountable Planning and Defense Problems While Preserving U.S. Presidential Decision Space**

Imagine if the United States had arrived at February 24, 2022, with a significantly different nuclear force structure and posture: ICBMs removed from readiness (de-alerted) or completely retired; SSBN patrols reduced or confined to one ocean; nuclear forces unilaterally reduced to levels well below those permitted by New START; theater nuclear weapons removed from Europe and, perhaps, completely



de-committed from NATO; presidential authority to order the employment of nuclear weapons limited or eliminated; and an aged deterrent force and command and control system with no modernization programs underway. All of these possibilities have been seriously proposed by a handful of U.S. policymakers and anti-nuclear advocates over the last decade or more.

Instead, the United States entered the Ukraine crisis with up to 400 responsive ICBMs and a portion of the survivable SSBN fleet on daily alert backed by flexible long-range bombers that commanders can use with great effect for conventional missions or which the president can return to nuclear duty if needed. Additional SSBNs can also be deployed to patrol areas, if necessary (generated in nuclear parlance), and more weapons beyond New START limits can be uploaded over time as a hedge against technical failure or geopolitical change. In essence, today's force structure and posture (and the men and women at the tip of the nuclear spear) provide the credible capabilities U.S. leaders rely on to implement U.S. policy. Perhaps most importantly, when Putin announced an increase in Russian nuclear alert levels, the president was not forced to make any similar dire pronouncements about using nuclear weapons or make difficult choices regarding changes to the daily force commitment or posture (e.g., returning bombers to nuclear alert or putting more ballistic missile submarines to sea) that could have proved escalatory in and of themselves. Instead, U.S. leaders were able to remain calm and keep their rhetoric cool.

The U.S. nuclear deterrent force—that is, the Triad of delivery systems and the manner in which it is operated—continues to make sound strategic sense; there is not a more effective way to meet our deterrence objectives. ICBMs and SSBNs can be immediately retargeted from broad open ocean areas to hold the most important Russian targets at risk, with the promise of a prompt assured response if ever

needed; at the same time, long-range dual capable bombers are being deployed in a non-nuclear role as a visible signal of U.S. commitment to allies and offensive capability in either role.

#### **Observation 4**

### **NATO's Nuclear Sharing Arrangements Have Important Deterrence and Assurance Values of Their Own**

The United States has remained committed to NATO as a nuclear alliance despite calls from some U.S. political quarters to either remove U.S. weapons from Europe or eliminate the U.S. nuclear commitment to NATO altogether. The United States has also remained committed to the NATO alliance despite some suggestions for the United States to completely withdraw from the alliance in favor of an isolationist doctrine.

Credible deterrence can never be based on a bluff. The Ukraine conflict has validated the importance of retaining visible, forward-deployed nuclear weapons and dual-capable aircraft in Europe. More importantly, the conflict has validated the criticality of allies, alliances, and mutual defense in the 21<sup>st</sup> Century. Again, in the face of Putin's nuclear threats the president would have been faced with far different decisions if NATO were no longer a nuclear alliance or U.S. weapons and dual capable fighters were no longer deployed there; a situation that would have been even worse if NATO had dissolved or the U.S. commitment to the alliance had not remained strong. Without NATO, I daresay it is not a stretch to imagine Russia conducting a series of Ukraine-like invasions around its periphery undeterred by unconvincing conventional or nuclear options, especially if deterrence was based on nuclear weapons as the only option. The United States made the

isolationist mistake twice in the 20<sup>th</sup> Century with grave consequences.

### **Observation 5**

#### **The U.S. Deterrent Will Not Remain Credible Without Improvements in Policy and Capabilities**

Doubts about U.S. political will and force capabilities can lead an adversary to make dangerous miscalculations that create the potential for unintended escalation in a crisis or conflict. U.S. nuclear policy and capabilities are credible today, but the Ukraine war has provided a glimpse of the lethality and intensity of warfare involving drones, hypersonic weapons, global information campaigns, artificial intelligence, persistent surveillance, social media, and other modern capabilities that create significant complexity and uncertainties for the future. Other nations are investing heavily in these capabilities and the cost of entry is often low enough to ensure proliferation.

The United States will never again have the luxury of time to prepare and benign sanctuaries from which to fight. Nuclear weapons will continue to provide unique challenges while offering deterrent benefits that we cannot ignore. Numerous studies and assessments in the United States have proven that we must continue to invest in and modernize both conventional and nuclear forces. Of particular concern: China is fast becoming a nuclear peer with the United States and the “two nuclear peer” problem presents new dynamics that could invalidate some key U.S. strategic assumptions and policy tenets. A number of issues deserve attention to ensure adversary deterrence and allied assurance remain credible and nuclear weapons are never used in combat in Ukraine or elsewhere:

- U.S. policymakers must continuously re-emphasize the continued importance and enduring role of U.S. nuclear weapons for deterrence and assurance.

- The United States must proceed with the bi-partisan nuclear modernization program (weapons, delivery systems, command/control/communications), including the critical industrial complex that maintains the weapons and stockpile, without delay.
- The United States should accelerate the nuclear certification of the F-35 and B-21, and production of the B-61/12 nuclear weapon and Long Range Stand Off cruise missile.
- The United States should build and deploy nuclear-capable cruise missiles (SLCM-N) on selected attack submarines as a clear signal of allied assurance.
- While USSTRATCOM remains the central focus of U.S. nuclear capabilities, nuclear planning must be restored across the U.S. combatant commands and within NATO.
- The United States must ensure its conventional forces, missile defenses, space, and cyberspace capabilities remain strong and capable of confronting 21<sup>st</sup> Century threats.

## **Observation 6 Deterrence Could Fail**

While I remain confident in the effectiveness of the U.S. nuclear deterrent, history teaches that wars are dangerous and unpredictable. The United States, NATO, and our allies and partners must be realistic and prepare for the possibility that Russia could use its nuclear weapons in an attempt to resolve the Ukraine conflict in its favor. Along with intense diplomacy, the United States and NATO must plan and realistically train and exercise for such an eventuality. In this way we will enhance deterrence

effectiveness and make a nuclear eventuality less, not more, likely.

## Conclusion

Although the conflict in Ukraine remains fraught with uncertainty and far from resolved, I believe U.S. nuclear strategy and posture have been shown to be sound by this war. Nuclear weapons have helped to safeguard allied interests, to limit the war, and to reduce the risks of escalation. The experience has demonstrated the wisdom of all recent administrations in rejecting the calls for “bold action” in the name of risk reduction or total elimination of nuclear weapons. However, the risk of nuclear escalation (intended or unintended) will remain as long as this war continues. It is vitally important to keep the nuclear employment threshold high by bringing U.S. policies up to date with modernized capabilities to carry them out.

*General C. Robert Kehler, USAF (retired) is the former Commander of United States Strategic Command. The opinions expressed in this article are those of the author and do not reflect the official positions of the United States Government, Department of Defense, United States Air Force, or United States Strategic Command. This essay is adapted from C. Robert Kehler, “Observations on U.S. Nuclear Posture and The War in Ukraine,” Journal of Policy & Strategy, Vol. 3, No. 1 (Fairfax, VA: National Institute Press), available at <https://nipp.org/journals/volume-3-2023/>.*

# Russia-Ukraine War – A Cyber Coming-of-Age?

David J. Lonsdale

## Introduction

Since the mid-1990s, there have been extraordinary claims made about so-called “cyberwar.”<sup>1</sup> According to such discourse, we are always on the precipice of an “electronic Pearl Harbor,” whereby a nation state could be brought to its knees via a cyber attack on its Critical National Infrastructure (CNI). It is certainly true that several significant attacks have occurred in the ensuing years. Notable incidents include the 2007 attack on Estonia (*Bronze Soldier*), the 2012 attack on Saudi Aramco (*Shamoon*), and the 2010 disruption to the Iranian nuclear programme (*Stuxnet*). Although noteworthy, in that they provide a glimpse of what may be possible with cyber weaponry, none of these attacks has risen to the heights often claimed in the cyber literature. It is, then, significant that one of the belligerents in the Ukraine War, Russia, is considered one of the more developed and active cyber powers in global politics. In this way, the ongoing war presents an opportunity to study cyberwar in a major conflict, and thereby give an updated analysis on the efficacy of this new means of strategic activity.

To that end, this paper will begin by briefly outlining a conceptual understanding of how we approach developing technologies and what they mean for military strategy and national security. The work will then briefly outline the

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<sup>1</sup> It should be noted that since cyber actions rarely, if ever, produce violent effects, the term “cyberwar” is a contested term. See, for example, Thomas Rid, “Cyber War Will Not Take Place,” *Journal of Strategic Studies*, 35:1, (2012), pp. 5-32.

Revolution in Military Affairs (RMA) hypothesis, as a taxonomy to assess whether cyberwar merits the attention it has received. Arguably, if cyber has once again underdelivered in Ukraine, then perhaps we can conclude that the hype of the cyberwar discourse is undeserved. In which case, we can arrive at a more balanced appreciation of what cyber can deliver in a strategic context.

## **Understanding War and Technology**

Since the mid-nineteenth century, the conduct of war and strategy has been subject to a plethora of technological advances. Each technological advance seemingly impacts the tactical and operational levels, with associated strategic implications, and some even establish an entirely new domain of strategic activity. This is evident, for example, in the invention of heavier-than-air flight in the early twentieth century. As noted by Lawrence Freedman, those responsible for strategy have sought to embrace technological advances for two main reasons: to counter potential enemy advantage, or in the quest for less costly, more rapid forms of victory.<sup>2</sup> Cyberwar certainly fits with Freedman's theory of future war. Virtual attack through cyberspace has been presented as both an existential threat to information age societies, as well as the epitome of quick bloodless war.

