Analysis of the Conflict Between Russia and Ukraine

What have we learned so far?

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kraine is located in the middle between Russia to the east and Europe to the west. Geopolitically, it can be said that Ukraine is a land between two panregions whose governing states are in conflict as the theory built by Karl Haushofer and halfway to the heart of the world, Eurasia—according to Sir Halford John Mackinder. Whoever ruled the heartland would have the world in their hands.

With this in mind, the motivation for this article is to help the reader to reflect on how geopolitics is back, and that *space is power*, especially regarding places with strategic resources that become scarce—such as food, water, and energy. This work intends to analyze the conflict between Russia and Ukraine.

Initially, we will approach the antecedents that correlate the two actors in the timeline, evidencing an ethnic, linguistic, and cultural partition that cannot be disregarded; the spatial significance represented by Ukraine and its role as an interface between the West and the East; the most important issues associated with the political and strategic part of the quid pro quo; the operational part expressed by the possible design of the Russian campaign; and, finally, the most instrumental, teachings with reference to operational factors or combat functions. In the final remarks, there will be some caveats.

Background: The Spirit of Time (Zeitgeist)

Like other neighboring nations, the two countries have as many historical and cultural ties that unite them as well as separate them. This common heritage >Col Kilian graduated from the Naval School in 1978; was the Commander of the 2nd Infantry Battalion and the Recruit Center of the Brazilian Marine Corps; attended the U.S. Army Combined Arms Course; studied at Marine Corps Command and Staff College Class 1996-1997; retired in 2007; and was a Naval War College Instructor and Researcher at the Doctrinal Development Command of Brazilian Marine Corps.

dates to the 9th century, when Kyiv, the current Ukrainian capital, was the center of the first Slavic state—created by a people who called themselves "Rus." It was this great medieval state, stretching from the Baltic to the Black Sea, called by historians the Kievan Rus, that gave rise to Ukraine and Russia—whose current capital, Moscow, emerged in the 12th century. The professed faith was Orthodox Christian and among the various Slavic dialects spoken in the region, Ukrainian, Belarusian, and Russian languages eventually developed. It is because of this shared past that Russian President Vladimir Putin says that "Russians and Ukrainians are one people, one whole." In the 13th century, the federation of Rus principalities was conquered by the Mongol Empire.

Subsequently, at the end of the 14th century, the territory ended up divided between the Grand Principality of Moscow and the Grand Duchy of Lithuania (which later joined Poland), taking advantage of the decline of Mongol power to advance in the region. Kyiv and the adjacent areas came under the rule of the Polish-Lithuanian Commonwealth—leaving western Ukraine more exposed to Western influences in the following centuries, from the Counter-Reformation to the Renaissance. In the 17th century, a war between the Polish-Lithuanian Commonwealth and Tsarist Russia brought lands east of the Dnieper River, which was known as Ukraine's "left bank," under the control of Imperial Russia.

Decades later, in 1764, the Russian Empress Catherine the Great dismantled the Ukrainian Cossack State that dominated the central and northwest regions of the territory and began to advance on Ukrainian lands, which were until then dominated by Poland. During the years that followed, a policy known as Russification banned the use and study of the Ukrainian language. Local populations were pressured to convert to the Russian Orthodox faith so that they could constitute one more of the "little tribes" of the great Russian people.

In parallel, nationalism intensified in the lands further west, which passed from Poland to the Austrian Empire, where many began to call themselves "Ukrainians" to differentiate themselves from the Russians. With the 20th century came the Russian Revolution and the creation of the Soviet Union, which made its own rearrangement of the Ukrainian puzzle. The western part of Ukraine was taken from Poland by Soviet leader Joseph Stalin at the end of World War II when the Ukrainian Soviet Socialist Republic was formed. Under the common Soviet cloak, in the 1950s, Moscow met an old demand from Ukraine and transferred the Crimean

Peninsula to the republic. Located on the Black Sea in the south, the region also has strong ties to Russia, which to this day maintains a naval base in the city of Sevastopol. Crimea returned to Russian control in 2014 when Putin's Russia invaded and annexed it.

