THE SIGNS OF THE SECOND KARABAKH WAR TYPICAL OF THE 5TH GENERATION WAR

Introductions

As a result of the Second Karabakh War, which began on September 27 of 2020, the Azerbaijani Army succeeded in restoring its territorial integrity and political sovereignty. This war has entered the history of military art of the XXI century as a modern war. In the Second Karabakh War, the Azerbaijani Army built upon extant tactics of conventional warfare, and enriched it with the preference for high-precision weapons. Performing its duties with high professionalism, the Azerbaijani Army did not allow military operations to go beyond the battlefield, the intervention of third countries, and demonstrated its commitment to international rules and norms during the war. This war opened a new page in the history of modern warfare.

Differences between generations of war

During the Second Karabakh War, the Azerbaijani Armed Forces carried out military operations typical of modern wars during the liberation of Nagorno-Karabakh. In Western studies, this war is characterized as the fifth generation by its characteristics, and in Russian military science as the sixth-generation war. However, the notion of modern wars, especially the disputed boundaries between post-Cold War generations, suggests that fourth- and fifth-generation wars remain the subject of serious research and controversy.

The changing global security environment, the revolution in the military because of the development of science and technology, the change in operational art because of the discovery and application of new weapons, the enrichment
of the ranks of legitimate actors at the expense of non-state (armed) players does not allow for the establishment of clear boundaries between the last generations of the war.

In general, the concept of “generations of war” should be considered to identify the features of the Second Karabakh War that are characteristic of modern wars. The concept of four “generational” wars, proposed by a group of U.S. analysts, including William S. Lind, covers the following classifications:

1. The first generation of war refers to the ancient and post-classical battles waged by mass manpower using the Armed Forces of the state and the tactics of phalanx, line and column. The main domains of wars of this generation are military operations on land and sea by kinetic (military, armed) forces. Called the “Phalanx, line and column war”, these confrontations are characterized by the destruction of enemy forces in close, face-to-face battles.

2. The second generation of war is associated with the first modern tactics used after the invention of rifled musket and breech-loading weapons, which continued with the development and application of machine guns and indirect fire. In this classification, the indirect destruction of the enemy’s Armed Forces (kinetic force) by firepower is characterized as a “Trench warfare” carried out on land and sea.

3. The third generation of war is aimed at using tactics based on the latest technology to break through the enemy’s lines of defense and destroy its forces in the rear. In fact, this generation of war aimed at destroying the enemy’s military command, control and logistics meant the end of a one-line war on a tactical level. In this war, the opposing units did not try to overcome each other in a face-to-face war, but in different ways (appearing from behind the enemy). This generation of so-called “War of maneuver” took place on land, sea and air.

4. The decentralized forms of fourth generation war, introduced by William S. Lind and others, are characterized by war and politics, breaking the boundaries between warriors and civilians due to the loss of state monopoly over their Armed Forces. Called the “Irregular / Rebel War”, this generation of confrontations involved non-state actors represent an asymmetric war that combines terrorism, insurgent and guerrilla tactics, a psychological war through media manipulation, the exploitation of existing political, economic, social and military pressures and a low-intensity conflict involving participants from all networks.

5. In addition, the concept of fifth-generation wars is found in Western military science. There is still no generally agreed approach to this generation of conflicts, characterized as “Unlimited wars”. Unlike conventional conflicts, fifth-generation wars, which do not seek to undermine the state or international peace and security, are network-oriented and provoke conflicts between communities, as well as allow nationalists to renounce their loyalty to the state.

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This form of “hybrid warfare” is a combination of traditional and irregular tactics such as guerrilla warfare, insurrection or terrorist attacks\(^2\).

The fifth generation of war means the expansion of asymmetric and insurgent war, the use of all traditional and non-traditional methods by the enemy.

It brings together political, religious and social reasons; covers information campaigns conducted by organizations or informal groups.

