



**BESA**   
The Begin-Sadat Center  
for Strategic Studies  
Bar-Ilan University

# The War in Ukraine: 16 Perspectives, 9 Key Insights

Eado Hecht, Shay Shabtai (Eds.)



Mideast Security and Policy Studies No. 201

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## **List of Articles**

1. The War in Ukraine – Key Insights and Lessons

### **Major Combat Operations**

2. Eado Hecht, 18 Months of War in Ukraine
3. Uzi Rubin, Missiles, Drones and Rockets in the Aerial Campaign
4. Yirmi Shiferman, The Russian Air Force in the War – Issues for Review
5. Eyal Pinko, The Naval Campaign

### **Ancillary Operations**

6. Eyal Pinko, The Cyber Domain
7. Shay Attias, Non-Violence Strategies, Soft Power and Digital Front Challenges in the Russian-Ukrainian War
8. Eado Hecht, NATO Aid to Ukraine

### **Global and Regional Contexts**

9. Ran Segev, The War in Ukraine and the Reshaping of the World Order
10. Efrat Aviv, A Policy of Compartmentalization: The Turkish Role in the Russia-Ukraine War
11. Lauren Dagan Amos, India and the Russia-Ukraine War: Rethinking the Course

### **The Israeli Context**

12. Shay Shabtai, Israel's Policy to the War in Ukraine
13. Elai Rettig, Israel's Energy Market and the War in Ukraine
14. Gershon HaCohen, Lessons for Israel

### **Where to?**

15. David Levy, Getting to an End in Ukraine
16. Shachar Heller, The War in Ukraine – Possible Directions

# **The War in Ukraine: 16 Perspectives, 9 Key Insights**

## **Introduction**

**Shay Shabtai, Eado Hecht, Eitan Shamir**

In February 2022, after a decade of conflict manifested in continuous low intensity fighting in southeastern Ukraine and after many months of a gradual increase in tensions between them, Russia invaded Ukraine. The general expectation was that Ukraine would be defeated soon, but the Ukrainians thought differently and prepared accordingly – they neither surrendered nor were defeated, but maintained a stubborn defense. Although Ukraine initially lost a large area, equal to about five times the entire area of the Land of Israel between the Jordan and the Mediterranean Sea, the Ukrainians continued to fight and about a month and a half later managed to make the Russian army retreat from a significant part of the area it had captured in the first impetus of its offensive. A Russian offensive that was planned to be carried out as a ‘special operation’ that would last several weeks, aiming to replace a pro-Western Ukrainian government that wished to bring the NATO alliance to Russia’s border with a government friendly to Russia, and to take considerable territory in eastern Ukraine, became a lengthy high intensity war, the end of which is not in sight at this point.

Due to the critical importance of the war to the collective security of Europe and the importance of Russia and Ukraine to the world economy, the rapid intervention of NATO countries to help Ukraine with money, military and civilian equipment and military training and the imposition of economic sanctions against Russia (although at least for now they refrain from sending forces to participate in the fighting itself), the war affects the entire world – parts directly and parts indirectly. Russia, unable to manufacture equipment and ammunition at a rate commensurate with the expenditure of the war effort, has turned to several countries, primarily Iran and North Korea, and is being helped by China, India, and a variety of countries throughout Asia and Africa to circumvent the sanctions NATO imposed on it.

The war deviates dramatically from the concepts developed in the West regarding the political reality in the world in general, the role of war within the framework of contemporary international relations and the characteristics of contemporary war in particular. These concepts developed gradually after World War II, and accelerated after the collapse of the Soviet Union and during the period of Western global dominance that followed. The main premise that was swept away was that, due to the transformation of world culture, “such” wars would no longer occur – high intensity wars with many casualties between states fighting over territory using mechanized maneuvers, trench warfare and the high firepower of large armies that exist thanks to the mass production of weapons and other means ( what was called the “Industrial Age Wars”). From the assumptions of this theory, additional assumptions were developed about the characteristics of the wars that would occur, their political goals and their usefulness in achieving these goals, and also about the effectiveness and usefulness of a variety of new technologies and old and new fighting methods of conducting wars.

This publication contains articles on a number of issues related to the conduct of the war – political, economic and military. The intention is to draw some of the lessons Israel is required to learn from this event. The articles are not intended and do not pretend to describe everything that has happened so far in this war, nor to predict everything that will happen in the future nor to cover all the possible lessons.

Two warnings must accompany the reader while reading the articles:

- ◆ The war is not over yet, and at least as it is currently developing, it seems that it is not going to end anytime soon, unless a fundamental political or military deviation occurs – an internal political collapse in one of the rival states or a major collapse in the determination of the fighters in one of the armies or in the countries that support them to continue their support. These are not impossible twists, but at least according to the currently available information they are unlikely in the near future.
- ◆ The information flowing to us from the fighting itself is clearly unreliable. The two adversaries control most of the information

that is disseminated, both only release information that is useful for the story they want to tell and this information is generally to be suspected to often vary between inaccurate to outright lies. Most of the information disseminated in Western public media and social media is Ukrainian propaganda propagated usually without checking its veracity. Aiming to influence the outcome of the war the official government sources of the Western countries also publish mainly planned narratives and very little raw information and they too often merely echo Ukrainian propaganda. At the beginning of the war, there were quite a few ‘wild’ sources - citizens and soldiers from both sides who published without control on social media sites what was happening in their immediate environment, but gradually this phenomenon decreased following an effort by the rival authorities to impose censorship. These publications still exist, but much less and they much less present general information about what is happening but only specific information or atmosphere.



We deliberately chose not to adopt an agreed and coherent approach for the various articles – the opinions of the individual researchers are presented here, some contradict each other and some of the articles partially overlap in content and opinions. However, in our opinion, as editors, it is possible to distill from the body of writing a number of relevant insights for Israel, and any party – especially in the Western



world – who is interested in learning and applying lessons from the war so far.

On the political level:

◆ The acceleration of the conflict between the blocs:

Over the past decade, China has promoted an aggressive global strategy that includes, among other things: a significant military build-up, an aggressive policy in its immediate area and economic expansion based on the establishment of traffic routes across the globe and deepening economic penetration into other countries. As a result, the political and economic competition between it and the United States has escalated. The conflict between Russia and the Western states in Europe is accelerating the transition from a unipolar world to a bipolar world and perhaps even a multipolar one. This is evident in the escalation of friction between the United States and its Asian allies and China, even though it is evident that both sides are not satisfied with the escalation into a new ‘cold war’, and it is possible that the Ukrainian precedent will be the basis for agreements and a new ordering of relationships. Developments in the near future will likely be a mixture of these two trends, and it is still too early to determine which one will prevail. One of the key issues, which is not covered in this selection of articles, are the nuclear forces of the adversaries and the method of deterrence they establish. In the Israeli context, one state that may benefit from a process of global polarization is Iran, and therefore, the evolving dynamics will also have an impact on Israel’s security challenges in its region.

◆ The return of occupation and annexation:

The Russian invasion of Ukraine reversed the accepted rule of the world order since World War II, according to which states – especially superpowers – do not conquer other states in order to annex them (although there were exceptions). This fundamental change may, on the one hand, set a precedent for similar moves (Taiwan is a leading possibility); But, conversely, it can create international efforts to levy a heavy economic and military price

that will deter most states considering such actions. In this issue as well, it is likely that the future developments will be a mixture of the two trends. Israel may find itself in the eye of the storm, due to the fact that its control of Judea and Samaria is seen by most of the world as an illegal occupation, and therefore, it might be used as an example to strengthen the rules again.

◆ The end of the post-heroic war phenomenon:

From the early 1970s, a cultural evolution occurred in the West that determined that war is often an unnecessary evil, it should be avoided, and, when it occurs, it should be conducted with minimal casualties to our forces and the enemy's population. However, this concept was not adopted by the majority of the world and many bloody wars were fought that caused tens of thousands to hundreds of thousands of casualties each. The West too found itself in extremely bloody wars in Afghanistan and Iraq, but since the Second World War no such war was fought in Europe. The war in Ukraine brings the horrors of war back to the heart of Europe, and will oblige the drafters of Western strategy to change their perceptions. Even those who believe that a combination of war machines and artificial intelligence will reduce the number of casualties in future wars, will have to prepare for the potential of a wide-scale war causing many casualties on the front, in our rear and in the enemy's civilian rear, with all that this implies to the political management of the war.

◆ The bloc of unaligned states:

In the process of polarizing the world between a Chinese-Russian bloc and an American-Western European bloc, quite a few states find themselves in a political dilemma whether to join one of the blocs or remain unaligned. In this anthology, we have articles discussing India, Turkey and Israel, but there are many other states debating the same issue. Each bloc has economic, technological and military power that creates benefits for joining, or at least coming closer to it. However, joining or approaching too overtly one bloc may cause the rival bloc to charge a price. Maintaining non-

alignment has benefits (less hostility from the blocs) and costs (less cooperation and reduced support). Israel is in a unique position in this regard, because maintaining the alliance with the United States is a fundamental principle of its national security policy, and yet, at the same time, the price of becoming overt adversaries of China and Russia is also high. This position will require a much more nuanced foreign policy than Israel is used to.

◆ The changing global energy market:

The war has shaken the global energy market, and forced it to change. Europe's decision to find sources other than Russia for its oil and gas, on the one hand, and Russia's need to sell them to other parties in order to preserve its economic stability and finance the war effort, led to a change in key trends in the global energy market. In this framework, there is a change in the energy supplier-consumer mix across the world and a significant acceleration in the promotion of infrastructure projects that will constitute a reordering of the global energy network. Green energy infrastructures are now being strengthened not only as a solution for Global Warming, but as a national security requirement.

A parallel issue to energy, which is mentioned but not developed in this anthology, is food security, which has also experienced significant fluctuations mainly due to Russia and Ukraine being central sources for global grain.

The change in the global energy market places Israel in a unique position as a possible supplier of both gas and green energy technologies, and as a possible safer transit route for oil and gas in both directions (exploiting the Eilat-Ashdod pipeline). However, for a variety of technological, financial and political reasons, it is highly doubtful whether Israel has the real ability to exploit this opportunity. The main route for it to do this is through the Abraham Accords and especially by developing its relations with Saudi Arabia too.

On the military level:

- ◆ The critical role of military strategy in a war between great rivals:

The analysis of the balance of power before the war was misleading. The Ukrainian army was (and remains) the largest army in Europe. The Russian army – which was admittedly larger and better equipped overall – actually employed a force smaller than that of Ukraine, due to internal political limitations. In a state of relative balance, the results of the war so far derive from the relevance of the military strategy of each side: the Russian opening move (the ‘special military operation’) failed miserably due to the mistaken belief, that limited military pressure and subversion would disintegrate Ukraine; Conversely, except in the Kharkiv area, which the Russians did not defend properly, the first Ukrainian strategic counter-offensive resulted in limited achievements due to the decision to attack across the entire front, assuming that the Russians were weaker than they really were. In an all-out war between two parties with considerable military capabilities – for example a possible future war between Israel and Iran – it is crucial to design a military strategy based on an open dialogue between the will of the political echelon and a realistic appraisal of ones true operational capabilities compared to those of the enemy, thus properly assessing the potential achievements and risks.

For Israel, the greatest challenge today in this context is to plan a combined confrontation with Iran and Hezbollah in such a way that the operational capabilities of the IDF will be able to bring about a significant military achievement, which will both realize Israel’s political goals and form the basis for an effective ending mechanism to the fighting.

- ◆ The need for national and military depth and redundancy capable of sustaining a massed ground maneuver:

An army entering a war supported by its national infrastructure must be prepared for the fact that the original plan – ‘Plan A’ – might not succeed. In this situation, the army and the national infrastructure require depth and redundancy that would allow the implementation

of several alternative operations and even committing to a prolonged war of attrition. In such scenarios, the need for massive ground maneuver capabilities increases, because they are the main backup in the event the strategic fire effort fails to achieve the desired result. They are the insurance policy without which it is very risky to initiate any military operation. Furthermore, external military aid – as reflected in the support of NATO members in Ukraine – can only rarely keep pace with the expenditure of forces in battle, and dependence on it means an increase in casualties at the front and in the rear. Depth and redundancy are created by maintaining large reserves of equipment, ammunition stocks and a pool of trained and organized personnel. At the national level, one must be able to secure the critical shipping lanes through which the absolute majority of ones imports and exports pass.

For Israel, this means that it must maintain preparedness of its national infrastructure and its military for a prolonged campaign and be able to protect the ships arriving and leaving its ports.

◆ The importance of air superiority:

An aerial strategy based on achieving air superiority over the opponent's territory and striking him from the air rather than focusing on only on air defence is a relatively new task for the Russian air forces. Performance in this area during the war indicates that the Russians have not actually been able to develop this capability effectively. The Ukrainians, whose aerial doctrine was based on the original Soviet doctrine of aerial defense rather than offense, survived the Russian air superiority offensive and prevented them from achieving freedom of action over the battlefield. The Russian attempt to use stand-off fire – missiles and UAVs – proved insufficient due to the limited numbers they could launch and the interception capabilities of the Ukrainians. The Ukrainians too are unable to utilize their air power because of the strength of the Russian air defense. As a result, the air components of the two adversaries have failed to achieve their missions. The war is being fought, and won or lost, virtually only by the ground forces.

The implication of this – also for Israel – is that we must continue to invest in rapidly achieving air superiority, because this is a prerequisite for air power to achieve its missions in deciding the results of battles and the overall campaign.

◆ The limitations of the ancillary efforts:

The actions of the special-forces in the city of Kyiv at the beginning of the war, in an attempt to decapitate the political leadership of Ukraine and end the war in one fell swoop, did not lead to the desired achievement due to the absence of surprise and the dependence of these forces on the rapid arrival of large regular forces to support them. Unable to reach their objectives the special-forces were forced into a battle of survival in order to escape destruction. The failure of the first forces intended to arrive and support the special-forces, an airborne force landing at an airfield near the city, was also due to the lack of surprise and employment of an initial force too small in relation to the size of the mission.

Cyber and Influence operations had a limited to negligible effect on the course of the war. The cyber attacks of the Russians aiming to disable the governmental and military infrastructure of Ukraine – including its satellite communication system at the outset of the war – were only partially successful and their effect on the war was negligible. It is important to note that the Russian failure resulted, among other things, from the preparations of the Ukrainians with the help of Western companies and governments to create effective cyber protection, redundancy and non-computerized alternatives to systems that depend on computers.

Ukraine's impressive efforts to influence the Russian public opinion were no more successful than the Russians were in influencing Ukrainian public opinion. They did not succeed in creating in any significant challenge to the Russian government's management of the war.

For Israel, the main lesson is that the most important effort in cyber is the defensive, especially of critical infrastructures, and that during a war – unlike during Routine Security operations and the

Campaign Between Wars – special operations, cyber attacks and influence operations are not the main effort. The main efforts are the large scale regular military operations and they serve almost only to support them or enhance them.

In conclusion, the war in Ukraine changes some of the basic patterns of international political and military dynamics and refutes some of the innovative theories developed in recent decades about the characteristics of future wars. It is however not yet over and it is likely that some of the lessons and consequences of the war will be revealed only in the future. In our opinion, it is essential that Israel's political and military leadership, involved in policy and strategic planning, the building and employment of military forces begin to incorporate the intermediate lessons into their work already today, so as to adapt to the reality of modern wars. Everyone is doing it – the Americans, the Europeans, the Chinese, the Iranians – and in the learning competition, those who manage to understand the right lessons and turn them into relevant action will have an advantage over their rivals.

# 18 Months of War in Ukraine

Eado Hecht

On 24<sup>th</sup> February 2022, after months of a gradual build-up of Russian forces near its borders and a month of cyber-attacks on its administrative and military computer sites and networks, the Russian army invaded Ukraine. The purpose of this article is not describe in detail all the actions of the war, only to give a general background and elicit some lessons on contemporary warfare in general.

The article is focused on the ground fighting because it is the main effort of both sides, and that is probably where the war's final result will be decided, but this fighting was not conducted alone – combat is occurring at sea, in the air and cyber-networks, the rivals are employing economic sanctions and competing in industrial output, conducting psychological and propaganda operations as well. The effects of these are, however, measured in the benefits accrued on the ground operations.

## Ratio of Forces

Before presenting the conduct of the war, it is important to dispel one of the myths that took root in some of the reporting on the war.

At the outbreak of the war, the Ukrainian army was **NOT** a weak and crippled organization established on the basis of popular improvised recruitment of people without military knowledge or training, nor was it a large guerrilla force. It was initially, with the exception of the Russian army, the largest army in Europe. Its ground forces were larger and equipped with more tanks, APCs, artillery pieces and other land weapons of all kinds than any of the other European armies; its air force included fewer fighter planes than the leading Western powers, but more than most other European countries and deployed more anti-aircraft missile batteries than any other European army other than the Russians. Only at sea were the Ukrainians completely inferior. What is correct is that during the first months of the war Ukraine added to the initial trained manpower enormous numbers of new recruits – many of them only partially trained.



The Russian army as a whole is much larger than the Ukrainian army both in its regular forces and in the potential to mobilize more manpower and weapons, however, due to the characteristics of recruitment, organization, Russian legislation and the flawed political concept that led to the initiation of the war, the forces actually assigned to the war by the Russian army were smaller than the initial forces available to the Ukrainian army. Furthermore, though in terms of total manpower and equipment, potentially Russia has more than Ukraine alone, it has not yet mobilized that potential and even after suffering severe military reverses continues to employ only a limited part of its theoretical capacity, albeit increased relative to the initial force employed. Furthermore, NATO countries support Ukraine and provide it with a reserve of budget and equipment far beyond its independent capacity.

### **The Ground Campaigns**

Looking back, the development of the ground war can be divided into several consecutive campaigns separated by changes in the main objective and the rival holding the initiative. It is important to remember that the transitions between the campaigns were not sharp but gradual processes:

#### **First Campaign – The ‘Special Military Operation’:**

The initial Russian attack included the ‘special operation’ to replace the government in Kiev and the rapid takeover of a significant part of eastern Ukraine – the area considered by Russia to be Russian land that only because of the vagaries of the development and disintegration of the Soviet Union became part of the state of Ukraine. This campaign included a very fast Russian maneuver deep into Ukraine on several fronts simultaneously. According to the conduct of the Russian forces, it is clear that the Russian political leadership did not expect significant Ukrainian resistance – the Russian leaders believed that the majority of the public in Ukraine would welcome them. Considerable professional incompetence also contributed to the Russian failure at this stage.

**Second Campaign – the Russian Main Effort in Eastern Ukraine:**

Following the failure of the ‘special military operation’ on the Kiev front – the Russian forces withdrew from this front and focused on conquering eastern Ukraine. This campaign was characterized by a return to the application of the official doctrine of the Russian army in its latest version – the slow conquest of territory by prolonged devastation with artillery fire and the use of small forces that would take exploit the achievements of the fire to gradually advance. This method is very reminiscent of the words of a French general in the First World War: “The guns conquer and the infantry occupy”. During this campaign, the Ukrainian forces and their stocks of weapons, ammunition and spare parts were worn out and they needed to be supplied with equipment made by NATO to continue fighting. It is difficult to be certain, but it is likely that without the arrival of this equipment the Ukrainian army would have exhausted its capabilities during the summer of 2022.

**Third Campaign – Ukrainian Counter-Offensive:**

Throughout the war, the Ukrainians resorted to a very aggressive defense in which they frequently initiated local counter-attacks. During the first two campaigns, they recruited more than 700,000 reservists, National Guardsmen, and fresh recruits with no experience, thus increasing the amount of manpower at their disposal to approximately one million soldiers. They took advantage of the large numerical advantage they created to preserve some of their forces in the rear and thoroughly prepare them for an all-out counter-offensive, which they first promised to launch in June (about 4.5 months after the start of the Russian invasion), then in July, and finally they actually launched it in the last days of August (about 6 months after the start of the Russian invasion).

In the first phase they attacked the entire width of the front (about 850 kilometers), with the main effort being on the southern end, and probing attacks across the rest of the front. The southern effort failed, but at the northern end of the front, east of the city of Kharkiv, they discovered a considerable Russian weakness, so in the third week of the counter-offensive they diverted the main effort there and

penetrated very easily through the sparse Russian defense system and captured a large area. Within a month they recaptured almost all the territory that the Russians had spent three months capturing in the previous campaign. The Ukrainian army used a lot of fire on both the front line and on the Russian supply system, but much less than the Russians, and relied mainly on mechanized forces that attacked and maneuvered quickly.

This defeat made it clear to the Russian leadership that it could not continue to conduct the war with limited forces and make-do with the routine peacetime recruitment and supplementary volunteers, so, for the first time in the war, Russia mobilized about 300,000 reservists. Some of these were sent to plug the gaps at the front after only short refresher training and the rest were left in the rear for more thorough training. The arrival of additional Russian forces and the exhaustion of the attacking Ukrainian forces refroze the front.

#### **Fourth Campaign – Balance and Waiting:**

From mid-October 2022, both sides gathered forces and prepared for a prolonged war. The front was not quiet – both sides continued to initiate fire attacks, raids and small attacks designed to capture limited objectives that would improve their situation and also slightly weaken the enemy's forces.

From mid-January 2023, the Russians increased the scale of their attacks. These attacks were weaker versions of the attacks of April – July 2022. It is not clear if this was the anticipated Russian offensive or if they had given up on a major offensive and were content with wearing down the Ukrainian forces while preparing to absorb the expected Ukrainian counter-offensive. The Russians used the winter to build extensive fortifications and concentrate reserves in several areas in the rear of the front.

In April 2023, the Ukrainians too increased their attacks, apparently as preparatory moves for their own major offensive.

### **Fifth campaign – the second Ukrainian counter-offensive:**

At the beginning of June 2023, the Ukrainian counter-offensive began and continues at the time of writing this article, so it is too early to assess its results. During the first couple of weeks the Ukrainians attempted to conduct mostly mechanized attacks of battalion to brigade size. Their achievements were minimal and their losses many. They have since reverted to small scale attacks focused employing mostly company to battalion sized infantry forces backed by artillery.

#### **The Maritime Campaign<sup>1</sup>**

The balance of power between the opposing navies ensured in advance total superiority for Russia. From time to time news reports describe “exciting” successes of the Ukrainians (the sinking of the cruiser ‘Moskva’, the sinking of an amphibious assault ship, an attack on Russian seaports in the Crimean Peninsula using remotely operated vessels, etc.), but strategically these actions have no decisive effect – they are only a nuisance. The Ukrainian Navy has not gone to sea and is content with firing shore-to-sea missiles, armed and reconnaissance drones UAV and remotely operated explosive vessels.

The Russian Navy exploited its superiority for a variety of operations, but its main mission was to impose a naval blockade on Ukraine and this blockade continues to this day. In late summer 2022, Russia agreed to relax this blockade to allow Ukraine to resume exporting grain and other raw materials vital to many countries in Africa and Asia that Russia does not wish to risk the starvation or economic collapse of and with which it continues to trade with, contrary to the economic sanctions imposed by the West on Russia.

#### **The Aerial and Strategic Fires Campaign<sup>2</sup>**

The doctrine and organization of the air forces of the Soviet Union were very different from those of the Western countries. Among the other differences were the lack of a concept of achieving air superiority as a preliminary to air operations in enemy territory and the lack of a concept of using air power to strike the rear of the enemy’s army and the enemy’s country (except in a nuclear war). In the last decade

and a half, the Russians added these two missions to their air forces and subsequently reorganized them and began to equip them with the means to conduct these missions. At the outbreak of the current war, they tried, for the first time, to achieve air superiority and failed. They therefore had to be content with attacking the targets deep in Ukraine using long-range missiles (launched from aircraft, ships and ground launchers) and explosive drones. However, the launch rate they are able to maintain is very low (at most a few dozen per day and often less) and the total amount of missiles and drones which were in their hands and which were produced or purchased during the war (only a few thousand) meant that the extent of damage inflicted to the Ukrainian military and national infrastructure was too weak to contribute to achieving the goals of the war. Due to the limited damage and the slow rate at which it was inflicted, the Ukrainians were, and still are, able to repair enough of their infrastructure to continue functioning.

The achievements of the Russian Air Force in areas where it continued the path of its Soviet predecessor were also poor. In the campaign for the defense of Russian skies, their achievements are mainly due to the weakness of Ukraine's capability, and despite this, the Ukrainians manage from time to time to hit targets deep inside Russia – although at an intensity that has no apparent practical effect, these strikes and their effect are mainly symbolic and psychological.

Aerial assistance to ground forces by both sides is consistently weak due to the failure of either to achieve air superiority. Russian strikes are too infrequent and weak to achieve much tactical effect and the Ukrainians are even less powerful.

### **The Political and Economic Campaign**

In the background of what is happening in the fighting itself, there is also a world-wide political and economic struggle.

Western countries rushed to help Ukraine. They imposed extensive economic sanctions against Russia and tried to rally the rest of the world to their side. From the beginning, Russia had a more limited ability to impose counter-sanctions – mainly reducing export of gas and oil exports to Europe.

The sanctions imposed by the adversaries on each other turned out to be insufficient to significantly affect the conduct of the war. All involved suffered economic damage – Russia more so, but not enough to break its ability or determination to continue the war. Against articles presenting a Russian economy that is on the verge of collapse due to the Western sanctions, no less scholarly articles are published about the way in which Russia manages to replace the loss of income and imports from Western countries with income and imports from other countries.

Furthermore, the Western states were surprised to learn that the majority of the world, who they thought would automatically mobilize on their side, chose not to do so. Many countries did indeed vote in the United Nations General Assembly in favor of the proposal to condemn the invasion - but, beyond this declarative and meaningless procedure, they are not prepared to take practical actions such as joining the sanctions. Some of them even did the opposite – they took advantage of the West’s commercial disengagement from Russia to increase their trade with it.

### **Some Characteristics of Contemporary Warfare That Can be Learned from the War in Ukraine**

As mentioned, the war shattered some superstitions that were rooted in the political and military thought developed in the West since the collapse of the Soviet Union, and primarily that “such” wars (high-intensity state versus state wars) will no longer occur, and particularly not on the European continent. However, even those who believed that high-intensity wars between states would still occur, but believed that these would be completely different in their characteristics from high-intensity wars of the past, were surprised.

In the early 1990s, American researchers, Heidi and Alvin Toffler, published a book, *War and Anti-War*, claiming, among other things, that the phenomenon of war is undergoing a fundamental change due to a fundamental change in the main technology used to fight. The basis for military technology and the way wars are conducted, they argued, derives from the essence of civilian technology which is the

basis for how communities make a living. Looking back, they divided the eras of how the war was conducted into three: the “Agricultural Age”, the “Industrial Age” and now, according to them, we are moving into the “Information Age”. The first example of the latter being the war on Kuwait (1991), conducted by the United States and its allies against Iraq. The main characteristics of the different eras are the manner military power is created:

- ◆ In the agricultural age, it was the armed warriors and the main effort was to recruit quantities of such warriors.
- ◆ In the industrial age it was the manned fighting machines and the main effort was to produce quantities of such machines.
- ◆ In the information age it will be information transmission and extraction systems and the main effort is to produce networks of sensors connected to long-range precise munitions by a computerized intermediary that sorts targets on the one hand, means of destruction on the other hand, chooses in the blink of an eye the most appropriate weapon for the purpose and activates it in a minimal amount of time and, due to its accuracy, guarantees destruction with almost every shot.

These ideas, and others similar to them, have become an accepted convention in Western military thought, and there is some truth in them. However, believers did not delve into the manner in which these processes occur and the accuracy of the theory.

First, there was never a sharp transition between eras – these are gradual transitions, and sometimes a transition occurs in one place in the world but does not simultaneously occur in another place;

Second, these eras usually exist simultaneously in different places or even overlap in one place – so, for example, an agriculturally based country can receive and use the products of an industrial country without making the cultural and technological transition itself, and thus its fighting characteristics will simultaneously include elements from two separate eras.

Furthermore, there has never been absolute superiority of a method based on a certain era over the previous era. Each method has advantages and disadvantages, therefore it is possible that an agricultural entity in terms of its culture and ways of conducting war will defeat an industrial entity that is supposedly more advanced – see the wars in Vietnam (1949 – 1956, 1964 – 1975) or the wars in Afghanistan (1979 – 1989, 2001 – 2021) for example.

