

ZDZISŁAW ŚLIWA *



Baltic Defence Collage, Tartu, Estonia

THE SYNERGY BETWEEN TECHNOLOGY AND SOLDIERS IN WARFARE – THE RUSSIAN ARMED FORCES IMAGE DURING THE WAR IN UKRAINE

ABSTRACT: The technology has impacted all the domains of human life and one of them are military affairs. The combination of sophisticated technologies and human capacities has created new qualities based on training and education allowing to achieve advantage over less developed nations. On the contemporary battlefield this combination of people and modern weapons could cause success or lead to failure if not achieved. The range of emerging military technologies is very wide including reducing dependency on people enhancing combat efficiency. However, the technological culture of societies matters to ensure that qualified personnel could operate such a variety of systems. This is related to the values of a society and respect for other people and nations facilitating understanding and following the rules and laws, which are recognized in democratic and civilized societies. The war in Ukraine has demonstrated the importance of synergy between technology and soldiers especially when comparing the Ukrainian and Russian armed forces. There is a different perception of those armed forces based on their performance during war. The paper will focus on the Russian way of conducting aggression against sovereign Ukraine to discuss two aspects of the Russian Federation's armed forces: technology and the human factor. The paper will use official documents and data within primary and secondary research allowing analysing and synthesising specific aspects of Russian efficiency during war.

KEYWORDS: War in Ukraine, Russian armed forces, technology in war, human factor

* dr hab. Zdzisław Śliwa, Baltic Defence Collage, Tartu, Estonia

 <https://orcid.org/0000-0002-5653-2941>  zdzislaw.sliwa@baltdefcol.org

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INTRODUCTION

The evolution of technology has been a factor changing all the domains of human life throughout centuries. It has also changed the requirements for people requesting to expand their abilities to use the new innovative and more complex systems based on training and education. It is including the military sphere as the combat systems are more sophisticated causing the need to have a qualified cadre able to operate them. For many armed forces, the old approach to military service based on conscripts is not fulfilling the requirements of the contemporary battlefield as modern weapons are demanding specific skills and extended training to operate them effectively. It is not only linked with an air force, navy or special forces as land forces are similarly operating technologically developed systems. The range of emerging military technologies is very wide including “advanced computing, ‘big data’ analytics, artificial intelligence, autonomy, robotics, directed energy, hypersonic, and biotechnology - the very technologies that ensure we will be able to fight and win the wars of the future”¹. The close and effective interaction between technology and soldiers is key to achieve success in a battle based on the proper use of possessed combat platforms. There is, of course, the great advantage of using advanced systems as it is reducing dependency on people for completing combat tasks as in the case of simple subsystems e.g., fire-and-forget, but still, an operator must have proper training about the application of such the systems in the combat. Therefore, when properly used, modern military technology is enhancing combat efficiency for benefit of friendly forces with a damaging effect on an enemy. The level of the technological culture of society matters as it is ensuring that qualified personnel operate a variety of systems but parallel it is an impetus toward innovation. Moreover, the human factor is closely linked with the legal and “ethical considerations” of using emerging artificial intelligence military technologies “because a human operator would not make specific target selection and engagement decisions”². This is related to the values of a society and respect for other people and nations facilitating understanding and following the rules and laws, which are recognized in democratic and civilized societies.

¹ K. M. Saylor, *Emerging Military Technologies: Background and Issues for Congress*, Congressional Research Service, Washington 06 April 2022, p. 1.

² *Ibidem*, p. 28.

The war in Ukraine has demonstrated the importance of synergy between technology and soldiers. It revealed its significance when comparing the Ukrainian and Russian armed forces. Although both were using similar technologies at the beginning of the war, the operations presented critical differences between them. Ukraine was able to prepare soldiers to effectively use the West combat systems before and during the war. Moreover, the education and training during the last two decades transferred units into high readiness forces for contemporary warfare requirements. The combination of modern technologies and skilled combatants led to successful operations; the will and readiness to defend the country reinforced this combination. On the opposite, the Russian armed forces, although modernized since 2008, failed to merge both and it was fighting 'the last war' using not only old equipment but also the old mindset. The paper will focus on the Russian way of conducting aggression against sovereign Ukraine.

The paper aims to focus on the two aspects of the Russian Federation's armed forces, namely technology and the human factor, recognizing that the war in Ukraine presents many deficiencies in this respect. Those are also lessons identified to be studied by other armed forces to avoid such the failed combination of two important constituents of the military affairs. The paper is based on available official documents and data examined within primary and secondary research allowing analysing and synthesising specific aspects of Russian efficiency during war. It will also touch briefly Ukrainian human factor as an attacked nation. The first part will focus on the technological aspect to be followed by the human dimension of war. The latter will consider such aspects as ethnicity and psychological challenges. The conclusions are to summarise major findings reflecting the complexity of the security situation and Poland's role and the challenges the nation is facing.