During the period of Soviet domination, the attempt to subject Ukraine to Russian influence intensified, often at a high human cost. Millions of Ukrainians who were already part of the Soviet Union in the 1930s died in a massive famine—which became known as the Holodomor—promoted by Stalin as a strategy to force peasants to join the communist policy of collective farms. Stalin even sent large numbers of Soviet citizens, many with no knowledge of the Ukrainian language and few ties to the region, to try to repopulate the east of the country. Even so, Soviet Moscow never culturally dominated Ukraine.

In 1991, the Soviet Union collapsed, and Ukraine became independent—although there was part of the population that would like to come under the aegis of the newly formed Russian state. It was a chaotic and painful process. In 1994, the Budapest Memorandum was signed, in which Ukraine acceded to the Nuclear Non-Proliferation Treaty and relinquished its nuclear arsenal while establishing a security guarantee against threats or use of force against its territorial integrity and sovereignty. In 1997, in exchange for the division of the Black Sea fleet and the ratification of a bilateral treaty wherein Russia formally recognized Ukrainian territorial integrity and sovereignty, Kyiv agreed to leave the strategic port of Sevastopol, on the Crimean Peninsula, under lease from Russia until 2017. Ukrainian President Yanukovych, in exchange for better purchase prices for Russian gas, would extend this *lease* until 2049 with the so-called Kharkiv agreements of 2010.

In the period from 1999 to 2004, NATO expanded to the east in the name of the market and democracy but carried out a true military siege of Russia. In 2008, at the Bucharest Summit, NATO welcomed Ukraine and Georgia to their Euro-Atlantic aspirations for membership. Immediately, President Putin declared that Ukraine's membership into NATO would be considered a direct threat to Russia. Soon after, the Russian-Georgian conflict took place, resulting in the emergence of the breakaway republics of Abkhazia and South Ossetia.

In 2014, Ukrainian President Yanukovych rejected a deal with the European Union while seeking an alignment with Russia, which sparked a series of protests in Kyiv. The repression of these protests caused violence to emerge, initiating the EuroMaidan or Orange revolution. The president had to flee and go into exile in Russia because his life was at risk. Ukraine replaced the exiled president without complying with the provisions of that country's Constitution—the impeachment process. This fact, however, was not forgotten by Putin. Subsequently, there was the Russian intervention in Crimea with Putin annexing it, as the eastern provinces Luhansk and Donetsk were controlled by pro-Russian separatists, starting a civil war in that region. During the 14 years of conflict, more than 14,000 lives were claimed.

Ukraine is a divided country: in the east, ties with Moscow are stronger, and the population is more likely to follow the Orthodox religion and speak Russian. In the western part, centuries under the rule of European powers contributed to the fact that many of its inhabitants are Catholic and preferred to speak Ukrainian, the local language.

The Geographical Importance of Ukraine

Ukraine is an Eastern European country with the capital city of Kyiv and a population of 44 million people. Its territory, the second largest on the continent, is bathed by the Black Sea and borders seven other nations—including Russia.

The Ukrainian territory is a transit region that connects Russia to European countries and has a very fertile agricultural space. In addition to adding strategic depth to Russia, large gas pipelines pass through its lands and are part of the logistics and transport of Russian products, especially in the energy sector. Ukraine receives capital for this reason. To end this dependence, the Nord Stream II was built, which connects Russia to Germany by pipeline without passing through Ukrainian territory. With the war, the pipeline was not certified. Today, the European Union is dependent on imports of oil and gas from Russia.

Ukraine is the breadbasket of the European Union and is considered one of the pillars of food stability around the world. In the south of the country, wheat, barley, rapeseed, sunflowers, and peas are grown. The war disrupted production and led to an increase in food prices, as well as fuel prices, which generates inflation throughout the world.