In fact, the more correct description is not a complete transition from a war method of one era to a war method of another era, but of additions – capabilities that belong to a more technologically advanced era join old capabilities, replace certain capabilities, grant new capabilities in certain areas, improve old capabilities in some areas, however, they also sometimes reduce capabilities that existed and are now performed less well. Furthermore, when both sides have similar abilities, a balance is created and sometimes because of this balance, old abilities are just as useful as new abilities, and sometimes more so.

The war in Ukraine presents this lesson. The expectation of many was that the new weapons of the information age technologies would ‘sweep’ the battlefield and completely change its face: long-range guided weapons, remotely operated aircraft and vessels, computerized control and communication networks and other tools that are a military product of the information age were supposed to produce a war that is being waged and looks “different”. However, the main characteristics of the war in Ukraine are familiar to us from the past – the competition for industrial production and the difficulty of the opponents to produce weapons and ammunition at the rate they are consumed at the front, the reliance on war machines of various types, the reliance on armed foot soldiers and also the use of information age means, including warfare in the new medium – the computer (cyber) network. Despite the songs of praise written for the armed-drones the Ukrainian army employed at the beginning of the war and for the latest generation anti-tank missiles that the Americans provided to the Ukrainian army and later also the GPS-guided rockets, it turned out that the old means, statistical artillery, trenches and obstacles similar to those of the wars of the last century, tanks and APCs contribute no less and even more decisively. A senior Ukrainian officer stated about the failure of the Russian



offensive at the beginning of the war: “anti-tank missiles slowed the Russians down, but what killed them was our artillery. That was what broke their units.”<sup>3</sup>

The limitations of the modern means were also discovered – both armies went to war with computer network based communication systems at their disposal and these networks failed. The failure of the Russian system may have been due to the fact that its development had not yet been completed, but the Ukrainian system failed due to electronic warfare jamming and a Russian cyber attack that brought down the network. The Ukrainians predicted this and therefore did not abolish the old systems – ordinary walkie-talkies and even messengers on motorcycles (the industrial age version of the messenger on horseback of the agricultural age). What the Ukrainians are requesting from the Western countries is not only the latest means but also old means: statistical artillery as well as precise munitions, tanks, APCs and fighter planes. Conversely, the Russian army, insufficiently equipped with modern weapons (it too had believers in information age wars, although under a different name), is seeking to acquire these, but is also collecting old weapons from the vast scrap yards of the defunct Soviet army and refurbishing them for use at the front. Drones, were claimed to be a revolution in warfare – it required a few years for the anti-drone technology and doctrines to catch-up, but despite their considerable contribution, it became clear that drones too suffer from various problems and are destroyed in large numbers. Recently, a Ukrainian source claimed that they lose a quadcopter every three sorties and a drone every six sorties. The anti-aircraft defense system of the adversaries has leapt forward and equipped itself with capabilities enabling it to protect the forces in the field from this new threat.

**It turns out that the ‘combined arms battle’ does not only combine forces from different arms, it also combines equipment from different eras!**

Another superstition that has been broken is the belief that we are in the age of ‘post-heroic wars’. In the mid-90s of the 20th century, two years after the publication of the Toffler’s book, American military theorist Edward Luttwak published an article arguing that the age of heroism

was over and that future wars would be dominated by the attitude that no political goal justifies dying or killing. This concept flourished in Western discourse on War and became a convention. However, most believers did not look deeply into Luttwak's arguments – he did not claim that this is how the whole world would be, but rather that this was the trend in the Western world and explained the material and cultural factors that pushed it. Societies that did not experience the changes Luttwak described would not necessarily adopt this approach, and indeed, once again, the Western view that “the whole world wants to be like us” blocked the understanding that most of the world did not. Those who ignored the refutation of this theory in the many dozens of wars that have taken place around the world since Luttwak published his article discovered this in the war in Ukraine – thus, in the series of wars that have been fought over the past 25 years between Ethiopia and its neighbors over the arrangement of the borders between them, hundreds of thousands of people have been killed; In the wars for the control of areas of production, transport and sale of drugs between the drug cartels in Mexico during the last 15 years, hundreds of thousands more have been killed; And so also in the civil wars in Yemen and Syria. And these are just the extreme examples. It turns out that across most of the world people are still willing to fight, risk their lives and kill wholesale. The figures of losses of the adversaries in the war in Ukraine are shrouded in a fog of denial and propaganda, but apparently at least 100,000 Russians and Ukrainians have already been killed and at least 200,000 wounded and both sides are quite willing to continue fighting for their contradictory goals.

### **Prognosis**

As mentioned, both sides are preparing for a long-lasting war. The Russian leadership has not yet given up on the idea of occupying that part of eastern Ukraine that they see as usurped Russian territory. Do they also have intentions beyond that? It's hard to know at the moment. On the other hand, the Ukrainians repeatedly declare that they intend to liberate all the territory occupied by Russia not only in the current war but also in the 2014 war. Supporters of Ukraine in the West, who are very interested in weakening Russia, fear that if the Ukrainians go too far they will ignite Russian retaliation with nuclear weapons and therefore, although they express support in principle for the Ukrainian goal, they also fear its implementation.

In light of the existing material figures (the size of the armies, the means at their disposal, their ability to replace human and equipment losses, the dimensions of the territory they are fighting on, and so on) it is difficult to see a move that one of the adversaries could make to change the current trend in one victorious blow. Accordingly, it seems that what is probable is the continuation of the gradual mutual attrition, some gradual territorial conquests, which, even if they appear dramatic in the media, are actually quite small in relation to the size of the arena and their strategic significance.

Behind the violent friction at the front will continue the industrial competition – a competition that is the most prominent feature of industrial age wars.

Both sides are investing in expanding their military production capacity, which turned out to be too small especially in the Western countries. Thus, for example, the Americans discovered that the amount of artillery ammunition shot by Ukraine in a single day is equal to that manufactured in the United States per month! The Russians shoot two to three times as much. The ammunition production rate of the other Western countries is even more dismal. The effort to expand this production capacity is not easy – it took a year to double the rate of ammunition production in the United States and it will take another year to double it again. Expanding ammunition production capacity is relatively easy compared to increasing the production of armored vehicles – where the gap between manufacture and losses is even greater.

Russia also discovered its limitations – it had much larger stocks of ammunition and greater manufacturing capacity than the West, but it too exhausted its stocks and had to purchase ammunition from Iran and North Korea. Russia also discovered its limitations in weapon stocks – again, it had a much larger initial stock, but the rate of losses is faster than the rate of manufacturing new weapons, compelling Russia to restore very old weapons. The operational difference between the old and the new is not always very significant,<sup>4</sup> but it would still be better to put into use tools with improved performance rather than tools with reduced performance. The greatest weakness of the Russian military

industry is the manufacture of electronic components – almost all the electronic components that were used by the Russian military industry in the last decades were purchased from Western countries and are now unavailable. These components are essential for a variety of weapons that the Russian army needs, and especially for its precision weapons. The Russian answer so far has been smuggling from the West, settling for lower quality components and purchasing weapons from Iran. If China participates in this competition more broadly than it has participated till now (replacing boycotted Western civilian goods with Chinese civilian goods – for example, cars; selling limited numbers of components for other products, etc.) and starts supplying Russia with weapons, components and ammunition, this could change the balance in this competition, but it will also expand the global economic conflict, since the economies of China and the West are much more integrated than Russia's economy was with the West's economy, and the United States threatens to take economic retaliatory actions against China if it responds to the Russian request.

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1 For a more detailed discussion see Eyal Pinko's article, "The Naval Campaign".

2 For a more detailed discussion see the articles by Uzi Rubin, "Missiles, Drones and Rockets in the Aerial Campaign" and by Yirmi Shiferman, "The Russian Air Force in the War – Issues for Review".

3 Jack Watling and Nick Reynolds, **Operation Z – The Death Throes of an Imperial Delusion**, RUSI – Special Report, 22 April 2022, page 4.

4 To illustrate: the T-62 tank is less protected and has a less powerful cannon than the T-72 tank. However, given that the protection of the T-72 is also not resistant to the anti-tank missiles in the hands of the Ukrainians, the difference in protection is not significant; and given that the difference in the weight of the explosive shell of both is not great, then against Ukrainian infantry or fortifications the T-62 cannon has sufficient performance to become a significant threat to the Ukrainian troops.

# Missiles, Drones and Rockets in the Aerial Campaign

Uzi Rubin

## Introduction

In the beginning air warfare was conducted using manned aircraft only. Gradually these aircraft were joined by a growing number of unmanned weapons, some of them independent and some controlled remotely: long-range rockets, long-range missiles of various types and drones. As a counter-measure, increasingly sophisticated systems were developed to detect and intercept the aircraft and other weapons from the ground. Today the term ‘aerial warfare’ includes the use of all these means in order to control the skies, or at least fly through them, and drop munitions on targets on the ground – be they targets of political, strategic, operational-level or tactical significance.

The air campaign in the war in Ukraine is conducted by air forces whose concept of war is based on that of the former Soviet Union and is different from what is customary in the armies of the West. In the Soviet concept, the main missions were:

- ◆ Defense of the Russian homeland, and for this purpose a dedicated organization was established that included interceptor aircraft and a large array of surface-to-air missiles.
- ◆ Protection of the fighting forces against enemy aircraft, and for this purpose a large array of surface-to-air missiles and anti-aircraft guns was established to accompany the forces with little assistance from interceptor aircraft.
- ◆ Offensive assistance to the ground forces, and for this purpose a force of light attack aircraft and helicopter gunships was established.

Two tasks that were part of Western aerial doctrine – achieving air superiority and bombing the infrastructure of the enemy army and the functional infrastructures of the enemy state (with non-nuclear

munitions) – were neglected. During the past decade these two missions were added to the Russian air force doctrine, followed by comprehensive changes in the equipment and organization of Russia’s air forces.<sup>1</sup> The Ukrainian army preserved the Soviet concept but acquired a new technological component to strengthen its ability to attack enemy forces at the front – armed drones from Turkey.

This article will focus on the achievements and failures of both sides in attacking infrastructure deep in the enemy’s territory and attacking enemy forces at the front. These achievements and failures were greatly influenced by the results of the short campaign that was conducted in the first days of the war for air superiority, so I will briefly touch on this as well.

### **The Air Superiority Campaign<sup>2</sup>**

The war began with a Russian attempt to achieve air superiority in the main sectors of their ground invasion by pinning Ukraine’s fighter aircraft to the ground (damaging the airfields) and destroying the ground based air defense system covering those sectors. This attack succeeded in achieving only a temporary disruption of the Ukrainian air defense capability – the number of radars and missile launchers destroyed and their locations and the damage caused to the airfields were too limited. The Ukrainians quickly recovered and the losses the Russians sustained in the first weeks of the war caused them to greatly reduce the participation of their aircraft in the war.

While the Russians tried to achieve air superiority over a large area, the Ukrainians contented themselves with an effort to achieve local air superiority against the Russian ground forces attacking towards their capital Kiev. For this purpose, they used the 20 Bayraktar TB2 armed drones they had purchased from Turkey. These were sent to destroy the air defense systems accompanying the Russian ground forces. This TB2 gained worldwide fame in the Second Nagorno-Karabakh War in 2020 due to its achievements in destroying the Armenian ground-air defense array and causing heavy losses to the Armenian ground forces. At the beginning of the war in Ukraine, it seemed that these drones were once again succeeding in achieving freedom of action over the Russian forces, however, about six weeks later, the reports of their achievements decreased

greatly. Later, reports began to describe considerable difficulties for operating these drones in the face of a significant reinforcement of the Russian air defense, which combined improved missile systems and electronic-warfare means. In the first months of 2023, a Ukrainian source reported that the rate of downing drones had increased greatly and reached a rate of one drone per six sorties.

In the first weeks of the war, there were battles between fighter aircraft, but later these also decreased and the Russian advantage in long-range air-to-air missiles caused the Ukrainians to reduce the presence of their fighter aircraft on the front except for short focused operations.

After a short and unsuccessful effort to achieve air superiority, both air forces gave up and their continued participation in operations takes into account their lack of freedom of action. From time to time, attacks are still carried out on ground air defense systems, but only for the purpose of supporting a specific local operation or as an incidental exploitation of an opportunity.

### **Air Power at the Front**

The Soviet concept of using air power at the front focused on attacking targets beyond the artillery range of the ground forces. Contrary to what is customary in the Western armies, except for the use of combat helicopters, it was not customary to carry out close-support strikes – that was the task of the artillery. Both armies seem to continue to act in this manner during the current war.

Lacking air superiority, both sides rarely use their aircraft to attack targets on the front and when they do attack, the emphasis is on the survival of the aircraft and not on the accuracy or strength of the attack. The Russians, more than the Ukrainians, operated and continue to operate attack aircraft and attack-helicopters, while the Ukrainians, from the beginning of the war, preferred to be content almost exclusively with armed drones. During the war, both sides also procured explosive-drones ('suicide') and quadcopters as well as improvised bomb-dropping quadcopters and these have become the main air weapon for attacking targets at the front, either as close assistance to the ground forces or in independent attack missions.

In addition to manned and unmanned aircraft, both sides use medium-range rockets and missiles as a substitute for attack aircraft. The Russians had such rockets from the beginning of the war, while the Ukrainians received them from the United States only a few months into the war.

## **Russia**

In the first days of the war, Russian aerial support for their ground forces was minimal. They concentrated their aircraft in the air superiority campaign. Furthermore, the speed of advance of the ground forces (80 to 150 kilometers each day) made it difficult to coordinate between them and the aircraft to prevent an attack on their own forces. After the Russian advance stalled, the Russians found it difficult to activate their attack aircraft due to the failure of the aerial superiority mission.

The main aircraft used were simple and cheap reconnaissance drones sent to locate targets for the Russian artillery – each battalion, and possibly each battery, received drones to be operated directly by their observation officers. Although many were shot down by the Ukrainians, the Russians had a large inventory that allowed them to continue using them.

During the war, additional models of drones and quadcopters were brought into use, some to reinforce the reconnaissance drones and quadcopters and some as explosive-drones. The most used model, the Lancet, is not operated in the method used by Western armies, including Israel's – roaming over enemy territory for the operator to locate a target himself and attack it. Instead, Russian reconnaissance drones locate targets and transmit their location to the Lancet operators, who launch towards the target under the surveillance and direction of the reconnaissance drone until the Lancet operator identifies the target and flies into it. Videos that the Russian military publishes from time to time show many hits to Ukrainian armor, artillery and air defense systems. Some Ukrainian units tried to protect their vehicles from the explosive-drones by building mesh fences around and above them. Since the Lancet is a light and slow aircraft, there were times when



it was unable to break through these fences and got stuck in them a few meters from the target, without causing any damage. However, apparently this method of defense is too cumbersome or not effective enough because it has not been adopted by all Ukrainian forces.

Recent reports indicate that the Russians intend to procure Iranian-made attack drones armed with anti-tank missiles.

## **Ukraine**

As mentioned above, the Ukrainians too did not use manned aircraft to assist their ground forces except in rare cases. They relied mainly on Turkish-made armed drones. At the beginning of the war, in addition to attacks on air defense units, these attacked tanks, APCs and convoys of trucks and caused many casualties. Before the war, the Ukrainians purchased about 20 of these and during the war they purchased dozens more, but they were gradually forced to move them away from the front due to the rate of losses caused by the Russians. They are mainly used for special operations – penetration through loopholes found in the Russian defense system – and for remote observation of the front line.

Instead of manned aircraft and armed drones, the Ukrainians turned to smaller aircraft that are less vulnerable to anti-aircraft missiles – quadcopters. Most of these are cheap civilian models (mainly Chinese) that have been converted for attack by the forces in the field.

The Ukrainians also use medium-range rockets as a replacement for the attack aircraft. Ukraine has self-made models and one of them even participated in the Nagorno-Karabakh war – but, in practice, none of them were used in the current war. There is no explanation for this in the available information. Instead, the Ukrainians used old missiles from the Soviet era, inherited from the disintegration of the Soviet Union's army. The Ukrainians used them to attack Russian buildings and bases with little success, probably because all these Ukrainian missiles carried cluster-bomb warheads not designed to penetrate buildings.

After several months of war, the US provided Ukraine with 18 HIMARS rocket launcher systems, with a range of about 90 kilometers guided

by GPS. With the help of accurate tactical intelligence information that came from the West, the Ukrainians launched these rockets at headquarters, ammunition depots and bridges deep within the Russian tactical rear. The Russians, who had become accustomed to not being threatened beyond a range of about 30 kilometers behind the front, were not prepared for this new threat. They suffered heavy losses, many ammunition and fuel stockpiles were blown up and the rate of fire of the Russian artillery at the front, which relied on these stockpiles, decreased. It is possible that the accumulation of damage from these strikes during the month of June prompted the Russians to stop their offensive in eastern Ukraine in early July and go on the defensive. Gradually the Russians dispersed their stockpiles and headquarters, learned the features of the HIMARS and learned to intercept it with anti-aircraft missiles and electronic jamming of its guidance system and halving its hit rates.

### **Long-Range Missiles to the Rear**

Attacking the military and national infrastructures were not part of the Soviet concept. The Russians began to discuss this possibility roughly two decades ago. There is no information about a Ukrainian intention to develop such a capability before the war.

#### **Russia**

As part of the development of their new concept, they began to equip themselves with different types of missiles with a range of 1,000 to 2,000 kilometers, launched from aircraft, ground launchers or ships. In the new concept developed by the Russians, the attack on the military and state infrastructures was not supposed to be conducted with missiles alone – the warheads of most missiles are only up to half a ton, so in order to destroy large targets, such as factories and the oil refining industry, many missiles are required to cover their area. The Russians intended to complete the work of destruction using aircraft using conventional bombs. Failure to achieve air superiority prevented them from being able to fly into Ukraine and they were forced to rely only on the long-range missiles.

In the first days of the war, the Russians used their limited missile launch capability in the effort to achieve air superiority.

After ceasing this effort, the missiles strikes were diverted to attack Ukrainian command and control infrastructures, the fuel infrastructures, weapon and ammunition stockpiles, headquarters and military camps all over Ukraine. Later, they also began to attack national infrastructures such as the oil industry and the tire industry of Ukraine, the military industry and workshops for repairing military equipment.

In June 2022, the Russians diverted their effort to disrupt Ukraine's railway system. Trains are the main means of transportation in Ukraine, and were used to transport forces from sector to sector and supplies from the rear to the forces at the front, as well as weapons and ammunition from the West into Ukraine. The Russian effort failed because of the small number of missiles actually fired at the targets and the skill of Ukraine's rail system experts to quickly repair damage and promptly improvise alternative routes for the damaged railway sections. Fortunately for the Ukrainians, the railway network, which they inherited from the time of the Soviet Union, was originally built for war and included extensive redundancy. Also, when the current war broke out in February 2022, the process of transitioning from gasoline locomotives to electric locomotives had just begun, so they were less vulnerable to infrastructure damage.

Starting in October, after the Ukrainian truck-bomb attack on the Kerch bridge, the Russians began to attack the national electricity infrastructure of Ukraine. In three months, the Russians launched about 600 missiles at 405 power generation and transmission sites, including 45 thermal and hydraulic power generation facilities. According to Ukraine's Ministry of Energy, more than half of the country's electricity facilities were damaged – some were repaired and damaged again and Ukraine's total electricity output dropped 30% to 40%. Large areas of Ukraine were repeatedly blacked out, and residents of major cities had to deal with situations where basic systems such as heating, traffic lights and elevators stopped working. In a satellite photo of Europe on the night of November 24, 2022, most of Ukraine, except its western edge, is dark.

However the Ukrainians, gradually, with the help of equipment from NATO countries, learned to reduce the extent of the damage and restore the electricity grid so that now there is a competition between the rate of damage of new attacks and the rate of Ukrainian restoration and it seems that a certain balance has been created between them. The nuclear power plants – which were not attacked for obvious reasons – also contributed to stabilizing the electricity supply.

During the war it became clear that the Russians did not have enough missiles. The accepted estimate is that Russia had about 4,500 missiles of all types, new and old, and that they produce about 40 missiles a month. About half of them were launched in the first months of the war and then the Russians sharply reduced the launch rate. As a partial solution, they converted hundreds of S300 anti-aircraft missiles to fire at ground targets. However, even this addition was not enough, and in the summer of 2022, Russia began purchasing hundreds of Iranian-made explosive-drones and began using them to bombard the Ukrainian military and state infrastructures. As the Iranian high-explosive-drones carry a warhead that is one-tenth the size of the missile warheads, they cause much less damage, conversely, they cost about a hundredth of the price of the missiles, so many more can be procured.

At the beginning of the war, the Ukrainians had a difficulties countering the Russian missile bombardments, as they did not have dedicated missile interception systems. Fighter jets tried to intercept the slow cruise missiles with air-to-air missiles but the results were poor. Effective employment range of surface-to-air missile systems was extremely short due to the low altitude at which the missiles flew, so large gaps were created in their coverage. One of the solutions was the establishment of mobile squads of ‘cruise missile hunters’ equipped with shoulder-mounted missiles, such as the American Stinger. These were placed across the common routes used by the Russian missiles in a chain of squads. Although the range of the missile is short, the quantity provided by the Americans made it possible to establish numerous squads. Later, NATO countries began to provide more advanced missile systems and anti-aircraft guns and, in late 2022, the Ukrainians began reporting increasing shoot-down rates of Russian

missiles and explosive-drones. In the spring of 2023, they began to claim success rates of 70% to 90%. To ensure hitting their targets, the Russians had to increase the number of missiles and drones fired at each target in a combined barrage. It seems they are using the drones mainly as decoys to attract the fire of the defense missiles and thus allow the missiles to penetrate the targets.

Recently, there have been increasing reports that Ukraine's stock of S300 interceptors is running low. This system is the only one in the possession of Ukraine with the ability to intercept targets at altitudes above 20 km, and its existence is the main factor that deterred the Russians from sending their strategic bombers and attack aircraft, numbering together about 700 aircraft, from penetrating the airspace of Ukraine and directly attacking the national and military infrastructure at an intensity much higher than what can be done with the stand-off fire of cruise missiles and explosive-drones. That is why the United States decided to provide Ukraine with Patriot defense systems, which have the ability to intercept high-altitude aircraft, ballistic missiles and cruise missiles. The first battery – probably from Germany – arrived in Ukraine in the middle of April 2023. It is not known how many such systems have been promised to the Ukrainians, nor is it known what models of Patriot interceptors are provided. To replace the Ukrainian S300 – about 200 in number after deducting losses – a similar number of Patriot launchers will be required. According to media sources, more than 1,000 Patriot launchers have been produced so far, so it appears that NATO will be able to close this gap when the Ukraine runs out of S300 interceptors.

## **Ukraine**

Ukraine did not have the concept or tools to conduct an aerial offensive against Russia's military or state infrastructure – although it is possible that it had prepared in advance a capability for special-forces operations in the Russian rear. During the war, the Ukrainians gradually developed the ability to attack the Russian rear by means of armed and explosive-drones, but this ability has not yet turned into a powerful campaign similar to the intensity of the Russian effort. The Ukrainians gradually began to carry out small attacks, first in the Russian rear in the Crimean

Peninsula and the Donbass and later also in the border regions of Russia with Ukraine. One of the most prominent attacks was the impact of an explosive-drone on the Kremlin building in Moscow. However, despite the considerable media hype that each such attack creates, in practice these merely sting and are not capable of affecting Russia's fighting ability or state functioning. For now their main influence is psychological.

In contrast to many areas where NATO countries gave Ukraine means that it did not have at the beginning of the war, in this area they firmly refuse to do so. Moreover, even when the Ukrainians are given shorter-range weapons, which are able to penetrate a few tens of kilometers into the sovereign territory of Russia, NATO countries clarify that the Ukrainians must not use them in this way. This is probably due to the fear that this will lead to Russian retaliation against the NATO countries themselves.

### Summary

At this stage, it seems that the Russian army will not be able to bring the war to a conclusion satisfying the goals announced by Putin at the commencement of the war. The only possible way for Russia to win this war is to wear down the Ukrainian home front till it loses its ability to support the fighting at the front and cannot reinforce its forces with weapons and ammunition from the West. The Russian attempt to do this by stand-off fire of missiles and explosive-drones failed. The rate of fire and the number of warheads launched, and as a result – the extent of the damage caused to Ukraine, are not sufficient. To illustrate, in ten and a half months, from June 1944 to March 1945, Germany fired at Britain more than double the number of missiles fired by Russia during 16 months of war, and each German missile had about 1.5 times more explosives than the Russian missiles. The Russians' only advantage is their missiles accuracy. However, the Germans fired at cities and not at specific targets. Britain was not subdued. An even bigger gap is between the intensity of the missile attack on the Ukrainian home front and the intensity of the bombing attack by Britain and the United States on Germany in the years 1939-1945. About 1.6 million tons of bombs were dropped on Germany's civilian and industrial rear, of which about a million tons in the last 12 months of the war – this compares with

at most 3,000 tons of Russian warheads on Ukraine. Germany did not surrender and the Allies had to conquer it by land combat.

At the front, the contribution of the air forces is poor too. Although at first there was great enthusiasm for the achievements of drones of all kinds, it gradually became clear that their contribution was far from decisive and the adversaries learned to shoot them down in very large numbers – the shoot-down rate is orders of magnitude higher than the shoot-down rate of manned fighter jets in the Yom Kippur War or the Vietnam War. Two wars that are considered the low point of fighter aircraft against the air defense arrays. Although the human cost of losing a drone or quadcopter is zero and the cost in money is a fraction of that of manned fighter aircraft, their tactical achievements are also quite low. In the end, the leading cause of human casualties on both sides is statistical artillery of all types.

In practice, neither side achieved freedom of action in the air, and therefore, the ability of the air forces to influence the outcome of the war or even the battles at the front has been and still is extremely weak. The Western doctrine, that air superiority is a prerequisite and necessary for the optimal exploitation of air power, has been proven correct.

One of the most significant lessons from the war, as it has been conducted so far, is the strategic importance of the integrated air defense and the rise of its role from a combat support measure to a measure that may decide the war. Ukraine's enemy, as do Israel's enemies, strives for a decision by attacking the home front to erode the determination of the population to continue the war and to erode the ability of the national infrastructure to maintain the combat troops. Integrated, effective and survivable air defense of the country's population and infrastructure is the key to resisting this enemy strategy and is a prerequisite for enabling the other forces to achieve victory.

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1 For more details see: Yirmi Shiferman, “ The Russian Air Force in the War – Issues for Review “.

2 For more details see: Yirmi Shiferman, “ The Russian Air Force in the War – Issues for Review “.

# The Russian Air Force in the War – Issues for Review

**Yirmi Shiferman**

Since the war between Russia and Ukraine began in February 2022, the question arises as to why the Russian Air and Space Force (VKS) has difficulty being a significant factor in its conduct, both offensive and defensive, especially given the apparent quality and quantity differences between it and its Ukrainian counterpart. During the war the tasks assigned to the Russian Air Force changed, but they can be summarized as:

- ◆ Defense of Russia's airspace.
- ◆ Achieving air superiority.
- ◆ Protection of the ground forces against the Ukrainian air forces.
- ◆ Assisting the ground forces by attacking enemy targets at the front.
- ◆ Landing ground forces in the enemy's rear.
- ◆ Damage to the military rear and the national infrastructure of Ukraine.

In its effort to conduct these missions, the Russians performed poorly.

Of these five missions, the article will analyze mainly the effort to achieve air superiority, and will only briefly touch the other missions.

The sources of information for the study are dozens of tweets, videos and messages on the various social networks and studies written by several Western research institutes.

## **Changes in the Roles of Air Power**

The traditional Russian approach to the exercise of air power is very different from the one that has developed in the West. The two notable differences were the lack of a concept of achieving air superiority and the lack of a concept of bombing the enemy's rear to damage national and military infrastructure. The Russian concept emphasized the defense of the Russian home-land and the Russian ground forces at the



front, assistance to the ground forces through attacks beyond the range of the artillery and the landing of large forces in the enemy's rear.

After the war with Georgia (2008), the Russians decided on a comprehensive change in the way their air force is organized and operated to become more similar to those of the air forces of the Western armies. To the traditional Russian air war concept were added the missions of achieving air superiority and damaging the enemy's command and control system. This required changes in organization, equipment and doctrine.

The Russian Air Force, formerly organized in separate mission-oriented organizations, was, with the exception of naval aviation, united into a single organizational framework, the Air and Space Force (VKS), which includes all aircraft, except those of the Navy, and all long-range air defense systems, which are employed to protect Russia's airspace.