Although modern strategic history is full of remarkable technological advances, it also gives us pause for thought on the transformative nature of these advances. In this sense, the RMA hypothesis provides a useful taxonomy for assessing the implications of new technologies. As exemplified by the work of Andrew Krepinevich, for a technological advance to merit the "revolutionary" marque,

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<sup>2</sup> Lawrence Freedman, *The Future of War: A History* (London: Allen Lane, 2017).

it must fulfill four criteria: new technology, organisational change, new operational concepts, and a significant rise in efficacy.<sup>3</sup> At the same time, the RMA hypothesis has some notable detractors, and the mid-to-long-term implications of technological advance can be questioned.<sup>4</sup> This is most evident on the Eastern Front during 1941-45, when the promise of German mechanised warfare was overwhelmed by geography, logistical challenges, and enemy resources. Nonetheless, it is argued here that the RMA hypothesis remains a useful set of criteria when seeking to understand the implications of new technologies in the complex, multidimensional world of strategy. As a consequence, the war in Ukraine gives us a relevant case study by which to further assess cyber power as a potential RMA.

### Cyber Operations in the Ukraine War

With a major land war raging in Europe between two developed states, it is not unreasonable to expect cyber power to have a significant presence in said conflict. Moreover, in the third decade of the 21<sup>st</sup> century, the major strategic actors now possess dedicated cyber forces and commands, and thereby should be better placed to harness the tactical and operational techniques of cyber power. Furthermore, prior to the extant conflict, Russia (or Russia-based groups) has a history of aggressive cyber attacks against Ukraine, most notably the *BlackEnergy* attack on the Ukrainian power grid in 2015, and the *NotPetya* attack in

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<sup>3</sup> Andrew Krepinevich, "Cavalry to Computer: The Pattern of Military Revolutions," *National Interest*, 37 (1994).

<sup>4</sup> For a discussion of the RMA hypothesis and its detractors, see David J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future* (London: Frank Cass, 2004).



2017 that reportedly affected 10 percent of all computers in the country.<sup>5</sup>

It should, therefore, come as no surprise that Russia has unleashed its cyber forces during the current conflict. Indeed, Google's Threat Analysis Group describes Russian attacks as "an aggressive, multi-pronged effort to gain a decisive wartime advantage in cyberspace."<sup>6</sup> Similarly, the European Cyber Conflict Research Initiative (ECCRI) describes Russian cyber attacks during the war as being on an unprecedented scale.<sup>7</sup> During the war, Russian cyber forces have engaged primarily in two forms of action: intelligence gathering and direct attacks on Ukrainian government and military entities, critical infrastructure and public services, and the information and media space.<sup>8</sup> In the first week of the war, 22 Ukrainian organisations were hit with cyber attacks.<sup>9</sup> The attacks utilised eight different forms of malware, including a number of wipers, which are designed to destroy data on hard drives, servers, and other hardware. One of the most noteworthy attacks was that against the communications company *Viasat*, which handles both commercial and military internet

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<sup>5</sup> Marcus Willett, "The Cyber Dimension of the Russia-Ukraine War," *Survival*, 46/5, October-November 2022, pp. 7-26.

<sup>6</sup> Google Threat Analysis Group, *Fog of War: How the Ukraine Conflict Transformed the Cyber Threat Landscape*, available at <https://blog.google/threat-analysis-group/fog-of-war-how-the-ukraine-conflict-transformed-the-cyber-threat-landscape/>.

<sup>7</sup> European Cyber Conflict Research Initiative, *The Cyber Dimensions of the Russia-Ukraine War*, April 2023, available at [https://eccri.eu/wp-content/uploads/2023/04/ECCRI\\_REPORT\\_The-Cyber-Dimensions-of-the-Russia-Ukraine-War-19042023.pdf](https://eccri.eu/wp-content/uploads/2023/04/ECCRI_REPORT_The-Cyber-Dimensions-of-the-Russia-Ukraine-War-19042023.pdf).

<sup>8</sup> Google Threat Analysis Group.

<sup>9</sup> Jon Bateman, *Russia's Wartime Cyber Operations in Ukraine: Military Impacts, Influences, and Implications* (Washington, D.C.: Carnegie Endowment for International Peace, December 2022), p. 12.

communications.<sup>10</sup> The *Viasat* attack used a wiper malware, *AcidRain*, to disable modems and routers. Although the attack affected several sectors across Europe, with internet outages sometimes lasting for up to two weeks, the military impact appears to have been moderate.<sup>11</sup> Highlighting the linkage between cyber and kinetic operations, another attack was aimed at the *Delta App*, which is used by the Ukrainian military to share battlespace information.<sup>12</sup>

At the time of writing, it is unclear whether Russia has been able to sustain a high level of coordinated cyber activity. One report notes that from 22 organisations in the first week of the war, the rate of attacks soon dropped to targeting one Ukrainian organisation per week.<sup>13</sup> That being said, some reports indicate spikes in Russian activity. For example, between 25-29 March 2022, the Ukrainian CNI was hit with 65 cyber attacks.<sup>14</sup> Moreover, the ECCRI notes that Russia has switched back and forth between espionage/reconnaissance and destructive attacks against CNI.<sup>15</sup> This could suggest that Russia is not capable of a sustained multi-pronged campaign, but rather must prioritise certain types of operations at any one time. The limited scale of Russian cyber fires becomes especially evident when compared to kinetic forms of military strikes. It is reported that in the first four months of the war, Russia

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<sup>10</sup> National Cyber Security Centre, *Russia Behind Cyber Attack with Europe-Wide Impact an Hour Before Ukraine Invasion*, May 10, 2022, available at <https://www.ncsc.gov.uk/news/russia-behind-cyber-attack-with-europe-wide-impact-hour-before-ukraine-invasion>.

<sup>11</sup> For details on the *Viasat* attack see, Cyber Peace Institute, *Case Study: Viasat*, June 2022, available at <https://cyberconflicts.cyberpeaceinstitute.org/law-and-policy/cases/viasat> and Bateman.

<sup>12</sup> European Cyber Conflict Research Initiative, *op. cit.*, p. 13.

<sup>13</sup> Bateman, *op. cit.*, p. 12

<sup>14</sup> Willett, *op. cit.*, p. 13.

<sup>15</sup> European Cyber Conflict Research Initiative, *op. cit.*

conducted 50 cyber attacks. In the same timeframe, they launched 3,654 missile attacks.<sup>16</sup>

Aside from the lowering number of attacks, Russia seems to have gained little operational or strategic advantage from them. When cyber fires and kinetic forces attack the same target sets, kinetic attacks seem to have proven more effective.<sup>17</sup> Indeed, it is reported that Russian military intelligence gathering has been far more potent with unmanned aerial vehicles (UAVs) than with cyber forms of information gathering.<sup>18</sup> This makes interesting reading for those cognisant of the information warfare debates of the 1990s. In their more extreme versions, advocates of information warfare predicted a future in which physical expressions of strategic power would become largely obsolete. The battle in cyberspace would be decisive.<sup>19</sup> Instead, 30 years later, on the plains of Ukraine, violent kinetic force still rules the battlespace.

How do we explain that cyber has fallen short yet again in this conflict? There appear to be three main reasons. The first is that an extensive cyber campaign is difficult to sustain. It requires considerable resources. This somewhat contrasts with earlier predictions that cyber attack was an easier and cheaper offensive option. So much so, that some theorists predicted a dramatic power shift in global politics, as cyber-enabled smaller or non-state actors benefitted from this equalising form of strategic power.<sup>20</sup> It is worth remembering that *Stuxnet*, which also had limited strategic impact, cost an estimated \$300 million.

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<sup>16</sup> Bateman, op. cit., p. 19.

<sup>17</sup> Ibid., p. 2.

<sup>18</sup> Ibid., p. 2.

<sup>19</sup> See, for example, Martin Libicki, "The Emerging Primacy of Information," *Orbis*, 40/2, Spring 1996, pp. 261-274.

<sup>20</sup> See, for example, Jessica T. Mathews, "Power Shift," *Foreign Affairs*, 76/1, (1997).

Secondly, it appears that Russia has not conducted an integrated, well-coordinated cyber campaign, certainly not after the initial attacks in support of the invasion in February 2022.<sup>21</sup> The ECCRI reports that professionalism and coordination are lacking in some Russian cyber units.<sup>22</sup> Moreover, various heads of European cybersecurity units have concluded that Russia is “not ready to wage coordinated cyber and kinetic war.”<sup>23</sup> This must be of concern for cyber enthusiasts, because prior to the war Russia was considered to be one of the more developed cyber actors. It may well be that in the cyber realm, as in the initial physical invasion, Russia simply performed poorly. In which case, the instruments may still be valid, if used correctly. However, there are a number of reasons why cyber attack is limited as an instrument of strategy. These include such factors as the intelligence challenge of understanding the enemy system, as well as the difficulties of controlling cyber capabilities in a manner that can be effectively converted into operational and strategic effect. Indeed, one of the main criticisms one can make of the cyber literature is that much of it is focused on the technical and tactical aspects. In this sense, the literature makes the mistake of equating technical and tactical prowess with success. In contrast to this limited perspective, to be of value, any form of military power must be converted into operational and strategic advantage.

Finally, Ukrainian cyber defences and resilience, bolstered by Western aid, have proven to be reasonably robust. The United Kingdom’s National Cyber Security Centre (NCSC) concludes that Ukraine has “proved

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<sup>21</sup> Google Threat Analysis Group, op. cit., p. 14.

<sup>22</sup> European Cyber Conflict Research Initiative, op. cit., pp. 7-8.