TECHNOLOGY AS A TOOL FOR WAR

Russia, during the last decade, has provided many advertisements about successful cutting-edge technologies presenting them as technologically more advanced than the West concepts. Such announcements were seen as an efficient way to forward the national narrative of a technological race in which Russia has declared itself a participant; in many ways, the message itself becomes the weapon. Russia is very effective in presenting some new weapon systems using even animation and this narrative was followed by the West media as a hot topic, the reality however did not meet those STRATCOM messages. This was a partially successful

approach for pushing forward its narrative using the West influencers and experts amazed by such news and shows impacting the West's perception of Russian armed forces. It was visible in connection with the 2018 Trump–Putin summit in Helsinki³ when the TASS news agency revealed advanced weapon systems. The five nuclear-capable weapons were revealed in March 2018: 'Burevestnik' nuclear-powered cruise missile; the 'Avangard' hypersonic missile system; the 'Sarmat' intercontinental ballistic missile (ICBM); the 'Poseidon' underwater drone; and the 'Kinzhal' hypersonic missile⁴. The message was clearly to impress President Trump and to show up a technological advantage over US and NATO. However, as assessed by US experts those combat systems were not yet fully operational and it would not happen in years to come⁵. The assessment is that concerning Emerging and Disruptive Technologies (EDTs) "Russia is lagging behind world leaders, first and foremost the United States and China"⁶.

Some of those projects are not new as many concepts originated during the Cold War period but they were not or only partially upgraded so still are under development, experiments or modification. Those are anyway part of the Russian version of deterrence which in Russian is 'sderzhivanie', which is "a purely reactive concept" merging "deterrence by denial in combination with resilience"⁷. The announcements about new technologies had more political than military value to support the regime, the image of a technologically developed nation, and to facilitate contracts for the military industry. It is to preserve the image of a superpower comparable with the US, maybe to deter China but also to be an argument for arms control discussions. How to compare those innovative technologies with dirty, hungry soldiers with old Soviet equipment and poorly equipped as seen in Ukraine?

³ J. Diamond, *Trump sides with Putin over US intelligence*, CNN Politics 16 July 2018, <https://edition.cnn.com/2018/07/16/politics/donald-trump-putin-helsinki-summit/index.html> (accessed: 30.10.2022)

⁴ T. Wesolowsky, *Here's What We Know: Russia's New Generation Of Nuclear-Capable Weapons*, Radio Free Europe 19 February 2019, <https://www.rferl.org/a/here-s-what-we-know-russia-s-new-generation-of-nuclear-capable-weapons/29778663.html>; B. Lendon, *Russia shows off new weapons after Trump summit*, WRAL Digital Solutions 20 July 2018, https://www.wral.com/russia-shows-off-new-weapons-after-trump-summit/17709879/?comment_order=forward (accessed: 30.10.2022)

⁵ D. Palavenis, *The Use of Emerging Disruptive Technologies by the Russian Armed Forces in the Ukrainian War*, Air Land Sea Application Center 01 October 2022, <https://www.alsa.mil/News/Article/3170285/the-use-of-emerging-disruptive-technologies-by-the-russian-armed-forces-in-the/> (accessed: 26 November 2022).

⁶ D. P. Jankowski, *Russia and the Technological Race in an Era of Great Power Competition*, Center for Strategic and International Studies, September 2021, p. 2.

⁷ V. Veebel et al., *Western Misperception when Deterring Russia: Cultural and Linguistic Factors*, "Journal of Politics and Law" 2020; Vol. 13, No. 3, p. 153.

The technological related narrative are vital as propaganda tools. Lately, the war proved limitations of the air defence systems, drone industry, and electronic warfare (EW). The technology is not the only issue as it is closely linked with the capabilities of the Russian Military Industry and available funds. The delivery of the next-generation tank T-14, based on the Armata platform and presented in 2015, was postponed a few times, and finally planned to be delivered only in 2022. However, it probably did not happen, maybe the serial production will start in the coming years, but sanctions after aggression on Ukraine will stop this process for years to come. It is estimated that as of now some 20 plus are operational, and probably slightly more have been delivered to the 2nd Guards Tamanskaya Division in 2022⁸. The T-14 will rather not be in combat in Ukraine as of the threat of losing during battles allowing to study them by Western experts. A similar situation is with the Sukhoi Su-57 'Felon' fifth-generation fighter jet. There are just "10 test prototypes and six serially produced aircraft have been produced — of which two have been lost in crashes during test flights"⁹. The promise was to start Su-57s serial production by 2022 and to deliver more than 70 'Felons' by 2028. But it will not work as this aircraft "need a large number of advanced microprocessors" so as of sanctions "AI capabilities of the aircraft may just remain a pipe dream"¹⁰. The EU sanctions for the delivery of civilian aircraft components will further impact the overall problems of Russian industry as some 75% of components are produced in the EU, US, or Canada¹¹. It will impact heavily also the military air industry complex.