For the first time, they began to equip themselves with multi-mission fighter aircraft, refuelers, command and control (AEW) aircraft, intelligence aircraft and new long-range bombers. Simultaneously, they developed and procured a variety of new long-range air-to-ground missiles (mainly cruise missiles) and long-range air-to-air missiles.

This transformation was supposed to dramatically change the way the Russian Air Force operates, to better adapt to a future conflict with NATO. The air forces' operations in Ukraine (2014) and Syria (since 2015) were perceived by Russian decision makers as successful and provided them with confidence in its ability to meet its new tasks. However, in practice, significant gaps remained in the assimilation of the new concept. For example, the supplementary doctrines and techniques necessary to implement the new concept have not been developed, nor were the operational planning and command and control processes changed. Thus, the operational planning process remains long and cumbersome, is based on out-of-date intelligence and lacks the ability to deal with time-sensitive targets (TCT/TST), the number of training hours for pilots remains low, and the operation of multi-aircraft 'packages' that combine combat aircraft with air-control aircraft and refuelers was not practiced.

## CHARACTERISTICS OF THE OPERATIONS OF RUSSIAN AIR FORCE IN UKRAINE

During the war, the Russian Air Force has operated in a variety of both offensive and defensive missions. The Russian air defense forces deployed long-range air defense systems along Ukraine's borders to initially disrupt the operation of the Ukrainian Air Force and later to protect Russia's own airspace. About 300 fighter aircraft (a small proportion of a potential of about 1,500 such aircraft) were deployed to forward bases to carry out offensive missions in the territory of Ukraine and simultaneously conduct air defense patrols to deny access to Ukrainian fighter aircraft on the various fronts. The strategic bomber formations carried out long-range attacks using cruise missiles and fighter aircraft of all types and attack-helicopter carried out close support attacks. Transport, troop landing and evacuation missions were carried out mainly by the transport-helicopter units.

The operational tempo of the Russian fighter aircraft was low compared to what is customary in the West (an average of 100 sorties per day and at the peak only about 300 sorties per day – on average less than one sortie per aircraft each day). Most of the sorties were carried out during the day and only a few at night. All the sorties were made in very small formations (mostly a single plane, in a minority of cases – pairs) and the use of force multipliers (command and control aircraft/AEW, intelligence gathering aircraft) was irregular and was insufficient for their operational needs. Aerial refuelers were apparently never employed, a fact that affected the ability of the Russian Air Force to maintain a continuous presence over the territory of Ukraine. Assault sorties by fighter aircraft to support the ground forces were often carried out at very low altitudes due to fear of the Ukrainian air defense, which continued to function with high efficiency throughout. Most of the munitions used were not guided, so the accuracy was low.

The manner of operation of the Russian Air Force resulted in the loss of many assets in combat: at least 115 surface-to-air missile systems, including advanced long-range systems, at least 80 fighter aircraft and at least 100 attack-helicopters and transport-helicopters. A significant

part of the losses were caused in the first weeks of combat, causing the Russian Air Force to reduce its offensive operations and concentrate on defensive missions. Most of the aircraft lost were hit by the Ukrainian air defense system, while the ground systems were mostly destroyed by the Ukrainian artillery (including the HIMARS systems).

In conclusion, it can be said that the competence and performance of the Russian air force, as demonstrated in combat so far, do not meet the requirements of a modern air force. The level of the pilots, the manner of exploiting the inherent potential of the aircraft, the systematic operation of the air force in its variety of missions and the quality of the aircraft and the armaments used did not allow the potential inherent in advanced air power to be fully exploited – the nature of Russian air operations did not surpass the basics.

### **AIR Superiority**

In accordance with their new concept of air operations, the Russians opened the war by attacking the airfields and air defense systems of Ukraine. However, it turned out that in the years leading up to the war, the Ukrainians had prepared to survive such a Russian attack and the attack failed to destroy their ability to function effectively.

### **Initial Ukrainian Deployment**

The Ukrainians established a unified command and control system, a large and extensive detection and warning system, which was deployed all over the territory of Ukraine and included a combination of radars and passive detection means, such as Elint systems and about 60 long-range (mainly versions of the S300 surface-to-air missile system) and medium range (Buk) missile systems. This array was deployed to ensure that even a widespread attack on it would not result in its complete destruction. Ukraine was divided into sectors, in each of which several detection systems and surface-to-air missile batteries were placed under a unified command with full responsibility and authority for the air defense in its sector. The batteries were often moved to new locations and operated in a decentralized manner.

In addition to the main airfields, alternative fields were prepared for dispersing the aircraft.

In addition to the general air defense array, the Ukrainian ground forces were equipped with dozens of batteries of motorized and man-portable surface-to-air missile systems (both Ukrainian and American models).

### **Attacking the Ukrainian Air Force**

The Russian opening move was designed to achieve complete air superiority over a significant portion of Ukraine by destroying the Ukrainian Ground-to-Air defense system (DEAD) covering those areas and crippling the Ukrainians' ability to operate their fighter aircraft (without destroying them). The attack combined the electronic jamming of the detection and fire control radars of the Ukrainian surface-to-air missile batteries (mainly in the Kiev sector), followed by the launching from aircraft and ground-launchers of approximately 200 missiles at about 30 (of a significantly greater potential) different target sites – military airfields, batteries of long-range surface-to-air missiles and radar emplacements. The strikes were conducted from a number of different directions.

Many of the targets were not damaged or only partially damaged:

- ◆ A considerable number of the missiles missed their targets or did not reach them because they crashed on the way.
- ◆ Many surface-to-air missile batteries that were attacked and some of the radars that were attacked had moved to new sites (one analyst estimated that about 75% of these sites were empty) and Russian intelligence did not discover these changes, so many missiles hit empty sites.

Even hits on still populated sites were not always effective:

- ◆ In some of the surface-to-air missile batteries, only non-essential components were damaged and therefore they continued to be fit for combat.

- ◆ Only two or three missiles were fired at airfields, which are large and complex targets that to temporarily disable them, let alone destroy them, requires hitting many separate targets within them. The missiles were apparently aimed only at the runways and not the aircraft themselves, but some missed their intended targets. As a result, the damage was only partial and insufficient to neutralize their operation.

After the opening missile barrage, Russian fighter aircraft carried out follow-up strikes on the same targets using ‘dumb’ bombs. The additional targets were selected in advance, based on the same preliminary intelligence regarding the location of the targets without updating it, and therefore also these attacks achieved poor results.

On the following days, the Russians continued to attack targets relevant to the air superiority mission, but the rate of attacks was lower than on the first day and their achievements continued to be poor.

It is possible that the Russians did not want to destroy the Ukrainian air force infrastructure (especially the air force bases), in light of their premise that after a short war this infrastructure would become theirs and they would have to restore the Ukrainian air force as an ally. However, the failure of the attack revealed a failure to complete and assimilate the new concept of aerial operations adopted after 2008. The transition from a mainly defensive force preparing to face a widespread NATO air offensive to an offensive force that strives to achieve air superiority required the development of doctrines and techniques, the development and equipping of new equipment and extensive retraining of the headquarters and forces. This was not done. They didn’t have enough aircraft and enough munitions to deal with the number of targets they were required to attack, and the munitions they did have suffered from technical problems – some crashed enroute and some missed by tens of meters. The Russian pilots demonstrated low flying skills and low competence for the mission. Added to these deficiencies was the inability to locate targets and attack them in a time that is shorter than the time these targets were in the location where they were located.

Achieving air superiority to its various degrees (local/partial/full) requires an orderly effort, investment of time and relevant collection and attack means and a command and control system that enables quick detection and attack of short-lived targets. Although the Russians had some of the relevant means (Sigint aircraft, unmanned aerial vehicles for real-time collection), they did not have, and still do not have, a doctrine and organization that gathers these capabilities into a unified operational idea. The pace of updating the intelligence on the targets was a significant gap that led in many cases to attacking empty targets or non-valuable components.

The Russian failure allowed the Ukrainians to restore their air defense system even in sectors where it was damaged and return it to almost full function within three days.

The Ukrainians continue to adhere to two methods of operation to maintain their air defense forces:

- ◆ Brief illumination by the radars according to a centrally coordinated program to reduce the ability of Russian intelligence to locate them.
- ◆ Repeated relocation of the radars and surface-to-air missile batteries from position to position, so that more often than not, even if located the Russian response is too slow to hit them before they have relocated.

### **Evolution of Aerial Strike Missions**

The Russian air campaign plan was based on a combination of long and medium range cruise missiles launched from aircraft, vessels and ground launchers and complementary strikes using aircraft dropping unguided bombs.

The downing of several dozen aircraft and several dozen Russian helicopters in the first weeks of the war caused the Russian high command to greatly reduce the participation of the air force in the fighting on the front and to be content with stand-off launching of missiles at targets deep in the Ukrainian territory. This withdrawal

from the front reduced the rate of aircraft losses but also reduced the contribution of the Russian air arm to the overall war effort.

In the relatively early stages of the campaign, Russia ran into a shortage of long-range precision munitions at its disposal. Initially they had at their disposal about 2,500 new missiles and about 2,000 older missiles. The Russians used most of their advanced weapons in the first weeks and the Russian production rate, estimated at about 40 missiles per month (despite the sanctions imposed on them), is not enough to keep up with the rate of fire. Accordingly, after a few weeks the rate of fire decreased and the Russians began using long-range surface-to-air missiles as surface-to-surface missiles and purchased explosive-drones from Iran.

The low rate of fire, technical problems leading to inaccuracy of the missiles and Ukrainian air defense, which gradually learned to hit an increasing number of missiles (in recent months intercepting 75% to 90% of them), reduced the amount of damage caused to dimensions the Ukrainians were able to deal with, especially given the assistance they received from NATO countries. The main Russian operational achievement was the damage to Ukraine's electricity infrastructure. In a period of two months, the Russian attacks succeeded in reducing Ukraine's electricity production capacity by 30% to 40%. However, with the assistance Ukraine received from its European partners, some of the production was quickly restored and the physical and psychological impact of the attacks remained limited. In general, the extensive Russian attacks have so far failed to bring significant gains in combat and have failed to cause significant damage to Ukraine's military infrastructure.

Procurement of Iranian long-range explosive-drones added only marginally to the intensity of the attacks due to the small power of the warheads (about a tenth of that of the missiles) and the high interception rates achieved by the Ukrainian air defense. Therefore, they have not been enough to significantly change the results of the Russian effort.

At the tactical level, armed with only unguided bombs and rockets and without freedom to maneuver because of the absence of aerial superiority, air support for the ground forces also failed to contribute significantly to their fighting effort. Recently the Russian air force has acquired guided-glide-bombs, but so far the numbers available and the difficulty in the targeting process has prevented them from changing the overall equation.

In addition to the lack of air superiority, the poor and over-long ‘target production to strike’ chain is a major contributor to the ability of the Russian Air Force to make a major impact on the war. In too many cases the Russians attacked empty infrastructure when trying to hit Ukrainian surface-to-air missile batteries or ground forces.

### **The Airborne Operation to Capture Hostomel AIRPORT**

A central part of the Russian operational plan was the rapid capture of the airport in Hostomel and its transformation into a forward operating base for the takeover of Kyiv. According to the Russian plan, dozens of paratroopers and special-forces fighters (“Spetsnaz”) were expected to participate in the operation. They were to conduct a surprise landing in 34 transport-helicopters, accompanied by attack-helicopters for their protection, to be followed by Ilyushin 76 transport aircraft carrying reinforcements. The helicopters’ flight path entered Ukraine along the Dnieper River till arriving at the airport. Fighter aircraft and attack-helicopters provided close support to the airborne force in order to prevent Ukrainian forces from disrupting the operation.

Despite the detailed planning, the operation failed. First, the element of surprise was neutralized, both due to the early warning that the Ukrainians received from their allies (some of the Russian forces involved discussed the plan on unsecure communications) and due to the manner of flying the helicopters, which resulted in full exposure of the invading force. Flying in concentrated formation in full daylight and at a relatively high altitude on one route, over the river and lake and passing over settlements, allowed the Ukrainian air defense units to prepare in advance for their entry and react with anti-aircraft



weapons. The self-defense measures of the helicopters were employed sub-optimally and so did not provide the Russian helicopters with effective protection against the threats they faced.

The incompetence resulted in the Russians losing about 10% of the helicopters before they landed. The failure of the heliborne force to take the airfield prevented the landing of the main force following them. A second larger heliborne landing the following day came too late. The Russians were forced to retreat without achieving their goal. In turn, this tactical failure foiled the entire Russian campaign plan to take Kyiv.

What, then, were the factors that led to the Russian failure? First, the flight during the day, the method of entering Ukraine and the method of flying within the territory of the country meant that the Russians lost the dimension of surprise, which is critical to the success of landing operations. Second, the Russians apparently did not have up-to-date intelligence on the deployment of the Ukrainian air defense systems, especially the shoulder-fired missile units, which posed the most significant threat to the helicopters. Third, bringing the main force with transport aircraft that need a clear runway to land instead of bringing the entire force in helicopters (as was done on the second day) left the advanced force alone, utterly inferior to the local Ukrainian forces. Above all, the allocation of only one brigade to this mission, even after all of it reached the airfield, left it inferior in numbers and firepower against the defending and counter-attacking Ukrainian forces.

### **Summary**

The question this article tried to answer is why, despite a comprehensive reform that was supposed to prepare it for modern warfare, the Russian Air Force failed to provide a significant contribution to the Russian military effort in Ukraine. The explanation for the problem consists of several issues, which together provide a good answer to the question.

On a perceptual and cultural level, the Russian air force remains essentially a defensive force, designed first and foremost to protect

Russian air-space against a widespread attack by NATO. The changes in its organizational structure and force composition were not accompanied by changes in doctrine, command and control methods, pilot training and other capabilities which enable effective use of the air force.

The Russians did not formulate systemic operational concepts for achieving air superiority, for deep attacks or for providing close assistance to the ground forces. Individual Russian fighter pilots remain capable of performing only basic missions, such as long-range interceptions or attacks using unguided weapons. The quantities of Russian precision munitions, which initially included only long-range cruise missiles and medium-range surface-to-surface missiles, were not suitable for conducting an intensive campaign and did not inflict significant damage to Ukrainian capabilities. Russian attempts to improve proved to be ineffective and insufficient for prolonged fighting.

Russian learning and changing while fighting remains very low. The Russian flying style has not changed throughout the entire war and was one major cause for their casualties. Then, instead of using protective measures on the aircraft, the Russians chose to avoid flying in dangerous areas – further reducing the air forces' contribution. The Russians did not realize the need for cheap accurate (GNSS guided) short-range (tens of kilometers) munitions to support their ground forces. The Russian use of such munitions was sporadic and unsystematic and inefficient in exploiting their usefulness.

The war proved once again that air superiority is a pre-requisite for effective use of air power at a reasonable rate of attrition. Without air superiority, it is not possible to provide high-quality and effective close assistance to the ground forces, nor to carry out an efficient and effective campaign of air strikes deep in the opponent's territory. Also, the ability to gather intelligence using aircraft is impaired. Failure to achieve air superiority at the beginning of the war almost completely prevents its achievement later, when each side needs only to preserve the survival of his air defense systems in order to disrupt the activity of the opponent's air force.

The war demonstrated the limitation of relying on medium-range and long-range missiles as an alternative to employing aircraft. The high cost of the missiles allows for a very limited supply and the ability to increase the stock during a war is very limited. Furthermore, the rate of shooting them down by the air defense systems is relatively high and therefore they too need air superiority to succeed. An inexpensive alternative to these missiles are GNSS-guided glide bombs dropped from aircraft. And yet, although it is possible to purchase and launch large numbers at once, their short range requires the attacking aircraft to get close to the target – something that could be costly casualties unless air superiority was achieved at least against long-range surface-to-air missiles and enemy fighter aircraft.

# The Naval Campaign

Eyal Pinko

The war in Ukraine was and is conducted mostly on land, but, though usually far from the media spotlight, there has also been significant operational activity at sea too. This article will present the naval campaign and the lessons that can be learned from it.

## The Roles of the Russian Navy at War

Though not strategically decisive in itself the Russian navy does have a number of roles in Russia's strategy – defensive and offensive.

**The defensive roles** include preventing enemy naval and aerial forces from approaching Russian territory by sea. For that the Russian navy is equipped with ships armed with anti-ship and anti-aircraft missiles and attack-submarines. Simultaneously, it must secure freedom of navigation for Russian merchant ships by defeating various threats such as enemy combat ships, aircraft and sea-mines. The operational freedom of the Russian merchant navy provides Russia with its economic sustainability.

**The offensive roles** are more varied:

- ◆ Long range attacks by precision missiles, up to 2,500 kilometers, on targets located in-land and on the coast of the enemy state.
- ◆ Conducting a maritime siege of the enemy state to reduce its economy and prevent it importing military equipment.
- ◆ Landing ground forces on enemy beaches, whether as an independent operation or as a subsidiary effort to the Russian ground campaign.
- ◆ Using naval platforms to collect intelligence and conduct cyber operations.

### **The Black Sea Fleet Before the Campaign**

Historically Russia was and is a land power. However, its coasts touch many different seas. Its main naval problem is that the sea along most of its coasts is frozen for many months per year, so only some of its ports can be used all year round, and these are all located in closed seas – the exits of which are controlled by rivals. The Black Sea is a typical example of a closed sea.

Of all the seas that interest Russia only the Black Sea and the Mediterranean Sea are relevant to the war in Ukraine. Russian domination of the Black Sea and a powerful presence in the Mediterranean have been a Russian ambition for two hundred years, both as part of Russia's defensive strategy (preventing hostile navies approaching Russia's Black Sea coast and ensuring Russian commerce with Mediterranean and African states) and its offensive strategy (a base for initiating attacks against western Europe).

After the dissolution of the Soviet Union in 1991 the number of active ships in the Russian navy dropped to about a tenth of its inventory in the late 1980s. After Putin's accession to power and the beginning of Russia's military recovery, dozens of old ships of various sizes were returned to service and new ships were built. On the eve of its invasion of Ukraine the Russian Black Sea and Mediterranean fleets numbered 20 missile-armed ships of various sizes, seven submarines, 8 landing-ships, marine-infantry units, intelligence collection units and air-defence units. Most of these were stationed on the Crimean peninsula and some in Russia's Tartus base in Syria. Also, three battalions of 600 kilometer range Yakhont anti-ship missiles were stationed in Crimea, together with advanced radar and electronic warfare equipment.

Facing this the Ukrainian navy had only one frigate and a number of shore-to-sea missile units.

### **The Black Sea Fleet at War**

The Russian Black Sea fleet preparation for war began on 10<sup>th</sup> February 2022, two weeks before the invasion began. Its ships deployed in the

Azov Sea, the Black Sea, the Mediterranean Sea and the Aegean Sea. When the war began the Russian navy was employed on a wide range of missions:

- ◆ Enforcing Russia's naval supremacy over the Ukrainian navy. Given the relative strengths of the two fleets the Ukrainians did not attempt to contest this and their only frigate was sunk in port by its own crew to prevent capture by approaching Russian ground forces.

- ◆ Blocking access to other fleets and hostile aircraft to the war zone in the northern Black Sea by a combination of missile-armed ships and attack-submarines sailing the central area of the sea and shore-to-sea missile batteries in Crimea.

- ◆ Besieging Ukraine to prevent it from exporting merchandise and importing weapons and other necessary goods through the Black Sea. This created significant economic damage to Ukraine because the majority of its import and export were through the Black Sea.

- ◆ Launching long-range missiles (Kaliber, 2,500 kilometer range, half-ton warhead) from ships and submarines at a variety of military and national infrastructure installations in Ukraine.

- ◆ Landing forces on the Ukrainian coasts to support the Russian ground offensive. One marine brigade landed on the first days of the war on the Azov coast to assist the Russian forces advancing from Crimea to the city of Mariopol. A small force was landed on Snake Island at the western edge of the Black Sea to emplace naval and aerial radars to assist the naval siege. Another marine brigade was brought a number of times to locations facing the port-city of Odessa, but never attempted to actually land and was later sent to conduct ground operations instead. The reasons it did not land are not known, but apparently initially weather conditions were inappropriate and later the Russian ground forces advancing to Odessa were halted 150 kilometers north-east of the city and there was no point in conducting the landing. The Ukrainians exploited the delay in landing to emplace obstacles on the beaches, scatter naval-mines off the coast, emplace shore-to-sea missiles to threaten the Russian landing-ships and conduct patrols of armed-drones over the sea at some distance from the coast.

◆ Secure freedom of navigation to Russian merchant ships in the Black Sea. These ships continued Russia's international trade (mostly exporting grain, oil and gas) despite Western imposed sanctions which most of the world refused to abide by. Many Russian ships sailed without activating the international-law mandated Automatic Identification System to prevent NATO from locating, identifying and intercepting them in the Mediterranean.

◆ Clearing Ukrainian naval mines. Because of the hasty scattering of these mines to prevent a Russian landing near Odessa many were not properly moored and broke free, floating independently through shipping lanes to the shores of Rumania, Bulgaria and Turkey.

◆ Employing electronic warfare, including jammers and spoofers of GPS, detection systems and communication systems, and cyber warfare to assist the Russian navy's operations and disrupt communication and navigation systems of NATO ships and aircraft operating in the Black Sea.

### **The Ukrainian Navy at War**

Lacking capability to confront the Russian navy, the Ukrainian navy settled for coastal defence and maritime denial.

It procured shore-to-sea missiles, unarmed and armed-drones, and later also remotely-piloted 'suicide' boats.

All these means were employed to attack the Russian fleet in order to force it away from the Ukrainian coast, harass its operations and conduct sporadic strikes on its ports in Crimea to wear it down. However, to date, the number of systems employed by the Ukrainians and its achievements with them have not risen above the level of a painful tactical nuisance has have achieved some propaganda successes.

### **Focus on Notable Events**

#### **Sinking of the Russian Flag-Ship 'Moskva'**

The lack of a real threat during seven weeks of operational activity off the coast of Ukraine lulled Russian naval commanders. They sailed off the

Ukrainian coast in repeated set courses that were even plotted by Osint and published on 7<sup>th</sup> April in an e-zine focusing on maritime matters.

On 13<sup>th</sup> April 2022 there was a storm at sea. The ‘Moskva’ sailed its routine course, 110 to 120 kilometers south of Odessa. Apparently based on information provided by American intelligence, the Ukrainians located the ‘Moskva’ and deployed a maritime radar forward as well as a truck-mounted shore-to-sea missile launcher. The radar located the ‘Moskva’ and directed an unknown number of drones towards it. Videos from the drones enabled definite identification of the ‘Moskva’. The cluster of drones approaching the ship was also intended to draw the attention of the crew and the ship’s defence systems. The ship’s radar detected numerous targets – aircraft and drones and focused on the most threatening ones. Meanwhile, the Ukrainian missile-launcher received the ship’s coordinates and launched two Ukrainian manufactured ‘Neptune’ missiles (maximum range – 280 kilometers). At least one missile, perhaps both, struck the ship near its missile store and caused a fire. The ship’s crew failed to extinguish the fire and at least some of the missiles ignited increasing the damage so that the ship began to take-on water. Other Russian ships attempted to tow the ‘Moskva’ to port, but it sank enroute.

One cause of the Russian failure was probably complacency over the previous lack of a threat. Perhaps even the electronic warfare equipment was switched off. Another cause was the Ukrainian success in saturating the sky with targets. Russian radar operators were used to seeing multiple aerial targets – Russian and Ukrainian aircraft and drones, and focused on identifying threats from these. They did not notice the fast-approaching low-flying (20 to 25 meters above water) missiles. The root cause of the failure was the Russian intelligence failure to realize that the Ukrainian ‘Neptune’ anti-ship missile development had been completed, so the Russian commanders were ignorant of this threat. The combination of faulty intelligence assessment, faulty operational concept and complacency were fatal to the ‘Moskva’.

The Ukrainian achievement was on three levels: completion of the ‘Neptune’ development project during the war and the ability to deploy



without exposure; the ability to rapidly complete the detection-strike cycle between the drone operators, the radar crew and the missile crew; and the use of the drones to not only acquire the target but also to deceive the target as to the true nature of the threat.

However, the Ukrainian achievement was merely tactical and propaganda in nature. It did not shift the balance of power at sea and the Russian navy continued to conduct its missions while employing precautionary measures to prevent further casualties.

### **The Snake Island Affair**

Snake Island is a small island located 35 kilometers from the coast of Ukraine near the border between Ukraine and Rumania. In 2009, following a long conflict between the two states, the International Court determined that it and the economic zone surrounding it belong to Ukraine. Russia never claimed the island for itself.

The island's location proffers it some importance in the context of the Russian maritime siege of Ukraine. The Russians can maintain the siege without holding the island itself, but placing a naval radar on the island provides a more stable observation capability of the entire western area of the Black Sea and reduces the need to maintain a permanent presence of warships in the area – with all the attendant costs to the crews and ships themselves, especially in stormy weather. Furthermore, an aerial radar would provide a permanent aerial picture of the north-eastern Balkans – including the aerial operations of NATO armies in that region.

The Russians took the island on the first day of the war and placed radars on it. The Ukrainians responded by repeatedly bombarding the island from the mainland shore and employing shore-to-sea missiles and armed-drones against ships supplying the Russian force on the island. Finally, in June 2022, the Russians decided that the cost of holding the island was higher than the benefits and withdrew from it. At the same time Turkey was mediating an agreement between Russia and Ukraine in which Russia would partially open its siege to enable Ukraine to renew its exports through the Black Sea, so that the importance of holding the island dropped.

After the Russian withdrawal the Ukrainians redeployed a force onto it and this force was periodically attacked by Russian aircraft.

### **Attacks on Russian Gas Rigs**

From 20<sup>th</sup> to 26<sup>th</sup> June, 2022, the Ukrainian Navy attacked three Russian gas rigs in the Black Sea located about 70 kilometers south of Odessa. The Russians had placed signal intelligence posts and electronic warfare equipment on the rigs.

The details of the attacks are not clear, but at least one attack included the use of a Ukrainian ‘Neptune’ or American ‘Harpoon’ shore-to-sea missile, and in at least one an exploding-drone was used. Each attack included also the use of reconnaissance drones to photograph it.

### **Attacks on Russian Ports in Crimea**

During summer 2022 the Ukrainians began employing special-forces sabotage teams and aerial exploding-drones to attack targets in Crimea.

In September 2022 they conducted the first attack employing an explosive remotely controlled boat. The first attempt apparently failed. It penetrated the Russian detection cordon but beached near the Russian navy port at Sevastopol. It is estimated to have sailed 270 kilometers from the launch site in Ukraine, controlled via civilian satellite communications. In October a larger attack force of such boats penetrated the port and it is claimed they damaged two Russian ships. Since then there have been a number of reports on such operations including at least two attacks on Russian ships at sea, much further from the Ukrainian coast.

### **Cutting the Zatoka Bridge**

The Russians quickly adopted the use of remotely-controlled exploding boats too. In February 2023 they launched such a boat against the Zatoka bridge – the only bridge enabling direct road traffic from Odessa in Ukraine to Rumania.

### **Insights and Recommendations for Israel**

18 months into the war, with the end not yet in sight, it is too early to assess how the war in Ukraine will affect Russia in general and the Black Sea Fleet in particular, but undoubtedly the war has and will have a decisive role in shaping the Middle East and the security situation in the Mediterranean.

So far, it seems that despite some losses in ships and personnel and damage to other ships, the Russian Navy is achieving most of its missions – first and foremost the maritime siege of Ukraine and the launching of missiles at Ukrainian national infrastructure.

Insights from the naval campaign and possible lessons for the Israeli Navy include:

- ◆ The importance of the sea for the global economy and for Israel's economy in particular. There is a high probability Israel's enemies will attempt to cut its maritime commerce and strike its critical infrastructures located at sea and on the coast. Attacks can emanate from Lebanon, Gaza or Yemen – all directed and armed by Iran. Israel's navy will need to defeat this attempt and simultaneously inflict a similar campaign of siege and strikes from the sea at enemy assets in order to inflict economic, political and psychological pressure on Lebanon and Gaza during a war.

- ◆ Long range attacks into the depth of the enemy's land is a strategic mission that assists the ground and aerial forces in their missions as well as independently creating powerful and important strategic, political and psychological effects. The Israeli Navy should study the means and ways needed to conduct such actions.

- ◆ The importance of landing from the sea: Landing ground forces from the sea plays an important role in military maneuverability. However, there are considerable threats to this capability that must be faced – naval mines, shore-to-sea missiles, artillery, armed and explosive aerial drones and remotely-controlled explosive-boats and other shore-based weapons not specifically created to attack ships, but having some such capability such as anti-tank missiles.