<sup>23</sup> “Russia Unexpectedly Poor at Cyberwar: European Military Heads,” *The Defense Post*, June 9, 2022, available at <https://www.thedefensepost.com/2022/06/09/russia-poor-cyberwar/>.

masterful in withstanding hostility through bolstered cyber defences, demonstrating the importance of resilient systems.”<sup>24</sup> As evidenced by the 8 April 2023 attack on the Ukrainian power grid, Google’s Project Shield against Distributed Denial-of-Service (DDoS) attacks, and the extensive use of Amazon Web Services, the paradoxical logic of strategy is alive and well in cyber strategy, and has helped keep Ukrainian systems online in the face of cyber fires.<sup>25</sup> The paradoxical logic, identified by Edward Luttwak, simply notes that potentially effective capabilities will be offset by countermeasures. Despite its seeming novelty, cyber power is just as susceptible to the paradoxical logic as any other expression of power. Indeed, it may be that Russian cyber attacks in the years preceding the conflict invigorated Ukrainian cybersecurity.<sup>26</sup> This will come as no surprise to anyone reasonably familiar with strategic history. Strategic bombing with air power was meant to make land power largely redundant, but failed, in part, due to air defences and the resilience of industrial age societies and economies.<sup>27</sup> This does not mean that air or cyber power are strategically impotent; rather, it means we should be more limited and realistic in our expectations of what they can deliver.

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<sup>24</sup> National Cyber Security Centre, *New analysis highlights strength of Ukraine's defence against “unprecedented” Russian offensive*, April 20, 2023, available at <https://www.ncsc.gov.uk/news/new-analysis-eccri-highlights-ukraine-defence-against-russian-offensive>.

<sup>25</sup> For details on Ukrainian defences, see Google Threat Analysis Group and Willett, *op. cit.*, p. 12. For the paradoxical logic of strategy, see Edward N. Luttwak, *Strategy: The Logic of War and Peace* (Cambridge, MA: Belknap Press, 1987).

<sup>26</sup> Willett, *op. cit.*, p. 16.

<sup>27</sup> For a discussion on the limits of strategic bombing, see David J. Lonsdale and Thomas M. Kane, *Understanding Contemporary Strategy*, 2<sup>nd</sup> Edition (Abingdon: Routledge, 2020), pp. 199-201.

## Conclusion – A Cyber RMA?

Now that we have the evidence of a major war between two developed states, how do we assess cyber power as a potential RMA? Certainly, cyber passes the new technology test. And, as indicated earlier, it now has organisations dedicated to exploiting the cyber domain for strategic effect, both offensively and defensively. Operationally, cyber has also developed distinct traits. Whether one chooses the NCSC's four stages of a cyber operation, or Lockheed Martin's seven-stage Cyber Kill Chain, it is evident that cyber power has definite operational concepts.<sup>28</sup> And yet, as evidenced once again in Ukraine, cyber has disappointed when it comes to the fourth characteristic of an RMA, a leap in strategic efficacy. Cyber power can certainly make a contribution to strategic activity. Indeed, in certain circumstances, it may be the preferred mode of operation. This could be the case, for example, if one is planning a discreet, limited raid on enemy infrastructure. However, when it comes to lasting strategic effect, it appears that physical expressions of power remain paramount. In this sense, the war in Ukraine suggests that cyber power has still not come of age as a potent instrument of strategy. Perhaps it never will.

*David J. Lonsdale is a Senior Lecturer in War Studies at the University of Hull, United Kingdom.*

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<sup>28</sup> National Cyber Security Centre, *How Cyber Attacks Work*, October 14, 2015, available at <https://www.ncsc.gov.uk/information/how-cyber-attacks-work>; Lockheed Martin, *Cyber Kill Chain*, available at <https://www.lockheedmartin.com/en-us/capabilities/cyber/cyber-kill-chain.html>. Also see, International Association of Chiefs of Police: Law Enforcement Cyber Center, *Cyber Attack Lifecycle*, available at <https://www.iacpcenter.org/resource-center/what-is-cyber-crime/cyber-attack-lifecycle/>.



# Deterrence Lessons from Russia's Invasion of Ukraine: One Year After

Keith B. Payne

## Introduction

According to Admiral Charles Richard, then Commander of Strategic Command, deterrence working as we expect is needed for U.S. military planning at all levels: "Every operational plan in the Department of Defense, and every other capability we have in DOD, rests on the assumption that strategic deterrence, and in particular nuclear deterrence, ... is holding right. And, if that assumption is not met, particularly with nuclear deterrence, nothing else in the Department of Defense is going to work the way it was designed."<sup>1</sup> That reality should make U.S. defense planners truly uncomfortable because the functioning of deterrence is increasingly problematic. When deterrence is essential but problematic, America has a significant challenge ahead.

This point is pertinent to developments in the war in Ukraine over the past year because those developments illustrate in an irrefutable way that today's deterrence challenge exceeds that of our Cold War experience and policy. The basic principles of deterrence theory endure, but its application must be adjusted to specific conditions and circumstances. The contemporary developments fully on display in Ukraine cast doubt on our accumulated wisdom about the application of deterrence and what we think we know about how deterrence will work.

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<sup>1</sup> Quoted in, Amy Hudson, "Richard Says Nuclear Deterrence Connected to All Other DOD Capabilities," *Air Force Magazine*, May 7, 2021, available at <https://www.airforcemag.com/richard-says-nuclear-deterrence-connected-to-all-other-dod-capabilities/>.



This brief essay will discuss several of these developments readily apparent in Ukraine and their implications for deterrence.

### Misreading the Times

Immediately following the Cold War, many Western leaders, academics and commentators were convinced that a “new world order” was emerging. George H.W. Bush described this “new world order” in which “the principles of justice and fair play protect the weak against the strong.”<sup>2</sup> Nuclear weapons and deterrence were to play an ever-declining role and great power war was expected to be a thing of the past. German Foreign Minister Westerwelle labeled nuclear weapons “relics of the Cold War.”<sup>3</sup> The U.S. “unipolar power” era was to transform the old anarchic, war-prone international system—establishing the basis for global nuclear disarmament.<sup>4</sup>

Yet, Moscow’s invasion of Ukraine and nuclear threats over the past year prove as nothing else could that the widespread expectations of a new world order following the Cold War were as bogus as have been all such past expectations of a coming new world order—whether with the League of Nations following World War I or the United Nations following World War II.

Correspondingly, a fundamental development of this past year that now challenges deterrence expectations is that Russia includes—indeed, it highlights—coercive

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<sup>2</sup> *Public Papers of the Presidents of the United States: George H.W. Bush* (1991, Book 1), 219-21, National Archives and Records Administration.

<sup>3</sup> Quoted in, “U.S. Plans Help German Nuclear Arms Removal: Minister,” *Reuters*, April 7, 2010, available at <https://www.reuters.com/article/germany-nuclear-idUKLDE6360X120100407>.

<sup>4</sup> “It is difficult to think of any moment since the height of the Roman empire in which the establishment of a world state was more possible than now.” Campbell Craig, *Glimmer of a New Leviathan* (New York: Columbia University Press, 2003), pp. 171-172.

nuclear first-use threats in its repertoire of power. For years, and even after Russia's invasion of Ukraine and associated stream of nuclear first-use threats, some commentators have continued to assert that this Russian threat of nuclear escalation—its “escalate to win” regional strategy—is an exaggerated misreading of Russian doctrine.<sup>5</sup>

However, it now is irrefutable that Moscow uses nuclear first-use threats as part of its “escalate to win” strategy to constrain Western options in response to its expansionist aggression. And, it appears that the fear of starting “World War III,” as President Biden has put it, does indeed constrain Washington's—and other Western capitals'—support for Ukraine.<sup>6</sup> This is entirely understandable, but it

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<sup>5</sup> See for example, Olga Oliker, “Putin's Nuclear Bluff: How the West Can Make Sure Russia's Threats Stay Hollow,” *Foreign Affairs Online*, March 11, 2022, available at <https://www.foreignaffairs.com/articles/ukraine/2022-03-11/putins-nuclear-bluff>.

<sup>6</sup> See for example, Vazha Tavberidze, “Former NATO Commander Says Western Fears Of Nuclear War Are Preventing A Proper Response To Putin,” *Radio Free Europe/Radio Liberty*, April 7, 2022, available at <https://www.rferl.org/a/breedlove-nuclear-fears-west-deterred/31791020.html>; Lt. Gen. Henry Obering III (ret.) and Robert Joseph, “Putin's nuclear threats worked against Biden — we must act before China gets the same idea,” *New York Post Online*, June 21, 2022, available at <https://nypost.com/2022/06/21/putins-nuclear-threats-worked-against-biden-us-must-act-against-china/>; Richard Haass, “Op-Ed: How the nuclear weapons taboo is fading,” *Los Angeles Times*, October 19, 2022, available at <https://www.latimes.com/opinion/story/2022-10-19/russia-putin-ukraine-nuclear-weapons-tactical>; Daniel Michaels, “Jens Stoltenberg Prepares to Confront Putin in Extra Year at NATO's Helm,” *Wall Street Journal*, July 2, 2022, available at <https://www.wsj.com/articles/jens-stoltenberg-prepares-to-confront-putin-in-extra-year-at-natos-helm-11656763204>; Shlomo Ben-Ami, “Russia's nuclear threat has worked,” Australian Strategic Policy Institute, June 8, 2022, available at <https://www.aspistrategist.org.au/russias-nuclear-threat-has-worked/>; Nina Tannenwald, “The Bomb in the Background: What the War in Ukraine Has Revealed About Nuclear Weapons,” *Foreign Affairs Online*, February 24, 2023, available at <https://www.foreignaffairs.com/ukraine/bomb-background-nuclear->

illustrates the power that Russian nuclear escalation threats have to deter Western actions.

