

By Seth G. Jones **JUNE 2022**

THE ISSUE

Russia has failed to achieve most of its objectives in Ukraine because of poor military planning, significant logistical problems, low combat readiness, and other deficiencies, which undermined Russian military effectiveness. These and other challenges—including Ukrainian military efforts and Western aid—severely impacted Russian air, ground, cyber, and maritime operations. Russia's failures will force the Russian military to fundamentally rethink its training practices, organizational structure, culture, logistics, recruitment and retention policies, and planning efforts. Nevertheless, Russia is still attempting a de facto annexation of parts of eastern and southern Ukraine that it controls.

> his analysis examines lessons from Russian air, ground, cyber, and other domains following Moscow's February 2022 invasion of Ukraine. It asks: What are some of the most important military lessons from the first three months of

the war? What do these lessons suggest about the future of the war? The assessment focuses predominantly on the operational level of warfare, especially the planning and conduct of the military campaign. The operational level links the tactical utilization of forces to strategic objectives and includes such aspects as fire and maneuver, logistics, intelligence, command and control, and planning.²

To answer the main questions, this analysis relied on several types of information. One included collecting and analyzing primary and secondary sources on the war, including military and intelligence assessments from Western countries. Another was a force disposition map of the battlefield, in which CSIS analysts compiled and assessed Russian and Ukrainian tactical and operational activity. The final involved background interviews with

Western government officials and other subject matter experts. While the war in Ukraine is likely far from over, this analysis comes to several initial conclusions.

First, the Russian military faced considerable logistics challenges, in part because of poor training and planning. During the Russian push to Kyiv in the early phase of the war, for example, Russian ground forces faced massive logistical and command and control challenges operating in contested areas inside of Ukraine. Without access to rail transport and with roads clogged with Russian vehicles, Russian ground forces failed to move fuel, munitions, spare parts, and other matériel quickly and efficiently to forwarddeployed units. Supply lines could not keep up with the long combat pushes, and logistics vehicles were not properly protected. The effectiveness of Russian long-range strike—a key aspect of Russian military operations—was also severely impacted by logistical challenges, including an insufficient supply of precision-guided munitions.

Second, the Russian ground offensive appears to have been planned and executed based on poor assumptions about how the Ukrainian military—and the population—would

respond, as well as how the West might react. Seizing and holding territory was a major political objective of Russian policymakers. But controlling territory in a foreign country with a hostile Ukrainian population was deeply problematic for the Russian military, particularly since the conflict began to resemble a "people's war." In addition, Russian forces failed to effectively integrate combined arms to seize and hold Ukrainian territory, including coordination between land power, air power, and longrange fires. The Russian invasion force was also far too small to achieve its objectives and neglected to block Ukraine's western border and prevent the supply of foreign weapons, systems, fuel, and other aid to Ukraine.

Third, Russian offensive cyber operations and electronic warfare failed to blind Ukrainian command and control efforts or threaten critical infrastructure for a prolonged period. Russian military and intelligence agencies conducted cyberattacks and utilized electronic warfare against Ukrainian targets, including destructive cyberattacks on hundreds of Ukrainian government and critical infrastructure systems. But these attacks did not notably impact the Ukrainian will or ability to fight or communicate. Ukraine was able to blunt most of the effects of these cyberattacks through an aggressive cyber defense, with help from private companies, Western governments, and other state and non-state actors.

The rest of this brief is organized into three sections. It begins by providing an update on the war, including a tactical map of Russian and Ukrainian force disposition. The brief then focuses on Russian challenges in several domains of warfare. It concludes with policy implications for the United States and its Western allies and partners.

SETTING THE STAGE: AN EVOLVING FRONT

In the initial phase of the war, Russian ground forces invaded on four main fronts:

- Northern Front: Russian forces pushed toward Kyiv from Belarus, led by units from the Eastern Military District, including the 29th, 35th, and 36th Combined Arms Armies.
- Northeastern Front: Russian forces moved west toward Kyiv from Russian territory, led by units from the Central Military District, including the 41st Combined and 2nd Guards Combined Arms Armies.
- Eastern Front: Russian forces pushed toward Kharkiv and out of the Donbas, led by units from the Western

- Military District, including the 1st Guards Tank Army and 20th and 6th Combined Arms Armies.
- Southern Front: Russian forces moved from Crimea west toward Odesa, north toward Zaporizhzhia, and east toward Mariupol. They were led by units from the Southern Military District, including the 58th, 49th, and 8th Combined Arms Armies, VDV's 7th Air Assault Division, and VDV's 11th Air Assault Brigade.

After suffering a series of setbacks that are highlighted later in this analysis, the Russian military began to withdraw forces from Kyiv around April 2022 and concentrate its efforts on eastern and southern Ukraine. Today, the distinctive feature of the war is a roughly 600-mile front that extends just west of Kherson along the Black Sea; moves east through Melitopol, Mariupol, and other southern cities; cuts northeast through the Donbas in eastern Ukraine, including the cities of Luhansk and Donetsk; continues northwest near Izyum; and then intersects the Russian border north of Kharkiv. Figure 1 highlights the force disposition by early June 2022.4 Russia deployed roughly 110 Battalion Tactical Groups (BTGs) in Ukraine for a total of approximately 142,000 forces; utilized irregular forces, including militias from Donetsk and Luhansk; dug trenches and placed mines at and near the lines of contact; and constructed rail lines and repaired bridges and roads to improve Russian lines of communication.5

Control of territory will continue to ebb and flow around these lines, including around such areas as the Donbas. In addition, Russian ships in the Black Sea have conducted a naval blockade of Ukraine, halting commerce at Ukrainian ports, and struck Ukrainian targets with cruise missiles and other stand-off weapons.

Russia has attempted to annex some of this territory through a crude form of state-building. It has forcibly deported—or, in some cases, tortured and executed pro-Ukrainian civilians and encouraged ethnic Russians (and pro-Russian civilians) to remain.6 Russia has also replaced Ukrainian government officials with hand-picked, pro-Russian officials. For instance, Moscow appointed Volodymyr Saldo, a former mayor of Kherson, as head of the Kherson regional military-civilian administration. In May, he announced that the area "will become the Kherson" region of the Russian Federation."7

Russian state-building covers a broad swath of economic, cultural, nationalist, governance, and security measures. Moscow has replaced the Ukrainian currency, the hryvnia, with the Russian ruble in such cities as Melitopol. It has taken control of critical infrastructure, such as nuclear power

114th FORCES Ukrainian Russian --- FRONT LINE MAJOR RAIL LINES Melitopol

Figure 1: Russian and Ukrainian Force Disposition, June 2022

Note: This map was last updated as of June 1, 2022.