◆ Naval mines – whether the ‘stupid’ simple types or the advanced types, repeatedly proves their effectiveness in creating a naval blockade and psychological effects. The Israeli Navy must find solutions for locating and removing mines in the Mediterranean and Red Sea arenas.

◆ Electronic warfare and the disruption of navigation systems occupy an increasingly central place in naval warfare, both in supporting offensive actions in defending friendly naval forces and aerial forces over the sea.

◆ The use of unmanned aerial vehicles is increasing and is affecting also naval warfare. Their cheap price enables everyone to acquire them. Turkey and Iran are leading manufacturers of such weapons.

◆ Use of unmanned submarines or surface vessels – remotely-controlled, small and stealthy vessels guided by civilian satellite communications used for reconnaissance or for attacking naval targets. Turkey and Iran are notable in this field too. Defending against them requires mounting new capabilities on Israeli naval ships.

◆ Naval intelligence: The destruction of the ‘Moskva’ emphasized again the need for up-to-date intelligence and awareness of threats. Israel suffered a similar incident, though less fatal, in its Second Lebanon War.

The war in Ukraine teaches that the key issues that naval intelligence must delve into are:

- Refining and updating intelligence methodologies to expose adversaries’ intentions and capabilities, while coping with intelligence biases such as over-estimations and under-estimations.
- Researching potential surprises whether tactical or technological.
- Researching naval cooperation and technology transfers between Iran, China and Russia.
- Researching the Turkish Navy’s capabilities, with an emphasis on missiles and remotely-controlled ships and aircraft, as well as

the proliferation of Turkish technology to countries in our region.

- Research of advanced technologies: shore-to-sea missiles and ancillary equipment, naval mining, intelligence gathering capabilities from the sea by Russian and Iranian ships, etc.

# The Cyber Domain

**Eyal Pinko**

The Ukraine-Russia war broke out on February 24, 2022, when the Russian army invaded Ukraine following a month's preparations and a ten-day exercise. The war, which is still ongoing, has included many cyber incidents. Cyber warfare changed the face of the military campaign, and with some calling this the first digital war – a nickname with no real basis, as a significant cyber campaign was conducted between Russia and Ukraine in 2014.

Cyber attacks have been carried out by both sides in the Ukraine-Russia war to neutralize national infrastructures, banking systems, and government ministries; influence decision-makers, citizens, and soldiers; and gather intelligence. Cyber played no real role in disabling national capabilities or infrastructure, but has had psychological and cognitive effects. The first year of the war sharpened the need to build and upgrade information security measures, especially around critical national infrastructure; strengthen real-time information-gathering capabilities from social networks; strengthen awareness; and maintain information security.

This article will provide an analysis of the role of the cyber domain in the first year of the Russo-Ukraine war and what it teaches us about modern warfare.

## **Credibility of Sources**

A critical limitation on available information should first be noted. Descriptions of cyber attacks are based on media reports by publications that have their own agendas. Publications on both sides are often used for psychological warfare. As we have seen so far, both combatants in this war engage in deception and fake news. These factors dominate the battlefield to such an extent that it is impossible to know which side's version is closer to the truth.

Descriptions of attacks described in this article are based on media reports and are quoted as they appeared. It should be remembered that

the publications focus on attacks whose results are clearly visible. There is no real information on the number of silent attacks that have penetrated computer systems on both sides but not been exposed to the public.

### **Cyber Attacks Before the War**

Russia has been conducting cyber operations against Ukraine since 2014 – intelligence gathering operations, influence operations and sporadic low intensity sporadic disruption operations against Ukrainian national infrastructure. Attacks relevant to the current war began about a month and a half before ground battles broke out. In early January 2022, the US warned Ukraine that its critical state infrastructures were under threat of cyber attack. Shortly after this warning, the websites of Ukrainian government ministries (Education, the Interior, Foreign Affairs, and others) were defaced and messages warning the residents of Ukraine about Russia were posted on them. The Ukrainian Internal Security Service claimed at the time that nothing had been stolen as part of the attacks, but tests carried out by American officials and Microsoft revealed viruses on Ukrainian networks – particularly those of critical infrastructures like the Ukrainian Ministry of Defense, power generation facilities, nuclear facilities, and others. About two weeks before the campaign officially began, the US sent expert assistance and technological solutions to protect Ukrainian infrastructure.

### **Russian Cyber Attacks During the War**

The day before the outbreak of the war and on its first day, many cyber attacks were launched on Ukraine's national infrastructure, government offices, and banking system. Most were Denial of Service (DoS) attacks and website defacement. Ukraine, which had suffered a number of cyber attacks on its electricity company since 2014 and the brief shutdowns of electricity in parts of the country was prepared for the current campaign.

In the first months of the war, Russia repeatedly attacked strategic Ukrainian targets and national infrastructures like banking institutions, the electric company, nuclear facilities, and the transportation

infrastructure, but the attacks failed. The Russians launched several strikes, mainly involving the deletion of information from servers and computers. A Russian cyber group called Armageddon targeted civilians and organizations in Ukraine in order to gather intelligence about the state of mind there, as well as other information that would assist in the ground campaign and the shutdown of Ukrainian national infrastructure. Most Russian attacks from the beginning of February 2022 to October 2022 were directed against government institutions, IT infrastructures, and the energy sector.

Cyber attacks were also used in combination with ground force operations or fire strikes. In April 2022, during the ground attack to capture the Zaporozhiya nuclear power plant, cyber attacks were conducted against the plant's corporate networks. The cyber attacks failed, but the plant was captured. In another case, the Russians attempted to disrupt the functioning of the Ukrainian Air Force headquarters in the city of Vinnytsia (200 kilometers south of Kiev). They first conducted a cyber attack on the regional communications network and then fired consecutive sporadic missile strikes on the airfield and headquarters itself. A similar attack was launched at government, military and national infrastructure installations in the city of Dnipro. The attack began with a DoS strike on the municipality's computers and website and continued with an attack by 11 cruise missiles on various installations in the city.

Studying the distribution of the known cyber attacks per sector in Ukraine from the beginning of February 2022 (i.e., a few weeks before the initiation of the general Russian invasion of Ukraine) till October 2022 shows that the majority of Russian attacks were directed at Ukraine's governmental institutions (including the army), communications infrastructure and energy. However, compared to the cyber attacks during the two years before the war there has been, since the war began, a reduction in the frequency of attacks.

At the same time, through social media and attacks on news sites and radio stations, the Russians conducted large-scale influence operations of disinformation and fake news against the Ukrainian government and NATO. These operations continue today.



The Russians conducted offensive operations also against the USA, Great Britain, Germany, Poland, Latvia, and other countries. These operations were intended to disrupt national infrastructures, but also to create a deterrent against intervention in the war.

### **Ukrainian Cyber Attacks During the War**

The Ukrainians responded by vandalizing Russian government websites in the first days of the war, creating DoS attacks and trying to create an understanding in Russia that Ukraine would respond to Russian aggression in the cyber domain as well as on the battlefield. Ukrainian president Volodymyr Zelensky even called on hackers from around the world to join the Ukrainian cyber army in attacking Russian websites and infrastructure as well as to be part of a cyber-based influence campaign. In the latter operation Ukrainians hacked into Russian government websites, sent messages to the cell phones of Russian citizens condemning the war, hacked the website of Russian television and broadcast messages there, and even hacked the website of the Russian Space Agency. The Anonymous organization claims to have penetrated and taken down the website of the Russian state intelligence service, the FSB. In addition to disrupting Russian state functions, the aim is to influence global and Russian public opinion to end the war.

### **Gathering Intelligence in the Cyber Domain**

The purpose of military intelligence in wartime is to collect information about the opponent's capabilities, campaign planning, actions and unit locations so they can be stopped and destroyed quickly and efficiently. Military intelligence was collected before and during the war in Ukraine by various means, such as human intelligence (HUMINT), signal intelligence (SIGINT), visual intelligence (VISINT) and others. A further critical intelligence-gathering method is OSINT, or open source intelligence. OSINT makes use of the Internet, apps, and open communication networks.

The collection of OSINT takes advantage of the vast amount of information available on social networks, applications, and websites to which access is unobstructed and which provides the signature

of users. This information can be collected and analyzed relatively quickly and with high accuracy by technological means. With that said, it can be difficult to know when the information collected is reliable and not disinformation.

Information was collected from photos, videos and stories uploaded by soldiers and civilians participating in or viewing operations. This information was used by the Ukrainian side to identify the location of Russian forces and turn them into targets. In June 2022, the Russians reported their intention to withdraw, but photos and videos uploaded to social networks by Russian soldiers showed that they were not withdrawing and that the Russian announcement was a deception. According to reports, these videos and photos were reported by Ukrainian citizens to local security services.

The second dimension of intelligence gathering in cyberspace is the gathering of visual information, mainly through the purchase of satellite images that are sold online. This information was mainly used to designate targets for attack and to study the opponent's maneuvers. Countries that do not have photography satellites collect data from websites that operate their own satellites.

The war in Ukraine is not the first in which a parallel campaign was conducted in the cyber domain. It is precisely the connection between the cyber and the physical domains that makes cyber an element of modern war, one that many countries and organizations wish to exploit.

In the first Ukrainian war in 2014, the Russians used cyber operations to assist them in the land campaign. The most prominent example was an attack on the Ukrainian electricity system that left about a quarter of a million households without electricity for hours. Preparation for this attack was conducted about a year and a half before the actual attack, creating a back-door that would allow the Russians to penetrate the Ukrainian electricity network at a time of their choosing.

Attacks on national infrastructures are conducted to produce psychological, economic and military effects that help the military campaign. Such attacks take time. They are not real-time attacks like

those seen in “Mission Impossible” movies. In order to carry out a cyber attack on national infrastructure, intelligence must be gathered about the target over a long period. An operational plan must be prepared and suitable malware must be inserted that will hide inside the target until activation.

After the 2014 war the Ukrainians and Americans studied the Russian *modus operandi* and raised the level of security at Ukrainian national infrastructures, thus foiling a majority of the Russian cyber attacks on Ukrainian infrastructure in the current war.

Bearing in mind the limitations on published information and spread of fraudulent information by both sides, it can be concluded that in this campaign, unlike the earlier one, cyber operations had no real role in disabling Ukrainian national capabilities and infrastructures. In fact, despite the deletion of information from servers (the Ukrainians claim most of the information was backed-up in invulnerable locations) the Russian achievements were minimal and did not rise above the level of harassment.

The cyber campaign in Ukraine did, however, create cognitive and psychological effects that influenced global public discourse, NATO, and the populations of both countries. While Russian cyber attacks on Ukraine delegitimized Russia and prompted other countries to provide the Ukrainians with additional assistance in cyber defense, they nevertheless created great anxiety in Ukraine. While it is difficult to isolate this anxiety from the broader fears of the local population during the Russian onslaught, it is likely that the cyber domain significantly elevated the anxiety of the Ukrainian population.

The world media has for the most part legitimized and even encouraged Ukrainian cyber attacks on Russia. They did not even disapprove of the Ukrainian president’s call for hackers around the world to launch such attacks – an interesting move in which criminal elements with no direct connection to the campaign were essentially granted legitimacy to act against Russia by a silent Western world. Russian cyber attack groups, conversely, have consistently received scorn and condemnation.

The evidence indicates that during the first year of the war, the cyber domain had a negligible military effect. The adversaries employed cyber operations primarily for the purposes of psychological warfare and influence on local and global public opinion.

### **Analysis**

In the cyber domain, where attack capabilities change every day depending on newly discovered weaknesses and fresh attack tools, countries do not necessarily have advantages over civilian attackers. A country can invest effort, money, and human resources to find weaknesses, attack capabilities, and defense capabilities, but this does not necessarily grant it superiority over its enemies in the cyber domain. Hackers can find new weakness at any given moment. Cyber supremacy, unlike military supremacy, is therefore a loose and dynamic concept that can change rapidly.

The matter of recruiting amateur or professional hackers from around the world is highly significant and can affect future campaigns, including in Israel. Israel could find itself facing not only Iranian, Hamas, and Hezbollah cyber attacks, but also attacks from others who share the goal of destroying Israel. We cannot know who might enlist in such a campaign, either beforehand or while it is going on. Nor can we know what new abilities such free agents might possess. These people could include Israeli citizens acting against it in concert with Israel's enemies.

Another important element of the cyber domain in the first year of the Russo-Ukraine war was fraud. False information was spread via news channels and fake profiles were disseminated to confuse the enemy about military movements, gathering places, and attack plans. The Russians broadcast their maneuvers through their own news channels, which were in turn quoted in global news reports. These announcements sometimes caused Ukraine to activate forces and maneuver for defense when not required, sapping readiness for real military moves.

The third and final component of cyber is the gathering of intelligence through social networks, websites, and applications that allow the locating of targets and forces and an understanding of military maneuvers.

## Recommendations

First, the Russo-Ukraine war has sharpened understanding of the need to build and upgrade information security measures, especially around critical national infrastructures like electricity, transportation, water, the financial system, communications, the health system and the defence organizations. In addition, protection measures should be strengthened for companies and organizations in the supply chains of national infrastructures. These will often be more vulnerable to and less aware of danger. They thus constitute an attack path to the heart of national infrastructures.

Second, real-time information-gathering capabilities must be strengthened on social networks to identify enemy soldiers and track their activity, location, and interactions. These tools must be able to distinguish between genuine and false information, which can be done using artificial intelligence. These capabilities should include detection of adversary cell phones, even when used among the civilian population, in order to create targets in real time. It should be noted that in the Second Lebanon War, Hezbollah apparently had such capabilities.

Conversely, the third recommendation, which is a corollary of the second, is to strengthen awareness of Israeli soldiers and civilians to maintain security of information before and during combat and not to reveal military secrets, including the location of forces, their size, or their use in social networks. Soldiers must be prevented from activating their phones during operations.

The fourth recommendation is the development of a national, uniform, timed and coordinated approach among all relevant bodies to create disinformation and influence on social networks and media channels. If the various bodies work together, they can achieve great influence in the domestic arena, in the eyes of the opponent, and in the often critical international diplomatic arena.

The fifth recommendation is the creation of permanent superiority in the cyber domain, the main element of which is the constant development of weaknesses, loopholes and access points into enemy

systems. Such an ability can be based on self-development but also on the discovery of existing weaknesses in the network, with an emphasis on the Telegram and Darknet channels, as well as on the operation of private bodies in state service.

# **Non-Violence Strategies, Soft Power and Digital Front Challenges in the Russian-Ukrainian War**

**Shay Attias**

The Russian-Ukrainian War has been a multifaceted conflict with significant implications for global politics and warfare. Beyond the military aspects, this conflict has shed light on the effectiveness of non-violence strategies, the role of soft power (a country's ability to shape the preferences and behavior of others through attraction and persuasion rather than coercion), the emergence of the digital front, and the manipulation of disinformation. These aspects provide valuable lessons also for Israel as it navigates its geopolitical landscape and seeks to counter threats, strengthen its position, and harness the power of communication in the modern era.

## **Soft Power**

Soft power includes a wide variety of tools, but one of the most prominent is information warfare – the use of true or false information to convince the target population to support or denounce a particular actor. The emergence of the Internet and social media have presented new challenges and opportunities in the field of information warfare – shaping the opinion of one's own public, the enemy public and the global audience on the war in general and for the benefit of one adversary and against his opponent.

The struggle in this field is not new, but the sub-field of disseminating false information to influence public opinion has greatly intensified and threatens individuals, communities and countries due to the new information dissemination technologies. The spread of false information may lead to the erosion of trust, change public opinion and destabilize governmental processes in general and democratic processes in particular.

Disseminating false information to influence opinions is also not new, but its prevalence and intensity have increased in the information age due to the ease of creating and sharing information on the Internet. If in the past only the states, large organizations and the rich could establish, maintain and use the technological systems required for the production and distribution of false information, today, thanks to social media, simple and cheap programs for sending messages and manufacturing content and the variety of online channels – anyone can.

The speed at which information can be shared, along with the viral nature of social media, amplifies the impact of disinformation efforts. These can quickly gain traction and reach a wide audience, making it difficult for people to distinguish fact from fiction. False information can be used by various parties, including state-sponsored entities, political movements, extremist groups, and individuals seeking personal gain. The motives are diverse – starting with shaping public opinion and undermining trust in institutions, ending with causing social fragmentation and the pursuit of economic or personal gains or any ideological goal that the manufacturer believes in.

Disinformation campaigns use various techniques to achieve their goals (see Tables 1 and 2). The techniques include the creation and distribution of false news stories, the manipulation of images and videos, the exploitation of social media algorithms to direct the distribution of information, the laundering of information, and the use of precise targeting and personalized content. The spread of false information has a profound effect on individuals, communities and companies, by eroding trust in institutions, manipulating public opinion, threatening governmental processes and exacerbating social divisions and polarization.



**Table 1: Main Threats and Countering Methods**

<b>Topic</b>	<b>Threats</b>	<b>Ways to Deal</b>
<b>Cyber Warfare</b>	- Cyber attacks targeting critical infrastructure and systems	- Implement robust cyber security measures
	- Manipulation of information and public opinion	- Foster international cooperation on cyber security
	- Weaponization of technology	- Invest in advanced technologies for defense
<b>Disinformation</b>	- Spread of false or misleading information	- Promote media literacy and critical thinking skills
	- Erosion of public trust and manipulation of opinion	- Implement platform regulations and fact-checking measures
	- Threats to democratic processes	- Collaborate between governments and tech companies

**Table 2: Emerging Technologies in the Digital Homefront**

<b>New Technology</b>	<b>Description of threats and opportunities</b>
Deepfake Videos	Artificially manipulated videos that can deceive viewers
AI-Generated Text	Automated generation of false narratives and articles
Bot Detection Tools	Tools to identify and combat social media manipulation
Blockchain Technology	Ensuring the integrity and transparency of information
Automated Fact-Checking	AI-driven systems to verify and debunk false information
Quantum Computing	Potential for enhanced cyber security and encryption
5G Networks	Faster and more connected communication infrastructure

### Ukraine's Soft Power

One significant lesson from the Russian-Ukrainian War is the effectiveness of non-violence strategies in advancing a nation's interests and resisting aggression. In addition to its initial military achievements in the war, Ukraine has demonstrated the efficacy of non-violent approaches. Diplomacy and international alliances have played a crucial role in garnering support and raising awareness about the conflict. Ukraine has condemned Russian aggression through many alliances with Western nations and international organizations and sought a perceived "peaceful resolution". The imposition of economic sanctions, with the backing of its allies, has targeted critical sectors of the Russian economy, weakening Russia's global position.

Additionally, Ukraine's adept use of information warfare techniques has enabled it to counter Russian propaganda and disinformation campaigns, shaping world's public opinion and countering Russian influence. Furthermore, Ukraine's commitment to providing humanitarian aid and support to affected regions has addressed the humanitarian crisis resulting from the conflict, garnering international sympathy and showcasing Ukraine's dedication to its citizens' well-being. These non-violence strategies employed by Ukraine have played a crucial role in resisting Russian aggression and advancing its interests.

**Table 3: Soft Power Tools used by Ukraine against Russia**

<b><i>Soft Power Tools</i></b>	<b><i>Description</i></b>
Diplomacy and International Alliances	Engaging in diplomatic efforts and forming alliances with Western nations and international organizations to garner support and solidarity in condemning Russian aggression and advocating for a peaceful resolution.
Media and Information Warfare	Utilizing media and information warfare techniques to counter Russian propaganda and disinformation campaigns. This includes shaping public opinion through accurate information, fact-checking misinformation, and utilizing social media platforms and digital communication channels.

<b>Soft Power Tools</b>	<b>Description</b>
Cultural Exchanges and Public Diplomacy	Promoting cultural exchanges, people-to-people interactions, and public diplomacy initiatives to enhance understanding, foster positive relationships, and showcase Ukrainian culture and values.
Economic Cooperation and Trade	Developing economic cooperation and trade partnerships with other countries to strengthen Ukraine's economic position and reduce dependency on Russia. This includes attracting foreign investments, expanding export markets, and showcasing Ukraine as an attractive business destination.
Educational and Scholarly Exchanges	Facilitating educational and scholarly exchanges to enhance cross-cultural understanding, promote academic collaboration, and showcase Ukraine's intellectual capabilities. This includes student exchange programs, academic partnerships, and hosting international conferences and events.
Humanitarian Aid and Support	Providing humanitarian aid and support to affected regions and individuals impacted by the conflict. This includes addressing the humanitarian crisis resulting from the war and showcasing Ukraine's dedication to the well-being of its citizens.

The Russian-Ukrainian War has also underscored the significance of soft power in modern hybrid warfare. Russia and Ukraine have extensively used social media platforms to spread their narratives and shape public opinion. Tactics such as false narratives, manipulated images, and misleading stories have been employed to advance their respective agendas.

Studying polls conducted in states across the globe on the allocation of blame for the existence of the conflict in Ukraine shows a distinct division between various areas. In the western world, including states politically close to the west in eastern Asia (such as Japan and South Korea) and South America (such as Brazil), the majority of the public blames Russia for initiating and escalating the conflict. However, in states who view the West less favorably the percentage blaming Russia declines and the percentage blaming the NATO states, especially the United States, grows – thus in China 52% blame the United States whereas only 11% blame Russia and a similar percentage blame Ukraine.

However, it is important to remember that a part of Ukraine’s success stems from the fact that its enemy is also the enemy of the Western states, so there was a measure of sympathy to Ukraine even before they began their efforts to mobilize support for their cause. For that very same reason, Ukraine’s efforts to mobilize support in countries traditionally ideologically hostile to the West – especially in Africa and Asia – were much less successful.

### **Decay of Russia’s Soft Power**

In 2012, Putin has shared his vision for Russia to be “an empire of soft power”. However, the war with Ukraine, already since 2014 and even more so since the breakout of the present war, has had a negative impact on Russia’s soft power. It has damaged Russia’s reputation as a peaceful and cooperative actor, eroded trust and credibility, led to sanctions and isolation, diminished regional influence, created perceptions of instability and affected the loyalty of the Russian Diaspora. In fact, in the 2023 Global Soft Power Index<sup>1</sup>, Russia has been the world’s only national brand to lose soft power over the past year while Ukraine has seen the most significant soft power improvement.

The following factors collectively contributed to the decline in Russia’s ability to shape opinions and attract the support of others through non-coercive means:

- ◆ **Perception of Aggression:** The invasion of Ukraine has been widely perceived as an act of aggression by Russia. The use of force and military intervention has undermined Russia’s image as a peaceful and cooperative actor on the international stage. The violation of Ukraine’s territorial integrity and Russia’s disregard for international norms and agreements have, raised concerns about Russia’s commitment to respecting the sovereignty of other nations. Russia’s use of Western dependence on the supply of Russian oil and gas in order to compel them to accept its aggressive policy towards Ukraine added fuel to the fire. These actions have negatively impacted Russia’s credibility and the

good-will previously accorded to it across the globe, including in the Russian Diaspora.

The failures of Russia's military, the economic and technological sanctions imposed on it by the West and events suggesting Russia's internal instability, have depicted Russia as a state much weaker than previously supposed and caused a number of states that had relied on Russia's power to guarantee their own stability and security to begin seeking alternative alliances and partnerships.

- ◆ **Weakening support of the Russian Diaspora:** The war in Ukraine has also affected the perception and loyalty of the Russian Diaspora across the globe. While Russia had previously cultivated strong ties with Russian-speaking populations abroad, the aggression in Ukraine has led to divisions and a more critical view of Russia's actions. This has undermined Russia's ability to mobilize support and influence through its Diaspora communities.

The weakening of Russia's soft power did not begin at the outbreak of the current war, it began already in the previous war in 2014, however, at that time Russia's intervention was less explicit and visible and the extent of harm to Ukraine was less, thus it was easier for Russia to defend its actions, so that the reduction was a relatively dramatic and steep drop and felt more acutely.

However, it is important to remember that though Russia has gained much hostility in the West and some other parts of the world, the attitude towards it in many states in Asia and Africa has not changed. Even if they are against Russia's actions in principle, in fact they do not see a reason to change the quality of the relationship between them. In fact, the accentuation of Russia's hostility to the West and the policy of the West towards these states has actually enhanced its standing in some parts of the world.

### **Weakening of Russia's Energy-Based Soft Power**

One component in Russia's soft power has been its dominant position as a supplier of energy to various countries – especially countries in Europe, who invested heavily in importing gas and oil from Russia.

However, the war raised concerns among European nations about the reliability and security of their energy imports from Russia. In order to sanction Russia's economy by reducing their imports from it and to bolster their own energy resilience European countries began to prioritize reducing dependence on Russian gas and oil. Efforts were made to seek out new energy suppliers and enhance energy security by diversifying supply routes, as well as focusing on increasing liquefied natural gas (LNG) imports.

Western states adopted a more assertive stance by imposing sanctions and restrictions on Russia's energy sector not only by reducing purchases, but also by targeting Russian companies involved in energy production, exploration, and infrastructure. As a result, Russia faces challenges in attracting foreign investment and expanding its energy influence.

### **Lessons for Israel**

Studying the methods of information warfare in general, psychological warfare as a subset in it and the issue of dissemination of false information in particular and how to defeat them is critical for Israel, because it faces enemies, such as the Palestinians, Iran and their supporters, who use these means to achieve their political goals. Therefore, Israel can learn a number of important lessons from this battlefield of the Russia-Ukraine War to improve its own capabilities, especially in the fields of digital resilience, strengthening of alliances, initiating information warfare and monitoring social media.

Israel faces unique challenges and threats when it comes to disinformation: disinformation campaigns specifically aim to delegitimize its existence, its government and policies, undermine its security and fuel anti-Semitism and hate speech in order to shape public opinion on the Israeli-Palestinian conflict, and influence its policies and alliances. These attacks endanger Israel's security, relationships with other nations, and social cohesion.

To effectively address disinformation threats, Israel requires a multifaceted approach that includes promoting media literacy, enhancing digital platform regulations, investing in technology

and research, fostering international cooperation, and promoting government transparency and accountability. By equipping individuals with critical thinking skills, strengthening regulations on social media platforms, leveraging technology to detect and counter disinformation, collaborating with international partners, and promoting transparency within the government, Israel can enhance its defense against disinformation and safeguard its democratic processes and national security.

As Israel navigates through the sea of challenges placed before it in its geopolitical environment, it is desirable that it recognize and understand the significance of the gap between the Western perception and the perceptions of the rest of the world, and learn the power of the various perceptions and norms that determine the general conduct of the world.

Israel fears the loss of the legitimacy of its relations with the Western world and its security policy, especially due to international legal actions and the possible economic consequences thereof. These concerns are further aggravated by the prejudices and immunity to change. Israel fears the impact on its international standing, economic partnerships and the ability to correct misconceptions, and therefore must learn from the case of Russia the difficulties in challenging prejudices that are deeply rooted in public opinion and the difficulty of countering them.

The Russian case also demonstrates that perceptions and norms can be deeply rooted, as reflected on the one hand in the unwavering support that the West shows for Ukraine, and on the other hand in the support that Russia receives from other countries. Similarly, the world often shows unquestioning support for the Palestinians. This gap can be seen in the activities of the UN Human Rights Committee, where there is demonstrable automatic discrimination against Israel.

The advantage that the Ukrainians and the Palestinians enjoy is not necessarily related to their actions, but to the initial conditions of the “game”. The Western world tends to align itself with the Ukrainian messages, even when they are false, due to its early biases against

Russia. Similar phenomena can also be seen in the way Western countries treat the Israeli-Palestinian issue. In the case of Russia - in its actions it indeed strengthens these biases.

*Prima facie*, the lesson is that Israel cannot win this competition. However, it is important that it not leave the international stage and enable the opposing side to act there without resistance. This statement is especially true as regards the United States – where lies the greatest source of legitimacy for Israel’s existence and policies. Despite the challenges and biases against it, Israel must actively initiate constant contacts with the international community, and proactively deal with misconceptions concerning it and its policies. By fostering a constructive dialogue, sharing its point of view and demonstrating its commitment to peace and security, Israel can work to reduce prejudices against it and strengthen its relations with supporting countries. Even if it will not win the contest, it will reduce the success of its enemies.