The main features of the fifth generation of wars include:
- evolved from the previous four generations of wars;
- key components include information and cyber threats;
- this type of war can be waged by state / non-state actors;
- is a mixture of kinetic (military operation involving active warfare) and non-kinetic (use of information, psychological, diplomatic, economic, social and technological means) war;
- mainly in the field of social and knowledge;
- supporters avoid traditional military confrontation;
- targets different purposes: you can get a small benefit by gaining unauthorized access to data in a system or computer, the average benefit from terrorist attacks and strategic benefits such as regime change\(^3\).

According to the analysis, the conventional features observed in the Second Karabakh War (the classic interstate Armenian-Azerbaijani conflict, the attack on legitimate military facilities by the Azerbaijani Armed Forces, as well as the maneuvering war, etc.) call it the “third generation”, “fifth generation” for the application of modern technologies – drones and high-precision weapons, unable to withstand the classic military power of Azerbaijan, Armenia launched rockets at civilian settlements (hitting illegitimate objects) in order to create chaos and panic among civilians in Azerbaijan, expand the theater of military operations with acts of terror and unrestricted violence, as well as attempted to take advantage of the violent and provocative activities of non-state actors (involvement of terrorists) could be characterized as a “fourth generation war” (irregular war).

Commenting on the features of the Second Karabakh War typical of modern wars, the President of Azerbaijan said: “Today, our experience is being studied in many countries, developed countries. Today, many experts dealing with this issue note that Azerbaijan has waged a war of the XXI century. For the first time in the 21st century, historical achievements have been made on this scale and in a short period of time with this effect”\(^4\).


\(^4\) President Ilham Aliyev and First Lady Mehriban Aliyeva visited the liberated city of Agdam, https://president.az/articles/47685.
The Second Karabakh War as a 5th generation war in the eyes of government officials and researchers

Subjective considerations, rather than extensive and well-founded research, now play an important role in attributing the 44-day war to the fifth generation. This is natural. The war has just ended. Research around it will be conducted after that.

However, in some respects it can be described as the latest type of war – the “fifth generation war”. Thus, in that war, non-kinetic abilities were widely used during military operations, along with kinetic means of struggle. Non-kinetic combat increases the army’s combat power through the widespread use of decentralized command and control systems of large-scale network sensors, unmanned aerial vehicles (UAVs). The goal is to increase the effectiveness of the military mission, increase the level of self-synchronization in the execution of actions and orders, accelerate decision-making and its duration. In such wars, which are seen as invisible touch or contactless combat, it is possible to punish the enemy without physical participation, using unmanned, cyber capabilities and global communication networks.

In order to substantiate my opinion, we consider it expedient to draw attention to an opinion contained in the report of the Federal Academy of Security Policy of Germany on the 44-day war. Thus, German analysts have linked one of the main reasons for the successful air campaign of the Azerbaijani Army to superior tactical intelligence on the battlefield, especially in the electromagnetic spectrum. According to them, “intelligence UAVs can capture unencrypted conversations of enemy soldiers on mobile phones, determine their location and immediately attack with the help of artillery and combat UAVs. Traditional anti-aircraft systems, used by Armenia, turned out to be practically helpless in front of this tactic”\(^5\).

We can fully agree with the similar opinion of the Russian researcher Denis Petrov that “in Karabakh we saw a new type of combat in which robotics, remotely controlled equipment and precision weapons play an important role”\(^6\).

In the views of Armenian officials on the war, the combination of kinetic and non-kinetic abilities is widely discussed. Artsrun Hovannisian, former spokesman for the Armenian Defense Ministry, admitted in one of his speeches during the operation that “in Karabakh is currently using the equipment in the arsenal of the superpowers – the latest Turkish and Israeli technologies. These are new UAVs, high-precision missiles, missile-artillery complex, EW systems. We see the war of the fifth generation”\(^7\).