Source: CSIS compilation and analysis of multiple sources (see endnote 4). For a list of the abbreviations, see the appendix.

plants and steel plants, and rerouted internet through Russia. In addition, Russia has issued newly married couples with Russian Federation wedding certificates. Russian flags now fly at numerous government buildings, while Ukrainian flags have been taken down and Ukrainian symbols have been removed from buildings and repainted. Russia is creating Russian-language schools and revising the education system—including the curriculum—in these areas, as Moscow attempts to reeducate locals in Russian-controlled areas of Ukraine. Russian military, intelligence, and police officials have penetrated cities and villages, rounding up and detaining protesters and pro-Ukrainian sympathizers.8

For Russia, annexation of these areas is a fait accompli. "It's out of the question to return the Kherson region back to Nazi Ukraine," said Kirill Stremousov, the Russianappointed deputy head of the military-civil administration of Kherson region. "Kyiv will no longer be able to force its ugly Nazi policies upon our land."9 Sergei Aksyonov, the head of the Republic of Crimea, similarly indicated that the Kherson and Zaporizhzhia regions would be annexed.10 And Russia's deputy prime minister Marat Khusnullin remarked that the Kherson region will take "a worthy

place in our Russian family."11 To expand Russia's control of territory, the Russian military is likely to continue its attrition campaign in eastern and southern Ukraine.

RUSSIAN MILITARY FAILURES

Russia failed to achieve what was likely its main political objective: to overthrow the Kyiv government in a blitzkrieg military operation. The Russian military also faced significant challenges seizing and holding territory. These problems contributed to the suspension or firing of several senior military officials, such as Lieutenant General Serhiy Kisel, commander of the 1st Guards Tank Army, for dereliction during the offensive against Kharkiv; Lieutenant General Vlaislav Yershov, commander of the 6th Combined Arms Army, for failing to capture Kharkiv; and Vice Admiral Igor Osipov, commander of the Black Sea Fleet, following the sinking of the flagship cruiser *Moskva*. ¹²

In addition, roughly a dozen Russian generals and other senior officials were killed on the battlefield, such as Lieutenant General Andrei Mordvichev, Lieutenant General Yakov Rezantsev, Major General Andrei Sukhovetsky, Major General Vitaly Gerasimov, Major General Kanamat

Botashev, Major General Andrey Kolesnikov, and Major General Oleg Mityaev.¹³ These firings and deaths may have exacerbated command and control problems that the Russian military was already experiencing. In an effort to improve overall command and control of Russian operations, particularly air-ground integration, Russian president Vladimir Putin appointed General Aleksandr Dvornikov to oversee military operations in April. Still, Russia continued to experience command and control challenges during its offensive operations in Donetsk and Luhansk Oblasts in May and June 2022.

The rest of this section examines Russian difficulties in the air, ground, and cyber domains of warfare. It also highlights Russian challenges in other domains, such as maritime.

Air Operations: Russian air operations in Ukraine have been characterized by a heavy focus on long-range strike against Ukrainian military and civilian targets to undermine the Ukrainian military's ability to wage war, weaken morale of the Ukrainian population, and punish the country for its shift toward the West. Over the previous several years, Russia had developed command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems on the battlefield, providing data to enable a higher throughput of airstrikes. These systems were integrated into Russia's overarching systems of "reconnaissance strike complexes"—which were designed for the coordinated employment of high-precision, long-range weapons linked to real-time intelligence data and accurate targeting.¹⁴ As General Valery Gerasimov, chief of the General Staff of the Russian Armed Forces, remarked, "The principal features of future conflicts will be the extensive employment of precision weapons and other types of new weapons."15 To identify targets in a relatively contested environment, the Russian military also utilized some airborne platforms, including unmanned aerial vehicles (UAVs).

In the early phases of the war, Russia aimed to pin down Ukrainian air defenses around the country by conducting ballistic and cruise missile strikes across the country, including Kh-101 cruise missiles deployed from Tu-95 Bear and Tu-160 Blackjack bombers flying in Russian and Belarusian airspace. ¹⁶ The Russian air force then expanded its target list to include Ukrainian military infrastructure, arms shipments from the West, fuel facilities, bridges, and even civilian targets. Russia launched more than 1,100 missiles at Ukrainian targets over the first 21 days of the war and a total of 2,125 missiles over the first 68 days of the war.¹⁷

Nevertheless, the Russian military faced numerous challenges in conducting its air campaign.

First, the Russian air force failed to achieve air superiority against a Ukrainian military with notable air defense capabilities, such as Stinger man-portable air-defense systems, S-300 surface-to-air missile systems, and other systems—thanks, in part, to Western aid. The success of Ukrainian air defenses deterred Russian aircraft from freely operating over most of Ukrainian-controlled territory. This meant that one of Russia's primary ways to strike deep into Ukraine was through cruise missiles launched from Russia, Belarus, and maritime vessels in the Black Sea.

Second, the Russian air force faced recurring logistics challenges, including running low on stocks of long-range, precision-guided munitions. Three weeks into the war, for example, the Russian air force began to run low on precision-guided munitions, such as laser- and satelliteguided bombs, which caused the Russians to use a growing number of unguided artillery shells, rockets, and missiles from the ground forces. 18 When it came to weapons systems such as the Iskander-M short-range ballistic missile system, the Russian military was also hesitant to expend a portion of its stockpile, which it needed for defense against the North Atlantic Treaty Organization (NATO) and other threats.¹⁹ In addition, dozens of Russian UAVs, such as the Orlan-10, Orlan-20, Orlan-30, Eleron-3, and Forpost, were shot down on the battlefield or subject to electronic jamming.²⁰ These challenges were exacerbated by the inability of Russia's domestic arms industry to replace these UAVs quickly.²¹

Over the long run, Russia may face a supply chain challenge because of U.S. and other Western sanctions. For example, the 9M729 cruise missile, which is fired from the Iskander-K short-range ballistic missile system, is one of the Russian military's most advanced weapons systems with precision-strike capabilities.²² The cruise missile has roughly a half dozen socket attachment points that permit data to move through the heat shield. Some of these socket attachment points were manufactured by U.S. companies. In addition, the rails that affixed the circuit boards to the computer housing—as well as the circuit boards—were manufactured by U.S. companies. The 9M949 300 mm rocket, which is used in Russia's Tornado-S multiple rocket launcher system, also used a fiber-optic gyroscope manufactured in the United States. Finally, the Russian TOR-M2 air-defense system utilized an oscillator designed in the United Kingdom, which is located in the computer that controls the radar.²³ These supply chain challenges will likely impact Russia's short- and long-term supply of components to conduct stand-off attacks, forcing Russia to look for substitute markets.