The 2008 Russian armed forces' procurement and modernization promises were very ambitious, and it has not been achieved with some differences concerning services. The point is that land forces are relying in many cases on modernized equipment like tanks, and armoured combat vehicles. During the war old Cold War-era equipment was activated although not fully as many platforms were disabled by stealing precious metals or even whole parts. However,

⁸ *Russia to Receive Advanced Armata Tanks in 2022*, "The Moscow Times" 04 March 2021, <https://www.themoscowtimes.com/2021/03/04/russia-to-receive-advanced-armata-tanks-in-2022-a73149> (accessed: 26 November 2022).

⁹ P. Suci, *Russia says an upgraded version of its struggling Su-57 stealth jet finally made its debut flight*, "Business Insider" 03 October 2022, <https://www.businessinsider.com/russia-says-upgraded-su57-stealth-jet-finally-made-debut-flight-2022-10> (accessed: 26 November 2022).

¹⁰ A. Paleja, *Russia completes debut flight of upgraded Su-57, its fifth-generation fighter*, "Interesting Engineering" 31 October 2022, <https://interestingengineering.com/innovation/russia-debut-flight-upgraded-su-57> (accessed: 26 November 2022).

¹¹ В. Лукашевич, Санкции - это катастрофа для нашей гражданской авиации, "Novye Izvestia" 26 February 2022, <https://newizv.ru/interview/26-02-2022/vadim-lukashevich-sanktsii-eto-katastrofa-dlya-nashey-grazhdanskoy-aviatsii> (accessed: 26 November 2022).

progress was done with artillery systems and those capabilities have been used with devastating effects, unfortunately, especially against civilian infrastructure. The investment was done in airborne and special forces. There is a new formation – the Rosguardia, which is already used in Ukraine to support land forces with specific duties and tasks. The air force received quite a few new aircraft and helicopters and there are modern constructions such as ‘Kamov’ Ka-50 and Ka-52, aircraft have been modernized, like MiG-31 interceptors, Su-24, and Su-25 attack jets, Su-27 and Su-33 fighters. The aim to deploy Su-57s squadrons to service by 2025 and the 5th generation stealth bomber in 2027 is unrealistic as of delays and technological shortcomings. There is also a problem with the Russian navy as it is not capable to produce major surface ships, the only aircraft carrier is not operational, and current major ships are old. There is some progress with corvettes equipped with ‘Kalibr’ missiles, but the fate of the Black Fleet and guided missile cruiser ‘Moscow’ is showing significant limitations to operate effectively. The only progress is with nuclear and conventional submarines as major deterrence tools. The modern system as the ‘Kinzhal’ hypersonic missile was already claimed to be used in Ukraine, although it was not possible to verify it. Nevertheless, it could be seen as “a signal to Ukraine that Russia has options to escalate, and a message to NATO” asking for developing “new capabilities, operational concepts, and defence design”¹².

Another aspect is the hit on the Russian military industry, which is an important component of income and critical to delivering weapons and supplies to continue the war. First, it will lose abilities to produce sophisticated military platforms as of sanctions and next, possible clients will not rely on old platforms so easily destroyed with relatively cheap anti-tank and anti-aircraft systems. Some systems like modernized tanks, new BMPs, air defence, helicopters, and even unexploded cruise missiles, have been only partially destroyed or captured allowing the Alliance experts to study them to see their weaknesses. The NATO nations will now know better how Russia is fighting, and what are the vulnerabilities of combat platforms, including such the fragile equipment such as command and control, and WRE systems as those have been captured to study them. There are other ambitious goals as by 2025 robotic systems are supposed to comprise around 30% of all military equipment¹³, as stated by then deputy prime

¹² H. Ellyatt, *Russia says it fired hypersonic missiles in Ukraine. What are they and why would Moscow use them?*, CNBC 22 March 2022, <https://www.cnbc.com/2022/03/22/hypersonic-missiles-why-would-russia-use-the-kinzhal-in-ukraine.html> (accessed: 16 September 2022).