The Ukrainian territory extends for 1316 km from east to west and 893 km from north to south, not counting Crimea, which is 320 km EW and 175 km NS. It is the second largest country in Europe after Russia. The lengths involved impose respect for the tyranny of distance on any actor who tries to violate its territory. It is a country where the Dnieper River cuts the land from north to south, dividing the east from the west and, at the same time, allowing the installation of several dams, plants, and irrigation canals. To the west predominate mountainous regions and forests that extend to the Carpathians. In the north and along the river, the presence of meadows and swamps is constant, as well as wetlands. The east is a flat, steppe region. In the south and southeast pulsates the industrial heart where the war, steel, and aeronautical industries are based. The coastline extends through the Azov and Black Seas, the latter being one of the last energy provinces to be explored. It is through it that a large part of foreign trade flows and generates wealth, sustaining the national economy.

Conflict Trigger

On 24 February 2022, Putin declared the autonomy of the two provinces of the Donbas region, Donetz and Luhansk, and invaded Ukrainian territory.

The main trigger of the conflict was the debate over Ukraine's incorporation into NATO. The problem is that Ukraine would be the first Russian border state to join NATO, *which is seen as something extremely negative by the Russians.*

Russian Strategic Credo

In the Russian primer, the strategic credo is based on the following premises:

• Regaining the power and influence lost with the dissolution of the former USSR. To do so, you can perform the following actions, among others

• The protection of ethnic Russians.

• The protection of Russian economic interests.

• The continued occupation of former naval and military bases.

• NATO *expansion is a threat*. Losing permanent control over Ukraine and letting it fall into the western orbit would be seen as a major blow to Russia's international prestige.

• Russia envisions the following countries as partners: Armenia, Belarus, Chechnya, Kazakhstan, Tajikistan, and Turkmenistan.

• The following countries are listed as opponents: Estonia, Georgia, Latvia, Lithuania, Moldova, Poland, and Ukraine.

Policy and Strategy

The following *aspirations and interests* of Russia can be enumerated:

• Restoration of Russia to Great Power Status in Northern Eurasia.

• End of NATO's eastward expansion.

• Reversal of previous NATÔ expansion.

• Security in Eastern Europe and the Caucasus.

• Recognition of Donetsk and Luhansk in eastern Ukraine as new states.

• Recognition of Crimea as Russian territory.

The Russian political objective in the current conflict can be deduced as being: the overthrow of the current Ukrainian government and the installation of one that is aligned with it (a Ukraine under Russian hegemony).

The Russian strategy in the current conflict was visualized as follows: the conquest of Kyiv, symbolizing the fall of current power. With the conquest of the capital Kyiv, possible negotiations would be carried out, in which Russia would assert its interests.

• *Center of Gravity*: As the source of all power and movement, the Ukrainian President, Volodymyr Zelensky, wields tremendous influence and the

loss of either him or the capital of Kyiv would be devastating. Operationally, the center of gravity would be the forces defending the capital.

• *Military Strategy:* A quick overland campaign toward the capital via a blitzkrieg. Establishment of a naval blockade of the Ukrainian coast through control of the Azov and Black Seas.

• *Narrative:* Denazification and demilitarization of Ukraine to protect people who were subjected to bullying and genocide by the Kyiv regime for eight years.

After the fruitless offensive on the capital, Russia achieved the balance in Bruce Bartlett's dynamics that relate to MEANS-ENDS-MANNERS and RISKS, in which we note the following changes: the political objective became the conquest of the *Donbas* region by adding the southern corridor that connects this region to the Crimean Peninsula, an area that was known in the 19th-century tsarist empire as Novorossiya, the New Russia; this is part of the Russian national objective, which appears to have been emulated and incorporated into Putin's beliefs.

Therefore, the following objectives can be added:

• Recognition of Ukraine's rights as an independent country.

• Withdrawal of all troops and weapons back to their bases, including those in Belarus.

• Non-accession of Ukraine to NATO or international organizations and "status quo" = neutral state.

• No foreign or NATO forces in Ukraine.

• Recognition of Crimea as Russian territory.