### **Summary**

In addition to the physical violent confrontation between the armies of Russian and Ukraine, the confrontation of hard power, there is also a confrontation of soft power in general, information warfare, psychological warfare and dissemination of false information in particular. In the complex hybrid landscape of the war, a stark contrast emerges between the perspectives of the Global South and the Western world. While the West displays unwavering support for Ukraine, countries in the Global South such as China, India, and Turkey offer a more nuanced outlook. Their preference for ending the conflict, even at the cost of territorial concessions by Ukraine, highlights the influence of historical experiences, economic ties, and a desire to prioritize their own security and economic interests.

Past military interventions by the US and its allies have created cynicism toward the West’s actions in Ukraine, without necessarily translating into support for Russia. Historical issues, such as the absence of colonialism by Russia in many parts of the Global South, impact how the war is perceived.



Additionally, Russia's economic ties and strategic partnerships contribute to its support from countries in the Global South. The Global South is driven by the urgency to end hostilities and resume trade, which aligns with their own security and economic interests. These interests have been harmed by the Western sanctions on Russia, and they are therefore attempting to end the war in order to renew free trade with Russia and Ukraine. The views of the Global South have been largely marginalized in mainstream media, which primarily focuses on Western perspectives and attempt to promote them. Moreover, some claim that Russia's propaganda efforts and diplomatic "charm offensive", combined with the perceived hypocrisy of Western powers, have in fact contributed to the increase in support for Russia.

Though the conclusions and results of enacting soft power strategies by both sides are contradictory – each side gained some and each side lost some – certain issues can be studied in greater depth to produce possible lessons for Israel, irrespective of the measure of success or failure of Ukraine and Russia in the soft power struggle between them.

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1 The [Global Soft Power Index](#) is a research study conducted annually by brand evaluation consultancy Brand Finance on a representative sample of 100,000+ respondents in 100+ markets worldwide, measuring perceptions of 121 national brands.

# NATO Aid to Ukraine

Eado Hecht

## Introduction

Ukraine's ties with NATO began in the early 1990s when it joined the North Atlantic Cooperation Council (1991) and the Partnership for Peace program (1994). After Russia's takeover of Crimea in 2014 NATO aid increased to reconstruct the Ukrainian army. Immediately following the current Russian invasion, NATO countries intensified their assistance to the Ukrainian army in almost every field that is not active participation of their own forces in combat.

## Funding: Military and Civilian

The war has dealt Ukraine's economy a severe blow. One of the indicators of this is the sharp drop in its gross national product from approximately 200 billion dollars (calculating by PPP this is equivalent to approximately 540 billion dollars) in 2021 to approximately 135 billion dollars (calculating by PPP this is equivalent to approximately 365 billion dollars) in 2022. This decrease must be contrasted with the jump in Ukrainian government spending to conduct the war. Ukraine's defense budget in the years leading up to the war was approximately 5.9 billion dollars per year (for products made in Ukraine this is approximately 16 billion dollars PPP, but for purchases outside of Ukraine, the dollar amount itself must be considered). There is no reliable data on the Ukrainian military spending during the war, but there is no doubt that it jumped by orders of magnitude compared to the budget that preceded the war. Also, the cost of restoring the damage caused to the national infrastructure by the end of 2022 was estimated at about 140 billion dollars and has grown considerably since.

From January 24, 2022 to January 15, 2023, Ukraine received aid whose total value is approximately \$158 billion from a wide variety of sources. This includes almost 15 billion dollars from international organizations: the World Bank, the International Monetary Fund,

the United Nations, the European Bank for Reconstruction and Development (EBRD). Almost everything else was received from NATO countries.

The United States gave a little more than 80 billion dollars and all the countries of the European Union together gave a little more than 60 billion dollars. It is important to note that the contribution of the countries of the European Union is divided into funds given by the European Union as an organization and funds given by each member state of the European Union directly to Ukraine.

The aid includes civil financing, humanitarian financing and military financing. Part of it was given in money and part in civil and military goods. The military aid made up about 41% of all the aid that Ukraine received in 2022 – all of it was a direct contribution from NATO countries. Over the past half year the United States and the European Union states have pledged many billions more in aid, though how much and when all this will actually reach Ukraine is still unclear.

In contrast, the United States alone spent an average of about 125 billion dollars each year on its war in Afghanistan and about 270 billion dollars each year on its war in Iraq.

Since January 2023, the United States and European states have promised significant additions to the aid already given or promised. How much longer can the West continue to maintain this level of aid to Ukraine is unclear. Thus, the national debt of the United States has reached about 32 trillion dollars. The European Union countries are also going through periods of economic struggles.

### **Implications:**

The implications derived from these data are that since the beginning of the war, NATO countries have actually been budgeting Ukraine's war against Russia. Part of the aid was given within the framework of NATO and part within the framework of the European Union. Also, there is no doubt that without NATO's contribution Ukraine would not have been able to finance the war against Russia. However, the political and strategic gains that NATO gains from the war

(considerable weakening of Russia) are cheap by orders of magnitude relative to the cost of direct fighting against Russia.

### **Military Equipment**

Before the war, Ukraine manufactured almost all the military equipment it had. The army was based almost exclusively on ex-Soviet equipment, some of which was upgraded in Ukrainian industry with Western electronics. There were a few items that deviated from this rule, but in small quantities: for example, Ukraine purchased some armed-drones from Turkey and some advanced anti-tank missiles from the United States.

The damage caused to the Ukrainian military industry during the war greatly reduced its manufacturing capacity (it is difficult to know exactly how much, but probably the majority) and in any case the rate of equipment loss due to battle-damage, malfunctions or mechanical wear far exceeded the ability to produce new items or spare parts to repair the damaged/broken/worn-down items. The ability to manufacture ammunition for the Ukrainian-made weapons was well below the actual consumption in the fighting and was reduced even further by Russian strikes on the factories.

NATO countries gradually opened their storage depots and transferred various types of equipment to Ukraine. The first were Eastern European countries that transferred heavy weapons and ammunition that remaining from the Soviet era (some of them continued to produce these equipments, spare parts and ammunition for the use of their own armies) and therefore was generally compatible with the equipment that the Ukrainian army operated itself. The Western countries initially sent mainly light and medium weapons that do not require much training to use, maintain and repair (hundreds of launchers and thousands of anti-tank missiles of various types, light anti-aircraft missiles, anti-tank rocket launchers, etc.) and communication equipment. They began to transfer heavy equipment with spare parts and ammunition only a few months later – a process that required the training of Ukrainian soldiers to operate and maintain this equipment, which was completely new to them, and which bears no resemblance to

their previous equipment. Not having local manufacturing capability the supply of this equipment required the supplying countries to also supply of all the spare parts, ammunition, fuels and oils used by each separate type.

During the fighting it became clear that there is a difficulty in maintaining and repairing this equipment due to the small stocks in the source armies. Thus, for example, the United States stopped the production of the Javelin anti-tank missile and the Stinger anti-aircraft missile, so that every missile sent to Ukraine reduced the inventory of the United States army without being able to produce a replacement for it until new factory lines will be set up. Also, it turned out that the Ukrainians were firing 155 millimeter shells per day of combat equal to the number of shells produced in the United States in a month. Over the course of about a year and a quarter, the United States provided approximately 1.5 million 155 millimeter shells and the other NATO countries provided hundreds of thousands of additional shells (perhaps as much as a million more). To do this, the NATO countries emptied a significant proportion of their storage depots. They are now investing in the expansion of production lines for a variety of products or in the reopening of production lines for products whose production has been stopped (for example, American Javelin and Stinger missiles) and in the return to service of old equipment that has gone out of use (such as German tanks of the Leopard-1 type).

In total, by the end of May 2023, weapons transferred to Ukraine included:

- ◆ 575 tanks – 212 more were promised.
- ◆ 40 armoured-cars armed with heavy guns.
- ◆ 2,635 armored personnel carriers of all types (IFV's, APC's, armored trucks) – 1,050 were promised.
- ◆ 735 towed guns and self-propelled guns – another 50 were promised.
- ◆ 105 multi-barreled rocket launchers – 5 more were promised.
- ◆ 40 combat aircraft – 5 more were promised and negotiations are underway for the delivery of advanced Western combat aircraft such as the F-16.

- ◆ 34 transport helicopters – 34 more were promised.
- ◆ More than 100 anti-aircraft missile launchers – dozens more were promised.
- ◆ More than 2,200 exploding Remotely Piloted Aerial Vehicles (loitering munitions).
- ◆ More than 100 reconnaissance and armed Remotely Piloted Aerial Vehicles.
- ◆ Large amounts of electronic warfare equipment.
- ◆ 125 radars (not including anti-aircraft battery radars).
- ◆ More than 200 engineering systems – bridges, armored obstacle breaching vehicles, etc.
- ◆ More than 85 naval vessels – reconnaissance and small boats and remotely piloted naval vessels.
- ◆ Enormous amounts of regular and precise ammunition for aircraft and ground launchers.
- ◆ Thousands of trucks and cross-country vehicles.

Some of the additional equipment promised has already been delivered by May 2023 and is being used in the Ukrainian counter-offensive that began in early June. However, the amount is not enough to replace all the items of these types that the Ukrainian army lost since the beginning of the war. Furthermore, the difficulties to maintain and repair equipment mean that when they are disabled they must be sent back for repair in the countries of origin, so that only a portion of this equipment is actually in the hands of the Ukrainian fighting forces.

A special area of equipment is the supply of modern weapon systems for which the Ukrainian army had no equivalent before the war – the best known case are the HIMARS missiles that gave the Ukrainians a unique ability they did not have before, this applies also to air-launched anti-radar missiles, air-launched cruise-missiles and a few more items. These new weapons gave the Ukrainians new performance capabilities, but not to the extent that enabled them to overwhelm the Russian forces.

**Implications:**

As a rough assessment, if Ukraine had not received assistance from NATO countries, it is doubtful whether it would have been able to continue fighting at a high intensity after June or July 2022 and would have been forced to gradually switch to irregular warfare methods instead of regular warfare methods – with all that is implied in terms of its ability to continue to defend territory or recapture territory from the hands of the Russians. However, all of NATO's aid combined is not equal to the amount Russia has. Russia too is already scraping the bottom of the barrel and had to turn to purchasing products from other countries that do not comply with the sanctions and boycotts imposed by NATO countries on economic ties and the sale of technology to Russia, primarily North Korea and Iran.

The transition from a certain type of equipment to another type of equipment complicates the entire Ukrainian supply, maintenance and repair system. Moreover, it does not replace all the equipment that the Ukrainian army lost since the beginning of the war, so even if in some areas it has increased in the quality of its equipment, quantitatively the Ukrainian army has become poorer in equipment –though not in active manpower which was quadrupled.

Furthermore, despite the relatively small amounts of equipment and ammunition delivered to Ukraine, many senior military officials from NATO (including the United States) complain that in some areas they are approaching the red line of keeping equipment and stocks for themselves.

**Intelligence**

NATO provided and continues to provide Ukraine with extensive and detailed intelligence information at all levels of the war management hierarchy, starting with strategic intelligence at the highest levels (including early-warning of Russia's intention to invade), through tactical intelligence on the moves or capabilities of Russian forces, and culminating with targeting intelligence.

This intelligence helped and helps the Ukrainians considerably in conducting the fighting.

## **Military Training**

For three decades now, the Ukrainian army has been linked to NATO training programs, but the extent of applicability and depth of this training from before the war are unclear. After the defeat of Ukraine in 2014, the ties were expanded and began to include joint training – mainly, but not only, with American commanders and soldiers. There is no consensus among different sources regarding the extent of the usefulness of this training – quite a few articles have been published in which it is claimed that this training enabled the Ukrainian army to change its command doctrine from the schematic detailed command in the Soviet style to the more flexible mission command in the Western style, and taught it advanced combat methods. On the other hand, a number of participants in the joint training and exercises wrote that the opposite was true – the knowledge that the Americans and the other commanders and soldiers from NATO had was focused on their operational experience in fighting in Afghanistan and Iraq, that is, in irregular warfare, while the Ukrainians brought with them experience in regular warfare against the Russian army that was beyond the scope of the western participants. A study of the fighting of the Ukrainian army, at least in the first months of the war, did not indicate a fundamental change in the organization, command and fighting methods of the Ukrainians from the Soviet format, except perhaps in small details.

After the war began the Ukrainian government recruited hundreds of thousands of its citizens into the army – among them relatively trained reservists, but also reservists who had not served for a long time and even people who had never served in the army (before the war military conscription in Ukraine was only partial). The Ukrainian army alone was unable to allocate enough instructors and means for training due to the pressures of combat operations. Therefore, they gladly accepted the arrival of instructors from NATO armies (mainly American and British) who came to train the recruits for them. In the next stage, thousands of soldiers from Ukraine began to transfer to training areas in NATO countries for some weeks each to undergo more training – both specific training to operate the new weapons that were sent to Ukraine, but, later, also general basic training (such as fighting



in built-up areas, conducting combined-form battles, etc.). However, study of the actual combat operations show that while some units have managed to adopt and conduct new tactics, many others have not. The extent of the actual training is still too limited to create an overall transition of the Ukrainian army from its roots to something new, and the rapid turnover of briefly trained personnel, due to casualties and exhaustion, limits the accumulation of experience needed to conduct more complex tactics.

### **Implications:**

Already at the beginning of the war, the Ukrainian army presented an average fighting quality higher than that of the Russian army. The duration of the training cycles provided during the war was short and therefore limited in depth and we do not see a fundamental change in the level of performance of the Ukrainian army that allows it to decisively defeat the Russian army. However, without NATO's assistance, the professional skill of the Ukrainian army would probably have deteriorated greatly due to the loss of commanders and skilled soldiers and the inability to feed the units at the front with new commanders and soldiers who have undergone proper training. To ameliorate this the Ukrainians would have had to transfer experienced commanders and soldiers from the front to the rear to carry out the training and thus diluting the experienced personnel in the frontline units. However, even with NATO assistance, there are still many reports of the arrival of many commanders and soldiers to units at the front after only two weeks of basic training.

### **Economic Sanctions on Russia**

In response to indications of Russia's intention to invade Ukraine, the NATO countries threatened it with the imposition of severe economic sanctions that also included boycotts on the import of Russian export products and the export to Russia of products that Russia purchased from these countries. After the invasion, the NATO countries discovered that they could not immediately cut economic ties with Russia and therefore the sanctions were imposed gradually. The sanctions have to some extent damaged the economy and the production capacity of

Russia's military industry, but have not fundamentally changed the political or military situation.

Furthermore, it turned out that despite the demand by the NATO countries from all the other countries of the world to join the sanctions, the majority chose not to do so.

### **Implications:**

Experience shows that for economic sanctions to work usually requires a long time and they have to be inclusive. There are countries that are more immune and countries that are less immune due to the degree of autarky of their economy and due to the commercial connections they have that are not affected.

The sanctions on Russia have mainly affected narrow areas in which it has difficulty obtaining alternatives – mainly the wholesale purchase of certain electronic components that are essential for the advanced weapons industry. However, Russia manages to smuggle a certain amount of such components through circuitous routes that make them more expensive and are generally lower quality alternatives but suffice for its purposes. The rate of production of advanced military equipment in Russia has slowed but not stopped.

Conversely, the imposition of sanctions imposes further costs on NATO countries due to the economic damage caused to them as well by these sanctions.

### **Cyber Warfare**

One of the prominent areas in which NATO was able to help Ukraine is cyber warfare. With the help of NATO, the Ukrainians were able to greatly reduce the achievements of the Russian cyber attack on their national administration and the Ukrainian army communications systems. There were systems that collapsed or were temporarily disrupted, but the Ukrainians prepared alternatives well in advance, so the damage was a reduction in efficiency but not a stoppage of functioning.

One of the important areas was the computerized communication system used by the Ukrainian army which was based on Viasat systems. This system apparently collapsed in the first days of the war due to a cyber attack. Starlink donated an alternative system to Ukraine that proved to be more resistant to Russian attacks.

### **Operational Planning**

Fragments of information indicate that there are American officers of various ranks who provide the Ukrainians with assistance also through operational advice. The extent of this assistance is not known, nor is it known how deeply these officers are involved in the Ukrainian planning process or whether it is only general advice. After the Ukrainian counter-offensive that began at the end of August 2022, reports were published about differences of opinion between the Ukrainian high command who developed a certain operational concept for that offensive and American advisers who recommended a different concept.

### **Summary**

It can be cautiously estimated that without the assistance from NATO, Ukraine would ultimately have been defeated in the current war. If Ukrainian resistance had continued, it would have become mainly characterized by irregular warfare operations to exhaust the Russian will, rather than to defeat Russia's capabilities and take ground back.

However, so far this assistance has not yet become decisive:

- ◆ The scope of the aid did not create a clear Ukrainian operational advantage, but at most partially replaced means that were in the hands of the Ukrainians and were lost due to combat damage or mechanical attrition.
- ◆ Certain weapons systems gave the Ukrainians new capabilities, but not by a large enough margin over Russian capabilities that they create a distinct quality gap. The amount that the Ukrainians received of these weapons is limited relative to the needs.

### Lessons for Israel

The strategic situations of Israel and Ukraine are completely different and this difference must be taken into account when trying to learn lessons from the war in Ukraine to Israel's probable wars.

With the exception of the United States, the willingness of NATO countries to help Israel is much lower than their willingness to help Ukraine because the war in Ukraine is seen as **their** war. The enemy of NATO and Ukraine is the same enemy – Russia. Therefore, although the Ukrainians are not actual members of NATO, they are fighting for the political and strategic goals of NATO – weakening Russia. Therefore, for example, the British army is ready to empty its warehouses and even empty operational units of equipment in order to transfer the equipment and other military supplies to the Ukrainian army. Israel is not in this situation – Russia is not our enemy and we have no interest in fighting the Russian forces stationed in the Middle East. If anything, on the contrary, Israel and Russia have common interests in certain areas – for example, limiting Iranian presence in Syria.

Accordingly, the only country that would probably be willing to help Israel in a similar way (not necessarily in a similar amount) to the way it helps Ukraine would be the United States. The history of American aid to Israel includes periods of refusal to provide aid and even provision of aid to Israel's enemies. Only in the mid-1960s did President Johnson change the perception that good relations with Israel were detrimental to American policy in the Middle East and stated that Israel might be a useful asset. Until 1973 no American aid was given, weapons supplied to Israel were fully paid for by Israel. Only as a result of the 1973 Yom Kippur War (and American demands from Israel to make political and military concessions to Egypt in order to serve American interests) did the United States begin to provide Israel with military equipment as a grant. After the collapse of the Soviet Union, there was concern that the United States would change its policy again, because it no longer had a practical reason to help Israel. The aid continues for other considerations, some of which are not interests but the development of cultural identification

between the United States and Israel. In the last two decades, cultural changes are taking place within the United States that may change this attitude. These changes are not directly related to Israel, but could, along the way, negatively affect the positive attitude to supporting it.

From past experience, the Americans sometimes exploit Israel's dependence on the aid as a means of pressuring Israel to accept American political dictates. However, given American consent to aid Israel, the limitations of American aid revealed in the war in Ukraine are not in funding, but in hardware: what equipment can the United States Army transfer to the IDF, at what speed, and what is the IDF's ability to assimilate this equipment. In the area of equipment for the Israeli air force, this is a matter of decision only, as is the case with many items of ammunition (although in light of the state of the United States Army's own ammunition inventory and the fact that it took hundreds of thousands of shells from its storage depots in Israel to supply them to Ukraine – there is probably a limit in this area as well). On the other hand, the Israeli ground forces are equipped with certain items that are unique to Israel and it is impossible to receive such items from the United States or any other country even if it agrees to supply them – types of tanks and APCs for example. Even if the Americans agree to supply equivalent equipment, how long will it take to receive major weapon system models that are not used by the IDF, absorb them and assimilate them into effective use by the fighting units? In 1973 supplies of American equipment to Israel during the war included only equipment already in use by Israeli forces – the only exception being munitions that required no special maintenance and minimal training to use. Equipment not in the Israeli inventory prior to the war arrived only towards its end or after it ended and was absorbed in the units only after the war was over.

The duration of the war in Ukraine made it possible to carry out a variety of activities that would probably not be possible in Israel's wars – the 'length of breath' of Israel and its rivals is much shorter than that of Ukraine, Russia and the NATO countries. Ukraine lost tens of thousands of square kilometers of territory (at the peak an

area five times the size of Israel) and could continue to fight because it was only about a quarter of its territory and the Russian forces had reached the culmination of their ability to continue attacking. Ukraine lost tens of thousands of soldiers, killed and wounded, but had the time to rebuild its army with hundreds of thousands of new recruits, in order to defeat repeated Russian attacks and launch its own counter-offensive 6 months after the beginning of the Russian invasion. Israel cannot absorb the loss of thousands of personnel, thousands of square kilometers of territory and wait patiently for the rebuilding of new fighting forces before launching a counterattack to recapture the lost ground.

The cumulative significance for Israel is that it should be ready to meet all, or at least almost all, the expected consumption of weapons, ammunition and other necessary supplies in the war even before it breaks out.

# **The War in Ukraine and the Reshaping of the World Order**

**Ran Segev**

In February 2023, the war in Ukraine entered its second year and its results will have profound consequences for shaping the world order in the post-war era. Although the roots of the war lie in a national conflict between Russia and Ukraine, it has become a global concern and the focus of a clash of interests and values between Russia and, mainly, the West, which includes most European countries and the United States. The reverberations of the war are also felt in more distant arenas, in the Far East and in Middle East.

## **Challenging NATO and the United States**

The Russian invasion of Ukraine created a serious threat to the international order in the very fact that a great power, a permanent member of the UN Security Council, engaged in a war aimed at bringing about the actual takeover of a sovereign country, recognized by the countries of the world as independent, and in addition to changing the regime in that country Russia openly striving for the actual annexation of territories of Ukraine. The Russian challenge has already brought about a profound change in the policy of the United States and NATO towards Russia. It is clear to the Western countries that the Russian takeover of Ukraine means a radical change in the political balance of power that was created after the breakup of the Soviet bloc and the Soviet Union over thirty years ago. Ukraine, the largest country that gained independence at the end of the Cold War, constituted a kind of buffer state, which stopped the possibility of Russian imperial expansion westward, towards central and western Europe. Total Russian control of Ukraine would resume its status as an imperial state and pose a serious threat to the European order as it was designed at the end of the Cold War.

The United States was called upon to strengthen European confidence in the American transatlantic commitment to Europe's security, in part through strengthening and exercising the United States' leadership role within NATO. The United States and other NATO countries, primarily Great Britain and Germany, are deeply involved in building Ukraine's military ability to withstand the Russian army. This includes many tens of billions of dollars and euros, the supply of military equipment and political support for President Zelensky's determination to continue the campaign even at the cost of widespread destruction of the civilian infrastructure in Ukraine.

The Western policy, led by the United States and prominent countries in NATO such as Germany and the United Kingdom, is based on the assessment that Russia under the leadership of Putin has adopted a neo-imperial policy, which seeks to change the balance of power in Europe and the world order and return Russia to the status of a great power that significantly influences that world order. According to the neo-imperial view expressed by Putin and the spokesmen of his government, Russia has the right to unite under its leadership the countries that belong ethnically, culturally and historically to the Russian cultural world. This policy is based on the claim that Russia is not merely a nation state, but has the right to shape an exclusive sphere of influence beyond its borders. The implementation of this neo-imperial policy is reflected in the support for the dictatorial regime in Belarus, which is currently a vassal state of Russia, in the military annexation of Crimea in 2014 in blatant violation of Ukrainian sovereignty, and in the years preceding the war in support of the separatist movements of ethnic Russian elements in eastern Ukraine. The weak response of the West to the annexation of Crimea in 2014, to the challenging Russian moves in eastern Ukraine, and the dependence that Germany developed on Russian gas, convinced Putin that the invasion of Ukraine, might provoke a stronger reaction than before from the United States and NATO, but that reaction will still be at a level that will allow Russia to realize the main goal in its invasion of Ukraine – the cancellation of Ukraine's status as an independent, pro-Western country, a buffer between it and European countries.



It can already be determined that Putin failed to properly assess the strength of the Western reaction. Furthermore, the Russian expectation that the invasion would bring about the collapse of the Zelensky regime, and that a broad movement of reluctance to the conflict with Russia, and a willingness to put up with its return to the Russian sphere of control, would develop among the Ukrainian people, was completely disappointed. After the failure of the opening move of the Russian “special military operation”, Russia moved to focus on the occupation of eastern Ukraine and the attrition of the Ukrainian army and later also on the destruction of national infrastructures in the Ukrainian rear in order to instill in the Zelensky regime the recognition that as the war drags on, the Ukrainian people will pay a very heavy price in lives and loss of national infrastructure, thereby forcing it to negotiate from a position of weakness.

Alongside the military campaign, an ideological campaign is being waged to shape public opinion, with each of the opposing sides presenting an opposite framing of the meaning of the struggle. The narrative of the struggle of Ukrainian speakers emphasizes the legitimacy of its existence as an independent nation, separate from Russia, which enjoys broad international recognition of its right to self-determination within the framework of an independent state. Internally, the Zelensky regime emphasizes the injustices caused by the Russian government during its prolonged rule in Ukraine and above all the crimes of Stalin, chief among them the ‘Holodomor’, the starvation of the years 1932-1933 caused as a result of the collectivization of agriculture in Ukraine, which today in Zelensky’s Ukraine is interpreted as a deliberate act of genocide directed against the Ukrainian people and is thus nurtured in the collective memory. Towards Europe and the West, it is emphasized that Ukraine is being “punished” by Russia for its choice to distance itself from the autocratic and anti-Western values of the Russian government, and for its choice of a government model close in its values to the democratic-liberal model of the West. The Ukrainian determination to continue to fight is also presented to the Western countries as an ideological-value choice between the continued development of Ukraine as part of the Western democratic world and its enslavement to the Russian world, characterized as autocratic and rejecting Western values.

Russia presents a narrative that challenges the Western argument and gives ideological justification for its decision to go to war in Ukraine. In the Russian narrative, Ukraine is presented as being led by a separatist, anti-Russian and neo-Nazi regime. In a document published by Putin on the eve of the war, called “On the historical unity between the Russians and the Ukrainians”, Putin emphasized, and the spokesmen of the Russian government and media repeat him, that the existence of Ukraine as an independent country is an artificial existence, and that the Russians and Ukrainians have been one people for about a thousand years. The hostility that has grown between Russia and Ukraine in recent years is the result of the “divide and rule” policy of the West, which works to conflict the Ukrainians and Russians and strives to insert its foreign values into the core of the Russian ethno-cultural space. Russia, struggling to prevent a Western takeover of Ukraine, is the party defending itself against the moves of the United States and the West, which are striving to impose their values on nations that advocate a scale of values that is contrary to that of the West. The war in Ukraine according to Russia is a product of Western predatory expansion into Russian space. On the global level, the Russian resistance to the aggression of the West should be a sign and an example for many other nations in the world that reject the Western model that the United States and Europe are trying to impose as the ideal model of the international order.

In the struggle for public opinion, Russia suffered a serious failure in the countries of the West. Furthermore, the brutality of the war, the extensive damage to the civilian population, and the war crimes committed both by the Russian army, and especially by special units of Russian mercenaries organized in the ‘Wagner Group’, shocked public opinion in the Western world. With the backing of public opinion, the United States, Great Britain, Germany, Poland and the Baltic countries mobilized to provide extensive economic and military aid to Ukraine. The willingness of the Western democracies to back the Ukrainian war effort on a large and unprecedented scale surprised Russia. It should be noted that Germany, a country that until the war cultivated relatively close ties to Russia, has cut its dependence on Russian energy, and is currently the world’s third supplier of military equipment to Ukraine, next to the United States and Poland and has

transferred billions of euros of economic aid to Ukraine – the latter beyond its share of aid within the framework of the European Union. As of January 2023, the taboo on the export from Germany to Ukraine of Leopard 2 tanks, the most common model in NATO, was lifted. The supply of weapons in impressive quantities from the West, together with economic aid has given Ukraine to maintain itself both on the civilian and military fronts.

However, it should be noted that the mobilization for political, economic and military support for Ukraine is a phenomenon that exists only among Western countries. In most countries of the world, the attitude towards the war is characterized by a large degree of indifference and the lack of willingness to help Ukraine. The narrative that Russia is marketing, that the war is the result of Western domination, is received with a large degree of sympathy among broad publics in non-democratic countries in Asia and the Middle East. Some of these countries are suffering badly from the economic sanctions imposed on Russia and the continuation of the war which has led to a significant increase in the price of food products, and they criticize the Western neglect of the damage to them. Many countries in Asia and the Middle East are not partners in enforcing the economic sanctions on Russia, some even assist in circumventing them.