¹³ А. Зинченко, Е. Згировская, *Боевые роботы защитят Россию*, “Gazeta.ru” 04 August 2016, <https://www.gazeta.ru/army/2016/08/03/9747017.shtml> (accessed: 12 November 2022).

minister Dmitry Rogozin “to conduct battles without any contact, so that our boys do not die, and for that, it is necessary to use war robots”¹⁴. Such statements are not reflected during the war in Ukraine and will not meet aims up to 2025. Russian military industry is not able to produce advanced military systems using emerging disruptive technologies without Western components and it will have a long-term impact on the delivery of new combat platforms. It will not change in the next decade and support from such nations as Iran will not cover the gap, although there will be attempts to bypass sanctions through third actors or proxies such as Belarus.

CHALLENGES TOWARD THE MILITARY LEADERSHIP

The real problem is still with the quality of leadership personnel as critical to command and conduct operations. The death of generals and senior officers on the frontline is an example of deficiencies in command and control asking them to lead by example or rather to enforce broken discipline. Even during war officers have not been able to effectively command troops, and there were even cases of abandoning soldiers. The shortage of a reliable communication system at the tactical level worsened command and control causing a lack of situational awareness exposing commanders to direct attacks when using private mobile phones. The conscript army is not enough for contemporary warfare; young conscripts are even morally too weak to conduct operations efficiently. There is a lack of Russian Armed Forces’ abilities for long and large-scale operations, the war in Ukraine proved a shortage of logistical support and maintenance capabilities, and a shortage of ammo, food, fuel, and spare parts already on the third day of operations. There is a problem with top-level leadership, and it is about corruption among ranks trying to use the positions for their benefit and prosperity. The armed forces contracts relate to huge funds causing stealing by commanders at all levels of leadership; it is not the only military problem, but it has significantly impacted the overall Russian society and it is part of the economy. There is old fashion mentality among commanders a kind of ‘Potemkin Village’ mindset to report only success and what is expected by superiors and political leadership. It means that those are cheating when presenting the status of units, and the industry is cheating when describing abilities. This is visible when Russian troops are eating food

¹⁴ D. Hambling, *Armed Russian robocops to defend missile bases*, “New Scientist” 23 April 2014, <https://www.newscientist.com/article/mg22229664-400-armed-russian-robocops-to-defend-missile-bases/> (accessed: 26 November 2022).

that is seven years after its date of expiration, poor uniforms and outdated equipment, and supplies shortage. The false information, based on a desire to satisfy superiors, was one of the origins of the failure to set unachievable political-military goals and reach desired end states during the war.

There is a great difference between the West and Russia as the former is investing in professional soldiers and the latter is considering soldiers (especially conscripts) as a mass easy to replace. Another aspect is the quality of non-commissioned officers (NCOs) who in the West armies' well-trained and motivated military are being able to lead small teams in combat following principles of mission command. Russia is building such the corps within ranks but still, it is not meeting the requirements of the modern battlefield; 'praporshchik' as a rank used by the Russian Armed Forces has not reached the same professional level as in the modern armed forces. Keir Gilles recognized this already in 2014 when discussing the progress of the 2008 reform of Russian armed forces. He estimated that the quality and skills of junior leadership are a challenge followed by "sustained reporting of units being unable to carry out their functions since the NCOs or conscripts tasked with carrying out duties previously assigned to officers simply did not have the training or experience to do so"¹⁵. There is a confrontation between two different military cultures when Ukrainian troops are fighting the West style based on small units' tactics allowing them to inflict significant casualties. They are motivated and it is clear to them what they are fighting for. Russian units are not combat-effective at the expected level as many do not understand the reasons and goals of the fight; casualties are further degrading morale and will to fight. Poor logistics and shortages of food and fuel, outdated equipment, poor weather conditions, and the hate toward them presented by even the Russian-speaking Ukrainian population are not supporting morale.

In general, there is a problem with the motivation of soldiers and those are committing many acts of robbery, stealing even basic goods, vandalism, and lack of respect for the civilian population as has been presented during the war in Ukraine. The perception of being 'cannon fodder' has been often expressed by soldiers causing many to be demoralized, avoid fighting, or refuse to follow orders¹⁶. Nevertheless, the cruelty presented by intentionally attacking

¹⁵ K. Giles, A. Monaghan, *Russian Military Transformation — Goal in Sight?* The Strategic Studies Institute (SSI), U.S. Army War College Press, Washington May 2014, p. 36.