• Recognition of Donetsk and Luhansk in eastern Ukraine as new states. From the Ukrainian perspective, it can be inferred that the political center of gravity was international public opinion, which led the narrative to explore the strong idea of Ukraine as a victim of aggression. As a strategic center of gravity, it is lawful to enumerate the capital Kyiv as a bastion and symbol of power and popular will. As an operational center of gravity, Russian forces advanced from north and northeast. Among the main Ukrainian interests, the following can be chosen:

• Permanence in the International System as an independent and democratic state (survival as a state entity);

• Admission to NATO and the European Union.

• Resumption of Luhansk, Donetsk, and Crimea.

• Increased security.

Ukraine can flex and adjust within one or more of the parameters listed below:

• Peace and security.

• Non-NATO membership and being a neutral state.

• No foreign forces or NATO in Ukraine.

• Join the European Union.

• Possible recognition of Luhansk, Donetsk, and Crimea after public vote (plebiscite).

• Continue fighting for independence until a ceasefire is agreed, observed by both sides.

Other Actors Involved

NATO: NATO had no obligation to support Ukraine in the conflict, due to the Collective Security Treaty, since the country is not yet a formal member of the organization. However, NATO countries supported Ukraine indirectly through the provision of weapons systems and logistical support as well as providing a large flow of intelligence and cyber support. There is also support in the instruction and training of Ukrainian forces by NATO troops since 2014, since the invasion of Crimea.

The United States: The United States offered strong financial support, exchange of intelligence information, material support, and support of the informational campaign in addition to economic sanctions aimed at isolating Russia.

China: China adopted a stance of moderation in the dispute, not least because it is a trading partner of Russia and Ukraine. From Russia it buys armaments; from Ukraine, she receives food and knowledge, as well as being the interface between West and East in its project "Belt and Road Initiative."

UN: Since Russia is a permanent member of the UN Security Council, the UN becomes ineffective, and the General Assembly is a theater where nations demonstrate diplomatically.

Other Countries: Other countries generalized repudiation of the invasion, given the victimization campaign in Ukraine for the aggression suffered.

War as a Multidisciplinary and Plural Phenomenon

The first lesson from the conflict is that the Clausewitzian theoretical framework remains valid and contemporary. We highlight the main points below:

• The nature of war continues to be a dialectic of wills, an act of force, where each entity tries to impose its will on the other, as it is important to emphasize that they are two living entities with their own will.

• War is the continuation of politics by other means, which characterizes war as a means to an end that is political; otherwise, the war would gain an autonomy it should not have. Submission to politics adds instrumentality to it.

• The impossibility of a "science of victory."

• Technological innovations impact and change the character of war and the way it is carried out.

• The (internal) friction, the force that makes what seems so easy to be so difficult, is continuous. It concerns chance, errors, accidents, difficulties, and their effects on decisions, speech, and actions. Overcoming friction requires the intellectual and psychological capacity (leadership, determination, and courage) of commanders and their subordinates as well as the morale, spirit, and self-confidence of the troops. Training, of course, is an attribute that helps to mitigate this obstacle.

• The fog of (external) war, the environment of uncertainty, and the imperfect correspondence between information and the environment is an obstacle to be overcome by intelligence, which today must make use of remotely piloted aircraft, the use of satellites, exploration cybernetics, and electronic warfare to reduce knowledge gaps and supplement information gained by human intelligence.

• War flaunts itself in all expressions of power—in the terrestrial, maritime,

aerial, space, and virtual domains and in the physical, informational, and human aspects—which makes it receive taxonomic labels that range from hybrid war, unrestricted war and fourth generation, living up to the old maxim that war is a true chameleon.

These maxims serve to remind us that in the formative itinerary of officers and soldiers, it is important to educate reflection to develop a critical judgment as well as the support of the consistent doctrine that helps to automate behaviors and favor the economy of thought.

In short, as war is the province of uncertainty, it is better to understand it to better manage it. There is no perfect strategy any more than there is a perfect army.

The Operational Level

As Russian actions were developed and disseminated widely by the media, it was possible to deduce their campaign design:

• Initially in *the line of effort*, cyber warfare and information operations were launched, aiming, respectively, to degrade the Ukrainian combat power and impose the Russian narrative.