These challenges undermined Moscow's attempt to establish air dominance over Ukraine, conduct effective precision strikes, and support advancing Russian ground forces.

Ground Operations: In the initial phase of the war, Russian forces along the northern front relied on the roads to avoid Ukraine's marshes and forests. While the advantage in numbers, artillery, and cannon fire from armored vehicles allowed Russian forces to quickly advance toward Kyiv, Ukrainian forces inflicted significant casualties using antitank ambushes. As Russian forces moved through Ukrainian villages and towns, local civilians provided intelligence on their location and movement, while Ukrainian special forces and UAVs marked targets for artillery.²⁴ As Figure 2 highlights, many of Russia's vehicles were marked with a "Z" to delineate that they were from the Russian military.

The bulk of Russian ground forces is composed of BTGs, which are combined arms units typically drawn from companies and battalions in existing brigades. While the structure of BTGs varies somewhat based on operational needs and available personnel, most include roughly 600 to 800 soldiers—and, in Ukraine, perhaps closer to 600 soldiers. They are generally mechanized battalions, with two to four tank or mechanized infantry companies and attached artillery, reconnaissance, engineer, electronic

warfare, and rear support platoons—including motor transport, field mess, vehicle recovery, maintenance, and hygiene squads. The result in theory is a fairly self-sufficient ground combat unit with fire and rear support.²⁵ In practice, the BTGs were likely understrength and lacked sufficient infantry.

Overall, Russian ground forces encountered serious problems in Ukraine.

First, the Russian army faced significant logistical and maintenance challenges operating in contested areas inside of Ukraine. Russia's approach to combined arms warfare was generally to hammer Ukrainian positions with artillery and other stand-off weapons and then to send armored vehicles forward on a maneuver termed "reconnaissance to contact," designed to overwhelm what remained of Ukrainian defensive lines.²⁶ But because of the Ukrainian military's effective use of anti-armor munitions, such as anti-tank guided missiles and loitering munitions, Russian ground forces had difficulty advancing and seizing ground. This was true even when the speed of some Russian armored units allowed them to push into Kyiv's suburbs only 48 hours into the war. Some of these Russian units were isolated with limited or no logistics, miles ahead of the main body of Russian ground units.²⁷

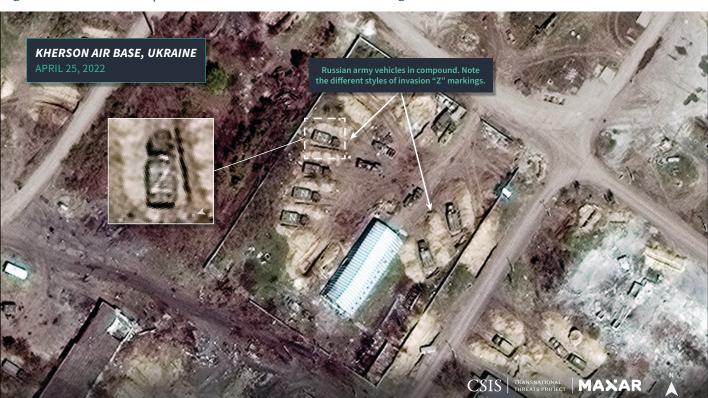


Figure 2: Russian Army Vehicles with Invasion "Z" Markings

The Russian army also operated with fewer support soldiers than many other militaries. Roughly 150 of the troops in a BTG could be considered support, which is notably lower than some militaries such as the U.S. Army, which deploys approximately 10 support soldiers for every combat soldier.28 Without access to rail transport that usually moves Russian heavy equipment, and with the few roads available clogged with traffic, it became increasingly difficult for the Russian army to move food, fuel, munitions, spare parts, and other supplies to forward-deployed forces. These problems were compounded by the Russian army's failure to provide convoy security to logistics vehicles, such as those carrying food, water, medical supplies, mobile kitchens, fuel, engineers, and spare parts. Forwarddeployed Russian vehicles broke down, and many had to be abandoned because of a lack of spare parts, mechanics, and recovery vehicles.²⁹ In short, the Russian army failed to secure its critical lines of communication.³⁰

The Russian advance to Kyiv, for instance, came at an increasingly heavy price. By the time Russian forces had secured Hostomel Airport in late February 2022 and were in place to launch an attack on Kyiv, they lacked the combat power to seize the city. Russian forces came into range of Ukrainian artillery units and exposed more of their depth to raiding.31 Russian forces also ran into numerous logistical challenges in their failed effort to seize and hold the city of Kharkiv. Bans by the West on the export of sensitive technologies to Russia could also cut into Moscow's ability to prosecute a protracted ground war. Two of Russia's largest tank manufactures, for example, were forced to halt production because of a lack of parts.³²

Second, the Russian invasion force was far too small to seize and hold territory, particularly with a Ukrainian population that rose up against the Russian military in a variation of what the Chinese revolutionary leader Mao Zedong referred to as a "people's war." As Mao wrote in his book On Protracted War, "the richest source of power to wage war lies in the masses of the people." Mao argued that in a well-organized resistance effort, the invading force "will be surrounded by hundreds of millions of our people standing upright . . . and he will be burned to death."33 Russia utilized between 150,000 and 190,000 soldiersincluding regular and irregular forces—for the initial invasion of Ukraine, a country of approximately 44 million people with an area of over 600,000 square kilometers.34 Those numbers translate into a force ratio of 4 Russian soldiers per 1,000 Ukrainian inhabitants.

There are no exact formulas for how many soldiers are required to hold conquered territory, but a force ratio of as many as 20 soldiers per 1,000 inhabitants has sometimes been necessary to pacify a hostile local population.³⁵ Large numbers of troops are generally essential to establish basic law and order. By the end of World War II, for example, there were 101 U.S. soldiers per 1,000 inhabitants in the U.S.-controlled sector of Germany. More recently, there were 19 U.S. and European soldiers per 1,000 inhabitants in Bosnia in 1995 and 20 soldiers per 1,000 inhabitants in Kosovo in 2000.36

Lower ratios are generally insufficient to pacify hostile populations. In Iraq, for instance, the United States had 7 soldiers per 1,000 inhabitants and faced a persistent deadly insurgency—even with the help of Iraqi government forces and Sunni militia members. U.S. Army chief of staff General Eric K. Shinseki warned Congress in February 2003 that "several hundred thousand" troops would likely be needed to secure postwar Iraq.³⁷ In Afghanistan, the United States had only 1 soldier per 1,000 inhabitants, along with the help of Afghan National Security Forces. With such small numbers, the United States and its NATO allies faced a prolonged insurgency that led to the overthrow of the Afghan government in 2021.38 The force ratio of Russian soldiers in Ukraine was far too small to hold territory including cities—for long.