¹⁶ L. Lewis, *'We were sent as cannon fodder. We're killing peaceful people': Weeping Russian POWs say they had no idea they were being sent to war and were made 'to attack people defending their territory'*, Daily Mail 02

civilian targets, critical infrastructure, and killing unarmed civilians is common for the aggressor and there is nothing to justify such war crimes. There is still a Soviet approach to people based on the saying that 'we have enough people' (Rus. У вас достаточно людей), especially among the non-Russian ethnic group. Michał Piekarski assessed that the serfdom and Soviet-era approach toward people is still visible in the Russian army¹⁷ and ethnicity underpinned by nationalism and racism is playing a negative role.

ETHNICITY AS AN ISSUE IN THE RUSSIAN ARMED FORCE

Another aspect is the ethnic composition of the armed forces as many conscripts are coming from very poor regions of the country. An example is the 58th Army from the South Military District with headquarters in Novocherkassk; the majority of soldiers are from the Caucasus including those from Dagestan, Kalmykia, or Kabardian regions. Depending on a specific period of conscription they are presenting some 40% of manpower¹⁸. It is more than the overall number of Russian minorities accounting for about 20% of the population¹⁹ with some 38 million living in the countryside²⁰. The army is responsible for security in Dagestan, North Ossetia, and Chechnya. The quality of those soldiers is lower than those from other regions as they live in the poorest regions of Russia. The average life span for men is 50 years and their physical status is inferior as an effect of poor living conditions, and there is a lack of basic goods and even food. Therefore, poverty and lack of social mobility are factors to join the armed forces allowing constant income and an opportunity to move out of their place of origin, usually rural and impoverished regions. Their education is similarly low, followed by low technical culture impacting their ability to operate equipment and to fight effectively. Another aspect is that those Caucasian soldiers are offended by native Russians' nationalism and lack of respect for their life. It is evidenced during the War in Ukraine as "soldiers recruited from the

March 2022, <https://www.dailymail.co.uk/news/article-10568725/We-sent-cannon-fodder-killing-peaceful-people-Weeping-Russian-POWs.html> (accessed: 23 September 2022).

¹⁷ M. Krawiel, *Rosyjska armia tkwi w czasach sowieckich. Ukraińska zarządzana jest jak korporacje*, Portal Money.pl 03 April 2022, <https://www.money.pl/gospodarka/rosyjska-armia-tkwi-w-czasach-sowieckich-ukrainska-zarządzana-jest-jak-korporacje-6752871687043584a.html> (accessed: 17 September 2022).

¹⁸ S. Zagórski, *Mięso armatnie. Na wojnę Putina idą biedni chłopcy z Kaukazu*, WP Magazine 02 April 2022, <https://wiadomosci.wp.pl/mieso-armatnie-na-wojne-putina-ida-biedni-chlopcy-z-kaukazu-6753898008521216a> (accessed: 23 September 2022).

¹⁹ *Russia Demographics Profile*, Index Mundi https://www.indexmundi.com/russia/demographics_profile.html (accessed: 27 November 2022).

²⁰ Population of Russia counts 146 million, with 108 million living in cities. Demographics of Russia - statistics & facts, Statista, <https://www.statista.com/topics/5937/demographics-of-russia/> (accessed: 27 November 2022).

outer reaches of the former Soviet Union, including the largely Muslim North Caucasus, make up as much as a third of known military fatalities and in some cases, up to 50% of the wounded in the war in Ukraine”²¹. It is recognized by local governments in the Caucasus, but those authorities are corrupt and support Moscow not trying to exploit the natural resources of their regions and are not concerned about the life of conscripts. Based on research about Russians killed and wounded in action Kamil Guleev, from the Washington-based Wilson Centre think-tank, explained “ethnic minorities are not so much a minority there. Judging from the casualty lists, minorities are wildly over-represented on the battlefields as cannon fodder”²². This is partially confirmed by the presentation of pictures and clips showing prisoners of war as many are beyond doubt from the Caucasus, Siberia and Central Asia. Those are often seen being in poor physical condition, in worn-out uniforms, or being accused of robbery, rape, violation of human rights, and other war crimes. The taken-over phone conversations are further showing an interest in grabbing whatever is possible to take home. All those characteristics are not suitable for civilized and quality armed forces recognized in the West; moreover, such brutality is accepted by commanders at all levels and political leadership. Among units involved in the massacre of civilians in Bucza, there were units from the East Military District including e.g., the 64th Separate Motor Rifle Brigade from 35th Army stationed in Knyaze-Volkonskoye, near Khabarovsk. Again, many soldiers were coming from those regions which are poor compared to big cities in the European part of Russia. Cooperating with Rosguardia, the so-called ‘Kadyrovtsy’, is another very brutal ‘force’ used previously to annihilate any Chechnya opposition further damaging the picture of contemporary Russian armed forces. The information to recruit some 16,000 Muslim soldiers from Syria as foreign fighters, who could join Ukraine’s Foreign Legion to fight Russia is another factor degrading the image of armed forces²³. However, two months after the announcement no Syrian regiments or a significant number of fighters were reported. Using social networks and PMC Wagner connections to recruit Syrian mercenaries, usually “people in a hopeless situation”, was not effective as few