Whether Russia actually will employ nuclear weapons as part of its war on Ukraine, as opposed to engaging only in the threat thereof, is an open but separate question. Moscow's exploitation of coercive nuclear threats to advance its revanchist regional goals—which is on display in Ukraine—compels rethinking multiple fundamental issues, including: the character of the international order; the requirements for deterrence and the prospect of its failure; U.S. freedom to defend Western interests via extended deterrence; and, the future of arms control.

Russia sees itself as being at war with the United States and is in a de facto alliance with an equally revanchist China, which appears to endorse Moscow's goal of absorbing Ukraine.<sup>7</sup> This geopolitical reality represents a tectonic shift for the worse in the international threat environment facing the West. Yet, much of the Washington establishment continues to speak about the emerging international context in euphemistic terms such as "Great Power competition" and the "international community,"<sup>8</sup> as if Eurasia were a neighborhood with secure property boundaries and members who simply are engaged in a vigorous, rules-based sporting event. Hopes and

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weapons; and Joseph Cirincione, "Why Hasn't Putin Used Nuclear Weapons?" *TheDailyBeast.com*, February 9, 2023, available at <https://www.thedailybeast.com/why-hasnt-putin-used-nuclear-weapons>.

<sup>7</sup> Monika Scislowska, "NATO chief sees 'some signs' China could back Russia's war," *Associated Press*, February 22, 2023, available at <https://abcnews.go.com/International/wireStory/nato-chief-sees-signs-china-back-russias-war-97397155>.

<sup>8</sup> Congressional Research Service, *Renewed Great Power Competition: Implications for Defense – Issues for Congress, Updated*, December 21, 2021, Congressional Research Service, available at <https://crsreports.congress.gov/product/pdf/R/R43838/83>.

expectations to the contrary, this is a grossly mistaken image of the international system.

Mistaken images of the international system cause distorted expectations about how deterrence will function. For example, the Biden Administration apparently had some confidence that Western economic sanctions and the “international community’s” censure would deter Russia from attempting to conquer Ukraine.<sup>9</sup> This reflected the familiar Western expectation that an opponent’s fear of sanctions and condemnation from the “international community” will somehow moderate its aggression. That expectation should be recognized for the vanity and misunderstanding of Russia that it is. Events in Ukraine demonstrate beyond doubt that Russia, in league with China, despises the West’s “international community,” seeks to overturn the Western rules-based order, and is willing to inflict and accept enormous pain to do so. Recognition of this new threat environment, as is now readily apparent with developments in Ukraine, appears limited.

For example, Moscow effectively all but withdrew from New START over a year ago; Putin has now done so formally in response to Western support for Ukraine,<sup>10</sup> and China shows zero inclination of interest in arms control. Nevertheless, many U.S. commentators and some political leaders continue to extol the virtues of, and call for a continuation of, the nuclear arms control process begun during the Cold War, as if that process is still alive and

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<sup>9</sup> See the discussion in, Paul D. Shinkman, “Putin’s Hollow Nuclear Threat,” *U.S. News and World Report*, February 24, 2023, available at <https://www.usnews.com/news/the-report/articles/2023-02-24/why-ukraine-wont-lead-putin-to-nuclear-war>.

<sup>10</sup> Ann M. Simmons, Sabrina Siddiqui and Austin Ramzy, “Putin Suspends Nuclear Pact, Biden Says Russia Won’t Win,” *Wall Street Journal*, February 22, 2023, p. A1.

holds great potential.<sup>11</sup> The Biden Administration's 2022 *Nuclear Posture Review* goes so far as to claim that "Mutual, verifiable nuclear arms control offers the most effective, durable and responsible path to achieving a key goal: reducing the role of nuclear weapons in U.S. strategy."<sup>12</sup> Yet, for arms control to hold any such potential, the United States would need willing partners that adhere to agreed commitments. That hardly describes Russia or China.

There appears to be limited willingness in at least some Washington circles to recognize the harsh reality that is on display in Ukraine: The United States is in a new, unprecedentedly dangerous world, and a "business as usual" approach to deterrence and its requirements is now imprudent folly. Mr. Putin has set up a comprehensive rationale for nuclear first use in Ukraine and has added that he is not bluffing. His rationale for such thinking may seem absurd; but he appears sincerely to believe it. Typical Western hopes that a global "nuclear taboo" will prevent nuclear employment are now akin to expectations in the early 20<sup>th</sup> century that world public opinion would ensure

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<sup>11</sup> See for example, Joseph Cirincione, "Don't Panic About Putin's Nuclear Saber-Rattling: The embattled Russian leader's latest threats aren't grave cause for concern in the short term. But we need to change our long-term plan for managing his nukes," *TheDailyBeast.com*, February 21, 2023, available at <https://www.thedailybeast.com/dont-panic-about-putins-nuclear-saber-rattling>; and, Matt Korda and Hans Kristensen, *If Arms Control Collapses, US and Russian Strategic Arsenals Could Double In Size*, Federation of American Scientists, February 7, 2023, available at <https://fas.org/blogs/security/2023/02/if-arms-control-collapses-us-and-russian-strategic-nuclear-arsenals-could-double-in-size/>.

<sup>12</sup> U.S. Department of Defense, *2022 Nuclear Posture Review* (Washington, D.C.: Department of Defense, 2022), p. 1, available at <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF>.

peace.<sup>13</sup> No, it is the West's nuclear deterrence strategy that must be called upon to help provide an answer.

Nevertheless, based on the familiar Cold War balance of terror narrative and the expected deterring power of censure by the "international community," many in the West remain convinced that there exists an effective global taboo against nuclear employment and, correspondingly, that only an *irrational* leadership could consider the first use of nuclear weapons.<sup>14</sup> That is wonderfully comforting, but the truth is that when an opponent deems the prize it seeks to be its rightful due and of existential national (or personal) importance, there should be zero optimistic assumptions about what even a rational opponent will *not* dare to do.

That level of invested commitment is on display with regard to Russia's views of Ukraine (and China's views of Taiwan). In such cases, including in Ukraine, the level of commitment and willingness to accept costs is likely to be at least as weighty in determining how deterrence functions as is the number and correlation of forces, and probably more so—potentially to Russia's advantage. U.S. deterrence strategies and capabilities must recognize those truths; it is unclear that they do so.

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<sup>13</sup> It should be noted in this regard that 71 percent of the Russian public reportedly supports Putin's war against Ukraine. See, Ann M. Simmons, "Putin Equates Ukraine, Nazis, Threatens to Escalate War," *Wall Street Journal*, February 3, 2023, p. A7, available at <https://www.wsj.com/podcasts/google-news-update/putin-links-war-in-ukraine-with-victory-over-nazis/7d7d79a8-a07a-4b09-a010-dc3b142fe988>.

<sup>14</sup> Tannenwald, "The Bomb in the Background: What the War in Ukraine Has Revealed About Nuclear Weapons," *op. cit.*

## The Enduring Value of and Need for Nuclear Deterrence

Events in Ukraine also teach us that the West's continuing aspirations for global nuclear disarmament are the contemporary great illusion. Western advocates of the UN's nuclear ban treaty often stigmatize nuclear deterrence and seek to shame those who support deterrence.<sup>15</sup>

Yet, the past year has demonstrated once again that solemn commitments to nuclear agreements can be hollow, and that a nuclear shadow will hang over any great power crisis. The question must be asked: If NATO had no nuclear deterrent, how much confidence could the West now have that Russia would *not* employ nuclear weapons in the current crisis? It is not difficult to understand that the United States must be able to deter coercive nuclear escalation threats, and that means the U.S. nuclear arsenal must backstop U.S. conventional capabilities for defensive deterrence purposes in Europe and East Asia. This continuing importance of nuclear deterrence to Western security must shape the role and value Washington attributes to nuclear weapons – and should bring to an end the stigmatization of nuclear deterrence policies and capabilities.

In addition, a long-standing adage in Washington is that U.S. conventional strength can reduce or even eliminate U.S. reliance on nuclear deterrence, a continuing U.S. policy priority.<sup>16</sup> That anticipated linkage and goal may have been reasonable immediately after the Cold War, in America's "unipolar" moment. However, given the new threat

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<sup>15</sup> See the discussion in Brad Roberts, "Ban the Bomb or Bomb the Ban? Next Steps on the Ban Treaty," *European Leadership Network, Global Security Policy Brief* (March 2018), available at <https://www.europeanleadershipnetwork.org/wp-content/uploads/2018/03/180322-Brad-Roberts-Ban-Treaty.pdf>.

<sup>16</sup> 2022 *Nuclear Posture Review*, op. cit., p. 2.

environment on display in Ukraine, it should be clear that strengthening U.S. conventional forces is necessary, but that U.S. reliance on nuclear deterrence will remain regardless.

Why so? Because establishing even the U.S. conventional capabilities needed to defeat Russia and China in a regional conventional war, were the United States to do so, would likely compel Moscow and Beijing to consider more earnestly engaging in nuclear escalation, if needed, to deter or defeat U.S. power projection and thereby achieve their respective existential goals. Given events in Ukraine, it is now fully apparent that the United States must be able to deter regional conventional attacks and also opponents' nuclear escalation in the event opponents consider it as the path to victory.