The low ratio was also problematic because of the substantial number of conscripts deployed to Ukraine, who were ineffective and suffered from poor morale. Russian conscripts are generally prohibited from serving in military operations abroad except when Moscow formally declares war, unless they volunteer as soldiers. Still, their compulsory service typically lasts for only a year, and conscripts have generally not been effective fighters.³⁹ Russian soldiers were given limited advanced notice that they were going to invade Ukraine, undermining readiness and logistics planning.⁴⁰

Third, Russian forces failed to conduct basic maneuver warfare against Ukrainian forces, preferring instead to bombard Ukrainian cities and villages in a war of attrition. 41 Problems on the ground were complicated by Russia's broader failure to conduct an effective combined arms campaign and to synchronize effects. Russia's challenges raised serious questions about its competence in fire and maneuver. For example, where were the Russian infantry that were supposed to target Ukrainian ambushes? Where was the fire from artillery, mortars, and close air support that was supposed to suppress Ukrainian anti-tank guided munitions?42

Part of the challenge may have been poor leadership within the Russian army and a highly centralized Russian command and control structure that lacked a professional corps of noncommissioned officers. There were also signs of declining professionalism in the Russian officer corps, including prohibiting drivers from evacuating wounded Russian soldiers to preserve military equipment.⁴³

The quality of Ukrainian forces was a major change from Syria, where Russia, Syria, Iran, Lebanese Hezbollah, and militia units from Iraq, Afghanistan, Palestinian territory, and other areas faced a relatively weak mix of insurgents. Russian mechanized formations in northern Ukraine were targeted by lethal Ukrainian light infantry armed with modern weapon systems, such as the Javelin anti-tank missile system, Next Generation Light Anti-Tank Weapon (NLAW), and Stugna-P anti-tank guided-missile system.

Ukrainian attacks during Russia's initial advance also made the Russians unwilling to push sensitive electronic warfare and air-defense systems into Ukraine in case they were captured. Consequently, Russia had to back off on its electronic suppression of Ukrainian radar and communications. Senior Russian officers began to deploy forward, where they became targets for snipers and artillery strikes. In addition, Russian forces encountered numerous command and control problems, including a paucity of secure communications, which undermined their ability to synchronize and coordinate attacks. Russian soldiers frequently used unencrypted communications including civilian cell phones—which allowed Ukrainian intelligence and military units to target them.44

Russian difficulties in seizing territory created problems in the maritime domain. On April 13, for example, Ukrainian forces struck the RTS Moskva, a guided-missile cruiser that was the flagship vessel of the Russian Black Sea Fleet, with Neptune anti-ship missiles. 45 The Russian navy lost several other ships to Ukrainian stand-off attacks, including the RTS Saratov, an Alligator-class landing ship; two Raptor-class patrol boats; and a Serna-class landing craft. Ukrainian Bayraktar TB2 UAVs apparently sank the patrol boats and landing craft.46

Cyber and Space Challenges: Russia conducted multiple cyber operations, including cyberattacks and espionage operations, in concert with Russian land, air, and maritime attacks. A day before the military invasion, for example, cyberattackers associated with the Main Intelligence Directorate (GRU) launched destructive wiper attacks on hundreds of systems in the Ukrainian government and

in Ukraine's energy, information technology, media, and financial sectors. Russia's goal was likely to undermine Ukraine's political will, weaken Ukraine's ability to fight, and collect intelligence that Russia could use to gain tactical, operational, and strategic advantages. Over the next several weeks, Russian actors linked to the GRU, Foreign Intelligence Service (SVR), and Federal Security Service (FSB) conducted numerous cyberattacks utilizing such malware families as:

- · WhisperGate / Whisper/Kill
- FoxBlade (or Hermetic Wiper)
- SonicVote (or HermeticRansom)
- CaddyWiper
- DesertBlade
- Industroyer2
- · Lasainraw (or IsaacWiper)
- FiberLake (or DoubleZero)47

These types of malware are designed to do a range of malicious activities, such as overwriting data and rendering machines unbootable, deleting data, and destroying-or attempting to destroy—critical infrastructure, such as industrial production and processes. Russian-linked hackers used a range of common intrusion techniques, such as exploiting public-facing web-based applications, sending spear phishing e-mails with attachments or links, and stealing credentials and using valid e-mail accounts. Over the first month and a half of the war, more than 40 percent of Russia's destructive cyberattacks were aimed at Ukrainian critical infrastructure sectors, while another 32 percent targeted Ukrainian government sites.48

Russia also conducted an electronic warfare campaign against Ukrainian forces. Over the previous few years, Russia had invested heavily in electronic warfare systems capable of shutting down communications and signals across a broad spectrum. This capability is grouped under the concept of the Radio Electronic Battery.⁴⁹ In the early morning of February 24, 2022, for example, Russia jammed Ukrainian air defense radar across all frequency bands. Russian E95M UAVs, which simulated Russian aircraft, harassed Ukrainian radar to draw out their air defenses.50

Nevertheless, cyber was largely a bust for Russia in the war. The Russian military faced considerable operational challenges, in part because of outside state and non-state assistance to Ukraine to identify cyber and electronic warfare attacks, attribute the perpetrators, and assist with remediation. Some Western governments, including

U.S. Cyber Command and the National Security Agency, provided help to the Ukrainian government. As General Paul Nakasone, commander of U.S. Cyber Command and director of the National Security Agency, remarked, "Coordinating with the Ukrainians in an effort to help them harden their networks, we deployed a hunt team who sat side-by-side with our partners to gain critical insights that have increased homeland defense for both the United States and Ukraine."51