• In *the operations line*, the following phases were visualized:

Phase 1: The strategic concentration. The Russian forces carried out the strategic concentration, as of October 2021, in the north, northeast, and east under the guise of military exercises in these regions. Phase 2: Suppression of enemy air defenses. Seeking air superiority and the resulting freedom of action in the battlespace. Phase 3: Land and naval offensive. These were launched simultaneously. The ground attack was launched from the north and northeast directed toward Kyiv, the strategic center of gravity, featuring the main effort, as well as an assault on Hostomel airport, located ten km northwest of the capital. A second axis of attack, going from east to west, to conquer Dnipropetrovsk, cut the communication lines of the Ukrainian army, and liberated the Donbas region and the respective provinces of Donetsk and Luhansk. The third axis

of attack was through amphibious operations carried out in the south of Ukraine in Odesa and Mariupol to conquer the respective ports and the cities of Kherson, Mykolaiv, and Berdiansk—isolating Ukraine from the seas of Azov and Negro and thus suffocating the economy. The Russian navy took actions in order to neutralize the Ukrainian navy and establish control of the maritime area in the seas of AZOV and NE-GRO, denying access to the maritime communications lines from the ports located on the southern Ukrainian coast. Phase 4: Degradation of critical civil (energy) and military infrastructure and destruction of vital centers through the launch of cruise and ballistic missiles. Energy facilities would be occupied and controlled with special operations troops depending on the sensitivity of these assets. Phase 5: Imposing their will to remove the Ukrainian president from power and putting a pro-Russian puppet in his place. Phase 6: Partial demobilization with military occupation in the entire southern region from Donbas to Crimea.

The intention was to cut Ukrainian territory in half by conquering Kyiv and isolating the eastern part of the Dniepr river, dividing Ukrainian troops, and cutting their lines of communications. At the same time, their goal was to guarantee the logistical flow to their forces in the north and east, avoiding the culmination of the attack. The offensive was meant to focus on speed, just like the German Blitzkrieg of World War II.

Ukraine was left with a defensive strategy, in which traditional defense would be used by conventional troops and an insurgency force using guerrilla tactics. The former was to capture the attention of the occupying forces and conduct possible counter-offensives; the latter was to increase occupancy costs and harass supply lines.

The capital, the western part of the Dniepr River, and the ports to the south on the Black Sea coast were essential for maintaining Ukrainian government power, the main logistical axis, and the Ukrainian national economy. Denying the Russian ability to connect the southern corridor along the coast to the Sea of Azov was also an essential task for Ukraine. In the informational field, the narrative would be based on the polarization of the conflict, having as an idea the notion of Russian aggression and the victimization of Ukraine to influence international public opinion. Winning hearts and minds would ensure support in all instances. The mythologizing of the Ukrainian leader would work as a complement to add cohesion and increase the people's morale. The rest was to flesh out logistical support from the West and make the war long in duration.

Maneuver

According to information obtained by the media, the Russian maneuver was based on the premise (basic hypothesis) that the bulk of the Ukrainian army would be in the east with the purpose of containing the advance of the Donbas region and the provinces of Donetsk and Luhansk. Therefore, the maneuver would be on several axes, quickly and decisively, in the light of the German Blitzkrieg, characterizing a maneuver operating from outside lines in the hope of dividing and thus weakening the Ukrainian resistance. Outside lines require operating lines and communication networks to be as perfect as possible. The Russian forces were numerically superior to the Ukrainians and the terrain was relatively clear of obstacles. The strategy also required the Russian forces to maintain constant pressure on the Ukrainian defenders.

However, the terrain to the north is swampy and marshy, which made progress difficult and limited speed. Russian logistics were not designed to operate far from their rail terminals and lacked air transport to overcome short--term challenges. Its fleet of trucks was also limited in its ability to support the Russian offensive and was overwhelmed when Russian forces advanced more than 90 km from their stopping points. If, on one hand, the Russian offensive, launched on different axes, was able to fragment the Ukrainian defensive forces, on the other, it proved to be a great challenge for Russian logistics, which presented difficulties in providing timely support to the immense amount of tanks deployed in the territory. This fact, together with the strong resistance found in the cities, was considered the cause of the identified operational pause.