In the emerging threat context in which opponents do indeed aspire to use nuclear escalation threats in just this way,<sup>17</sup> regional stability cannot be separated from U.S. nuclear deterrence capabilities. Indeed, absent a credible U.S. deterrence answer to Russia's theory of victory based on nuclear escalation threats, Moscow is likely to see regional war to advance existential goals as less risky, i.e., this apparent deterrence gap invites Russia's aggression, and likely China's. In short, there is no plausible route to lowering U.S. reliance on nuclear deterrence in this regard because Russia and China have a say in that possibility, and they are not giving the United States that option. Ignoring their voices in this matter is dangerous.

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<sup>17</sup> See for example, Brad Roberts, "On the Need for a Blue Theory of Victory," *WarOnTheRocks.com*, September 17, 2020, available at <https://warontherocks.com/2020/09/on-the-need-for-a-blue-theory-of-victory/#>.



## The Perception of Stakes

Another lesson from Ukraine involves how Moscow sees its stakes in comparison to how it sees Western stakes, and what that means for deterrence.

Russia deems control of Ukraine to be of existential importance; Ukraine is considered rightfully Russia's and stolen by a villainous West. Recovering Ukraine is central to Putin's version of "manifest destiny" and a matter of correcting a great, historic wrong. As noted above, Moscow clearly has a high tolerance for inflicting pain and accepting pain in pursuit of this existential goal. For an historical analogy, think of Hitler's unalterable drive to destroy the 1919 Versailles Treaty and pursuit of German *Lebensraum*.

Rightly or wrongly, Moscow appears to see an enormous asymmetry in the West's view of the stakes involved and its own, i.e., that the outcome in Ukraine is not an existential matter for the West.<sup>18</sup> And, again, as noted above, this asymmetry in Moscow's perception of stakes works to its coercive advantage.

How so? Moscow's theory of victory appears to be predicated on this perceived asymmetry in commitment and the associated effects of Russian nuclear threats and predictable Western fatigue. Given the perceived asymmetry in stakes and related anticipation of Western fatigue, even a frozen conflict may be to Moscow's coercive advantage. Defeat is not an option, but a conflict that outlasts the West's endurance may well be. The disgraceful U.S. 2021 withdrawal from Afghanistan does not help perceptions in this regard.

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<sup>18</sup> See Daniel Stewart, "Medvedev says 'NATO would not intervene directly' if Russia used nuclear weapons against Ukraine," September 27, 2022, available at <https://www.msn.com/en-us/news/world/medvedev-says-%C2%ABnato-would-not-intervene-directly%C2%BB-if-russia-used-nuclear-weapons-against-ukraine/ar-AA12hZnv?li=BBnb7Kz>.

A final point in this discussion of differing perceptions of stakes in Ukraine is that deterring Russia is not simply about creating some level of threat that Moscow will find painful, and thus is expected to deter. Just brandishing a threat is *not* deterrence. U.S. deterrence strategies must compel opponents to conclude, *per their own values and priorities*, that the violation of U.S. redlines is a *more miserable option* than their continuing to accept a geopolitical condition they define as *intolerable* – *whether that condition is continuing to tolerate an independent Ukraine or an autonomous Taiwan*.

In short, U.S. deterrence threats must promise costs that are *more intolerable*, as opponents calculate cost, than their continuing acceptance of a world order they find intolerable. The United States must brandish a prospective cost that is greater than what our opponents will have to endure if they do *not* alter the intolerable status quo. That is no small task and there is no methodology that can calculate that deterrence threat requirement with confidence. Think of how this reality comports with the point that all U.S. military planning depends on deterrence working reliably. We should be concerned.

Commentators often confidently presume to know what opponents won't "dare to do," including with reference to Russia's or China's future actions. It is comforting to believe with confidence that one knows how and when deterrence will work.<sup>19</sup> That belief greatly eases the

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<sup>19</sup> Such commentator claims are frequent. See for example William J. Perry and Tom Z. Collina, *The Button* (Dallas, TX: BenBella Books, 2020), pp. 118-119, 128, 144; Kingston Reif and Shannon Bugos, *Issue Brief: Responses to Common Criticisms of Adjusting U.S. Nuclear Modernization Plans*, Arms Control Association, May 18, 2021, available at <https://www.armscontrol.org/issue-briefs/2021-05/responses-common-criticisms-adjusting-us-nuclear-modernization-plans>. A senior analyst with the Institute for the Study of War reportedly observed with all apparent confidence that, "The likelihood of Russia choosing – or Putin choosing – to use nuclear weapons directly against the West is

uncertainty and stress involved in deterrence calculations. But, events over the past year have illustrated that such confidence is convenient, but unwarranted and potentially dangerous. That danger now is apparent in Russia's nuclear first-use threats and its bloody drive to conquer Ukraine. It may become obvious in the Taiwan Strait.

### **Conclusion**

In conclusion, after decades of Western confidence in the blossoming of a beautiful new world order, Russia's war against Ukraine over the past year has made painfully obvious that the old anarchic international system endures. In that system, Moscow will use force and nuclear first-use threats in its bid to destroy the status quo and restore its empire. The debate about that is over. And, it also is now apparent that those nuclear threats have at least a measure of the desired effect on Washington and other Western capitals. Whether Putin will choose to employ nuclear weapons is not clear and likely subject to many competing perceptions and motivations. But, the war in Ukraine illustrates the power of those threats and, correspondingly, that the Western anticipation of a declining need for deterrence and nuclear weapons—a particularly fashionable expectation in the immediate aftermath of the Cold War—should be discarded. The implications of this truth should affect U.S. calculations of its deterrence requirements vis-à-vis Russia and China.

The deterrence challenge vis-à-vis Moscow, in league with China, is now much more complex and our past confident expectations are now uncertain. This is what we have learned about deterrence after one year of brutal war in Ukraine; it is a sobering lesson that should move Western

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astronomically low. It should not even be seriously considered at this stage." Quoted in, Shinkman, "Putin's Hollow Nuclear Threat," op. cit.

thinking away from business as usual but, as yet, appears not to have done so in important ways.

*Dr. Keith B. Payne is a co-founder of the National Institute for Public Policy, professor emeritus at the Graduate School of Defense and Strategic Studies, Missouri State University, a former Deputy Assistant Secretary of Defense and former Senior Advisor to the Office of the Secretary of Defense. This essay is adapted from Keith B. Payne, Deterrence Lessons from Russia's Invasion of Ukraine: One Year After, Information Series, No. 548, February 27, 2023, available at [https://nipp.org/information\\_series/keith-b-payne-deterrence-lessons-from-russias-invasion-of-ukraine-one-year-after-no-548-february-27-2023/](https://nipp.org/information_series/keith-b-payne-deterrence-lessons-from-russias-invasion-of-ukraine-one-year-after-no-548-february-27-2023/).*



# Preliminary Lessons Learned from Russia's Brutal and Illegal War Against Ukraine

David J. Trachtenberg

February 24, 2023 marked the one-year anniversary of Russia's latest invasion of Ukraine. Much has already been written about what we should take away from this conflict—especially Russia's poor military performance. Moscow's inability to subjugate Ukraine after a year of intense and bloody fighting suggests there are numerous lessons to be learned—lessons applicable to the United States, NATO, Russia, Ukraine, and America's other friends and enemies.

**First**, this conflict has exposed the fallacy of what has been called “deterrence by detection” or “deterrence by disclosure.”<sup>1</sup> Prior to Russia's invasion, senior Biden Administration officials stated that publicly exposing Moscow's actions would serve as a deterrent to Russian aggression. A significant amount of intelligence information was released as part of a “name and shame” approach. As one official reportedly stated, “Our theory has been that putting true information into the public domain, which was bearing out in real time because everybody can see what they're actually doing, was the best way to prevent the Russians and what they always do, which is to try to control the narrative with disinformation.”<sup>2</sup> However,

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<sup>1</sup> David J. Trachtenberg, “The Fallacy of ‘Deterrence by Detection’,” *Information Series*, No. 562, September 11, 2023, available at [https://nipp.org/information\\_series/david-j-trachtenberg-the-fallacy-of-deterrence-by-detection-no-562-september-11-2023/](https://nipp.org/information_series/david-j-trachtenberg-the-fallacy-of-deterrence-by-detection-no-562-september-11-2023/).

<sup>2</sup> Michael D. Shear, Julian E. Barnes and Eric Schmitt, “Wooing Allies, Publicizing Putin's Plans: Inside Biden's Race to Prevent War,” *The New York Times*, February 21, 2022, available at <https://www.nytimes.com/2022/02/21/us/politics/biden-putin.html>.

simply telling Russia we knew what they were up to in planning to invade Ukraine, and that they would be severely penalized if they violated Ukraine's sovereignty and territorial integrity, was clearly insufficient as a deterrent.

So, I would argue that one lesson is that aggressors bent on conquest are unlikely to be deterred by threats they consider less important than the goals they seek to achieve by waging war. For deterrence to work, there must be an accurate understanding of the objectives and motivations of an adversary. Lacking this, deterrence is problematic.

**Second**, we have learned that America's "arsenal of democracy" lacks timely resilience. And, China has learned that the U.S. defense industrial base would apparently be hard-pressed to support a major conflict over Taiwan. Russia's war against Ukraine has exposed shortcomings in the U.S. defense industry's ability to produce and resupply weapons, as inventories decline, and the pace of weapons transfers exceeds industry's ability to replenish stockpiles. One recent report characterized this as an "empty bins" crisis, noting, "The U.S. defense industrial base is not adequately prepared for the international security environment that now exists.... In a major regional conflict—such as a war with China in the Taiwan Strait—the U.S. use of munitions would likely exceed the current stockpiles of the U.S. Department of Defense."<sup>3</sup>

U.S. allies are encountering similar problems. As NATO Secretary General Stoltenberg stated last week, "The war in Ukraine is consuming an enormous amount of munitions and depleting allied stockpiles.... The current rate of

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<sup>3</sup> Seth G. Jones, *Empty Bins in a Wartime Environment: The Challenge to the U.S. Defense Industrial Base*, Center for Strategic and International Studies, January 2023, p. 1, available at [https://csis-website-prod.s3.amazonaws.com/s3fs-public/2023-01/230119\\_Jones\\_Empty\\_Bins.pdf?VersionId=mW3OOngwul8V2nR2EHKBYxkpiOzMiS88](https://csis-website-prod.s3.amazonaws.com/s3fs-public/2023-01/230119_Jones_Empty_Bins.pdf?VersionId=mW3OOngwul8V2nR2EHKBYxkpiOzMiS88).