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Armenian President Armen Sargsyan, who linked Azerbaijan’s victory with adept and widespread use of non-kinetic abilities (information, technology), admitted at a meeting with representatives of the diaspora in Moscow that “we have lost the information war. Azerbaijanis were seriously prepared for this. This war continues today, they are attacking us. We did not deal with it, that’s why we lost. Towards the end of the First Karabakh War, the Armenian army was technologically superior to Azerbaijan. In recent years, Azerbaijan has spent large sums to strengthen itself, and Armenia is proud of the glory of the past. During the 44-day war, Azerbaijan had a drone, while Armenia did not have such a weapon. The war of the future will be waged with the participation of artificial intelligence. That is why we must engage in science, new technology and education so that we do not lose again”\textsuperscript{8}.

Armenian Prime Minister Nikol Pashinyan also linked his country’s defeat to the use of different combat tactics by the Azerbaijani Army. According to him, the Azerbaijani army changed its tactics and attacked in small groups and managed to create panic in the rear of the Armenian army\textsuperscript{9}.

Armenian military expert Van Ambartsumyan linked the defeat of his country in the Second Karabakh War with the tactic of the Armenian generals in the 1980s, while Azerbaijan applied the concept of non-contact war. According to him, “the results of this war should form the basis of Armenia’s new military strategy. It is necessary to first learn what a non-contact war means, then to move towards it step by step, to prepare for it by obtaining all the necessary means. Armenia must change its military concept, which does not meet the criteria of the fifth and sixth generations of war”\textsuperscript{10}.

One of the main goals of the fifth generation and hybrid war is to take advantage of the dividing lines (political, economic and social storms and chaos) within the rival country\textsuperscript{11}. The result of the 44-day war was not limited to the battlefield, but also contributed to the chaotic processes in the internal life of Armenia. Touching upon the bitter consequences of the war, the Armenian President said: “We are all in crisis. This is a human rights, psychological, financial, economic and humanitarian crisis of a country, not a state, but a nation. In other words, we must first acknowledge that we are in a crisis, that is, we will not be able to continue living as before. Armenia is already a different country”\textsuperscript{12}.

In fact, it has always been a priority for Azerbaijan to take indirect, if not practical, steps to destabilize Armenia’s internal stability. President Ilham Aliyev described the role of Azerbaijan in the change of government in Armenia

\textsuperscript{8} A. Sargsyan, Every Armenian should think about Armenia as about his home: President RA – Armenian community, https://www.president.am/ru/press-release/item/2020/11/29/President-Armen-Sarkissian-in-Moscow/.
\textsuperscript{9} Z. Najafov, Pashinyan admitted his military-political defeat, it remains to be officially confirmed, https://aqreqator.az/en/siyaset/1058027.
\textsuperscript{10} Caspian Sea: War of the Fifth Generation, https://kaspiy.az/news.php?id=142745#YXPVD9J BzIU.
\textsuperscript{11} N. Maaz, 5 GW and hybrid warfar....
\textsuperscript{12} A. Sargsyan, Every Armenian should think about Armenia as about his home: President RA – Armenian community....
in 2018 as follows: “I do not want to exaggerate [Azerbaijan’s role], we do not want to call it [a change of government in Armenia], as they say, in our own name. However, it is also true that as a result of our policy, Armenia has been deprived of all projects that could bring them income”\textsuperscript{13}.

Contrary to the views of other foreign researchers, the Russian researcher V. Slipchenko in his work entitled “Sixth generation wars. Weapons and the military art of the future” analyzes the transformation of the nature of war in six generations. Cold weapons (knives, daggers, swords, axes, bows, and crossbows) were used in the wars of the first generation, tactical wars were waged by the type of war (military operations were conducted in units), the aim of the war was to destroy the enemy.

The second generation of wars used gunpowder and rectangular weapons, and the purpose of the war was to destroy the enemy, occupy his valuables and territory.

Third-generation wars often used rifled multi-shot weapons, operative-tactical wars (military operations were carried out by units and armies), the aim of the third-generation war was to dismantle the enemy’s Armed Forces, destroy its economy and overthrow its political structure.