Private sector firms also responded. Microsoft worked closely with the Ukrainian government and cybersecurity staff from other governments and private companies to identify and remediate Russian threat activity against Ukrainian networks before and after the Russian invasion.⁵² In January 2022, the Microsoft Threat Intelligence Center identified wiper malware in over a dozen Ukrainian networks and alerted the Ukrainian government.⁵³ Microsoft established a secure line of communication with Ukrainian cyber officials to provide real-time threat information and offer technical support to assist Ukrainian efforts to identify and defeat Russian-linked cyberattacks over the course of the war.⁵⁴ Microsoft worked with Ukrainian government officials to enable controlled folder access, a Microsoft Defender feature, and helped Ukraine run endpoint detection and response solutions.⁵⁵

In addition, Elon Musk's company SpaceX activated Starlink—a satellite internet constellation that provides high-speed, low-latency broadband internet using advanced satellites in low earth orbit-in Ukraine and sent additional network terminals, including over 10,000 dish antennas.⁵⁶ Starlink enabled members of the Ukrainian military to carry out sophisticated intelligence collection and fire support operations against Russian positions.⁵⁷ Many of the Starlink kits donated to Ukraine included a 23-inch-wide receiver dish that needed to be mounted outside, as well as a cord that connected to a simple router that projected a Wi-Fi internet signal.58 Starlink helped blunt Russia's attempt to jam signals, block the internet, and undermine Ukrainian command and control capabilities.

IMPLICATIONS FOR THE FUTURE

What do these lessons indicate about the future of the war in Ukraine? This analysis suggests that Russia made significant mistakes during the planning and execution phases of its military campaign in Ukraine, which will be difficult to fix quickly. The Russian air force is not likely to possess air superiority over Ukraine, and it has run low on stocks of long-range, precision-guided munitions. Russia will also likely face long-term supply chain challenges for some weapons systems because of Western economic sanctions.

In addition, the tendency of poorly trained Russian forces to conduct massive bombardments of towns and cities in a war of attrition, rather than conducting basic fire and maneuver, will make it difficult to seize and hold substantial territory against entrenched Ukrainian ground units with Western weapons systems and a pipeline of Western logistical support. Russian cyber and electronic warfare capabilities have largely been neutralized by effective Ukrainian countermeasures, with help from Western state and non-state entities. These and other challenges contributed to high attrition rates for the Russian military, including the partial or complete destruction of at least 1,000 main battle tanks, 350 pieces of artillery, 36 fixed-wing aircraft, and 50 helicopters. 59

However, Russia will likely make some adjustments over the course of the war, including improving logistics. For example, Russia's decision during the second phase of the war to regroup along a southern and eastern front improved Russian lines of communication. Russian forces constructed and reinforced some railheads, bridges. and roads, and Russian naval successes along the Sea of Azov allowed Russian ships to resupply Russian forces by water. These adjustments improved Russia's ability to move spare parts, munitions, fuel, and other matériel to forward-deployed Russian forces. Yet 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.

Still, the war in Ukraine is likely to be protracted. For the Kremlin, the status quo is likely to be unacceptable. Not only has the Russian military failed to achieve most of its objectives, but Ukraine continues to move closer militarily, economically, and politically to the West. Even worse for Moscow, NATO is likely to expand to Finland and Sweden. Russia has a recent history of attempting to grind out military victories. Following Russia's failures during the First Chechen War (1994-1996), for example, Putin paused to revamp Russian strategy, operations, and tactics. 60 In 1999, Russia restarted offensive operations and was much more successful in defeating insurgents during the Second Chechen War (1999-2009).61

The status quo is also unlikely to be acceptable for Ukrainian leaders, including President Volodymyr Zelensky, who indicated they are unwilling to allow more of their territory to be annexed. 62 Since 2014, Russia has

Figure 3a: Main Battle Tanks and Self-Propelled Artillery, Kherson Air base, Ukraine



Figure 3b: Multiple Rocket Launchers, Kherson Air base, Ukraine



Figure 3c: Defensive Fighting Positions, Kherson Air base, Ukraine



illegally annexed salami slices of Ukrainian territory, first in Crimea, then in eastern Ukraine, and finally in larger areas of southern and eastern Ukraine. In a May 2022 opinion poll, 82 percent of Ukrainians responded that Ukraine should not hand over any of its territory to Russia as part of a peace deal.63

But winning back territory will be difficult for Ukraine. As Figures 3a, 3b, and 3c highlight at Kherson Air base near Crimea, Russian forces have become entrenched in Ukraine with main battle tanks, self-propelled artillery, electronic warfare systems, multiple rocket launchers, armored fighting vehicles, sophisticated air defense systems, and other systems. Russia has also constructed defensive fighting positions to make it difficult for Ukraine to counterattack.

Without a peace deal between Ukraine and Russia, a major U.S. and Western military objective should be to provide sufficient military assistance to help Ukraine retake territory in the east and south. If the United States and the West want to shift the balance of power in Ukraine's favor, they will need to provide Ukraine with more weapons and platforms that allow the Ukrainian military to conduct offensive operations and more effective counterattacks against dug-in Russian forces over a sustained period. Examples include UAVs with a longer range and higher payload than the Bayraktar TB2 or AeroVironment Switchblade loitering munition, such as the MQ-1C Gray Eagle: main battle tanks, such as the Leopard 2 heavy battle tank; medium- and long-range missile systems, such as the HIMARS multiple-launch rocket system; and fighter aircraft, such as Su-25s.

Most of these systems will require additional training and a steady supply of munitions and spare parts, which should be feasible with a protracted war. More advanced weapons and platforms will be critical to overrun entrenched Russian forces. In addition, Ukraine needs to conduct a sustained guerilla campaign behind Russian lines that involves ambushes, raids, sabotage, and subversion against Russian forces and political leaders hand-picked by Moscow to replace local Ukrainian officials.

The worst outcome for Ukraine would be allowing Russia to de facto annex more Ukrainian territory. As Winston Churchill remarked on the eve of World War II, appeasement only increases a dictator's appetite: "And do not suppose that this is the end. This is only the beginning of the reckoning. This is only the first sip, the first foretaste of a bitter cup which will be proffered to us year by year unless by a supreme recovery of moral health and martial vigour, we arise again and take our stand for freedom as in the olden time."

Over the past eight years, Moscow has seized larger portions of Ukrainian territory and tried to overthrow the government. There is little probability that Vladimir Putin will stop now.

Seth G. Jones is senior vice president and director of the International Security Program at the Center for Strategic and International Studies (CSIS) in Washington, D.C., and author most recently of Three Dangerous Men: Russia, China, Iran, and the Rise of Irregular Warfare (W.W. Norton, 2021).

The author gives special thanks to Grace Hwang, Kateryna Halstead, Jared Thompson, and Catrina Doxsee for their help with research and analysis, particularly with the battlefield map. In addition, thanks to Mark Cancian, Ben Jensen, Michelle Macander, and Danielle Ngo for their helpful comments on an early draft of the document.