Ukraine's ammunition expenditure is many times higher than our current rate of production...." For large-caliber ammunition, he noted that "orders placed today would only be delivered two-and-a-half years later."<sup>4</sup>

**Third**, although NATO has remained unified to date in support for Ukraine, concerns that the war may become a "frozen conflict" lasting for years suggest fissures may open in alliance unity—including domestically in the United States—that ultimately work to Russia's advantage.

Already, there have been signs that alliance resolve is weakening. In the United States, there are those who have criticized continued U.S. security assistance to Ukraine, which has already approached \$50 billion in supplemental appropriations.<sup>5</sup> Recent polls show European public support for Ukraine flagging, with less than 50 percent of the populations in Greece, Slovakia, and Bulgaria supporting continued assistance to Ukraine and majorities in other European Union countries favoring a negotiated deal with Russia.<sup>6</sup> So, what some may see as a Russian failure may turn out to be quite the opposite the longer the conflict drags on.

**Fourth**, some believe Russia has learned from its mistakes and has shown an ability to adapt its tactics, such as using swarms of drones to disable Ukraine's infrastructure and

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<sup>4</sup> "NATO chief says Ukraine's ammunition use outstripping supply," *Associated Press*, February 13, 2023, available at <https://apnews.com/article/russia-ukraine-nato-politics-jens-stoltenberg-business-c50b44b430ae86f289baee9da5e35345>.

<sup>5</sup> Christina L. Arabia, Andrew S. Bowen, and Cory Welt, "U.S. Security Assistance to Ukraine," Congressional Research Service, February 27, 2023, available at <https://crsreports.congress.gov/product/pdf/IF/IF12040>.

<sup>6</sup> John Psaropoulos, "Is Europe really united in backing Ukraine and isolating Russia?," *Aljazeera*, February 24, 2023, available at <https://www.aljazeera.com/news/2023/2/24/has-the-ukraine-war-strengthened-europe-or-weakened-it>.



electronic warfare capabilities that disrupt Ukrainian military communications.<sup>7</sup> Notwithstanding its battlefield problems, Russia may be down, but it is not out, despite the Chairman of the Joint Chiefs of Staff, Gen. Mark Milley, stating, “Russia has lost... strategically, operationally and tactically.”<sup>8</sup>

Despite its mistakes and the general assessment that Russian military forces have performed poorly in Ukraine, Russia is gaining valuable warfighting experience. While the Russian Army’s reputation may be tarnished, the ultimate outcome of its war against Ukraine remains uncertain, and it would be a mistake to write off the Russian military as incapable of adapting to realities on the battlefield. As one analysis concluded, adjustments have been made that “improved Russia’s ability to move spare parts, munitions, fuel, and other matériel to forward-deployed Russian forces,” but “many of Russia’s failures will require years of changes and will force the Russian military to rethink its training, organizational structure, culture, and planning to improve readiness and military performance.”<sup>9</sup>

**Fifth**, a strategy of incrementalism is not a strategy of victory. U.S. support to Ukraine has been slow, halting, and reactive. The Biden Administration’s fear of escalation

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<sup>7</sup> Dara Massicot, “What Russia Got Wrong: Can Moscow Learn From Its Failures in Ukraine?,” *Foreign Affairs*, March/April 2023, available at <https://www.foreignaffairs.com/ukraine/what-russia-got-wrong-moscow-failures-in-ukraine-dara-massicot>.

<sup>8</sup> Tassilo Hummel and Charlotte Van Campenhout, “Chairman of US Joint Chiefs of Staff: ‘Russia has lost strategically, operationally and tactically,’” *Reuters*, February 14, 2023, available at <https://www.reuters.com/world/us/chairman-us-joint-chiefs-staff-russia-has-lost-strategically-operationally-2023-02-14/>.

<sup>9</sup> Seth G. Jones, “Russia’s Ill-Fated Invasion of Ukraine: Lessons in Modern Warfare,” Center for Strategic and International Studies, June 1, 2022, available at <https://www.csis.org/analysis/russias-ill-fated-invasion-ukraine-lessons-modern-warfare>.

allowed Putin to seize the initiative and to determine the contours of the U.S. and Western response. This is hardly a formula for success now or in the future.

A policy of what I would call “strategic hesitation” is more likely to embolden U.S. adversaries than deter them. Vacillating on the one hand between full-throated verbal support for an independent, democratic country that has been invaded by an aggressive, authoritarian neighbor in contravention of international law and explicit security guarantees, and nervousness over providing military support that might be perceived by an adversary as escalatory on the other hand, opens the door to adversary miscalculation and increases the risk of potential challenges to U.S. national security interests that may lead to direct conflict.

**Sixth**, some have speculated that the prospect of nuclear escalation has deterred Russia from considering nuclear use. Yet, one year on, and having laid the predicate for nuclear use by declaring that Ukraine poses an existential threat to the Russian Federation (as Putin has repeatedly declared),<sup>10</sup> is Moscow willing to accept a conventional defeat without escalating to the nuclear level?

The *Executive Order On Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence* signed by Putin in June 2020 declares that Russia may use nuclear weapons to counter aggression “when the very existence of the state is in jeopardy.”<sup>11</sup> And Putin himself declared that the

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<sup>10</sup> Speaking about the conflict in Ukraine during his Presidential Address to the Federal Assembly, Vladimir Putin asserted that “this represents an existential threat to our country.” See *Presidential Address to Federal Assembly*, February 21, 2023, available at <http://www.en.kremlin.ru/events/president/transcripts/messages/70565>.

<sup>11</sup> *Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence*, June 8, 2020, available at [https://archive.mid.ru/en/web/guest/foreign\\_policy/international\\_s](https://archive.mid.ru/en/web/guest/foreign_policy/international_s)

conflict in Ukraine “represents an existential threat to our country.”<sup>12</sup> As one analyst recently commented, “We should not assume that Russian nuclear threats are mere rhetoric.... escalatory processes have a way of driving leaders to behavior they never would have contemplated in normal times.”<sup>13</sup>

**Seventh**, one must ask if the U.S. intelligence community severely underestimated Ukraine’s ability and determination to defend itself against a larger and more capable foe. Clearly, the conventional wisdom assumed that Russia would accomplish its military goals and defeat Ukraine in short order. However, Ukrainian President Volodymyr Zelensky remains defiant, Kyiv has not fallen, and Russian territorial gains remain limited.

Intelligence information is never perfect, but the current situation in Ukraine appears to highlight a gross failure to ascertain the true state of military preparedness, morale, logistical capabilities, and other factors on both sides that influence the outcome of any conflict. Perhaps it is time to reevaluate the methods and analytic approach the intelligence community uses and to conduct a “Team B” type assessment of the intelligence community’s processes.

**Eighth**, Ukraine has learned that even a superior military force commanded by an authoritarian leadership with little sympathy for the principles of basic human decency can be

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<sup>12</sup> Vladimir Putin, “Presidential Address to Federal Assembly,” February 21, 2023, available at <http://en.kremlin.ru/events/president/news/70565>.

<sup>13</sup> Loren Thompson, “Washington Is Escalating Its Military Role In Ukraine. What Happens When Russia Reacts?,” *Forbes*, February 13, 2023, available at <https://www.forbes.com/sites/lorenthompson/2023/02/13/washington-is-escalating-its-military-role-in-ukraine-what-happens-when-russia-reacts/?ss=aerospace-defense&sh=75921ca0659b>.

stymied, if not defeated, by a free people determined to shape their own future for themselves. While it is certainly true that Ukraine has benefited from the significant military assistance provided by the United States and its NATO allies, it is Ukrainians who are fighting and dying on their own soil to protect their freedoms, independence, and sovereignty.

Despite the incessant bombardment of their homeland by Russian forces, Ukrainian forces are fighting bravely and with a level of competence and ingenuity that has bolstered their morale. As one senior military official in the German High Command noted in 1940, "The final word regarding victory and defeat rests not on arms and equipment, nor the way in which they are used, but on the morale of the troops."<sup>14</sup> This, of course, is no guarantee that Ukraine will ultimately emerge victorious, but it may help explain the current dynamics on the battlefield.

**Ninth**, U.S. allies and friends rightfully wonder if the U.S. extended nuclear deterrent remains credible, or if the American nuclear umbrella has so many holes that they need to consider acquiring nuclear weapons themselves to guarantee their own security. While some historically neutral countries like Finland and Sweden now seek the protection of the U.S. extended nuclear deterrent that NATO membership brings, others appear increasingly reluctant to place unbridled faith in America's commitment to guarantee their own security.