Fourth-generation wars used automatic and jet weapons, tanks, aircraft, navies, vehicles, and communications. The military operations were waged on a strategic scale (military operations were conducted by along fronts by entire armies), the aim of the war, was to destroy the enemy’s Armed Forces, to overthrow its economic potential and political system.

The fifth generation of wars is already a nuclear war and can be the only and final in the evolution of mankind. Thus, in the event of a nuclear war there is potential for warring parties to destroy not only each other, but all of humanity. In this case, there is no need to talk about political goals.

All the power of the aggressor will be calculated to destroy the enemy’s economic objects by mass air strikes and strikes from various types of high-precision weapons (SDS)\textsuperscript{14}.

The appearance of high-precision weapons in the Armed Forces of any state allows for large-scale warfare in the future and massive high-precision fire on the enemy’s economic and other important facilities (government, energy center). In this case, the need to occupy enemy territory is eliminated, its economy and political system may collapse as a result of those blows. In modern times, high-precision weapons are becoming a decisive factor in the armed struggle and victory in war in a number of countries.

Both Western and Russian military science are almost identical in their approach to modern wars. These include improving the means of warfare, applying technological innovations to military purposes, replacing depressing wars with short-term and highly effective military operations, and dismantling

\textsuperscript{13} I. Aliyev, We also played a role in the collapse of the regime in Armenia, https://www.bbc.com/azerti/azerbaijan-44778547.

\textsuperscript{14} V.I. Annenkova, Military power in international relations: textbook, Moscow 2011, p. 496.
strategic logistics resources (material base and transport infrastructure in the enemy’s rear) that play an important role in the fate of war.

The Second Karabakh War is the only example in the world where one army used such high-precision weapons against another. Neither the United States, nor Russia, nor Israel, nor other countries have used UAVs on this scale. In such conflicts, UAVs have proven their utility. “To this must be added the tactics of the Azerbaijani Army for the destruction of enemy forces and air defense systems, the mass use of anti-aircraft missiles in the destruction of armored vehicles, highly protected targets and manpower”\(^\text{15}\).

The researcher does not rule out that the experience of the Azerbaijani Army will lead to changes in the conduct of combat operations.

Azerbaijan has conducted two unique operations. First, coordinating and adapting Israeli and Turkish UAVs, of course, required great skill. Therefore, strategic, large targets were destroyed by Harop, and armored vehicles and other targets were destroyed mainly by Bayraktar TB2. But as you know, Harop is a disposable weapon, so we chose very carefully the targets that we would strike with Harop\(^\text{16}\).

Second, Azerbaijan used Soviet-era An-2 aircraft to identify Armenia’s positions. Azerbaijan sent An-2 planes to the frontline by turning them into deceptive anti-aircraft guns, forcing the enemy to accept these deceptive targets as real targets and fight against them. As a result, the drones targeted important enemy air defense systems. These tactics are reminiscent of the tactics of the Vietnam War.

The Pentagon is also seriously analyzing the successful military tactics of the Azerbaijani Army in Karabakh and the effectiveness of the high-precision weapons used. The Pentagon plans to use the modern experience of the Azerbaijani Army, which destroyed Armenia’s air defense systems in that war, in the process of improving its air and missile defense systems. According to the Chief of Staff of the US Army, General James Charles McConville “The active use of unmanned aerial vehicles in Karabakh has highlighted the importance of improving the US Army, especially the Air Defense System. The battles in Karabakh and the battles in other places indicate that in future wars we will face deadly UAVs”\(^\text{17}\).

He said the Pentagon was developing a new system to pre-determine and destroy airspace where enemy strike drones were concentrated. However, in modern wars dominated by UAVs, tank and infantry armored vehicles are not expected to leave the battlefield. It is expected that in future wars they will be used as a means of protecting soldiers.


\(^{16}\) President Ilham Aliyev, *Before the Second Karabakh War, UAVs were not used on such a scale and effectively*, interview by Igor Korotchenko, “National Defense”, Baku 24.09.2021, https://president.az/articles/53199.