Russian ground units are usually organized into battalion tactical groups with layered anti-aircraft, anti-drone, and anti-armor capabilities. In short, they are self-sufficient. However, there are indications that some advanced elements of Russian forces failed to operate as battalion tactical groups in Ukraine, often inexplicably leaving behind their defense assets. This fact helped to generate ineptitude on the part of Russian ground forces, whose armored forces made blunders in their advances:

- Armored action fails due to low speed of progression and resulting slow pace of operations.
- Continued use of highways without previous aerial and ground reconnaissance.
- Vulnerability of armored vehicles to portable AC weapons due to lack of reconnaissance and poor techniques of the immediate action of the units during the engagement.
- Lack of cleaning of the flanks during displacements.
- Lack of air coverage in movements through the axes of progression.
- Possible deficiency in training or use of conscripts in armored units.
- Possible poor communications between ground units and air units.

Therefore, it is still verified that having a good anti-armor defense is a factor of strength in combat.

The increasingly intense question may also arise as to whether armored vehicles with high firepower, under caterpillar or not, are still important. The answer seems to conflict with the facts being observed in Ukraine. Undoubtedly, the armored capability of advancing troops is still fundamental to achieving the operational effects of war. However, associated with the added shock and firepower, capabilities have been added today that enhance armored actions—especially in the type of eastern European terrain, which is flat—such as air cover, anti-aircraft capability, and, mainly, anti-armor capability. For this reason, it is possible to understand NATO's offer

of next-generation light anti-tank weapons and JAVELIN weaponry, as well as the portable anti-aircraft STINGER (North American) and the GLOM (Polish), in addition to the great star of the skies—the BAYRAKTAR drones that hit Russian artillery and supply lines, slowing their advance.

Logistics

To get an idea of the logistical effort necessary to sustain the forces, it is important to highlight the organization of a tactical battalion group, the Russian battalion tactical groups, mentioned earlier. There are 700–900 personnel and the following number of vehicles:

Combat and combat support: ten T-72 or T-80 BVM tanks; six armored vehicles with mounted mortars; 40 BMP-3 armored personnel carriers; 12-20 AP MSTA armored artillery vehicles with 152mm and LMF GRAD 122mm cannons and 10 SA-15 GAUNTLET armored vehicles

Combat Service Support: three food supply trucks (10-day load); five water supply trucks; two-five medical trucks for first-line treatment (not equipped for surgery); two mobile kitchen trucks; ten-twelve fuel trucks with about two days' worth of cargo; five trucks containing engineers and their supplies (demining equipment, for example); five drone vehicles; two electronic signal jamming vehicles to neutralize spy satellites and radars; two recovery vehicles: one tow truck for light vehicles and one for towing tanks and artillery.

About 150 of the 700-900 troops can be considered support, and as this formation would be an arm of a larger force in the area, they could also count on the help of other logistical units. But the ratio still does not come close to that of the U.S. Army, which sends about ten support troops for every combat soldier. On average, each Russian soldier requires around 440 kilograms of supplies a day, including food, fuel, ammunition, and medical care. Russia sent over 150,000 troops to Ukraine, organized in various formations. Therefore, the daily need to supply the three mouths—the soldier, the vehicle, and the weapon—is 66,000 tons. The Russian army operates with fewer logistical support soldiers compared to other armies.

The Russian invasion plan tried to dominate with long and fast thrusts, which overextended their supply lines. Choosing to simplify logistics might work in a quick military action, but it does not leave much room for error in a longer action. Here are some problems the Russians seem to have:

Inadequate protection of supply trains. Trucks traveling along supply lines need protection, especially if travel options are reduced to a few predictable roads. But from the beginning, Russian troops did not perform the basics of convoy escort, which involve armored vehicles and soldiers protecting and defending vulnerable logistical vehicles. Supply vehicles were sometimes left unattended even after they learned that citizens were attacking unarmored fuel trucks.