The United States and its allies, aside from mobilizing to strengthen Ukraine's resilience, are also working to strengthen and expand NATO. On April 4 2023, Finland officially joined the alliance, thus increasing the military alliance to 31 member states. Finland's accession is a blow to Russia, which declared many times in the past that it will oppose the expansion of NATO's presence to its borders. Russia has already announced that it will strengthen its military presence along its 1,540 kilometer border with Finland, and Russian Defense Minister Sergei Shoigu has warned that NATO's move only increases the possibility of an escalation of the conflict in Ukraine. Russia has even signaled that it may deploy tactical nuclear weapons on Belorussian soil, as part of its response to NATO expansion – and at least on the declaratory level is preparing to actually do so.

The second year of the war presents difficult tests to both sides. The United States and the West, who base their strategy on building Ukrainian resilience to a level that will allow it to function and the ability to deny Russia the military decision. In Russia, an effort is underway to exploit its enormous demographic resources by deepening the recruitment of manpower for the army while learning the necessary lessons from its failures in the first year of the war. Inside Russia, the despotic characteristics of the Putin regime, which silences with an iron fist any manifestation of criticism and opposition to the war, are being strengthened. At the same time, an effort was made to mobilize internal support for the war while fueling feelings of hatred for the West and an effort by the regime to evoke sympathy and embrace Russia's imperial past. And this includes the legitimization of rulers who expressed the Russian imperial impulse, such as Peter the Great and even Stalin. It is clear to the Russian regime that a crushing failure in Ukraine will cloud the legitimacy of the regime at home, and project an image of weakness abroad. Therefore, for now, it seems that despite the operational difficulties and the heavy losses and damage to the economy, the Putin regime is determined to persevere in the war until a significant achievement is gained that would justify stopping it.

### **The Escalating Struggle Between the International Blocs**

The reverberations of the war in Ukraine are felt around the world, but it seems that in addition to its obvious effects in the European arena, they are most significant in the area of East Asia, in the area of friction between China and the United States, and in the Middle East, especially in the area where Iran seeks to establish its regional hegemony.

In the last decade of the twentieth century, following the collapse of the Soviet Union and the disintegration of the Soviet threat, there were observers who predicted that we were at the beginning of a prolonged era of 'Pax Americana' – a complete victory over the world order led by the capitalist-democratic camp led by the United States which would dominate the management of that world order. There was even a thinker, Fukuyama, who claimed that in his estimation the world was at the threshold of "the end of history".

Already today it can be determined that the era of American leadership of the world order, almost without competition from peer powers, has come to an end. Today, the United States is facing the challenge of the Russian neo-imperial policy in the European arena and in Asia an even more significant challenge – China’s quest to establish a leading position in the East Asian arena while realizing its intention to control, in practice, the vast expanse of the South China Sea.

China’s policy is already a threat to the national security of Taiwan, Japan, Vietnam, the Philippines and Malaysia. The goals and implementation of the Chinese policy go beyond the scope of this review. However, in order to analyze the effect of the war in Ukraine on the world order, the rapprochement between China and Russia against the background of the war must be examined. In practice, in view of the containment policy led by the United States, China and Russia formed a common front, the arrows of which are directed mainly towards the United States. China is even taking advantage of the attraction of the United States to the European arena to demonstrate its ability to threaten the allies of the United States in the East and South China Seas – primarily Taiwan and Japan. China compensated Russia for the loss of its markets in Germany and Western Europe by becoming a major destination for Russian energy exports and replacing imported Western goods with its own. Russia and China moved to manage their trade in euros, rubles and yuan while demonstrating their determination to free themselves from the dependence of international trade on the American currency.

In addition to the economic compensation given to Russia thus neutralizing some American levers of influence, China provides political backing to Putin. The totality of China’s actions, both in the arena closest to it (including a military maneuver unusual in its size near Taiwan) and in the international arena already today expresses the significant devaluation of the American leadership in shaping the world order.

The weakening of American influence is felt especially these days in the Middle East. The levers of power and influence of the United States on countries that were once its traditional allies, Saudi Arabia

and Egypt, have been eroded. While the United States is reducing its involvement in the region, China is filling the void left by the American withdrawal. A public expression of increasing Chinese involvement in the Persian Gulf was the visit of Chinese President Xi Jinping to Riyadh. Behind the scenes, China worked vigorously to bring about reconciliation between Saudi Arabia and Iran. Following the announcement in March of the reconciliation between the countries, a negotiation process between the foreign ministers of Iran and Saudi Arabia is taking place, which is managed entirely under Chinese auspices. At a meeting held in Beijing on 5<sup>th</sup> April, the foreign ministers of the two countries signed a joint statement that includes the renewal of the 2001 agreement on security cooperation between them. It was also stated that the two countries will work to promote regional security. The United States is completely isolated from this process, and Chinese influence in the Persian Gulf, an area vital to the interests of the West, once again testifies to the erosion of American influence there.

Iran, taking advantage of the erosion of American influence to advance its interests in the Arab world and the Persian Gulf, is in a more favorable position than before in its relations with Russia. Iran has responded to Russia's requests to purchase from it modern weaponry lacking in Russia, and has supplied thousands of explosive 'suicide' drones. Iran's improved position, as it enjoys Russian and Chinese backing, and stands against the weaker American deterrence, is already translating into an increase in the confrontation between Iran and its proxies, Hezbollah, Hamas and the Palestinian Islamic Jihad, with Israel. In Iran there is an expectation that the alliance with Russia will even result in a significant upgrade of its military capabilities with advanced Russian-made air defense systems and fighter jets.

### **Summary**

The results of the ongoing war in Ukraine will have a great impact on shaping the world order in the third decade of the 21st century. Only two decades ago, in 2003, European leaders gathered in the city of Petersburg in Russia to mark the 300th anniversary of the founding of

the city. In his speech to the gathering, Putin said, “Today’s summit is being held in the most European city among Russia’s cities. Especially here, in Petersburg, it is clearly evident that Russia - both historically and culturally, is an inseparable part of Europe.” When these words were said, they were received by European leaders as a statement of intent by a young and dynamic leader who, after about a decade of the chaos and decay that characterized Yeltsin’s rule, was working to restore the Russian state and guide it to integration into the European order.

The Russian invasion of Ukraine closed the door on the possibility that Russia, under Putin’s rule, would be part of that European order. Today, European countries are looking at NATO as a basis for curbing Russia’s westward expansion. Most European countries see today’s Russia as the complete opposite of the values enshrined by Western society. Today, Russia is a military threat to European countries, and this concern is particularly emphasized on the front line of the countries that broke free from the Soviet Union and tied their fate to NATO and the European Union. In Russia itself, the increasingly authoritarian methods of the regime, with a systematic violation of civil rights – primarily freedom of expression and the close supervision over the population. Russia is even undermining the basis of agreement between itself and the West in the field of nuclear weapons and is threatening to place, perhaps already has placed, tactical nuclear weapons in Belarus, on the border of Poland, a member of NATO. At the same time, Russia is increasingly being compelled to lean on China, both economically and as a political backer of the Russian regime in the international system. The Sino-Russian axis is the axis of two autocratic regimes hostile to the United States and striving to change the global balance of power so that it deprives the United States of its position as the dominant power. It would therefore not be surprising that the President of Iran, Raisi, expressed to President Assad of Syria, on 8<sup>th</sup> April this year, his hope that “the world order is changing in favor of our axis and the weakening of the West.”

At this stage it is too early to assess how the war in Ukraine will end. But it can already be determined that this is a human tragedy of great proportions – millions of citizens were displaced from their homes,

the losses of both sides at least exceeded one hundred thousand dead (although both sides hide the exact extent) and hundreds of thousands wounded. Ukraine suffered material damage estimated at hundreds of billions of dollars. On the day the war ends, Ukraine will stand devastated and bruised by a war that was imposed on it. The rehabilitation of Ukraine will be a task that will take many years.



# **A Policy of Compartmentalization: The Turkish Role in the Russia- Ukraine War**

**Efrat Aviv**

## **Introduction**

The only diplomatic achievements so far in the Russia-Ukraine war are Turkey's. Turkey, which has attempted to serve as a hub for mediating international disputes in recent years, was able to persuade Russia and Ukraine to accept two agreements: a sporadic exchange of captured soldiers and the opening of the Ukrainian Black Sea ports for the transfer of grain. The Turkish mediation took place at a time when the Turkish economy is experiencing a serious crisis and Erdoğan was facing polls that did not predict his definite reelection to the presidency in May 2023. Turkey's ability to play with all the parties engaged includes its capacity to separate and divide various interests. Additionally, Turkey's relationships with different forces and its capacity to use itself as a deciding factor, particularly during crises, demonstrate the effectiveness of this strategy – at least for the time being.

Since February 24, 2022, Ankara has carefully balanced relations with both sides in the war. The Russian invasion came when Erdoğan was at one of the weakest points of his 20-year tenure. Isolated abroad and facing growing discontent at home over an economic crisis, he saw his poll numbers dropping. In the beginning of the war, in public debates in Turkey, Ukraine was portrayed as a state used or manipulated by Western powers in their ambition to encircle Russia. This point of view contends that the West's provocations led to the conflict and that Putin was forced to launch "military operations" in Ukraine as a result. They anticipated that Putin would win in a matter of weeks, if not days, dealing a blow to the West's reputation and standing, especially the United States. However, these groups are now disappointed by Russia's sub-par military performance. On 28<sup>th</sup> February 2023, a year into the war, President Erdoğan stated in an interview, that any peace agreement should call for the return of all areas occupied by Russia, including Crimea, to Ukraine.

### **Turkish-Ukrainian Relations**

Turkish-Ukrainian bilateral relations commenced before the war.

As part of their military modernization program the Armed Forces of Ukraine purchased 12 Bayraktar TB2s armed-drones from Turkey in 2019. Eight more such drones were purchased before the war. These drones participated in the initial battles of the war – especially on the Kyiv front – attacking Russian armored columns, anti-aircraft systems and supply convoys. Footage of the drone strikes became a symbol of Ukrainian resistance and the Bayraktar company reported that there is currently a three-year waiting list to buy the drones.

However, since Moscow and Ankara share close relations in a variety of sectors, the Turkish company's decision to provide TB2s to Ukraine infuriated Putin. Even prior to the outbreak of war, Turkey's foreign minister Çavuşoğlu urged Kyiv to stop mentioning his country when discussing its drone imports. On the other hand, members of the U.S. Congress called on Ankara to send more drones to Ukraine.

In addition to the TB-2 drones, Turkey also sold Ukraine Kizilelma (Red Apple) stealth drones, armored vehicles, such as the Kirpi (Hedgehog) armored troop carriers, body armor and four Ada-class corvettes (that did not arrive in Ukraine before the war and are still in Turkey) and other equipment needed to modernize Ukrainian naval forces.

Within days of the Russian invasion Turkey blocked Russian warships from entering the Black Sea through the Dardanelle Straits and denied passage through Turkish air space to Russian military aircraft. However, Turkey does still allow Russian civilian air traffic to it and through it.

Erdoğan speaks frequently with Ukraine's president Zelensky, and even visited Ukraine in a show of support weeks before the invasion and again in August 2022, earning the trust of Ukrainian officials.

### **Turkish-Russian Relations**

Relations with Russia are more complex.

One of the reasons for their cordial relationship, despite disagreements and friction in Syria and Libya, where each supports rivals in the local civil wars, is that Putin has refrained from criticizing Turkey's negative

human rights record. This relationship has grown even more important as Turkey's hopes of joining the EU have failed and Putin has filled the void by openly endorsing Erdoğan in his bid for re-election and lending him a more receptive ear.

Chronic friction between Turkey and the other NATO members played into the Russian leader's desire to weaken the bloc. Putin wants to create a club of authoritarian leaders as expressed in the Iranian-Russian-Turkish Summit in Tehran in July 2022, but he also wants to use Turkey to show the world – and his own domestic audience – that Russia is not isolated and that other countries, such as NATO member Turkey, are interested in changing the current uni-polar world order to a multi-polar order that is not dominated by the United States alone. Turkey, even if for its own interests, delayed the acceptance of Finland to NATO and currently, at the time of writing, is still delaying the acceptance of Sweden to that organization.

From the Turkish perspective, Turkey did not only refuse to join American and EU sanctions on Russia, it also helped soften the blow of those sanctions on Russia's economy. Turkey has long held the principled position that it will only enforce sanctions applied by the UN and not by any particular state or group of states. For example, Turkey sells Russia goods that Russians could no longer import from the West, including iron, clothing, electronics, and vehicle parts needed for the military.

From the Russian perspective, despite the disagreements between Turkey and Russia, especially regarding the situation in Syria, where Russia is interested in dissuading Turkey from realizing its intention to launch a new operation in northern Syria, Russia has reciprocated with transfusions of foreign currency that Turkey badly needs to fund a policy of defending its currency which has been in steep decline since a series of interest rate cuts in 2021 and 2022. In July 2022, Russia transferred \$5 billion to Turkey to continue the construction of a nuclear power plant by a Russian company. Foreign currency reaches Turkey from Russia through tourism as well, as Russians are the second-largest national group flocking to Turkey for touristic purposes. Large sums of mostly untraceable foreign cash have also flowed into Turkey – \$24.9bn from January to September 2022, more than double the amount during the same period in 2021. Another important factor in the relations between Russia

and Turkey is the supply of natural gas from Russia, which provided 45 percent of Turkey's needs in 2022.

### Conclusions

The war between Ukraine and Russia benefits Turkey in a number of ways:

**Economically:** Turkey has sold military hardware to Ukraine without suffering repercussions from the Russia. At the same time, it continues to receive foreign cash from Russia, the amount of which has grown during the war.

**Diplomatically:** Erdoğan has leveraged his role as a diplomatic player. Turkey is attempting to become a mediation hub for global conflicts and therefore served as an intermediary between Russia and Ukraine. It has succeeded in achieving the only two palpable agreements between Moscow and Kyiv so far:

- ◆ A UN-backed deal signed in July 2022 which resumed Ukrainian grain deliveries across the Black Sea.
- ◆ An agreement signed in September 2022 to conduct exchanges of captured personnel.

The Turkish president will now be in a position to exploit some of the few political successes of the entire conflict towards the West. For example, these successes encourage Erdoğan to increase his demands when asking Western nations to meet Turkey's security requirements vis-à-vis Syria, the Aegean Sea, the Kurdish rebels, Turkish political dissidents and more.

What propels Turkey's diplomatic achievements is the careful compartmentalization of political and strategic objectives versus the other actors in the international playing-field and on both sides of the war in Ukraine.

### The Israeli Angle

Though Israel too attempted to negotiate an agreement between Russia and Ukraine, these parallel meditations were not construed as a competition or conflict. Israeli President Herzog congratulated the Turkish mediation attempts.

However, Turkey's mediation is aimed at realizing Turkish interests by proving its unique place and criticality in the international arena, so that Turkish attempts to improve relations with Israel must be understood in the same light.

# India and the Russia-Ukraine War: Rethinking the Course

Lauren Dagan Amos

In the year and a half that has passed since the beginning of the Russian invasion of Ukraine the Western democratic states enacted wide-ranging economic sanctions on Russia and severely criticized its aggression. The Western states also mobilized to aid Ukraine in other ways – sending weapons and ammunition, financial and economic aid as well as humanitarian aid – in order to ensure Ukraine’s ability to withstand Russia’s invasion. Contrary to this mobilization of the West, the position of the largest democracy in the world, India, is considered problematic, and it is now compelled to rethink the course of its international policy.

The Russia – Ukraine crisis creates for India new challenges and constraints in the international system in general and in its regional Asian system. India’s need to rethink its policy vis-à-vis the crisis stems from a number of reasons.

First, the increasing stature of India as a global power directs more attention to it. India has become the world’s fifth largest economy and is predicted to become within a few years the third largest, after China and the USA. According to the World Monetary Fund, in 2022 India’s economy grew at a rate of 6.8%, while the USA’s economy grew by only 1.6%.

A second reason requiring the rethink is India’s aspiration to focus on positioning itself as an important global power, taking part in setting the agenda of both south-east Asia and the world at large.

Both these reasons concentrate global attention on India’s response to the Russia – Ukraine crisis.

Given India’s history of a deep relationship with Russia, both cultural and political, this international attention adds a layer of

complexity. The long history of relations between India and Russia, even mutual affinity between the two states, adds much significance to their bilateral relationship. India sees in Russia an important actor in the international system and an important contributing factor in developing India itself, economically and militarily. Throughout the years of the Cold War the relations between the two states tightened, including the signing in 1971 of a treaty of friendship that provided India with economic, military and diplomatic aid during its hostilities with Pakistan.

After the end of the Cold War and the collapse of the Soviet Union, India recalibrated its foreign policy to grow closer to the Western world. However, it did not abandon its relationship with Russia and with the accession to power of Putin in the early 2000s, India and Russia renewed and retightened their relations, focusing on the importance of the strategic partnership between the two states. Today, this renewal is expressed in a variety of fields: military, energy and trade.

Both countries view their relationship as mutually beneficial. Militarily, the two went beyond the past focus on supply of military equipment by Russia to India and are now involved also in combined projects of research, manufacture and marketing of advanced military technology. Thus, for example, the BrahMos missile system is a joint Russian-Indian venture. India is licensed to manufacture Russian Su-30 fighter aircraft and T-90 tanks. Russia is also an important partner in India's nuclear power projects and recognizes India as a state holding advanced nuclear technology. 87% of the Indian army's ammunition is supplied by Russia.

As regards public diplomacy, India sees Russia as a reliable partner that has supported it in the United Nations and other international forums during its numerous crises with Pakistan. Economic relations also emphasize the growing mutual dependence between the two. This has been made even clearer since the Russian invasion of Ukraine by the doubling of India's purchase of energy from Russia, despite the disapproval of the United States. India's dependence on Russian oil stems from the fact that it is the world's third largest consumer of oil.

Lacking its own oil and gas sources, and the especially low price of Russian oil sold to it, it cannot free itself from this dependency. For example, during December 2022 India imported 1.2 million barrels of Russian oil – 33 times more than in December 2021. In January 2023, Russian oil was 28% of India's entire import of that commodity.

India's explanation for its amicable relationship with Russia and its continuing to purchase Russian oil, despite Western sanctions, rests on its internal needs. Responding to questions on the subject India's Foreign Minister explained that India's main interest is to feed its citizens and that if Russia assists that by selling it cheap oil it will purchase it. The complexity of the relationship between the two states explains India's complex position on the war in Ukraine. On the one hand India sympathizes and expresses solidarity with Ukraine for the severe damage and cost inflicted on it by the war, and on the other hand India refrains from clearly denouncing its important strategic partner Russia.

However, the longer the war continues the more it tests the relations between the two. This is not a crisis that threatens the existence of these relations, but it might compel a major change in them. During recent years India's foreign policy was aimed at creating multiple connections and maneuvering between Russian and the West. India's growing security relationship with the United States is reducing the importance of Russia in India's agenda. Furthermore, Russia's growing relations with China, more so than with India, is adding another shadow over the India – Russia relationship. The result is that in the new world order being formed by the war in Ukraine, Russia might find that in the triangle of China, India and Russia it is regarded as the weak partner, and that its diplomatic and strategic room for maneuver is being reduced.

Currently India's position as regards the war in Ukraine stems from a pragmatic approach, determined by its national interests. An example that highlights this is India's consistent abstentions in the anti-Russian votes in the United Nations. On the other hand, at the declaratory level, India expresses a negative sentiment towards the Russian aggression. Thus, in September 2022, India's president, Narendra Modi, said to



Putin during the Shanghai Cooperation Organization summit that “today’s era is not an era of war, and I have spoken to you on the phone about this” adding that democracy, diplomacy and dialogue were crucial to leading the world to peace.

Over the past year and a half many have raised doubts and puzzlement over India’s independent and pragmatic position on this global crisis, and some argue that it actually signifies Indian support of Russia. But the reality is more complex, since India does not see itself bound by the rules deemed legitimate in the eyes of western liberal democracies. India’s adamant refusal to state a clear position can be interpreted as a gradual long-term reduction of India’s dependence on Russia. The embarrassing performance of the Russian army on the battlefields, limited Russian capability to manufacture weapons and ammunition, because of the constraints imposed by the sanctions and international isolation, are causing India to rethink its policy in general and its continued dependence on Russia in particular. This situation is generating a greater effort by India to increase and solidify its relations with other actors in the international system, above all the United States and as a result of that also Israel.

Despite the complexity of India’s position towards the war and its relations with Russia, the past year and a half have proven that India is an important political power in international politics, a power that cannot be ignored. A wealth of diplomatic visits and state meetings that have occurred in India have shown that states such as Japan, Australia, the United States and Italy have recognized its rising status and its importance in the international arena. The crowning achievement expressing this was the appointment of India to head the presidency of the G-20 forum – a post that provides it with another platform to improve its position in the developing world order.

The crisis in Ukraine is profoundly changing international politics. The changes are expressed in Europe’s rush to rearm and increase its military expenditure but also in the changes of India’s status and relations with a variety of states. This change and the potential it creates of more changes must be studied by the states of the Middle East at large and by Israel in particular.

Israel could reap more benefits in addition to its already warm relations with India: security, economic, cultural and diplomatic. The crisis in Ukraine shows that India is not interested in mediating or taking a strong stand in international crises, because this could create for it a zero-sum game and constrain its field of action vis-à-vis a variety of actors in the international system. Given India's position, Israel, which is suffering from a less comfortable international situation than previously, could find in India an important and well-placed friend. This is an asset that should not be given up easily, especially since India is the world's largest democracy and the world's fifth largest economy. Apart from the short-lived attempt by Israeli Prime-Minister Bennet to mediate, Israel too is refraining from attempts to mediate or take a strong stand in the current crisis. India and Israel have similar interests: both cannot unequivocally take a stand in favor of one side or the other, especially given Israel's constant air strikes in Syria against the Iranian military buildup there, that are allowed by Russia. Therefore, because of its relations with Russia, Israel should continue its neutral stance like India, and distance itself from the crisis. This will not endear Israel to Westerners, but it will prevent it from being forced into a zero-sum game, in which it could lose support from both the West and Russia.

# Israel's Policy to the War in Ukraine

Shay Shabtai

The Russian invasion of Ukraine on February 24, 2022 created a number of tensions in the array of considerations on which Israel's foreign policy is based, thus creating for it a significant policy dilemma and making it difficult to devise a coherent policy.

The main tension, which was presented as a basis for the Israeli considerations, was, on the one hand, the basic commitment to the United States and the West and the desire to continue a positive dialogue on the increasing Iranian threat and the Palestinian issue; and, on the other hand, the desire to maintain vis-à-vis Russia the agreements on freedom of action within the framework of Israel's operations to reduce the build-up of Iran's military presence in Syria and the transfer of arms from Iran to Hezbollah through Syria. To this is added the fear of pushing the Russians closer to Iran, providing the latter with more advanced military technology, political support and a freer hand to operate in Syria.<sup>1</sup>

Although most of the Israeli speakers and commentators referred to this as the leading and even the only consideration, there were a number of other significant tensions that influenced the decision-making:

- ◆ The identity of the leaders: on one side stands Russian President Putin, who is the most pro-Israel Russian leader in the history of relations between the countries, and who has cultivated a close relationship with Israel's leaders over the years; And on the other side is the President of Ukraine Zelensky, a Jew who over the years has maintained an affinity for the State of Israel. The importance of Israel in the eyes of both made it, against its will, a focus for competition to acquire its support and legitimacy, each for their side in the war.
- ◆ The Jewish communities: In both countries and in Israel there are two magnificent Jewish communities, which were the cradle of

the establishment of the Zionist movement. Until the war, most Israelis called the Jews from these countries 'Russians', and after the outbreak of the war it became clear that despite some affinity these are in fact two separate communities. Heavy concern arose for the fate of the two communities, the one that experienced the war at its doorstep and the one that could be harmed by Israel's position against Russia.

- ◆ Israel's international positioning: on the one hand, Israel maintains a deep ideological-perceptual commitment to the West, which underlies the special relationship with the United States – relationships that are at the heart of Israel's national security strategy. In this case, we are also talking about a move which, according to any reasonable interpretation of international law, is illegitimate aggression by Russia, and which is accompanied by clear war crimes by the forces on the ground. On the other hand, Israel's being a religion-based nation-state brings it closer to countries where nationalism and religion and the struggle for them are a central component of identity – such as India, Russia, Brazil and countries in the Middle East, and makes it difficult for it to absolutely prefer liberal values over national concepts. Added to this was the dilemma of how to acquiesce to the combined mental pressure of Zelensky and the Democrats in the United States, without this creating a precedent for issues relevant to Israel: the Iranian threat (encouraging concessions to Iran in general and acquiescence to an agreement on Iran's nuclear weapons program) and the Palestinian conflict (pressure for a political settlement with features unfavorable to Israel).
- ◆ Difference of opinion with the United States: it was clear from the beginning that the United States, who cannot intervene in the war directly and is thus demonstrating a strategic weakness, is ready to push the war 'to the last Ukrainian'. They do not show sufficient sensitivity to the victims among fighters and civilians 'on their side', an issue that is a central consideration in the Israeli strategy of using force. On the geo-strategic level, the Israeli leadership does not understand the American decision, which means pushing Russia for many years to the side of China, the main rival of the United States.

The other aspect that affected decision-making was the lack of information and understanding of the conflict. Israel did not have the independent tools to understand and predict the magnitude of Russia's military weakness, and on the other hand, the strength of the Ukrainian resistance supported by American and European intelligence and material support. The willingness of both sides to continue to fight brutally and to sacrifice hundreds of thousands of fighters and civilians for the sake of owning what is a relatively peripheral region for both – especially since the issue of political domination of Kiev was dropped from the Russian agenda – is also essentially different from the Israeli approach which is deeply rooted in the concept of the 'post-heroic war'. The Russian 'flirtation' with the issue of using nuclear weapons also created difficulty for Israel to understand the situation.

Due to all these, Israel was not, and is still not, in a situation where it can ignore the war, and regard it as being distant from its interest. To manage a situation in which the war is linked to Israel and Jewish communities it took a number of steps:

- ◆ Mediation: The most daring move was to go deep into the conflict between the parties by trying to mediate between them and stop the war with some kind of settlement within a few weeks of its breaking-out. The Russian failure in taking Kiev, which became apparent after a few weeks, made such a move possible. Prime Minister Bennett relied on the close relationship with both sides in an attempt to stop the bloodshed and destruction, which indeed reached considerable proportions due to the continuation of the war.
- ◆ This effort was carried out while demonstrating a relatively independent position from the American approach, which clearly strove to continue the war in order to weaken Russia in the long term. In doing so, Israel demonstrated an attitude of international responsibility, which gained it positive points in the European capitals and the Middle East, by trying to shorten a war between two sides that are relatively close to it, and from Israel's perspective, no good could come from its continuation. The effort failed due to the national and cultural gap that the parties are in, and the

inability of the two leaders – each for his internal political reasons – to agree to compromise proposals. The mediation came to an end as a result of the differences between the parties, and security and political crises at home that demanded the full attention of Prime Minister Bennett. This was another proof of how much the political instability in Israel makes it difficult to make long-term policy and strategic moves.

- ◆ **Dual public approach:** In what appears to be an agreed division of labor, Foreign Minister Lapid led a policy of participating in the international political condemnation of Russia for its aggression. On the other hand, Prime Minister Bennett continued to extend a hand to Russia. Israel avoided condemning votes in the UN, and preserved the air travel service between it and Russia, arguing the need to continue to maintaining contact with the Jewish community in Russia. Simultaneously, it makes sure to implement the international decisions to boycott Russian officials, even though some of Putin’s Jewish partners took advantage of Israel’s Law of Return to transfer their assets to Israel. The current government in Israel continues this approach.
- ◆ **Humanitarian aid:** together with extending a humanitarian hand to the citizens of Ukraine in the form of civil and medical aid and the establishment of a temporary hospital there, Israeli activity focused on aid to Ukrainian Jews and their absorption in Israel. Aid was also given to the Jewish community in Russia, and Israel became a place of refuge for thousands of young Jews who fled forced conscription. In this issue, too, a debate arose between those who see Israel as a Jewish state and a refuge for Jews in need, and those who expected the Israeli approach to be more universal, and include the reception of non-Jewish refugees as well.
- ◆ **Refusal to supply weapons:** despite President Zelensky’s sometimes very aggressive pressure, Israel has avoided and continues to avoid supplying Ukraine with weapons – neither offensive nor defensive. Beyond the political reasoning, and the desire to avoid disrupting Russian military activity and causing the death of Russian soldiers by Israeli manufactured weapons

– actions which might be reciprocated by Russian disruption of Israeli operations against Iran, there is another significant consideration in this issue: the desire that advanced weapons, which will be needed in a war against Iran and Hezbollah, do not fall into the hands of the Russians, and are transferred by them for examination in Iran, as is reported to be done with Western weapons systems. The disadvantage of this is that Israel also loses potential for operational experience of the weapon systems against Russian and Iranian threats. There are reports that Israel is passing information to Ukraine about the Iranian-manufactured weapons, which are operated by the Russians.