For example, despite the recent high-profile reaffirmation of the "ironclad" U.S. commitment to the security of the Republic of Korea, polls show more than 70 percent of South Koreans favor the deployment of nuclear weapons on their territory as a deterrent to North Korean and Chinese aggression, with an even higher percentage

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<sup>14</sup> Hermann Foertsch, *The Art of Modern Warfare* (New York, NY: Oscar Piest, 1940).

favoring an indigenous South Korean nuclear deterrent.<sup>15</sup> Even in Japan, the only country to have suffered from not one but two atomic bombings, some officials have begun to question whether Japan's post-war pacifism and anti-nuclear stance should be reconsidered. Former Prime Minister Shinzo Abe stated that "Japan should also consider various options in its discussions" on security, to include the possible deployment of U.S. nuclear weapons on Japanese soil.<sup>16</sup>

**Tenth,** Russia's trashing of the 1994 Budapest Memorandum that guaranteed Ukraine's independence, sovereignty, and territorial integrity demonstrates that Moscow will ignore any agreement that doesn't serve its purposes, meaning the prospects for meaningful arms control are practically nil. In fact, Putin announced that Russia is suspending its participation in the New START Treaty, the only strategic arms control treaty still in force.<sup>17</sup>

Such an action should not come as a surprise, as Russia (along with its Soviet predecessor) habitually violated arms control agreements whenever such actions suited its objectives. The Anti-Ballistic Missile (ABM) Treaty, the Intermediate-Range Nuclear Forces (INF) Treaty, the Open

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<sup>15</sup> Hiroshi Minegishi, "What makes South Koreans so eager for nuclear deterrent?" *Nikkei Asia*, February 19, 2023, available at <https://asia.nikkei.com/Politics/Defense/What-makes-South-Koreans-so-eager-for-nuclear-deterrent2#:~:text=TOKYO%20%2D%2D%20A%20large%20majority,nuclear%20arms%20in%20the%20country>.

<sup>16</sup> Jesse Johnson, "Japan should consider hosting U.S. nuclear weapons, Abe says," *The Japan Times*, February 27, 2022, available at <https://www.japantimes.co.jp/news/2022/02/27/national/politics-diplomacy/shinzo-abe-japan-nuclear-weapons-taiwan/>.

<sup>17</sup> Andrew Roth and Julian Borger, "Putin says Russia will halt participation in New Start nuclear arms treaty," *The Guardian*, February 21, 2023, available at <https://www.theguardian.com/world/2023/feb/21/putin-russia-halt-participation-new-start-nuclear-arms-treaty>.

Skies Treaty, the New START Treaty, and other international agreements were cast aside unilaterally by Moscow when compliance with them no longer served Russia's interests. Despite a history of such behavior, Biden Administration officials continue to assert the need for arms control agreements with Russia. Indeed, the 2022 *Nuclear Posture Review* asserts that "Mutual, verifiable nuclear arms control offers the most effective, durable and responsible path to reduce the role of nuclear weapons in our strategy and prevent their use."<sup>18</sup> And, despite Russia's refusal to share data on its strategic forces as the New START Treaty requires, the United States unilaterally provided Russia with data on U.S. strategic force levels per the treaty's requirement—an effort to, in the words of one senior U.S. arms control official, "strengthen transparency and predictability."<sup>19</sup> Unsurprisingly, this gesture went unreciprocated by Moscow.

**Eleventh,** China has learned that the United States has established redlines for itself when confronting a major nuclear adversary. Although those redlines appear to have shifted somewhat with respect to the provision of military assistance to Ukraine, the Biden Administration's support is still inhibited by fears of escalation. Beijing must recognize this in its own deterrence calculations.

Moreover, Beijing has learned that actions taken now to offset the potential economic penalties it may face from taking aggressive military actions may insulate it from the

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<sup>18</sup> Department of Defense, 2022 *Nuclear Posture Review*, p. 16, available at <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF>.

<sup>19</sup> See tweet by Bonnie Jenkins, Under Secretary of State for Arms Control and International Security, May 15, 2023, available at <https://twitter.com/UnderSecT/status/1658200030778368002?ctx=HHwWhlCckY-JjoMuAAAA>.

effect of Western sanctions.<sup>20</sup> China is working toward greater self-sufficiency in order to reduce its dependency on foreign sources of supply.<sup>21</sup> All of this bodes ill for deterrence of Chinese aggression against Taiwan.

**Finally**, the war against Ukraine may be perceived as a regional conflict, a burden that states in the region should primarily shoulder, but it has significant global implications. There are those who believe U.S. support to Ukraine is siphoning resources away from what should be the top priority – deterring China.<sup>22</sup> While China remains the “pacing threat” that governs DoD investments and program priorities, it would be imprudent to suggest that China’s deterrence calculus is unaffected by the West’s response to Russia’s unprovoked and brutal aggression in Ukraine. The perception of a weakening resolve on the part of the United States to vigorously aid a democratic Ukraine against the onslaught of a revanchist, authoritarian, and anti-American regime is likely to strengthen the resolve of the Chinese leadership to bring Taiwan under Beijing’s political control, by force of arms if necessary.

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<sup>20</sup> Evan A. Feigenbaum and Adam Szubin, “What China Has Learned From the Ukraine War,” *Foreign Affairs*, February 14, 2023, available at <https://www.foreignaffairs.com/china/what-china-has-learned-ukraine-war>.

<sup>21</sup> For a more detailed discussion of this point, see Keith B. Payne, David J. Trachtenberg, Matthew R. Costlow and Christopher Ford, “Deterring China in the Taiwan Strait,” *Journal of Policy & Strategy*, Vol. 2, No. 2, available at <https://nipp.org/wp-content/uploads/2022/05/Special-Issuefinal.pdf>. Also see David J. Trachtenberg, *Deterring China in the Taiwan Strait: Potential Economic Tools for a Victory Denial Strategy*, *Occasional Paper*, Vol. 2, No. 12, available at <https://nipp.org/wp-content/uploads/2022/11/Vol-2-No.-12-OP.pdf>.

<sup>22</sup> See for example, Elbridge A. Colby and Alex Velez-Green, “To avert war with China, the U.S. must prioritize Taiwan over Ukraine,” *The Washington Post*, May 18, 2023, available at <https://www.washingtonpost.com/opinions/2023/05/18/taiwan-ukraine-support-russia-china/>.

Moreover, other countries, including Iran and North Korea, will draw their own lessons from U.S. actions in response to Russia's naked aggression. Calling on America's European allies to do more on behalf of Ukraine is appropriate, but conditioning American assistance on European contributions is likely to be counterproductive. Should the United States tire of aiding Kyiv before Ukraine has succeeded in reclaiming its territorial sovereignty, would-be aggressors may draw dangerous lessons about the staying power of American security commitments that increase instability. Therefore, Ukraine is very much a factor in the deterrence calculations of China and other U.S. adversaries.

There are, no doubt, other lessons to be learned from the Russia-Ukraine conflict, and more will become apparent as the conflict goes on, but the key takeaway is that the best way to deter aggression is to be resolute in opposing it. This requires sufficient commitment and determination—backed by the necessary military capabilities—to impose greater costs and risks on the aggressor than on the defender. Hopefully, this is a lesson that will be learned before it is too late.

*David J. Trachtenberg is Vice President of the National Institute for Public Policy. Previously, he served as Deputy Under Secretary of Defense for Policy from 2017-2019.*





# Lessons Learned from Russia's Invasion of Ukraine

Kenton White

Before the events of February 2022, the West and NATO's response to Russian hostility along its border with some other nations was low profile if not passive.

There are many lessons to be learned, from small unit tactics through the use of technology to strategic planning. This paper discusses three lessons which have been driven home by the war in Ukraine. They are not detailed analyses of the fighting there, but rather broader geopolitical and strategic lessons which have significance for NATO and the West more generally.

First, this paper will address the blatant use of half-truths and downright falsehoods employed by Russia in the propaganda war and, more worrisome, their acceptance as "truth" by some nations. Political and public understanding, and tolerance for the types of propaganda used by the Russian government, are at a low ebb compared to that of the Cold War.

Secondly, and directly related to the first point, the cost of decades of political ignorance of the needs of military organisations is addressed. The war in Ukraine has illuminated this cost to Western nations. However, the cost is not only financial but intellectual and developmental. The West has lost its technical advantage as part of short-term economic benefits from "globalisation" without considering the effects this may have in the longer term.

Finally, this cost will be directly analysed in light of the operations by both sides during the war.

The overall conclusion for NATO is not good. The lessons drawn provide no surprises for some practitioners and analysts. Nevertheless, the response from many

political representatives, analysts and academics has been disappointing.

### **A Political Reality Check – Russian Falsehoods**

Orwell confronted the problem of a totalitarian state that, "...declares itself infallible, and at the same time it attacks the very concept of objective truth..." continuing that he "... hardly need to point out the effect of this kind of thing..."<sup>1</sup> Perhaps it does need pointing out, in the strongest possible terms.

Former U.S. president George W. Bush said, "Russia has invaded a sovereign neighboring state and threatens a democratic government elected by its people. Such an action is unacceptable in the 21st century."<sup>2</sup> However, he wasn't talking about Ukraine, but discussing Russia's invasion of Georgia in 2008. He continued, "It is time for Russia to be true to its word..." Nonetheless, despite Russia failing in almost every respect to be true to its word, little or nothing was done. In fact, the lack of action, and vain attempts by Western nations to bring Russia closer politically and economically, indicated a lack of interest in the West which Russia could exploit. It also indicated to Russia that if pushed in the right way there would be little or no response, beyond some vocal criticism.

It is necessary to assume that President Putin's goal is the one he has stated on several occasions: to reunite Greater Russia. Whether this perspective is historically accurate is not relevant. His revisionist policies have been inherited from the Tsarist and Soviet eras.

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<sup>1</sup> "Literature and Totalitarianism," *Listener* (London: BBC, June 19, 1941).

<sup>2</sup> George W Bush, "President Bush Discusses Situation in Georgia," Press Conference (Washington, D.C.: White House), August 11, 2008.