The shortage of food, water, and fuel. In the media, there are many reports of Russian soldiers without food and even fuel for their tanks. The *New York Times* reported that some soldiers were carrying meals that expired in 2002 and intercepted radio communications between troops outside Kyiv who said they needed food, water, and fuel. *CNN* cited two sources familiar with the matter who said Russia asked China for rations.

Questionable medical care. A vital aspect of military planning is how best to treat and transport wounded soldiers, ideally within the first hour after trauma. There were reports of inadequate medical support for Russian troops. One of the many horrible things about war is the idea that a military force would not be prepared to support its soldiers in terms of their medical needs.

Low supply of guided missiles. Conquering cities is an extremely bloody and time-consuming event. Urban terrain favors defenders who know the territory and offers endless places to hide and opportunities for ambush. It also forces an attacker to use an enormous amount of ammo. *Forbes* reported that a Pentagon official said Russia appeared to be low on precision ammunition such as guided missiles, and *Reuters* reported that these missiles have a failure rate of up to 60 percent.

Excessive vehicle breakdowns. Since the invasion began on 24 February,

Russia has lost more than 2,000 vehicles, including more than 300 tanks, according to open source reports. The Ukrainians destroyed and captured some; others were abandoned. Some of the tanks were older generations and not well equipped, including the T-72, a Soviet-era tank that went into production over 50 years ago. Combat vehicles go off the road, through dirt roads and gravel roads, which constantly shake everything including the little pieces, screws come loose, and small pins fall out. So it is very common for armored vehicles, even wheeled trucks, to break down in an intense operating environment. This explains why we have seen so many pictures of abandoned Russian vehicles. They just broke along the way. It is inferred that the maintenance deficiencies were compounded by the fact that the troops were exercising for two months before crossing into Ukraine.

Command and Control

Russia's command structure is confusing at best. It is not one structure, but four—all coming from different regions of Russia. A single chain of command would make life much simpler.

Evidence of the chain of command failure is that at least fifteen senior Russian commanders, including seven generals, have been killed. Normally, these high-ranking officers would not be close to the front lines, but they had to go further than usual to enforce order and direct operations at lower levels.

Many Russian troops in the south appear to be professional soldiers who have been deployed to Crimea. But elsewhere, especially in the north, Russian forces appeared to have many recruits who would be less motivated and less trained. Also, it appears that the orders for the invasion were kept secret from the base.

It is important to note that the Russian army is very centralized, making the decision-making cycle (OODA cycle) slow, and thus being overtaken by the enemy in terms of time. It is also noted that the degree of situational awareness is very low since they do not work in networks and there is no sharing of information. Soon, Ukrainians aware of this vulnerability carried out surgical strikes on Russian command posts, eliminating the generals and generating systemic chaos in Russian forces as subordinates within the Russian organizational structure have low initiative and are given tasks in terms of action to be taken and not for the desired effect. In short, losing C2 ability is unsettling for the Russians as leadership in the lower echelons is almost non-existent.

Intelligence

A high degree of situational awareness is important in combat. Therefore, in today's world, the dissipation of the fog of war is achieved by sharing information flowing through networks in realtime. Information about the enemy—such as its device, composition, value, and quirks and deficiencies as well as terrain and weather and weather conditions is essential for making good and quick decisions, particularly when it comes to target acquisition.

Within the combat that is developed, it was observed that there is an intense game regarding the acquisition of targets and the resulting kinetic fires. There is no lethality without target acquisition. This is a true game of cat and mouse, where the number one rule of survival, "shot denounced the position," cannot be forgotten. Therefore, there is an increasing need for tactical mobility on the battlefield. Another corollary is that recognition must be organic and exist at all levels. There can be no dependence on the upper echelon or other forces. A target only engages if it is seen or sensed. You cannot enter into blind combat without the "eyes," whether satellites, planes, or drones. This information is essential and must flow immediately across networks.