\(^{17}\) The US general gave an example of the combat tactics of the Azerbaijani Army, https://m.modern.az/en/news/259910.
Turkish Aviation General Erdogan Karakush’s views are also interesting. “Armenia’s air defense system has been paralyzed by anti-aircraft missiles and suicide drones” – he said. “Unmanned aerial vehicles cannot hit after the destruction of the enemy’s air defense system. After that, you can strike at the Armenian army as you wish”\textsuperscript{18}.

The role of drones in the success of our Armed Forces on the battlefield. The President of Azerbaijan Ilham Aliyev addressed the nation and in interviews with foreign media. During the ongoing military operations, on October 14, President of the Republic of Azerbaijan Ilham Aliyev said in an interview with France 24 TV channel: “We have destroyed $1 billion worth of Armenian military equipment through drones we received from Turkey alone. Of course, as you know, we also use drones from other sources. We use artillery, a wide range of military equipment. However, the drones alone caused $1 billion in damage to Armenia (these weapons are listed in the table below). This is a serious loss for them”\textsuperscript{19} (See Figure 1).

Professor Carlo Frappi, a researcher at the University of Ca’ Foscari in Venice, writes in his article entitled “The Nagorno-Karabakh Conflict and the Weight of Energy” that Azerbaijan has built the necessary attack and defense systems to force Armenia to compromise in negotiations. The asymmetry created by the strengthening of Azerbaijan’s energy potential [in the relations of military power between the two countries] was also reflected in the recent clashes\textsuperscript{20}.

It was a very difficult task to break through the echeloned eco-defensive barriers created by the enemy in the occupied territories for 30 years. That is why it seemed impossible to apply the Blitzkrieg scenario against the enemy. The “vertical strike” method applied by the Azerbaijani Army (destroying the enemy’s air defense system with high-precision weapons by seizing hegemony in the air, destroying its artillery systems without entering the battlefield) seriously undermines the enemy’s military resistance, was to force him to surrender by destroying his armed forces and military-economic base.

The Second Karabakh War has seriously affected the history of the world’s military art, military-industrial complexes and military budgets of different countries. Specialists of the Military Academy of the Air Defense Forces of the Russian Armed Forces have conducted an investigation into the air defense systems destroyed in Karabakh.

The main purpose of this investigation was the mass destruction of Russian air defense systems “Buk-M1”, “Tor-M1”, “Osa-AKM”, “Pantsir” and “Tunguska-M1” in the armament of the Armenian army and to clarify the reasons why Bayraktar TB2 drones practically dominated the airspace\textsuperscript{21}.

\textsuperscript{18} Azerbaijan Army destroyed 8,000 Armenian soldiers: they alone caused 1 billion damage to the enemy, https://www.aztoday.az/news/125308.html.
\textsuperscript{19} I. Aliyev, They alone caused 1 billion damage to the enemy, https://axar.az/news/siyaset/507333.html.
\textsuperscript{20} Azerbaijan has the necessary systems of attack and defense to force Armenia to make concessions, https://news.milli.az/politics/891032.html.
\textsuperscript{21} The Russian Military Academy is conducting research on air defense systems destroyed in Karabakh, https://azerforum.com/az/rusiya-herbi-akademiyası-qarabagda-mehv-edilen-hava-
Two results were obtained during the study. The first was due to the extremely low effective scattering area of Turkish drones. As a result, Russian missile defense systems were unable to detect them in time, and therefore the drones were able to deliver the first strike.

Secondly, another reason for the failure of Russian air defense systems was the operation of the Groza radio electronic warfare device purchased by Azerbaijan.
from Belarus. In many cases, this system misdirected missiles fired by “Osa-AKM” or “Buk-M1” complexes or destroyed them at the very beginning of the flight.