Russia has not forgotten the playbook from the Cold War. Some listeners in the West, despite evidence to the contrary, maintain that close political ties and negotiations are what is needed in its relations with Russia. Western diplomats, politicians, and some high-ranking military leaders have anticipated that Putin would react in the same manner as they would in a similar situation. This highlights a critical vulnerability of Western political systems, primarily democracies, that are based on the rule of law and logical decision-making. When faced with a country that does not conform to similar behavioural norms, they struggle to determine the appropriate course of action. We can see the same when interacting with China over the South China Sea. Western politicians may lose their power thanks to the electorate. Vladimir Putin and Xi Jinping face different challenges, but losing an election does not seem to be likely.

President Putin's promises and agreements cannot be trusted, as he has repeatedly violated agreements and treaties. Therefore, Western and NATO leaders must recognize that any diplomatic resolution to the Ukrainian conflict would only be temporary. Despite efforts by Western leaders to negotiate with President Putin regarding his actions in Chechnya and Georgia, the annexation of Crimea, and his support for separatist regions in Ukraine, they must be mindful of his track record of breaking agreements.

NATO's response to the situation in Ukraine has been varied. Since 2014, Western European nations have regarded Russian support for separatists in Luhansk and Donetsk with suspicion but very little action. Only with the increasing threat of direct military action did NATO begin to act by sending weapons. Training of Ukrainian troops has been undertaken by various NATO countries, with obvious success. We have seen Russian attacks stall under ferocious defensive actions, and aggressive counter-attacks.

## **The Scale of Potential War Has Been Willfully Misunderstood**

That war is costly, brutal, and profligate with human lives is a truth that has lost its force. Certainly, in the West we have become accustomed, from the wars in Afghanistan and Iraq, to relatively low casualty numbers. Governments have shaped their military forces accordingly. We thought we had seen the end of the use of cannon fodder.

Relearning the lesson of the grinding, costly nature of large-scale war has been difficult, and has still not sunk in for some. Acclimatising the politicians and public to this cost is necessary. If the conflict widens, as it very well might do, and if NATO were to become involved, then losses would quickly exceed those currently considered acceptable by Western nations.

Maintaining a capable military force comes with significant expense. Any political pledges to cut military funding without compromising military effectiveness are dubious at best and, at worst, may endanger a nation's sovereignty and international legal principles. Since the end of the Cold War, NATO's political leaders have aimed to reduce defence budgets in an effort to save money. Although some NATO members have professional and well-equipped troops, their forces are relatively small. As a result, many nations have budgets that are only sufficient to maintain their current forces. Due to its involvement in Afghanistan, NATO's strategic focus has been on counter-insurgency rather than fighting a peer adversary like Russia. The number of conventional fighting forces, armour, ships, aeroplanes, and personnel has been reduced. This has saved nations money, but at what longer-term cost?

Money is not the only problem. NATO, and by extension Ukraine, may have been hindered by confusion caused by varying political and military interpretations of

Russian activities. Academic interpretations and theories may have contributed to this confusion, making it difficult for NATO to agree to decisive action. Even though the invasion of Ukraine in 2022 clarified the severity of the situation, NATO members still struggled to reach a consensus on the appropriate response.

Throughout the 20th century, strategy and military conflict encompassed a broad spectrum, from counter-terrorism to large-scale industrial warfare, with certain specialists concentrating on guerrilla warfare and small conflicts. Following 2001, the focus shifted to counter-insurgency. Theorists and academics, and indeed some in the military, were convinced that the era of large-scale warfare was over.

Western politicians, and many academics, have focused too much on theories of international relations. Several eminent theorists and practitioners have criticised the use of titles such as “grey-zone,” “asymmetric” and “effects-based” warfare.<sup>3</sup> These theories, for example the much-vaunted concept of “hybrid warfare,” are difficult to define, and are thus almost useless as a tool for understanding political and military activities.<sup>4</sup> They simply described military and non-military action that has been part of international relations, good and bad, for centuries. Fridman suggested, “...Russian and Western military professionals now recognise that the term [hybrid] is next

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<sup>3</sup> For example, Antulio J. Echevarria, “How Should We Think about ‘Gray-Zone’ Wars?,” *Infinity Journal* 5, No. 1 (Fall 2015): 16.

<sup>4</sup> For example, see Alessio Patalano, “When Strategy Is ‘Hybrid’ and Not ‘Grey’: Reviewing Chinese Military and Constabulary Coercion at Sea,” *The Pacific Review* 31, No. 6 (November 2, 2018): 811–39; and, Rob Johnson, Martijn Kitzen, and Tim Sweijts, eds., *The Conduct of War in the 21st Century: Kinetic, Connected and Synthetic*, Routledge Advances in Defence Studies (London and New York: Routledge, 2021).

to useless for describing the real nature of contemporary conflicts....”<sup>5</sup>

The acceptance of the decline of “traditional” warfare, especially in academic circles, is flawed, certainly as far as war over at least the last two and a half centuries is concerned. Since pre-biblical times, war has consisted of formed bodies of troops engaging in battle as well as irregular forces and civilian intervention. To ignore these events is to build castles on sand. This leads one to question whether non-military analysts and researchers are providing useful support to the military function. On a broader level, the practitioners – those who will put their lives at risk when the government decides their deployment is necessary – have questioned the relevance of the academic discussion around military force and its use. If the definitions and writings from theorists and academics are not useful, then we should be resolute and discard them.

### **The Iron Law of Logistics – Or How Important Maintenance Really Is**

Had the Western nations immediately provided the arms requested by Ukraine, the cost to that country may have been dramatically reduced. The hand-wringing over supplying tanks and aircraft has done nothing but weaken Ukraine’s ability to resist the Russian invasion. NATO’s unity and core principle of deterrence and crisis management are called in to question by this indecision.<sup>6</sup>

NATO currently cannot feed the true appetite of war, nor avoid it through technological means. The inability to achieve the necessary production capacity without a slow buildup to war is a failing of Western defence policy.

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<sup>5</sup> Ofer Fridman, *Russian “Hybrid Warfare”: Resurgence and Politicisation* (London: Hurst & Company, 2022), p. 157.

<sup>6</sup> “NATO 2022 - Strategic Concept” (Brussels: NATO, 2022), pp. 6–9.

Without an infrastructure to support the military function, most military operations will fail, or at best they will become extravagantly costly.<sup>7</sup> Even if the infrastructure is available, there is no guarantee that any military operation will be successful.

One of the lessons quickly demonstrated by the invasion of Ukraine in 2022 was that an army that neglects its logistics will fail in its operations. Western nations have seen the logistical function of their armed forces cut as an easy target for cost savings. Logistical forces rely to a large extent on reservists and are not developed equally throughout NATO. Reliance on one nation for much of the heavy lift capacity does not provide flexibility.

Nations are now more interdependent than ever before, which presents a significant risk. Amidst the noise surrounding globalisation and the interconnectedness of states, the purpose of defence and strategy has largely been obscured. A nation or group could gain dominance in a critical aspect of supply or transportation that others rely upon. This creates a national security problem, even if it may not be immediately apparent. A single point of failure in the supply of essential resources like fuel, food, or raw materials could have severe consequences. The COVID-19 pandemic, Huawei controversy, *Ever Given* incident in the Suez Canal in 2021, Russian invasion of Ukraine, and sabotage of Nord Stream have all highlighted the dependencies created by interconnectedness. This type of threat from China is far more significant than that from Russia as the West is almost entirely dependent on that nation for the supply of cheap technology.

In terms of the relationship between technology and warfare, it is important to recognize that the speed of information accumulation increases almost exponentially as

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<sup>7</sup> Adrian Bristow, *A Serious Disappointment: The Battle of Aubers Ridge, 1915 and the Subsequent Munitions Scandal* (London: L. Cooper, 1995).



technology advances, in line with Moore's Law.<sup>8</sup> This amplifies the swiftness and accuracy of certain military operations. In Ukraine, the use of inexpensive, commercially available technology has made a significant impact at the tactical level, such as drones equipped with cameras used for reconnaissance. However, the influx of data can be overwhelming when traffic exceeds capacity. In modern warfare, lower-level commanders are now faced with information overload, with limited human capacity to analyse and interpret data, compounded by factors such as fear and fatigue. Moreover, the enemy may provide false data or decoys to confuse and overwhelm analysts and available weapons systems. While technology can enhance the effectiveness of combat operations, reliance on digital systems and stored data renders some military organisations susceptible to attacks on data integrity.

As counters to new technology evolve, and some systems become too expensive to risk in battle, fighting will descend to the lower common denominators of combat – firepower, mass, and a willingness to continue the fight. We have seen this in several places in Ukraine, and it is likely to continue. Russia has a greater willingness to continue the fight than the West does.

## **Conclusion**

Western governments in NATO face a problem in that their previous major military strategies, except for limited conflicts between 1945 and 2003, have not been put to the test. Nevertheless, success has been assumed, and the process of developing and implementing strategy has

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<sup>8</sup> Moore's Law is a statement and observation made by Gordon Moore, one of the co-founders of Intel Corporation, in 1965. It refers to the trend in the semiconductor industry where the number of transistors that can be placed on an integrated circuit doubles approximately every two years.

become a self-sustaining and self-reinforcing culture. A level of complacency has developed since the end of the Cold War.

Ukraine has suffered from a slowly evolving realisation in the West that it is acting as a bulwark against Russian aggression and expansionism. There have been opportunities for NATO, and more broadly the West, to confront Russian aggression and expansionism. These opportunities have been missed, and Ukraine is now paying the price.

*Kenton White is Lecturer, Department of Politics and International Relations, University of Reading, United Kingdom.*



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