²¹ C. Milmo, *Putin accused of using troops from ethnic minority backgrounds as cannon fodder in Russia-Ukraine war*, Associated Newspapers Limited 25 March 2022, <https://inews.co.uk/news/putin-accused-using-troops-ethnic-minority-backgrounds-as-cannon-fodder-1539841> (accessed: 23 September 2022).

²² Ibidem.

²³ M. Chulov, *Syria recruiting troops from its military to fight with Russian forces in Ukraine*, “The Guardian” 11 March 2022, [Syria recruiting troops from its military to fight with Russian forces in Ukraine | Russia | The Guardian](https://www.theguardian.com/world/2022/mar/11/syria-recruiting-troops-from-its-military-to-fight-with-russian-forces-in-ukraine) (accessed: 15 September 2022).

decided to fight for Russia²⁴. It was a similar attempt as recruiting people from South Ossetia, the DPR and LPR to fight in Ukraine “to minimize the political damage from Russian losses”²⁵. The mercenaries, including even Hezbollah fighters, intended to support Russian armed forces are also a signal about a problem with real military capabilities to wage urban combat asking for specific training and usually linked with heavy casualties. The highly discussed force is the ‘Wagner’ Private Military Company (PMC) another ruthless group of mercenaries, recruiting also prisoners who are committing war crimes. PMC ‘Wagner’ is a platform for its sponsor, Prigozhin, to build political power in Moscow. The crimes are presenting not only a lack of quality soldiers but also a lack of respect for civilians exposed to being attacked and offended by people with significant criminal records.

THE PSYCHOLOGICAL FACTOR OF THE COMBAT IMPACT ON SOLDIERS

Technology is well connected with the psychological impact on soldiers. It is happening during the war in Ukraine degrading the morale of Russian active duty and especially mobilized soldiers. The reason is that they see the inadequate equipment received, and the poor potential of their weapon systems if obtained at all on time and with the required quality. The constant withdrawal is adding another stress component as victory is not the same as presented by propagandists. Heavy losses and constant and precise attacks by Ukrainian combat systems are causing questions about their own capacities. Next, the persistent pressure, insecurity and uncertainty are affecting the psyche with a longstanding impact on Russian troops to be again integrated into families and civilian life. The flying UAVs, like the famous ‘Baykar Bayraktar TB3’, snipers, precise rocket strikes by M142 HIMARS, lack of own aviation to control skies, burning tanks and armoured fighting vehicles paralleled with cold, frostbites or hunger are completing this psychological and devastating cause. Moreover, history proves that war, which is a state of immediate danger to life, triggers in many people the lowest instincts, including the compulsion to kill, revenge, murder or rape. A devastating example is the abuse and mass murder of Ukrainian civilians in Bucza, Marijampole, Kherson, and other cities and villages. It was a reflection of the lowest instincts and total lack of respect for human life and violation of all the

²⁴ S. Al-Khalidi, L. Bassam, *Some Syrian veterans ready for Ukraine fight, commanders say*, Reuters 20 March 2022, <https://www.reuters.com/world/some-syrian-veterans-ready-ukraine-fight-commanders-say-2022-03-20/> (accessed: 14 September 2022).

²⁵ A. Volkova, *To see Donbass and die. Will Russia bring Syrian mercs to Ukraine?* “The Insider” 5 May 2022, <https://theins.ru/en/politics/250943> (accessed: 16 September 2022).