Although it appears that Israeli activity on the issue of the war in Ukraine is not based on a coherent national strategy that provides a nuanced and optimal response to the basic tensions, in fact Israel registers a complex balance which still tends to the positive. It is admittedly criticized for its decision not to stand clearly on the side of Ukraine and the West, including from the Biden administration; But on the other hand, it is also appreciated for its independent position and receives more understanding of its security needs in an unstable environment full of challenges, maintains channels of communication with the Russian leadership, provides support to the processes of strengthening the NATO armies with relevant Israeli technology and military knowledge, and receives Jews immigrating from both countries.

However, Israel must be aware of the dynamism of the situation and its changes. Iran's increasing involvement in the war through the supply of weapons to Russia and the resulting rapprochement between the two countries which includes military aspects; the continuing high-intensity fighting between the parties through 2023 and other manifestations of Russian war crimes; the increase in European and American military aid to Ukraine due to Zelensky's incessant pressure; and the strengthening of the latter's position (Time's Person of the Year) and his becoming one of the most influential leaders in public opinion in the world today – all of these require Israel to continuously examine where it stands between the parties.

It is desirable that these moves be based on a better understanding of the situation in Ukraine and in the international arena by conducting continuous deep monitoring, regular policy debates and flexibility in making decisions and implementing them. In light of the expanding supply of main weapons systems to Ukraine by Europe and the United States and pressure by them on Israel to assist, Israel will most likely be required to take additional political and military steps in order to place itself more than before on the Ukrainian side. When it comes to doing this, it must remember that Russia will not disappear, not from the global map and more importantly not from involvement in the Middle East and the Iranian issue, and therefore Israel must continue to maintain complex balances in its policy. It can do this while presenting clear demands to Russia regarding the depth of its military-technological assistance to Iran.

### **Summary**

The Russian invasion of Ukraine on February 24, 2022 created a significant dilemma for the State of Israel arising from a number of inherent tensions.

This is not only a tension between the basic commitment to the United States and the West and the desire to continue the accords achieved with Russia regarding Israel's freedom of action against Iran in Syria and preventing Russia from getting closer to Iran (as has gradually happened because of Russia's need for Iranian drone technology and industrial capacity); but also a series of weighty issues related to the close relations between the leaders of Russia and Israel, the Jewish communities in both countries and the difference between Israel's policies and those of the United States.

Israel could not ignore the war, and in examining the outcome of its actions, it records a complex balance sheet for itself, which still tends to the positive, including as a result of a bold mediation move at the beginning. However, it must be attentive to change, which will most likely require it to stand even more on the side of Ukraine, while still protecting itself from long-term effects of each Israeli action on relations with Russia. Especially since Russia will continue to be



a global player present in the Middle East and active in the Iranian issue, and Israel's need that Russia limit its military-technological aid to Iran.

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1 In Syria Russia and Iran have a common interest to support the Assad regime against the Syrian rebels, however, their interests conflict as to how to use a stabilized Syria, each for their own purposes. Exploiting that conflict Israel has achieved a *modus vivendi* with Russia enabling it to operate against Iranian forces in Syria that threaten it.

# Israel's Energy Market and the War in Ukraine

Elai Rettig

Following Russia's invasion of Ukraine in February 2022, Europe's energy markets have experienced high electricity prices, multiple gas supply disruptions, and a dramatic re-thinking of their energy security strategy. While Europe has so far been able to withstand the brunt of the energy crisis thanks to a relatively mild winter season and ample reserves of Russian gas in storage facilities, it is already gearing up for a more difficult 2023/24 winter season. Depending on how the war develops in 2023 and how committed European countries will remain in their sanctions against Russian oil and gas imports, this year may provide several opportunities for the development of Israel's gas export potential, oil transit and storage capabilities, and renewable energy sales. These include:

1. The prospect for more natural-gas exploration and new LNG export projects in the East-Mediterranean Sea to meet Europe's growing demand for non-Russian gas.
2. The revival of the "EAPC-UAE deal" to transit cheaper oil from the Gulf States to Europe through Israel.
3. More Israeli solar and clean-tech export deals to the Gulf States to help release oil and gas for exports.

While offering potential rewards, these opportunities include economic, security and environmental risks that need to be considered as well.

## **Increased Potential for Israeli Gas Exports**

Since the discovery of major offshore gas deposits in 2009 and 2010, Israel has been struggling to secure major export deals to Europe. Several hurdles, including the relatively small amount of gas available for export, the challenging topography of the East-Mediterranean Sea,

and the political feuds over maritime borders, have so far made it too expensive and too risky for private companies to invest the billions of dollars needed to construct an underwater pipeline from Israel to Europe. As a result, Israel has yet to find buyers for about two-thirds of the gas it has earmarked for export and has seen its bidding rounds for new gas exploration licenses repeatedly fail. This deadlock may change following the Russian invasion of Ukraine, which has caused a major price hike for imported gas in Europe as well as a re-prioritization among EU policymakers towards securing new non-Russian gas supply at a higher cost, especially Liquefied Natural Gas (LNG).

These developments in Europe are important for Israeli gas prospects, because so far, its two main potential export destinations have proven out-of-reach on both economic and political grounds: a pipeline to Greece and a pipeline to Turkey. The idea of an underwater pipeline from Israel to Greece through Cyprus (nicknamed “East-Med Pipeline”) has excited policymakers in all three countries and has spurred a series of high-profile meetings and agreements but has failed to yield tangible results. The economic viability of such a pipeline has proven too difficult to justify due to geographic and technical limitations. If constructed, the East-Med pipeline will be the longest and deepest underwater pipeline in the world, reaching depths of 2000 meters down to the sea-bed (compared to Nord Stream 2 which reaches a maximum depth of 210 meters). This limits how wide the diameter of the pipeline can be without collapsing into itself, thus decreasing the amount of gas that can run through it. It will also need to run through areas near Crete which experience seismic activity, making it much more expensive due to multiple engineering challenges. These challenges can all be overcome, but they require that the end-user (Greece) agrees to pay a high price for the gas in a fixed price as part of a 10–15-year binding contract to justify the costs of the pipeline. Initial estimates are that Greece will need to pay around \$8 per MMBtu, while the average price of gas in Europe in recent years has hovered between \$2-\$6 per MMBtu. As such, neither the Greek government nor a private company has been willing so far to commit to a deal. Adding to these complications is the feud between Greece, Cyprus, and Turkey over who controls the maritime territory that the pipeline needs to pass through.

The economic and political impasse surrounding the East-Med pipeline to Greece has led to the reawakening of a dormant Israel-Turkey option. Turkey is a large market of natural gas and already has infrastructure to transit the gas to Europe (TANAP pipeline), making it in theory a good candidate for Israeli gas exports. Previous attempts from 2015 to promote an underwater pipeline between Israel and Turkey failed over price disagreements and political tensions. Turkey demanded a lower price for the gas than the private gas companies could offer due to Israeli regulations. Israeli officials are also wary of Israel becoming too dependent on Turkey as its primary gas customer due to fears that Turkey will use the pipeline as a political tool. Israel thus requires assurances supported by third-party guarantees (either by the US or the EU) in case of a deliberate disruption before signing such a deal. For its part, the European Union hasn't been keen on the idea of increasing Turkey's role as Europe's main gas transit country (in addition to its role of transiting gas from the Caspian region, Russia, Iraq, and potentially Iran), thus providing Turkey with both economic and geopolitical advantages in its dealings with the European Union.

The dramatic rise in European gas prices following Russia's invasion of Ukraine has changed some of the EU's calculations, but still not enough to justify a major pipeline deal to either Greece or Turkey. As prices reached \$25 MMBTU in some European gas hubs, it may seem that expensive gas pipelines from the East Mediterranean Sea make much more sense than they did two years ago. However, it is still not clear how long these high prices will hold and in some places they already dropped to pre-war levels. In an ideal scenario, a major infrastructure project from the East-Mediterranean to Europe can be completed at the end of 2025 at the earliest. But will the war still go on in 2025? Will there still be sanctions against Russian gas in 2025? Will Putin still rule Russia in 2025? Until European investors know the answers to these questions, it is still a very risky prospect for the private sector to invest in multi-billion-dollar infrastructure. Unless the European Union provides guarantees that the private investors won't lose their investments once prices go down, the gas companies in Israel will likely not be able to sign a 10–15-year binding contract with a European customer.

The culmination of these political, economic, and technical limitations has pushed European customers to bet on the LNG option. For Europe, LNG imports offer more flexibility to search for non-Russian suppliers, freedom from transit states, and a quicker solution for its gas crisis than pipelines. While most efforts to build LNG-intake terminals (i.e. regasification facilities) in Europe over the past decade have focused on West Europe, the current crisis is now pushing towards more terminals in Central and Southeast Europe (including Greece, Italy, Poland, Germany, and Estonia). Assuming the EU goes through on building these new LNG terminals and increases its LNG demand over the next 2-4 years, it will still need to compete with Asia for demand. Europe has been lucky so far in that it did not need to compete with East Asia for LNG during 2022 due to a mild winter and COVID restrictions in China. But 2023 may see a surge in East Asian demand for LNG as China recovers from lockdowns, and the price may increase substantially. This will require much more LNG supply to come online in the next few years.

Israeli and regional investors are thus hopeful that LNG will be the next chapter for the East-Med gas export market, ridding it of the geopolitics of pipelines. The cheapest and most immediate option for Israel to export LNG to Europe is to do it through Egypt's two existing LNG terminals (Idku and Damietta). However, they do not represent the ideal solution, since there's not much spare capacity left in those terminals to increase exports, they do not have the most efficient technology (considerable loss of gas during liquification process), and they offer more geopolitical advantages to Egypt than to Israel. In addition, Israel needs to overcome infrastructure bottlenecks that are preventing it from exporting more gas to the LNG plants in Egypt, requiring it to build a new direct underwater pipeline from its gas fields directly to the terminals.

Other LNG export options may exclude Egypt but entail challenges of their own. Israeli can lease or purchase a Floating LNG (FLNG) facility, which is becoming cheaper and creates much less political pushback (i.e. NIMBY opposition over the shoreline in Israel). However, most FLNG ships generate a small amount of gas (between 0.5-2 BCM annually) and even the biggest FLNG offers much less capacity to

export when compared to a regular land-based LNG terminal (4-6 BCM annually vs. 12 BCM). Another option is to construct a land-based LNG terminal in Cyprus. However, this might anger Egypt as it aspires to become the “LNG hub” of the East Mediterranean and may still create problems with Turkey over contested political waters around Cyprus.

### **Turning Israel into an Oil Transit Route to Europe**

In addition to higher natural-gas prices, the war in Ukraine is causing a major shift in global oil transit routes, and this puts the East Mediterranean Sea, and particularly Israel, right in the middle of it. As European sanctions against Russian oil came into play at the beginning of 2023, Russian oil headed towards East Asia instead (e.g. China, India). Part of this oil is shipping through the Northern arctic route (which is more available to Russia due to climate change and melting glaciers), and part of it is going through the East Mediterranean and the Suez Canal. Russian oil is being sold at a deep discount and is thus grabbing market share at the expense of the Gulf States, including Saudi Arabia, UAE, Qatar, and Kuwait. In return, Europe is asking for more oil from the Gulf to compensate for the loss of Russian oil, which means that more Gulf oil is flowing West through the Suez Canal and the East Mediterranean to reach European markets.

This reconfiguration of global oil routes can re-ignite and even expand Israel’s role as a transit and storage destination for Europe-bound oil via the EAPC pipeline. In the past two decades, the Europe-Asia Pipeline Company, previously the Eilat-Ashkelon Pipeline Company (EAPC, or KATZAA in Hebrew), has been used as a minor player in storing and moving Russian, Azerbaijani and Kazakh oil from north to south (Ashkelon in the East Mediterranean to Eilat in the Red Sea), thus reducing the costs of transit through the Suez Canal. Following the “Abraham Accords”, Israel signed a deal to transit UAE oil from south to north (Eilat to Ashkelon), thus reversing the flow of the pipeline and substantially increasing the amount of oil it transfers. The deal quickly created controversy in Israel due to the substantial environmental risks that increased oil movement in the Eilat bay may cause to the marine life and tourism industry in case of an accident,

and the deal became mostly dormant. However, a combination of pressure from the USA and Europe to help transit cheaper Gulf oil through the Red Sea during this time of crisis, along with the new Netanyahu government's keen desire to expand relations with the UAE (and perhaps bring the Saudi kingdom into the fold), may revive the UAE-EAPC deal.

More oil flowing to Europe through Israel and Egypt entails considerable environmental and security risks for both the Red Sea and the East Mediterranean Sea. Potential for oil leaks and accidents will inevitably rise along with the increased movement of oil tankers, and this requires more cooperation between the countries of the region for standardizing monitoring and quick-response measures. The movement of Israel-bound oil tankers in the Red Sea may also increase potential for Iranian sabotage, especially near the Bab-el-Mandeb straits via Houthi rebels in Yemen. These types of operations may prove more advantageous to Iran than operations in the Persian/Arabian Gulf and the Straits of Hormuz, which can block Iran's oil shipments as well. Increased Iranian maritime threats require deeper cooperation between the region's Navy forces, a process that is already occurring.

### **A Brighter Future for Israeli Renewable Energy Technology**

Finally, Europe's energy challenges are creating a major push towards alternative energy solutions, both in Europe and in the Arab Gulf States, offering Israel a major role as a leader in clean-tech innovation. On the European side, while the energy crisis is causing a rise in demand for oil, gas and coal in the short-term, it is also encouraging further investment in solar, wind, and even nuclear alternatives to increase independency from Russian imports in the long-term. This will cause a substantial rise in clean energy project funding throughout Europe in the next few years, allowing Israel to bid for projects and take an active part in the transformation. This is especially relevant for Israeli innovation in solar energy, cyber defense for smart grids, and energy efficiency solutions. Other promising avenues may include hydrogen and energy storage technology innovation.

An additional market for Israeli innovation is the Arab Gulf States, as they look for solutions to decrease domestic demand for oil and gas through alternative energy systems. Saudi Arabia, for example, loses almost a third of its oil production due to local demand in the form of heavily subsidized electricity generation and gasoline, as well as other subsidized products. As the Gulf States are experiencing a boom in population growth and a rise in the standard of living, this rising trend not only creates a heavy burden on the government's annual budget but also an obstacle for the Gulf to meet growing European demand for their product as Russian oil sanctions revamp the global oil map. Israeli efficiency and solar innovation may thus help the Gulf States meet growing domestic demand while also making more oil and gas available to European customers searching for non-Russian supply, creating a win-win scenario for all sides.



# Lessons for Israel

Gershon HaCohen

The war in Ukraine will be the focus of hundreds and thousands of studies in the future, but it already raises significant lessons for the State of Israel. According to some media reports, Iran and Hizbollah have also been studying the war in order to glean lessons.

## **Surprise at the Strength of the Resistance of the Ukrainians**

There is much criticism of those who said before the war that the fate of Ukraine would be decided in a few days. For those who thought so, there were good reasons: in the last decade, the Russian army has conducted several very well-considered and effective blitz operations, while accurately exploiting its capabilities and limitations. This is what they did in Georgia (2008), in Crimea (2014), in Syria (2015-2020). The Russians also had good reasons to think so, because they estimated that there would be no significant resistance. Even American intelligence, which accurately warned of the Russian intentions, failed to predict the course of the fighting. The American proposal to evacuate President Zelensky, was an operational expression of their assessment of the ratio of strength. Only a few assessed that the Russian plan of attack would be so severely disrupted and fail.

## **The Initial Russian Failure**

When President Putin decided to initiate the war, he surely knew that war is a phenomenon that even the strong side could lose control of. But he expected to end the war in one short campaign – a “special operation” as he called it. He aimed to take control of Kiev rapidly with elite airborne forces and reinforce them quickly with mechanized forces.

The success of the Ukrainians in thwarting the Russian attack in the first week must be credited to accurate intelligence provided by the American intelligence organizations and to the fighting spirit of the Ukrainian people. The regular forces that fought for the defense of

Kyiv were joined by reserve forces and territorial defense forces, many of them conscripted citizens – some properly trained and some only briefly so. But above all, the battle for the defense of Kiev shows the critical significance of intelligence superiority in the quality and depth of cyber and satellite information collection, which only the superpowers have and which has been granted to Ukraine throughout the war by the United States and Great Britain.

### **Changing the Political Objectives of the War**

From the moment the Russian high command realized that the campaign on Kiev had failed, it moved to a second campaign – aimed at a different political goal. While in the first campaign, regime change and the occupation of Kiev were the main effort and the occupation of eastern Ukraine was a secondary effort – they canceled the effort around Kiev and focused on occupying a continuous area in the southeast of Ukraine, from the Donbas region to the edge of the Black Sea at the mouth of the Dnieper. Added to this effort was a long-range missile attack on Ukraine’s national and military infrastructure. From the fall of 2022, this long-range fire effort was redirected towards Ukraine’s electricity system, primarily to exert psychological pressure on the Ukrainian public.

The rationale behind this new campaign allows it to be long, and less dependent on achieving quick results. However, as it continues over time it requires a large reserve of forces and resources and also revealed the limitations of the Russian army.

IDF forces, weapons and supply stocks are many times less than those of Russia or Ukraine. Even the Western powers, including the United States have had their ammunition warehouses emptied. Understanding this, the State of Israel must return to accelerated self-production of ammunition such as tank shells and artillery, which in recent years have been purchased mainly in the United States.

### **The Return of the National Fighting Spirit**

The biggest surprise in this war is the willingness of the Ukrainians to fight for their national independence with supreme sacrifice. In the

history of the war, the issue of supremacy in material or spirit has arisen many times. In this war, we see a large army, possessing some very advanced capabilities, operating according to an interesting concept, with clear superiority in several areas, but also an army that lacks motivation to fight this war. In front of it stands a determined people who understand well their military limitations, but also the gaps in their opponent's capabilities. Here lies an important lesson for the IDF and Israeli society.

The mobilization of Ukrainian citizens to fight, including citizens and veterans in territorial units, contributed considerably to the achievements of the Ukrainian defense. Such was the mobilization of Israeli society in 1948. However, this approach has been abandoned in recent decades. Ukraine's lessons for the State of Israel immediately require the establishment of a national guard based on the mobilization of citizens and the renewal of the territorial defense forces in the peripheries.

### **The Necessity of Military Mass**

The Russian army enjoys the image of a large army based on a mass of fire and maneuver forces, manifested in defense and attack in a deep three echelon deployment. This is how the Soviet doctrine, through quantitative superiority, achieved victory over Germany in World War II, this is how the Warsaw Pact formations were built during the Cold War. This was the doctrine behind the large-scale armies of Egypt, Syria and Iraq.

The fascinating phenomenon is that in all the recent operations of the Russian army, including the invasion of Crimea in 2014, and the military involvement in Syria starting in September-2015, the Russian army acted in the new age patterns of Western-American military logic: the employment of well-equipped task-forces, with high professionalism and skill, but limited in size – a “small and smart” army. In Syria, for example, mainly air power was used to support the Syrian army forces, with some special forces (Spetsnaz) assistance. The Russian ground army, in its traditional form, was not used at all in the campaign in Syria. Instead, the Russians relied on the local forces, the Assad regime's army, Hezbollah and other

Iranian proxies, who provided the mass and were trained by Russian officers and the Spetsnaz..

A significant consideration for choosing this form of operation stems from the trend to reduce as much as possible the need to mobilize the nation for war – the ‘nation in arms’ concept. This is why all Western armies annulled conscription and began recruiting paid volunteers. Thus, in Russia too, except for the paid volunteers who are thrown into the friction of combat together with privatized mercenary forces, such as the Wagner group, the general population in the prosperous cities are not required to suffer the hardships of war. In Moscow and St. Petersburg, the citizens can go about their daily lives, without being required to participate in the war effort.

What is important for us is the fact that even the Russian regime, one far removed from liberal concerns for civil rights, is aware of the limitations involved in mobilizing the people for war. A mother of a soldier in St. Petersburg, like a mother in Berlin and Paris, is in no hurry to lend her hand to support wars. The new system thus allowed the Russian regime to go to war without paying attention and sensitivity to the conditions and constraints of popular support.

Understanding the increasing limitations in modern times, on a country’s decision to go to war, was among the insights that led the British general Rupert Smith to his argument that industrial wars no longer exist. This argument has been quoted repeatedly in the past year. Smith’s paradigm of industrial war is of a war between states that includes the maneuvering of large forces and the total mobilization of the entire human pool and industrial infrastructure in the country, at the expense of all other interests, for the goal of total victory. President Putin’s initial strategic concept for the war in Ukraine was indeed of a limited war, but not of the kind described by General Smith. The war was designed and conducted from its beginning to consistently avoid bringing the Russian nation as a whole into an all-out industrial and national war. Even 18 months into the war, despite the extensive mobilization of Russian industry, and the throwing of additional forces to the front, Russia still continues deliberately to avoid full mobilization. Ukraine’s strategy is the exact opposite:

the national consciousness is in an all-out war, in a heroic war for independence, which demands the full resources of the nation in a full national mobilization.

In the meantime, with the Russian regime refraining from full mobilization, the Russian army finds itself with a shortage of forces on the front lines, and with a shortage of essential resources such as ammunition and other equipment of warfare.

In light of the intensity of the war and its duration, both sides, both the Russian and the Ukrainian, exhausted their initial resources. The Russian avoidance of extensive mobilization caused a gap in the amount of manpower available for the war. Furthermore, despite the fact that it had large stocks and still has a large production capacity, Russia was compelled to turn to foreign aid – the purchase of strike-drones from Iran, as well as ammunition from other countries. For Ukraine, beginning with smaller stocks and production capacity, foreign aid quickly became critical to the point of not being able to continue the war without a continuous and generous supply of major weapons systems, ammunition and economic aid, intelligence and cyber warfare capabilities from all NATO countries.

The lack of reserves is expressed on both sides in its effect on the strategic and operational decision-making for conducting the war: the lack of reserves is expressed in calculated risk management and the restraining of enterprise that the campaign commanders of both sides can initiate.

### **Return of the Masses**

War is not a special operation, as the Russians found out first hand, as the Israelis found out in 2006, as the Americans found out time and time again. Special operations are particularly successful when they encounter loose systems. But not when they are facing a determined mass, in a complex area and over an increasingly long period of time. When the operation becomes unspecialized, the mass returns to play a critical role. The quantitative mass of the Ukrainian fighters, with different degrees of skill, allowed the Ukrainians to dismantle part of the quantitatively inferior Russian technical superiority. In recent

decades, the IDF has been intensively engaged in the promotion of centers of superiority, but in a way that caused it to neglect the attention and resources to preserve its quantitative mass. The war in Ukraine raises questions about the correct proportions of the IDF in this issue.

An examination of the fundamentals of the essential difference between a special operation and a war, leads to an examination of the categorical difference between making decisions in risk management in a controlled system, and making decisions under conditions of uncertainty, in a complex and open system. A special operation is conducted to a large extent according to the risk management method. In the absence of control over critical basic data for risk management, the operation will be cancelled. War, on the other hand, is inherently conducted in spaces of uncertainty, which are fundamentally uncontrollable. Thus, a war situation requires a mass of force and resources ready in reserve, available for the reinforcement of planned operations gone awry or for application in previously unplanned contingencies.

### **End of the Era of Maneuver?**

In quite a few discussions about the difficulty of maneuvering on land, it is described as a unique problem of the West: as if it stems from an unwillingness to suffer losses, along with the duty of caution against harming the uninvolved. But in this war we find that even with both sides' lower sensitivity to human life, maneuvering becomes very difficult. The world has simply become more crowded – most of the space has become a built or semi-built area, and armies have no ability to decide a war just by fighting in the open space outside the cities. Increased firepower too threatens maneuver. The anti-tank guided missile slowed the momentum of the mechanized advance. New air strike capabilities threaten maneuver forces and their logistical support. The connection between missiles that attack beyond the horizon, between real time surveillance reports, including drones that allow non-precision artillery and local guerrilla activity to become almost precise, with the support of armed unmanned aerial vehicles, which have become an off-the-shelf product for anyone who needs it, fundamentally changes the expression of “air superiority”.

And yet, after all the difficulties, it turns out that without a mass of armored vehicles to create a maneuvering momentum, the front turns to static trench warfare, frozen, with minimal changes achieved only at great cost in casualties, resources and time, since autumn 2022 from Kupyansk to Kherson. Any of the sides that wants to change the front line to a considerable extent, must employ the momentum of an armored attack led by tanks.

### **Attacking National Infrastructures and Essential Facilities**

Precision guided weaponry is today a weapon of the masses. Salvoes of cheap accurate attack drones made in Iran paralyzed a significant proportion of the Ukrainian electricity infrastructure, teaching us about the potential for destruction to vital national infrastructures to be expected in war. This is a significant threat that the State of Israel will have to deal with in any future war.

Iranian attack drones have been shot down over the Golan Heights. Various attack drones are currently in the hands of Hamas, Hezbollah and Iranian militias. These may attack in Israel's strategic and operational depth and cause damage to Israel's national infrastructure, IDF air bases, headquarters and depots. The lesson of the Ukrainian war is, that for protecting critical installations and tactical forces in the field from attack drones, the IDF must quickly equip itself with a variety of suitable air defense weapons, including advanced anti-aircraft guns for the field units.

### **Lessons for Creating Campaign-Level and Tactical-Level Fires**

From the end of the first week of the war arises the question of the minimal contribution of the Russian air force to the campaign.

The question is specifically focused on the low efficiency of the Russian fighter aircraft. The Russian field headquarters are apparently having difficulty in the tactical cooperation with the air force and in closing intelligence-strike cycles in real time. The issue requires further investigation as a highly significant puzzle.

In the meantime, studying the lessons learned from the war by the Polish army, can intensify the puzzle. The Polish army does not focus

on the procurement of combat aircraft. Instead it focuses mainly on the procurement of ground-fire equipments, advanced artillery and HIMARS batteries from the United States. In a major procurement deal, the Polish army chose to equip itself with an additional 750 advanced self-propelled guns from South Korea and at the same time with 500 American HIMARS launchers, with 9,000 rockets. The American HIMARS launcher provides a rapid attack capability with regular and precise rockets to a range of up to 90 kilometers. The purchase of these launchers is also requested by the Dutch army and other armies. The overall envelope of ground fire used in combat on both sides, statistically and precisely, can perhaps teach about the relevance and the high efficiency of the ground fire systems, compared to the limitations of air fire assistance for the ground forces – especially against large and dense air defense forces.

The high consumption of artillery ammunition throughout the war obliges the Western armies, and certainly the IDF, to rethink the over-focus given in recent decades to precision weaponry, in a way that largely rejected the need for cheap and available field artillery in sufficient quantity.

### **The End of the Era of Peace**

The “free world” was united in its support for Ukraine and its strong disapproval of President Putin, who started the war. For the time being, the war is being waged on the soil of Ukraine, but the horror of the war has reawakened existential anxiety even in peaceful Europe.

Not that there haven’t been wars since Fukuyama declared the “end of history” in 1989. But they took place in places far from Europe and the United States, or as small wars in Europe’s Balkan backyard. These wars did not threaten the consciousness of a stable order in Europe. The return of the war to the consciousness of the West, undermined the hope for a final and permanent peace in the gospel of the last days, and returned it to the ground of reality.

After being tempted for decades to comprehensively reduce their armies, the European countries were astonished to see – with the outbreak of the war – how completely they lacked any capacity



for self-defense. In a shocked reaction, especially in Germany and Poland, they resorted to a rapid effort to rebuild the military force. The budgets that were diverted to the accelerated procurement of weapons, will undoubtedly harm the budgets that were allocated in the past decades for the needs of society and welfare.