This brief is made possible by general support to CSIS. No direct sponsorship contributed to this brief.

CSIS BRIEFS are produced by the Center for Strategic and International Studies (CSIS), a private, tax-exempt institution focusing on international public policy issues. Its research is nonpartisan and nonproprietary. CSIS does not take specific policy positions. Accordingly, all views, positions, and conclusions expressed in this publication should be understood to be solely those of the author(s). © 2022 by the Center for Strategic and International Studies. All rights reserved.

Cover Photo: Fadel Senna/AFP/GettyImages

APPENDIX: LIST OF ABBREVIATIONS

Abbreviation	Unit Name
Aaslt	Air Assault Brigade
AB	Airborne Infantry
AC	Army Corps
CAA	Combined Arms Army
DPR	Donetsk People's Republic
GAAB	Guards Air Assault Brigade
GAAD	Guards Air Assault Division
GAAR	Guards Air Assault Regiment
GAD	Guards Airborne Division
GMRD	Guards Motorized Rifle Division
GMRR	Guards Motor Rifle Regiment
GTA	Guards Tank Army
GTD	Guards Tank Division
GTR	Guards Tank Regiment
JSC South	Joint Strategic Command South
LPR	Luhansk People's Republic
MB-CMD	Military Base-Central Military District
MCB	Marine Corps Brigade
Mech	Mechanized Brigade
Motor	Motorized Infantry Brigade
MRD	Motorized Rifle Division
MRR	Motorized Rifle Regiment
Mtn	Mountain Assault
OC East	Operational Command East
SCB	Separate Coastal Brigade
SGMRB	Separate Guards Motorized Rifle Brigade
SGNIB	Separate Guards Naval Infantry Brigade
SGTB	Separate Guards Tank Brigade
SMRB	Separate Motorized Rifle Brigade
SSP	Separate Special Purpose
STB	Separate Tank Brigade
Tank	Tank Brigade
TD	Territorial Defense

ENDNOTES

- U.S. Department of Defense (DOD), Joint Operations, Joint Publication 3-0 (Washington, DC: DOD, October 22, 2018), https://irp.fas.org/ doddir/dod/jp3_0.pdf; Stephen Biddle, Military Power: Explaining Victory and Defeat in Modern Battle (Princeton, NJ: Princeton University Press, 2004), 2; and Rachel Tecott and Andrew Halterman, "The Case for Campaign Analysis: A Method for Studying Military Operations," International Security 45, no. 4 (Spring 2021): 44-83.
- DOD, Joint Operations, Joint Publication 3-0, xi.
- 3 Mao Zedong, Selected Works of Mao Zedong (Peking: Foreign Language
- Figure 1 is based on CSIS compilation and analysis of multiple sources. A team of CSIS researchers consulted numerous open-source mapping efforts of the war in Ukraine, including the work of Henry Schlottman (@HN_Schlottman) at UA War Data (www.uawardata. com) and Jomini of the West (@JominiW). CSIS researchers then worked to corroborate unit types, size, and strength using other available open-source data. Examples included: open-source analysts publishing verifiable information concerning specific units on digital platforms and the internet; publications from research institutions; publications and information from governments; and publications and social media posts from verified international journalists reporting on the conflict. The information in Figure 1—including unit types, sizes, locations, and the line of contact between Ukrainian and Russian forces—represent CSIS's best estimate. All locations are approximate. The representation of the line of contact between Ukrainian and Russian forces is not meant to denote de facto or de jure Russian control over Ukrainian territory.
- CSIS estimates; "Senior Defense Official Holds a Background Briefing," DOD, May 26, 2022, https://www.defense.gov/News/ Transcripts/Transcript/Article/3045931/senior-defense-official-holds-a-background-briefing/; "Senior Defense Official Holds a Background Briefing," DOD, May 19, 2022, https://www.defense.gov/ News/Transcripts/Transcript/Article/3038153/senior-defense-official-holds-a-background-briefing/; and Yaroslav Trofimov, "Ukraine Will Fight Until All Russian Forces Are Expelled, Military Intelligence Chief Says," Wall Street Journal, May 20, 2022, https://www.wsj.com/ articles/ukraine-will-fight-until-all-russian-forces-are-expelled-military-intelligence-chief-says-11653046810.
- On Russian atrocities, see, for example, Human Rights Watch, Ukraine: Executions, Torture During Russian Occupation (New York: Human Rights Watch, May 2022), https://www.hrw.org/ news/2022/05/18/ukraine-executions-torture-during-russian-occupation; and Amnesty International, "He's Not Coming Back": War Crimes in Northwest Areas of Kyiv Oblast (New York: Amnesty International, 2022), https://www.amnesty.org/en/documents/ eur50/5561/2022/en/.
- "Ukraine's Kherson to Become 'Part of Russia,' Occupation Official Claims," Moscow Times, May 20, 2022, https://www.themoscowtimes. com/2022/05/19/ukraines-kherson-to-become-part-of-russia-occupation-official-claims-a77738.
- See, for example, Marc Santora, Ivan Nechepurenko, and Norimitsu Onish, "Moscow Moves to Russify Seized Ukraine Land, Signaling Annexation," New York Times, May 19, 2022, https://www.nytimes. com/2022/05/19/world/europe/moscow-russifying-captured-territory.html; and Yaroslav Trofimov, "Russia's Occupation of Southern Ukraine Hardens, with Rubles, Russian Schools and Lenin Statues," Wall Street Journal, May 1, 2022, https://www.wsj.com/articles/rus-