The Russians used a combination of drone, telephone and radio intercepts to locate Ukrainian command posts and high-value enemy positions. The Ukrainians are tracking Russian positions through drones and intercepts as well as information from Western allies.

Fires

It is important to highlight that military forces, in their operational maneuvers, are centered on kinetic fires, which use in their portfolio howitzers and artillery rockets, missiles from surface ships, submarines, as well as aircraft. It is recalled that within the Russian brigade there are three artillery battalions, while in the Western world we have only one battalion to support the brigade.

Another lesson noted is that long-range precision fire is extremely important and indirectly associated with the ability to translate battlefield intelligence into high-impact attacks—as the Ukrainians did against key Russian leaders and equipment. The value lay in the ability to sink ships and the ability to reach command posts.

The effectiveness of drones in combat is nothing new, but in this war, their importance was reaffirmed. Drones and anti-drone capability are key assets whose importance was displayed in the war. The synergy generated by the drones adds speed, range, and convergence which increases the capabilities of a combined arms force. Once again, the Turkish drone Bayraktar was the star of the skies.

Russia did not use all of its air assets to achieve and exploit effective air superiority at the start of the fighting, which would have given it greater freedom of action in the battlespace. The real causes are not known, but based on some expert reports, some of the possible causes are listed:

• The limited amount of precisionguided munitions launched by aircraft that was available for most fighter units of the Russian air force.

• Low confidence in the ability to safely deconflict large-scale sorties with anti-air defense activity (surface-air missile) operated by Russian ground forces.

• Relatively low number of flight hours that Russian air force pilots receive each year compared to most of their western counterparts, just under 100 flight hours per year.

• Success of Ukrainian anti-aircraft artillery, predominantly low-altitude artillery.

• Adverse climatic and meteorological conditions.

Protection

Increasingly, cyber warfare and electronic warfare are critical to protection and are considered multipliers of combat power. Anti-aircraft defense is fundamental for the exercise of mobility and initiative in combat. Currently, the nucleated modular arrangements in the battalion must seek self-sufficiency and be based on a portfolio of weapons systems that add autonomy on the battlefield. Therefore, as far as possible, the GptOp-FuzNav must have direct and indirect fire weapon systems such as anti-armor munitions and mortars and artillery in direct support.

Technical details and current doctrine can be relaxed or changed so that the combat module has the greatest possible resilience in action. The philosophy of maneuver warfare must be carried out from the destruction of the zero error mentality and the continuous readiness in simulations, war games, and practical training. The transformation of a force begins with schools and is perfected in training. The greatest protection will be gained when minds change and admit that error is a phase of the process.

Informational Dimension

The battle of narratives was intense for both contenders. Regarding the "jus ad bellum," that is, the right to war, "just war," the Russians used the idea of force to protect its nationals with the resulting denazification and demilitarization of Ukraine as well as the threat of NATO. On the other hand, the Ukrainians said they were victims of aggression and that they resisted the autocratic Russian regime, needing support from the West.

The Russian narrative appeals to its people; the Ukrainian one shapes impressions and ideas of international public opinion. The dissemination of fake news and images with the aim of influencing and shaping behavior in all instances was constant during the conflict.

As for the deficient Russian information campaign, it is an indication that it is a paradigm shift. Currently, it is practically impossible to maintain a narrative focused on some external target audience (the West) and another narrative in the internal scope. Rare exceptions such as North Korea and China would be able to isolate the country from external informational influence. Putin was more focused on protecting information in the domestic environment and dedicated to containing implosive actions such as protests and internal riots.

Final Considerations

The most important lesson of the present conflict is that geopolitics is back and with it power politics represented by the realist side of international relations.

Another lesson is the one that is well synthesized by Thucydian thinking that emphasizes, "The powerful do what they want and the weak suffer what they must," which must be very well understood by the national elite so that Brazil in the future is not an island from Melos.

Finally, it is necessary to emphasize that the international environment is increasingly multipolar and, therefore, more unstable, uncertain, and insecure.

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