rules attributed to civilized societies. The deliberate crime to intimidate the civilian Ukrainian population became the only option when the Russian Federation was not capable to win using the military instrument of power. The effect was the opposite of what was expected, as Russia suffered a moral defeat seen by the whole civilized world and was recognized as a barbarian nation murdering innocent unarmed civilians without no reason. At the same time, armed forces were not able to achieve desired end state showing major weaknesses in planning, executing and sustaining operations at all levels of war. It will have an effect not only on the consolidation of Ukrainian society but the post-traumatic stress disorder (PTSD)²⁶ effect will harm soldiers impacting Russian society. The combat situation, death of comrades or their wounds, being ambushed or taken as a prisoner and tortured are extreme situations and any person could be broken. The feeling of being guilty will have long-term negative consequences when Russian troops will be back home. PTSD is well connected with combat stress during the Ukrainian war, which “covers the full range of behaviours in combat, from behaviours that are highly positive to those that are totally negative”²⁷. Especially the negative aspects are exposed leading to misconduct stress behaviours and criminal acts like e.g.: mutilating enemy dead, killing prisoners, killing non-combatants, torture, brutality, indiscipline, combat or refusal to obey orders, desertion and many others²⁸. All those aspects are very visible in aggressive actions conducted by Russian soldiers being under investigation by the International Criminal Court. The soldiers’ mental health will be affected in long term²⁹ by such symptoms as re-experiencing, hyperarousal, changing negatively the way of thinking and avoidance of having a source in negative thoughts, bad memories, and poor self-assessment. Those will cause difficulties in daily life and adaptation back to normal life with reminiscences of traumatic experiences after the death of friends, injury or death to innocents, atrocities, seeing bodies or wounds; being hostage or Prisoners of War or seeing torture³⁰. All those effects were faced by

²⁶ U.S. Army recognizes PTSD as “psychological trauma, by definition, involves a crisis situation which makes the person feel he is changed for the worse. The implication is that the victim has suffered a psychological injury and bears the psychological scars.” *FM 22-51, Leaders’ Manual for Combat Stress Control*, Headquarters, Department of the Army, Washington DC, 29 September 1994, para 6-2.

²⁷ *FM 22-51, Leaders’ Manual for Combat Stress Control*, op. cit., para 2-9.

²⁸ For details see table 2-2 and Chapter 3, 4 in: *FM 22-51*, op. cit. para 2-9, Chapter 3 and 4.

²⁹ *What is PTSD? Combat Stress for Veterans; Mental health*, Leatherhead 2019, <https://www.healthline.com/health/mental-health/hyperarousal#outlook> (accessed: 07 November 2022).

³⁰ *What causes hyperarousal?* Healthline Media, New York, <https://www.healthline.com/health/mental-health/hyperarousal#causes> (accessed: 07 August 2022); *Post-traumatic stress disorder (PTSD)*, NHS UK, 27 September 2018, <https://www.nhs.uk/conditions/post-traumatic-stress-disorder-ptsd/causes/#> (accessed: 07 August 2022); *FM 22-51, Leaders’ Manual for Combat Stress Control*, op. cit., para 6-2.

Russian soldiers especially those mobilized and send to war without any training. The Russian case is not a separate one, as during history wars triggered the lowest instincts in some people causing them to commit war crimes or crimes against humanity within “a widespread or systematic attack directed against any civilian population”³¹. It was recognized by Alexey Kovalev, who assessed that whatever will be the outcome of the war that “Russia has already suffered a crushing moral defeat” and it will impact the society sooner or later, although “a mass antiwar movement is still a way off”³². The technological impact on psychological factor, as discussed previously, is further impacting Russian soldiers when they are attacked by Ukrainian Defence Force using modern combat systems, which are better than those they possess. It will cause doubts about national capacities and the power of armed forces in general. It is visible that even the Russian air force was not able to achieve air superiority, not even mentioning achieving air supremacy. Similarly, the symbol of the navy cruiser ‘Moscow’, hit the perception of national pride.

THE RESPONSE TO THE THREAT FROM THE RUSSIAN FEDERATION

The war significantly changed the image of the Russian armed forces; those are not similar to those presented during military parades and large-scale exercises amazing the West and China. It is impacting the NATO perception of Russia as the enemy but will also underestimate its armed forces' image inside Russia; sooner or later the real picture of the war will be available to the domestic audience showing poor technology and untrained, scared conscripts. Credibility will be shaken. Nevertheless, we should never totally underestimate Russia, as some well-equipped professional units are still not used, maybe those are rather to be ready to protect the regime in the case of civil war or mass riots. Russia was highlighting the importance of technology by presenting its cutting-edge technology and denying such abilities to the NATO nations. The speed of decision-making, based on autocratic governance and leadership, as highlighted when concerning Russia is also questionable. Moreover, even after long-term preparations for the war logistics failed and it was impossible to achieve the aims of the war.

³¹ See the definition: R. Vernon, *Crime against humanity. International criminal law*, Britannica, <https://www.britannica.com/topic/crime-against-humanity> (accessed: 25 November 2022).