- sias-occupation-of-southern-ukraine-hardens-with-rubles-russianschools-and-lenin-statues-11651403176.
- Trofimov, "Russia's Occupation of Southern Ukraine Hardens."
- "Аксенов: Херсонская и Запорожская области будут в одной стране с Крымом" [Aksenov: Kherson and Zaporizhzhia Regions Will Be in the Same Country with Crimea], РИА Новости [RIA Novosti], May 18, 2022, https://ria.ru/20220518/rossiya-1789329104.
- 11 "Херсон займет достойное место в российской семье, считает Xуснуллин" [Kherson Will Take Its Rightful Place in the Russian Family, Says Khusnullin], РИА Новости [RIA Novosti], May 17, 2022, https://ria.ru/20220517/kherson-1789082855.html.
- UK Defence Intelligence, Twitter post, May 18, 2022, 10:45 p.m., https://twitter.com/DefenceHQ/status/1527163546781483008/pho-
- 13 CSIS estimates. Also see, for example, "Стингер на выходе из атаки, взрыв в воздухе и... Всё," [Stinger at the Exit from the Attack, an Explosion in the Air and . . . That's It], ВВС Русской службы [BBC Russian Service], May 24, 2022, https://www.bbc.com/russian/features-61559430; "War in Ukraine: Why is Russia Losing So Many Senior Officers on the Front?," Time, March 26, 2022, https:// time.news/war-in-ukraine-why-is-russia-losing-so-many-seniorofficers-on-the-front/; "Ukraine War: Who Are the Dead Russian Military Officers and What Do Their Deaths Tell Us About Russia's Operation?," Sky News, March 26, 2022, https://news.sky.com/story/ ukraine-war-who-are-the-dead-russian-military-officers-and-whatdo-their-deaths-tell-us-about-russias-operation-12566775; and Julian E. Barnes, Helene Cooper, and Eric Schmitt, "U.S. Intelligence Is Helping Ukraine Kill Russian Generals, Officials Say," New York Times, May 4, 2022, https://www.nytimes.com/2022/05/04/us/politics/russia-generals-killed-ukraine.html.
- Вале рий Гера симов [Valery Gerasimov], "Влияние современного характера вооруженной борьбы на направленность строительства и развития Вооруженных Сил Российской Федерации. Приоритетные задачи военной науки в обеспечении обороны страны" [The Influence of the Contemporary Nature of Armed Struggle on the Focus of the Construction and Development of the Armed Forces of the Russian Federation. Priority Tasks of Military Science in Safeguarding the Country's Defense], Вестник Академии Военных Наук [Journal of the Academy of Military Sciences] 62, no. 2 (2018). Also see, for example, Dmitry (Dima) Adamsky, "Russian Lessons from the Syrian Operation and the Culture of Military Innovation," Security Insights 47 (February 2020), https://www.marshallcenter.org/MCPUBLICWEB/mcdocs/ security_insights_47_-_adamsky_-_russian_lessons_from_the_syrian_operation.pdf.
- Gerasimov, "The Influence of the Contemporary Nature of Armed 15 Struggle."
- Jack Watling and Nick Reynolds, Operation Z: The Death Throes of an Imperial Delusion (London: Royal United Services Institute for Defence and Security Studies, April 22, 2022); and John Ismay, "Russian Guided Weapons Miss the Mark, U.S. Defense Officials Say," New York Times, May 9, 2022, https://www.nytimes.com/2022/05/09/us/politics/russia-air-force-ukraine.html.
- "Senior Defense Official Holds a Background Briefing," DOD, March 21, 2022, https://www.defense.gov/News/Transcripts/Transcript/Ar-

- ticle/2973395/senior-defense-official-holds-a-background-briefing/; and "Senior Defense Official Holds a Background Briefing," DOD, May 2, 2022, https://www.defense.gov/News/Transcripts/Transcript/Article/3017053/senior-defense-official-holds-a-background-briefing/.
- "Senior Defense Official Holds a Background Briefing," DOD, March 21, 2022; and Ismay, "Russian Guided Weapons Miss the Mark."
- 19 Watling and Reynolds, *Operation Z*.
- 20 See, for example, the data collected by open-source analysts at the blog Oryx. See Stijin Mitzer et al., "Attack on Europe: Documenting Russian Equipment Losses During the 2022 Russian Invasion of Ukraine," Oryx, accessed May 25, 2022, https://www.oryxspioenkop. com/2022/02/attack-on-europe-documenting-equipment.html.
- 21 UK Defence Intelligence, Twitter post, May 21, 2022.
- 22 On the 9M729, see Reuben Johnson, "Russian Attempts to Restock Its Military May Be Doomed to Failure," Breaking Defense, May 19, 2022, https://breakingdefense.com/2022/05/russian-attempts-to-restock-its-military-may-be-doomed-to-failure/.
- 23 Watling and Reynolds, Operation Z.
- 25 Lester Grau and Charles K. Bartles, "Getting to Know the Russian Battalion Tactical Group," Royal United Services Institute, April 14, 2022, https://rusi.org/explore-our-research/publications/commentary/getting-know-russian-battalion-tactical-group; and Mark Galeotti, Armies of Russia's War in Ukraine (New York: Osprey Publishing, 2019).
- 26 Andrew Kramer, "Life in a Ukrainian Unit: Diving for Cover, Waiting for Western Weapons," New York Times, May 12, 2022, https://www. nytimes.com/2022/05/12/world/ukraine-russia-weapons.html.
- Watling and Reynolds, *Operation Z*.
- Bonnie Berkowitz and Artur Galocha, "Why the Russian Military Is Bogged Down by Logistics in Ukraine," Washington Post, March 30, 2022, https://www.washingtonpost.com/world/2022/03/30/russia-military-logistics-supply-chain/.
- Alex Vershinin, Russia's Logistical Problems May Slow down Russia's Advance—But They Are Unlikely to Stop It (West Point, NY: Modern War Institute at West Point, March 2022), https://mwi.usma.edu/russiaslogistical-problems-may-slow-down-russias-advance-but-they-areunlikely-to-stop-it/; and Berkowitz and Galocha, "Why the Russian Military Is Bogged Down."
- 30 Vershinin, Russia's Logistical Problems.
- 31 Watling and Reynolds, Operation Z.
- Ian Talley, "U.S. Says Export Controls Are Hurting Russia's Battlefield Might," Wall Street Journal, May 10, 2022, https://www.wsj.com/ livecoverage/russia-ukraine-latest-news-2022-05-10/card/u-s-saysexport-controls-are-hurting-russia-s-battlefield-might-gg2nFxV47SvlOJOiXtcd.
- 33 Zedong, Selected Works of Mao Zedong.
- 34 On the size of the Russian advance see, for example, Mark F. Cancian, "Russian Casualties in Ukraine: Reaching the Tipping Point," CSIS, Commentary, March 31, 2022, https://www.csis.org/analysis/ russian-casualties-ukraine-reaching-tipping-point/. On Ukrainian population and size estimates, see Central Intelligence Agency, The World Factbook (Langley, VA: Central Intelligence Agency, 2022), https://www.cia.gov/the-world-factbook/countries/ukraine/#geogra-
- See, for example, James T. Quinlivan, "Force Requirements for Stability Operations," Parameters 25, no. 1 (1995): 59-69,