According to the study, new complexes should be developed to combat Turkish drones worth $ 5 million, which easily destroyed Russia’s $ 100 million air defense systems. This is because if the position areas of long-range air defense systems such as S-300 and S-400 are not reliably protected from drones, they can be destroyed by Turkish-made drones.

The Second Karabakh War did not pass unnoticed in the defense expenditures of major powers such as Russia, Great Britain and China. Thus, one of the main trends in Russia’s state armaments program until 2033 will be the use of unmanned vehicles in military conflicts. “Look at how the use of drones has changed the nature of military conflict. This is already a stable trend. At first, they were a means of reconnaissance, but today they are a means of strike. Karabakh has shown what they are capable of” — these words belong to the First Deputy Prime Minister of Russia Yuri Borisov.

The New Statesman, a leading British media organization that has been operating since 1913, writes that the Prime Minister of the United Kingdom Boris Johnson announced an additional £ 16 billion (over $ 20 billion) to the Ministry of Defense. There is no doubt that the allocation of so much additional British defense funding is due to the outcome of the war in Nagorno-Karabakh.

The successful operation of drones on the battlefields in the Karabakh conflict is forcing China to take urgent steps. All this has caused concern in China’s defense system and seriously compels the development of counter-strategies.

Armenia was forced to fight illegitimate, hybrid violence against the well-trained Azerbaijani Army. The hated enemy sought to compensate for its failure on the battlefield by launching operational tactical missile strikes on areas far from military operations, killing peaceful, innocent people and destroying civilian targets. During the 44-day war N. Pashnyan’s chief military adviser, the newly resigned Defense Minister Vagharshak Harutyunyan stated in an interview to the “Vesti” program of the “Russia 1” TV channel that “Armenia is deliberately firing rockets at Azerbaijani civilian cities, trying to create panic among the civilian population.” Realizing that the statement of the Armenian official was a crime against humanity, the management of the channel was forced to suspend the program.

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22 Borisov assessed the impact of the war in Karabakh and Syria on the state program of armament, https://www.rbc.ru/business/20/12/2020/5fdcb4629a794716349e5fc7.
Conclusions

Thus, the historic victory of the Azerbaijani Army in the Second Karabakh War allows us to draw a number of conclusions:

the de-occupation of our territories was successfully completed, the legitimate status quo was restored, the separatist Nagorno Karabakh Republic regime was destroyed, the ideological program of Armenia's occupation policy “Greater Armenia” and “Miatsum” were put to an end;

in the Second Karabakh War, the Azerbaijani Army conducted military operations typical of the 5th generation wars (based on the combination of kinetic and non-kinetic abilities);

Azerbaijan’s military experience in the Second Karabakh War opened a new page in the world’s military history, forced large states to improve their air defense systems and increase defense spending and the need to reckon with small states in modern wars;

the successful use of drones in the Second Karabakh War will open a new page in the activities of military-industrial complexes, increase the demand for Turkish and Israeli weapons in this direction;

in general, the brilliant military victory of Azerbaijan in the Second Karabakh War does not exclude the possibility of radical changes in military tactics, operational art and conditions, military strategies and armaments programs in both developing and powerful countries.

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THE SIGNS OF THE SECOND KARABAKH WAR TYPICAL OF THE 5TH GENERATION WAR

SUMMARY

This article discusses the great performance of the Azerbaijani Armed Forces in the Second Karabakh War, clarifies the features of Azerbaijan’s military operations typical of modern wars and explains the reasons for the victory from different perspectives and prisms. The article analyzes the military operations of the Azerbaijani Army in the Second Karabakh War through the spectrum of generational war theory and makes the case that it is a 5th generation war in the context of Western military history and a 6th generation war in the military history of Russia. According to the author, Azerbaijan’s victory was achieved due to the professional use of kinetic and non-kinetic capabilities. At the same time, the impact of this war on military tactics, operational art, military strategies, armaments programs and defense spending is undeniable.

KEYWORDS: conventional war, the concept of war generations, kinetic and non-kinetic capabilities, UAVs and high-precision weapons, modern wars