³² A. Kovalev, *Russia has suffered a crushing moral defeat. And Russians know it*, The Market Herald 11 March 2022, <https://themarketherald.com.au/russia-has-suffered-a-crushing-moral-defeat-and-russians-know-it-2022-03-11/> (accessed: 25 November 2022).

The war in Ukraine proves the aggressive drive of Russia to rebuild the sphere of influence and to change the regional security situation and deterrence. The unsuccessful and brutal attack presented however that Russian armed forces are not what is presented on the Red Square during military parades. It is causing many questions about the real value and capabilities, nevertheless, it should not be underestimated. Russia is claiming that NATO deployments are a threat, which is not true as of the Alliance's defence posture and lack of aggressive intentions. But the Kremlin narrative is using this language for internal reasons. In the future, further aggressive steps by this nation should not be fully excluded and ignored as was the case of undermining the importance of Crimea annexation and war in Georgia. To deny such a threat to NATO the presence 'on the ground' must be boosted by having high readiness capabilities to establish the Alliance counter-anti access/denial means as a deterrent on the Eastern Flank (Front). The concept is to be based on the threat assessment leading to developing those capabilities, which will enable to deny a potential enemy to interfere with national sovereignty, interests, and security. Such concepts should be based on understanding that national security is not only a military domain, and it includes all the domains of governance. Therefore, such concepts and Total Defence, Whole-of-Government-Approach are asking for developing capabilities and national assets to deny, defend and resist. In Poland, it relates to preparing society during peacetime to react in the case of crisis and war.

Poland's 'National Security Strategy of the Republic of Poland' (NSS) published in May 2020 confirmed Russian neo-imperialist policies and ambitions as the most severe threat to Poland's and European security system³³. It presented the concept of common civic defence idea (which could be seen as a total defence concept) founded on "the efforts of the entire nation and building an understanding for the development of the Republic of Poland's resilience and defence capabilities"³⁴ It is to be based on building military and civilian capabilities parallel preparing laws, procedures, and capacities across the whole nation to orchestrate all available instruments of power. In a military context, the decisive role is belonging to the Ministry of Defence and Chief of General Staff. As for the specificity of possessing both the Operational Command and the General Command, the role of force provider and force user must be

³³ *Strategia Bezpieczeństwa Narodowego Rzeczypospolitej Polskiej*, Biuro Bezpieczeństwa Narodowego (National Security Bureau), Warsaw 2020, https://www.bbn.gov.pl/ftp/dokumenty/Strategia_Bezpieczenstwa_Narodowego_RP_2020.pdf (accessed: 20 November 2022).

³⁴ *Ibidem*, p. 15.

carefully recognized and based on clear legal regulations dividing responsibilities. Those are jointly responsible and accountable for the effective functioning of the national defence system to deter Russia and to defend the country arm-in-arm with NATO partners. The advantage is membership in the Alliance as a credible and accountable partner, as it allows receiving support in the military domain (NATO) and non-military spheres (EU). The additional advantage is a strategic partnership with the US, as seen lately by procuring combat platforms for all services like armour, long-range artillery, air defence, and antiship systems on short notice. In this context, national capabilities “must be supported by increased responsibility by our allies in Europe for their share of the costs for such developments”³⁵. It is asking to possess credible Joint Intelligence, Surveillance and Reconnaissance (JISR) systems covering the Kaliningrad Oblast and Russian mainland to have updated data during peacetime to use them and allow to continue gathering data during crisis and war. At the same time, own forces should present capabilities and their readiness and decisiveness to use them as part of a deterrence posture by denial and by punishment. Respective commanders are to introduce such capabilities into services, based on a clear understanding of the specificity of threat needs and the role of services to achieve joint effects of operations. The thoroughly and purposefully developed combat systems commanded by experienced leadership are having a significant impact and direct effect on extended security. Therefore, it is key to show the national ability to deter (by denial and punishment) parallel presenting resistance and resilience potential. It must be understood by an enemy that any aggressive action is not to be cost-effective and potential gains will be lower than costs. There are many decisions toward achieving both and those must be professionally calculated and implemented as long-term procurement plans and not hasty decisions. There are good steps taken into developing society resilience comprehension, just to mention the newly created Territorial Defence Forces, but again it is connected with the proper understanding of their role and possessed capabilities. So, integration of the whole society supported by security and defence-related education is required to build national resilience and defence.

³⁵ J. Lokshin, *Anti-Access Area Denial*, Missile Defense Advocacy Alliance, July 2016, <https://missiledefenseadvocacy.org/missile-threat-and-proliferation/todays-missile-threat/russia/russia-anti-access-area-denial/> (accessed: 20 November 2022).

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