- doi:10.55540/0031-1723.1751; James Dobbins, Seth G. Jones, Keith Crane, and Beth Cole DeGrasse, The Beginner's Guide to Nation-Building (Santa Monica, CA: RAND, 2007), 19-45, https://www.rand.org/ pubs/monographs/MG557.html.
- 36 Dobbins et al., The Beginner's Guide to Nation-Building, 39.
- Nicolaus Mills, "Punished for Telling the Truth About Iraq War," CNN, March 20, 2013, https://www.cnn.com/2013/03/20/opinion/millstruth-teller-iraq/index.html.
- Dobbins et al., The Beginner's Guide to Nation-Building, 39.
- 39 Mark Galeotti, Armies of Russia's War in Ukraine.
- Uliana Pavlova, "Russian Officer Reveals Why He Risked It All to Quit Putin's War," CNN, May 22, 2022, https://www.cnn.com/2022/05/22/ europe/ukraine-russian-officer-resigns/index.html.
- On coercion by punishment see, for example, Robert A. Pape, Bombing to Win: Air Power and Coercion (Ithaca, NY: Cornell University Press, 1996).
- David Johnson, "The Tank is Dead: Long Live the Javelin, the Switchblade, the ... ?," War on the Rocks, April 18, 2022, https://warontherocks.com/2022/04/the-tank-is-dead-long-live-the-javelin-theswitchblade-the/.
- See, for example, Frederick W. Kagan, Kateryna Stepanenko, and George Barros, Russian Offensive Campaign Assessment (Washington, DC: Institute for the Study of War, May 28, 2022), https://www. understandingwar.org/sites/default/files/Russian%20Operations%20 Assessments%20May%2028.pdf.
- 44 Vikram Mittal, "New Russian Strategy Does Not Resolve Underlying Military Issues," Forbes, April 14, 2022, https://www.forbes.com/ sites/vikrammittal/2022/04/14/new-russian-strategy-does-not-resolve-underlying-military-issues/?sh=3d410c683798.
- See, for example, Sam LaGrone, "Warship Moskva Was Blind to Ukrainian Missile Attack, Analysis Shows," USNI News, May 5, 2022, https://news.usni.org/2022/05/05/warship-moskva-was-blind-toukrainian-missile-attack-analysis-shows.
- H.I. Sutton, "Satellite Images Confirm Russian Navy Landing Ship Was Sunk at Berdyansk," USNI News, March 25, 2022, https://news. usni.org/2022/03/25/satellite-images-confirm-russian-navy-landing-ship-was-sunk-at-berdyansk; "Ukrainian Military Says Drone Destroys Russian Landing Craft Near Snake Island in Black Sea," Radio Free Europe / Radio Liberty, May 7, 2022, https://www.rferl. org/a/ukraine-russian-serna-landing-craft-destroyed/31838979. html; and Yaroslav Trofimov, Laurence Norman, and Matthew Luxmoore, "Ukraine Says It Sank Two Russian Naval Boats, and Moscow Targets Odessa," Wall Street Journal, May 2, 2022, https://www.wsj. com/articles/ukraine-says-it-sank-two-russian-boats-as-new-blastshit-russian-border-city-11651482072.
- Microsoft, Special Report: Ukraine (Redmond, WA: Digital Security Unit, Microsoft, April 27, 2022), https://query.prod.cms.rt.microsoft. com/cms/api/am/binary/RE4Vwwd.
- 48
- Asymmetric Warfare Group, Russian New Generation Warfare Handbook (Fort Meade, MD: December 2016).
- 50 Watling and Reynolds, *Operation Z*.
- 51 Paul M. Nakasone, "Posture Statement," Hearing before the 117th Cong., 2nd sess., Senate Committee on Armed Services, April 5, 2022, 3, https://www.armed-services.senate.gov/imo/media/ doc/5%20Apr%20SASC%20CYBERCOM%20Posture%20Statement%20(GEN%20Nakasone)%20-%20FINAL.pdf.
- Microsoft, Special Report: Ukraine.

- "Destructive Malware Targeting Ukrainian Organizations," Microsoft, January 15, 2022, https://www.microsoft.com/security/ blog/2022/01/15/destructive-malware-targeting-ukrainian-organizations/; and "Digital Technology and the War in Ukraine," Microsoft, February 28, 2022, https://blogs.microsoft.com/on-theissues/2022/02/28/ukraine-russia-digital-war-cyberattacks/.
- Microsoft, Special Report: Ukraine.
- Mark Galeotti, Armies of Russia's War in Ukraine.
- Kevin Collier, "Starlink Internet Becomes a Lifeline for Ukrainians," NBC News, April 29, 2022, https://www.nbcnews.com/tech/security/elon-musks-starlink-internet-becomes-lifeline-ukrainians-rcna25360.
- Matthew Fitzgerald and Cort Thompson, "What Does Starlink's Participation in Ukrainian Defense Reveal About U.S. Space Policy?," Lawfare, April 26, 2022, https://www.lawfareblog.com/what-doesstarlinks-participation-ukrainian-defense-reveal-about-us-spacepolicy.
- Kevin Collier, "Starlink Internet Becomes a Lifeline for Ukrainians," NBC News, April 29, 2022, https://www.nbcnews.com/tech/securitv/elon-musks-starlink-internet-becomes-lifeline-ukrainians-rcna25360.
- "Senior Defense Official Holds a Background Brief," DOD, May 26, 59
- Olga Oliker, Russia's Chechen Wars 1994-2000: Lessons from Urban Combat (Santa Monica, CA: RAND, 2001); Mark Kramer, "The Perils of Counterinsurgency: Russia's War in Chechnya," International Security 29, no. 3 (Winter 2004/2005): 5-63.
- 61 Mark Galeotti, Russia's Wars in Chechnya 1994-2009 (New York: Osprey Publishing, 2014).
- 62 Gayle Markovitz, "Davos 2022: President Zelenskyy on 'New Precedents' and a Call for Global Help 'As Fast As Possible'," World Economic Forum, May 23, 2022, https://www.weforum.org/agenda/2022/05/davos-2022-special-address-by-volodymyr-zelenskyy-president-of-ukraine/.
- 63 "Most Ukrainians Oppose Territorial Concessions, Poll Shows," Reuters, May 24, 2022, https://www.reuters.com/world/europe/ eighty-two-percent-ukrainians-oppose-territorial-concessions-poll-2022-05-24/.
- 64 Winston Churchill, Speech in the House of Commons, October 5, 1938, from House of Commons, Parliamentary Debates (London: Her Majesty's Stationery Office, 1938).