Understanding this new reality, it is also appropriate for the State of Israel to recalculate its path. The peace that Israel sought during the 1990s, including the Oslo process, was largely based on the atmosphere of global peace that gripped the Western world at the time. Inspired by the question “How long will we live on our swords?” But in the meantime the countries of Western Europe have also returned to their ancient obligation of holding the sword. Even if the war ends within the next few months, Europe will not soon return to its former peace. As the winds of war from Ukraine penetrate into the Middle East as well, and are expressed also in the atmosphere and an increase in terrorism in the Palestinian arena, it behooves the State of Israel to examine in depth the validity of the basic assumptions on which the accords and peace agreements were established in the 1990s. It is certainly recommended to re-examine the size of the military force and the means required for the State of Israel to protect its existence and security.

The vast expanses of Ukraine, contributed greatly to the Ukrainians’ success in first absorbing and then stopping the Russian attack, teaching once again the basic lesson of the importance of territorial depth. “Military experts” in the State of Israel who in recent years have tended to underestimate the value of space, as a necessary condition for defensible borders, are advised to re-examine their position.

The very fact that the war in Ukraine continues without an end in sight – in the absence of levers of influence to end it – has significance for the Israeli assessment of the situation. In the concept of security formulated by Ben-Gurion at the end of the War of Independence, the critical requirement was defined that any major war would be decided and ended in a short time. A comprehensive, multi-arena and powerful war that goes on and on with no end in sight is an extremely serious threat to the State of Israel.

### **Summary**

The war in Ukraine raises big questions at all levels from the political, through the strategic and operational down to the tactical level. There are many reasons to explain why the Russian case, or the Ukrainian case, are completely different from what is happening here, in the Middle East in general and in Israel in particular. To a large extent, several senior American generals also think so. But it is appropriate for the IDF to use the “War Theater” playing out in eastern Europe, to imagine us in a similar event. To learn and prepare more correctly for a difficult war that has not yet been experienced here.

# Getting to an End in Ukraine

David Levy

General Colin Powell formulated his Powell Doctrine during the first Gulf War (1990-1991). The doctrine has eight criteria that must be answered affirmatively before going to war:

- ◆ Is it a vital national interest?
- ◆ Are there clear objectives?
- ◆ Have the risks and costs been fully and frankly analyzed?
- ◆ Is there support at home and broad international support?
- ◆ Have all other non-violent policy means been fully exhausted?
- ◆ Is there a plausible exit strategy?

Russia's invasion of Ukraine is now in its second year, and the doctrine provides a useful lens to study the current state of the conflict. Each of the major participants in the conflict has different objectives. Russia and Ukraine, the two opposing belligerents, axiomatically have opposing objectives. However, even the parties supporting Ukraine, the United States and the European NATO allies have differing objectives.

## Russia

From Russian President Vladimir Putin's public statements, the invasion was ostensibly a vital national interest for Russia. At the commencement of this conflict, President Putin declared that the goal of Russia's 'special operation' was to "strive for the demilitarization and denazification of Ukraine". Moreover, Putin watched NATO's eastward expansion while simultaneously Ukraine's foreign policy drifted westward. Though Moscow still had many diplomatic hands to play, Putin, as part of irredentism, used NATO expansion as a pretext for invasion.

Russia has failed so far in achieving its objectives, yet Putin, at least publicly maintains, maximalist goals. As NATO Secretary Jens

Stoltenberg stated on January 30<sup>th</sup>, 2023: “there are no indications that Russia is preparing to negotiate for peace and that all indicators point to the opposite... Russia may mobilize upwards of 200,000 personnel and is continuing to acquire weapons and ammunition through increased domestic production and partnerships with authoritarian states such as Iran and North Korea”. The Kremlin is now counting on the West to develop fatigue over the conflict. Russian former Prime Minister and current Deputy Chairman of the Security Council, Dmitri Medvedev, recently declared, “America always abandons its friends and its best [proxies]. It will happen sooner or later this time too”.

Whether the Russian people support the war in Ukraine is not easy to answer. Opinion polls show a range of support among Russians for Putin’s ‘special military operation,’ but these polls may not reflect the true sentiments of the society. The war has triggered a wave of draft evasions among military-aged Russian men. According to various reports, hundreds of thousands of men have left Russia for neighboring countries or distant destinations, fearing conscription or border closure. Some have been called up despite being exempted by their occupation or health condition. Others have been hiding from recruiters or avoiding public places where their documents could be checked. The mass exodus of men has created a noticeable gender imbalance in Moscow and other cities, affecting businesses and social life.

Russia has additional mounting problems. As CIA director William Burns noted in a recent CNN interview, Russia is paying increased costs, including military casualties, cumulative economic damage, and huge reputational damage. Also, the conflict “has not exactly been a great advertisement for Russian arms sales”. A popular meme sums it up: “I used to think that Russia was the second-best army in the world; I now think it is perhaps the second-best army in Ukraine.”

Notions on how the conflict in Ukraine will end for Russia run the gambit. One extreme sees Russia engaged in an attrition war denuding Ukraine’s remaining combat capability while simultaneously mobilizing soldiers from a deep pool of military-aged men. When Ukraine has been weakened enough, Russia will secure the Donbas and open the road to Kharkiv and the Dnieper River. In this scenario,

Russia will capture half or more of Ukraine. At the other extreme, Russia could face a second civil war or a total collapse in which individual oblasts declare independence.

Russia has had some minor successes. Moscow and Tehran have moved closer as a consequence of the conflict. Iran is providing Russia with many hundreds of armed drones and other military aid while Russia is selling Sukhoi Su-35 fighter aircraft to Iran. Many global south nations, including India, Brazil, and South Africa, have chosen to remain neutral. The Kremlin's relationship with Beijing remains strong, and China continues to buy Russian energy and is now considering providing military aid. For much of the Soviet era, Moscow and Beijing had been adversaries. Today, China and Russia are aligned. As noted in the Economist: "China also benefits from a like-minded ally at the UN, where it can take a back seat while Russia acts as a bully. [and] Russia is a valuable source of commodities that are increasingly being supplied on Chinese terms".

Does Russia have an exit strategy? Having failed to achieve their initial objective on conquering Ukraine, it is unclear. At this point, settlements and ceasefires seem a long way off. Continuation of Western aid to Ukraine continues, the vast reserve of manpower of Russia has left and its ability to supply them have left each side believing that its relative strength versus that of its opponent will improve over time and is therefore capable of prevailing if it stays the course.

If at some future date a settlement is obtainable, Russia's opening demand will be the entire Donbas region and recognition of Crimea as Russian. This position is the opposite of what Volodymyr Zelensky, president of Ukraine, demands, which includes recovering all land taken by Russia, including Crimea, reparations, and a war crimes tribunal.

## **Ukraine**

For Ukraine, ending the conflict with its lost territory returned is its primary goal. The conflict is plainly a vital national interest. Ukraine is fighting an existential threat, a war for its very existence. Ukraine

would like a return to *the status quo ante bellum* from 2014 when Russia annexed Crimea and supported pro-Russian separatists, unmarked masked soldiers, the so-called ‘little green men’, in eastern Ukraine. This would mean a restoration of its territorial integrity and sovereignty, as well as its security and stability. Ukraine also wants to join NATO, an idea supported by Henry Kissinger and the European Union, but which Russia opposes and was one of the causes for its invasion. However, without assurances that Ukraine would remain outside NATO, Russia may reinitiate the conflict.

Ukraine has suffered considerably. At the very least, 130,000 AFU soldiers and countless civilian casualties have been killed or wounded, perhaps more. The AFU remains committed to fighting but lacks the reserve in manpower that Russia has. If the war becomes a protracted conflict, manpower is a vulnerability. Though the numbers are not known, in Ukraine too not all eligible men are willing to enlist and many have fled the country or attempt to evade mobilization inside Ukraine. Also, due to the war, Ukraine faces a humanitarian crisis, economic hardship, and political challenges. Kyiv needs continued international support in the form of money, arms, and sustained sanctions against Russia to continue fighting.

As of now, Kyiv believes it has the capacity to continue fighting, and with continued support, it can reach its objectives. This means for now, like Russia, Ukraine is not interested in a negotiated settlement.

### **Europe**

The invasion of Ukraine has united and reinvigorated the NATO alliance. Putin expected to achieve the reverse. A recent Economist article stated, “whereas the old NATO was reactive, it is now being rebuilt to deter Russia in peacetime and to respond immediately and in force as soon as it threatens to encroach on its members’ territory.”

At the conflict’s commencement, Europe depended on Russian energy imports. The EU purchased roughly 50% of Russia’s oil exports, both crude and refined, and over 60% of its natural gas. Putin made a bold strategic bet. Europe will need Russia’s energy when winter comes. Putin believed he could threaten the suspension of oil and

natural gas to coerce Europe into concessions. Failing that, he could at least pull away some alliance members desperate for Russian energy to heat their citizens. The bet was lost. Two unpredictable events greatly favored Europe. First, Europe enjoyed a record-breaking mild autumn and winter, cutting demand for heating. Second, Europe could find alternate energy sources far more quickly than was believed achievable. Moreover, Germany has delayed its nuclear power phase-out to counter Russia's energy threats. In short, the EU is less scared and more united at this point than Moscow, Washington, and even Brussels would have predicted at the beginning of the conflict.

Though Europe is generally united in supporting Ukraine, the various European nations differ on how the conflict should end. According to a recent poll by YouGov, a British Internet-based market research and data analytics firm, Swedes, Danes and the British believe the West should support Ukraine until Russia withdraws. However, Italians support a negotiated peace even if Russia is left in control of some of Ukraine. The Spanish, Germans and French are roughly evenly split on how the war should end.

Europe is experiencing a transformation. In a major rebuke of Russian aggression, Sweden and Finland abandoned decades of neutrality to apply for NATO membership. Having grown accustomed to soft power and diplomacy for addressing continental conflicts, the use of direct military action in their neighborhood was astonishing. Europe's reaction has been to direct billions of dollars in military assistance to Ukraine and to next year's defense budgets. Germany alone plans to invest \$112 in the Bundeswehr to address years of underinvestment.

Another hard lesson Europe has learned is that they still need the US for their protection. European states have promised more than \$50bn in aid to Ukraine. As of February 22nd, 2023, the US has given \$112bn (some estimates are closer to \$200bn). After World War Two, the US was the primary power in Europe. Efforts like the Marshall Plan and the Berlin Airlift made this clear. The American departure from Afghanistan, the announced pivot to Asia, and a notable populist non-interventionist movement in America left many US allies wondering if US power was waning. However, the American response to Ukraine

has demonstrated that the US is back and is still a major power in Europe. Kori Schake, a former official now at the American Enterprise Institute think-tank, argues that it is clear that, without the United States, Europe would not have come together to provide Ukraine the support it needed.

### **The United States**

For the United States, Russia's invasion of Ukraine threatens the international order, which makes the war a US national interest. Perhaps a vital national interest. US hegemony has benefited the world by providing global public goods such as security, trade, and monetary stability. In 2010, the University of Toronto's Carla Norrlof, author of *America's Global Advantage: US Hegemony and International Cooperation*, argued that the US security umbrella protects its allies and deters potential adversaries while enabling the US to project its global power and influence. The US also shapes the rules and institutions of international trade, facilitating its access to foreign markets and resources. Moreover, US hegemony also benefits other states that enjoy peace, prosperity, and cooperation under its auspices. For example, non-allies like Vietnam benefit from the US presence as a counterbalance to China's rising power. Therefore, US hegemony has been a positive force for global order and development.

With the invasion, US support for Ukraine has grown exponentially. Between January and November 2022, the US provided \$66.0 billion in aid to Ukraine. The end-of-the-year congressional omnibus package added another \$45bn for total of around \$100 billion spent in 2022 (some estimates are as high as \$113bn). In the spring of 2022, the US provided helicopters, Stinger anti-aircraft systems, Javelin anti-armor systems, UAVs, and small arms. Allies have also helped – sending funds, military equipment and humanitarian aid. Some European partners have pushed to sending more advanced or heavier weapons systems, while others and the US have generally been more reticent – worried about the consequences of Russian responses. In spring 2023 it was finally agreed to send Western tanks and at time of writing there are discussions over sending F-16 fighter aircraft.



At this point in the conflict, the United States has three possible courses of action: withdrawal, maintaining the status quo through a settlement, or assisting Ukraine while strengthening the global system.

Course one, withdrawal, sides with America's growing isolationist movement. The US administration has already intervened, yet, there is now a minority political faction arguing for abandoning Ukraine. America abandoning Ukraine is not only a withdrawal of current support but a withdrawal of safeguarding the existing international order.

The US has a long tradition of isolationism, which has come from several factions. Some isolationists were traditional unilateralists that point to George Washington's 1776 Farewell Address and Roosevelt's Chautauqua 'Good Neighbor Policy' speech of 1936 as evidence against engaging in foreign entanglements. In the years leading up to World War Two, the Liberal Isolationists feared entering the war would require centralizing government power and limiting civil liberties that would not be restored. The pacifists, of course, called for a peaceful resolution to the dispute. Others argued for unilateralism best achieved through autarky, and others valued the benefits of American neutrality in support of trade, an economic empire as described in Warren Cohen's "Empire Without Tears".

The Biden administration inherited a split America, with noninterventionists clashing with internationalists. This split remains even while the administration seeks to define a policy in Ukraine. Inside the Republican party, the split is most acute. Former Secretaries of State Condoleezza Rice and Mike Pompeo are adamant about supporting Ukraine. Pompeo recently said the US "should do everything Ukraine is asking" to defeat Russia. However, Governor and likely Presidential candidate Ron DeSantis has gone on the record saying, "While the US has many vital national interests... becoming further entangled in a territorial dispute between Ukraine and Russia is not one of them".

A withdrawal approach would be a major setback to US foreign policy. Coupled with the feckless Afghanistan withdrawal, it would signal

significant US weakness, a forsaking of NATO, and a surrendering of the leadership position in the global system. Near-peer competitors will challenge the US, violate international norms, and be emboldened in the utility of the use of force. The world would be less safe.

In the ‘maintain the status quo approach,’ the US is willing to provide enough assistance to return to the *status quo ante bellum* but refrains from activities that might escalate the situation. This is the more cautious course. Above all, the US seeks to avoid nuclear war. The US also wants to prevent an escalation that brings US and NATO forces into direct conflict with Russian forces. The US will support Ukraine in the war, understanding that, ultimately, it will end in a settlement.

In supporting Ukraine, the US has already achieved many of its goals. Washington has reassured allies, demonstrated a willingness to defend the international order, assembled and sustained an international sanctions regime, and separated Europe from Russian energy dependency. Also, the US has provided military aid to Ukraine at the cost of roughly 5% of America’s annual defense budget, which has greatly diminished the Russian military’s capacity and morale.

If America chooses the third course and backs Ukraine until Russia is ejected from most, if not all, its territory, the United States will present a resolute position. It is an opportunity to renew the American-helmed international order. This is a much riskier course, but with a greater return. The US will confirm its status as the only global superpower with a persistent alliance system. It will reaffirm America’s *bona fides* as the *primus inter pares* of the Western alliance. Other powers like the People’s Republic of China will be distant rivals deterred from confrontation. The war will take longer, but the *pax post bellum* could also be longer.

### Conclusions

In invading Ukraine, Russia has fail to achieve its initial goals, even now its spring offensive met with failure due to the unwavering Ukrainian resistance, international support for Ukraine, adverse weather conditions, logistical challenges, and internal dissent. What was supposed to be a breakthrough of Ukrainian lines was instead a

protracted slog for the eastern city of Bakhmut. The offensive ended and Ukraine has launched its own counteroffensive, now with new equipment including the Leopard II Tanks. Russian chances of victory are dwindling and Moscow lacks a coherent exit plan. Instead it is hoping that mass and attrition will turn things around.

Terminating the conflict by a settlement is the safest and quickest path to ending the conflict. However, neither of the two belligerents is ready to pursue that path. That means the conflict persists. Russia has little chance of reversing its weak position but could force the conflict into a protracted ordeal. In that case, the US and its NATO allies have no viable choice but to fully support Ukraine. This path will either lead to success, a fully liberated Ukraine, or it will force negotiations with Moscow as Russia's position continues to deteriorate.

# **The War in Ukraine – Possible Directions**

**Shachar Heller**

We are currently 18 months into a war which many expected to be sophisticated, short and overwhelming and to end, at minimal cost, in a Russian victory. Though the aggressor Russia has not achieved its objectives, neither has Ukraine. Both sides have suffered immense casualties and economic disruption. Despite these, neither side seems willing to desist from continuing the war. This article will present four possible directions that events will unfold and analyze the possible geopolitical effects in each direction and possible costs/benefits for each of the parties.

## **First Possible Direction – Continued Attrition (high probability)**

The two warring parties are locked in a state of mutual attrition and exhaustion, apparently without the ability to bring about dramatic changes. Both sides are achieving only small exchanges of territory at massive cost to each other. The expected trend is a continuation of this situation until one of the parties lacks the ability to introduce more manpower or equipment to replace the casualties and begins to decline in its ability to maintain the current intensity of combat, or till one of the sides decides on a radically different course of action.

Continued attrition brings mainly cost without foreseeable benefit to both sides. The main cost is the casualties in personnel and equipment, but also financial loss and reduction in the economies. To that should be added the erosion of legitimacy in the eyes of the publics – both domestic and international, for the continuation of the fighting.

On the other hand, should one of the rivals achieve a positive trend in this attritional exchange it could pave the way for that rival to choose a more decisive strategy in the future.

### **Second Possible Direction – Ukrainian Tie-Breaker (medium-low probability)**

Some Western military technology was supplied to Ukraine even before the Russian invasion. Following the invasion this supply grew in the quantity and the quality of the equipment being supplied. Various international organizations and commercial companies also began to aid Ukraine directly and indirectly. A prominent example is ‘Starlink’ which provided its satellite services, enabling the Ukrainian military to rapidly recover from Russian cyber and electronic warfare attacks on its essential communications system.

So far there has been no equipment supplied that can be described as a ‘tie-breaker’ that could drastically tip the military balance between the two rival armies. In fact, as the Chief of the Joint Chiefs of Staff, General Mark Milley, declared not necessarily all types of weapons in the United States inventory would be supplied to Ukraine. Through the war there has been a gradual increase in the types, the quality and the quantity of weapons being provided, however, if the current policy limiting the supply of certain weapons is changed to provide these weapons (large numbers of advanced tanks, combat aircraft and missiles, long range accurate missiles of all types) in sufficient quantities, they could arguably change the course of the war in Ukraine’s favor.

A more dramatic change (very low probability) could be the entry of NATO forces into Ukraine to directly participate in the war. Of course, such a move has extensive geopolitical consequences, including the possibility that the Russians will also ask their allies to join the fighting on their side and/or even activate nuclear weapons.

It is necessary to understand that the introduction of a few advanced weapons, even if capable of having a considerable effect on the battlefield, will not necessarily lead to the complete victory. The Russians could adapt as they did after the initial successes of the HIMARS. Furthermore, quantity matters – a few highly advanced weapons and ancillary systems can gain an advantage but only rarely one that is decisive in the context of large armies. To achieve a general superiority requires a large number of these equipments.

Should the Ukrainians receive and be able to exploit such a tie-breaker, the possible benefits are clear and significant. However, assessing the cost is more complex – what would be the effect of the Russians changing methods to adapt to the new capability or even changing their entire strategy in response to it (see the third possible direction).

### **A Third Possible Direction – Russia Adopts an ‘All In’ Strategy (medium-low probability)**

So far, Russia has not declared war on Ukraine and continues to operate under the limitations imposed by the definition of a ‘special military operation’. Should Russia officially declare a state of war, this will allow the mobilization of the entire Russian economy to war, as well as allow the army to utilize all of its capabilities. For example, after a declaration of war, the Russian army will be able to activate all of its conscripts at the front – something it has been prevented from doing until now – and also recruit many more reserve soldiers.

Conversely, this move also has many negative effects on the Russian economy due to the accompanying damage to the operation of the government ministries, the economy being enslaved to the needs of the war and the loss of many workers recruited into the army or fleeing abroad, as during the autumn 2022 mobilization.

Such a move also risks broad geopolitical consequences. For example, it could provoke Western countries to increase their supply of more advanced equipment to Ukraine that they have not supplied yet (see above). It is also possible that countries that have been neutral until now for many reasons will decide to choose a side in the conflict.

A Russian ‘All In’ strategy will lead to a dramatic change on the battlefield, but, our assessment is that Russia’s political, geopolitical and economic costs will be greater than the benefits, and therefore we assess the likelihood of choosing this move under the current and foreseeable circumstances is medium-low.

## **A Fourth Possible Direction – Diplomatic Negotiations**

### **(low probability)**

A possible end to the war today through diplomatic negotiations seems more distant than ever.

Putin will not want to return to Russia “with his tail between his legs”, mainly because he has not achieved what he wanted and has not yet exercised all of Russia’s capabilities (see the third possible trend).

Ukraine, on the other hand, currently feels it is enjoying a positive trend (mainly due to systematic support from the West) and wants to return all the territories it lost since 2014. Therefore, they are likely to see more cost than benefit from this course of action. In addition, the Ukrainians, out of principle to show the Russians that they are not surrendering, will not stop as long as they feel that there is a possibility of achieving their overall goal.

Despite this, it is possible that the parties will seek to reach agreements on a temporary or permanent truce, in order to recover and build capacity to resume fighting in the future. This course of action can develop because of three main issues operating on both sides:

- ◆ Russia and Ukraine – an excessive attrition of military strength of both sides might lead the military commands to demand the governments enter into a ceasefire, while carrying out a reorganization processes.
- ◆ Russia – increased pressure from the Russian civilian public as more people realize the accumulating costs and lose hope for a better result than the current situation. This pressure can lead to a change in the positions of some of the political elements within the country and pressure Putin to reach a ceasefire, even if only temporarily.
- ◆ Geopolitics – Western countries, China, India and other countries will force each of the parties to reach an agreement. This is possible mainly because of the effects of the war on the world economy in general and on various interests of these countries in particular. The coercion will be carried out by creating economic pressure

on each of the parties, closing supply routes (production parts, ammunition, etc.), preventing trade with other parties, harming external interests, and more.

### **Cost Benefit Analysis assuming a diplomatic agreement**

Assuming that the war will end in the near future and without any real change on the ground, it is possible to assess the costs and benefits of each of the rivals and other parties.

#### **Russia**

One of the interpretations regarding the reasons for Russia going to war is based on the ideas of Friedrich Ratzel's geopolitical theories. Ratzel argued that the state is a living creature that needs resources and living space to continue growing, developing and protecting itself. If it does not develop, the country will find itself in a state of reduction or stagnation, which marks a process of degeneration.

According to this interpretation, it seems that Russia sought to break out of a long-term deteriorating situation from the time of the dissolution of the Soviet Union (1991) and the gradual exploitation of this situation by the West. If the war ends in the near future through negotiations or a unilateral decision by the Russians, some of the benefits that Putin sought to achieve in this war will not be achieved. Thus, for example, pre-war Russia constituted a central "player" with more significant power in the international arena. Ending the war in its current state, after a series of failures and significant attrition of the Russian army without achieving the desired results will lower its esteem in the international arena as a superpower. For example, it can be seen that, as a result of the war and the attrition of its military power, Russia had to thin out its presence in a number of areas outside Russia where it sought to preserve or even increase its influence.

Other possible costs if the war ends in its current state include:

- ◆ Reconstruction of the army: Russia invested many resources (money, manpower, ammunition, etc.) in a war that did not go as planned. Russia's military and military-industry have suffered as a result. A negotiated ending of the war might not enable their restoration.



- ◆ The trust of the Russian public: the war brought the Russian public out into the streets as they had not since the revolution in the early 1990s. The trust of the Russian public in the government was damaged already at the start of the war because many did not agree with its justification. Furthermore, many Russians see a strong cultural identity with the Ukrainian population. Another example of public distrust in the war was the fleeing of many potential candidates for mobilization abroad or even injuring themselves to avoid it. Even many of those who do support the war aims, understand that Russia and the Russian army cannot achieve their goals. This loss of faith could be expressed in the coming elections – requiring the regime to enforce the results it wants. It could also be expressed among minorities wishing to breakaway from Russia who might initiate action against it.
- ◆ A new alliance: during the war North Korea and Iran helped the Russians. The questions are: What will be the price they will demand in return? And what is the global price for tightening the relations with with these two pariah countries?

On the other hand, there are also benefits Russia might accrue if the war ends soon. First, a “new world order”, a situation that may bring Russia out of the process of degeneration in which it was in conflict with the West for several decades. Examples of this can be seen in several key areas:

- ◆ Economic: Removal of the Western sanctions as a requirement by Russia for the peace, return of international companies and foreign investors.
- ◆ NATO: One of the costs of the war was the addition of Finland to NATO. A negotiated settlement could see NATO agree not to accept other states bordering with Russia, such as Georgia or Ukraine itself.

The Russian invasion also invigorated NATO, an organization that was gradually losing its military capability. Most members of NATO significantly increased their defence budgets, but this carries economic penalties. Should the war end these countries might

gradually lose interest again in funding their militaries and transfer the funds to other issues deemed more important to their societies.

- ◆ **Energy powerhouse:** The anti energy sanctions by European countries on Russia hurt the Russian economy, but also the European economies. The alternative energy sources are more expensive than Russian gas and oil. Cessation of hostilities will gradually allow Russia to return to exporting energy to Europe, thus recovering some of the economic losses it suffered during the war.
- ◆ **Food:** as with energy, and especially given the climate change affecting the world, Russia is getting stronger in the field of global grain cultivation. Though this field was less affected than the energy field, it too suffered reduction and a negotiated settlement could recover it. Furthermore, if the settlement leaves in Russia's hands territory captured in east Ukraine, it will have additional fertile land to exploit to increase its export capabilities.
- ◆ **Metals:** Russia has captured huge metal deposits located in eastern Ukraine. These metals include uranium, nickel iron, coal and more. A negotiated settlement that leaves these deposits in Russian hands increases its income on the world market – especially since some are crucial for the chip industry, battery industry and similar technologies).

## **Ukraine**

It seems that the Ukrainians now have more to lose from a possible end to the war - even with a decision of a unilateral cessation by the Russians without negotiations, since the willingness of the NATO countries to continue supporting the continuation of the war is likely to decrease significantly and their desire to restore the damage caused to their economies so far will exceed their willingness to continue to fund Ukraine's war. Most of the war (except for minor incidents inside Russia) took place on Ukrainian soil, in which large parts of the country were destroyed (including cities, villages, essential infrastructure, roads, etc.). Ending the fighting today will stop the momentum of the Ukrainians to change the situation and return to

the beginning of 2022, or, as they claim they intend to do, back to the beginning of 2014, before Russia invaded the Crimean Peninsula. For example, the return of the territories annexed to Russia in the east (where many natural resources are found), reopening of the shipping lanes which were under Russian control in the Black Sea (where there are also large gas reserves) and more. It is estimated that the Ukrainians lost about 12.4 trillion dollars in various resources. Therefore, if the war ends before these mineral areas are restored, Ukraine will have twice as much difficulty in rehabilitating itself and repaying the huge loans it took to finance the war.

In addition, ending the war today will weaken Ukraine's appeal in international organizations due to a gradual erosion of the world attention and the legitimacy that they receive today, as new challenges and new opportunities appear with the end of the war – *there is nothing more boring than yesterday's news*.

On the other hand, the cessation of the war today can also greatly help the Ukrainians, especially in taking a new place in the international arena. In this way, Ukraine will be able to turn again to the European Union and NATO and request to join, when it is likely that in the near future the allied troops will not have to fight on its soil. Another possibility is the creation of a regional alliance of Ukraine with other countries of the region (under NATO and/or American auspices). This alliance will allow NATO to stay out of the Ukrainian game, on the other hand, to significantly increase its support. Another and probably the most important issue is the reconstruction of the country. The cessation of the war will also enable the beginning of the reconstruction phase, a process that might bring a lot of money from international organizations and supporting countries into the country and will help to rebuild it. The Ukrainian army will also continue to benefit from new investments that include western weapons, continued quality training for its personnel and more.

### Summary

There are several major possible directions for the continuation or ending of the war between Russia and Ukraine. For the time being,

each of the parties to the war (including some third parties) has interests that push it to continue the fighting as much as possible, even though each of the parties also has hidden interests to end the war in its current state. As the war continues, and especially if it continues in the current state as a struggle of attrition and exhaustion of the rivals and their supporters, it is likely each of the various vectors pushing them to continue their current policies and strategies or to change them will grow stronger or weaker and together create a greater force to change rather than continue the current situation, though of course it is currently impossible to predict the direction that will result and when.

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