Protection and the Change in the Character of War

By Captain Matthew R. Bigelow

The nature of war is generally unchanging; it is violent, interactive, and political. If any of these elements are missing, there is no war. Only the character of war—through politics and society—changes. Prussian general Carl von Clausewitz called this the "Spirit of Age."[1] Technology influences cognitive and material shifts in the character of war across time and space. Due to the evolving impact of technology on the character of war, coupled with environmental and resource considerations, neither the offense nor the defense maintains a stranglehold on victory. The character of war is assessed through von Clausewitz's trinity: military, government, and people.[2]

Throughout history, there are examples in which advances in technology have shifted advantages in acquiring a decisive victory. History also illustrates that the side that does not possess the superior technology struggles in achieving its military objectives. Furthermore, war is not won only through decisive victory; the will of an actor may be broken due to exhaustion or attrition. Worthwhile case studies in which technology changed the character of war include the machine gun in World War I, the radio and tank in World War II, and Soviet-developed capabilities used by Arab nations during the Yom Kippur War. The world has recently witnessed a shift in the character of war through the use of loitering-munition technology and other unmanned aerial vehicles (UAVs), as demonstrated by the 2020 Nagorno-Karabakh conflict. Like the Russo-Japanese War, which was a precursor to World War I, or the Spanish Civil War, which preceded World War II, the recent Nagorno-Karabakh conflict provides a reflection point regarding what future war against a peer adversary might look like. This conflict must be further studied and analyzed from the protection war fighting function perspective. In addition, if necessary, the resulting information should drive protection-related changes or modernizations within the realms of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P).

The technology of the machine gun changed the character of war during World War I. The machine gun increased overall lethality and mitigated against mass frontal assaults. In addition, it increased the effective range and reach against forces on the battlefield.[3] In order to achieve a decisive victory during the middle phase of the war (in 1916), the French and British attacked the Germans with mass at the Battle of the Somme. With their hardened trenches and defensive positions, the Germans used machine guns to prevent the British and French from achieving their objective of ending the stalemate and the war.[4] The technological advances of the machine gun shifted the strength of war from mass to machine and, thus, gave the Germans the advantage of increased lethality.

The character of war was also changed by radios and tanks during World War II. With speed and surprise, Germany launched an offensive against France through the Ardennes Forest in 1940. The Germans bypassed the French fortifications known as the Maginot Line. French defensive measures failed to stop the operation of the German tanks.[5] The use of radio communication in conjunction with tanks enhanced Germany's ability to conduct command and to increase its overall speed on the battlefield. Every tank was equipped with a radio; this was not possible for the French.[6] This strengthened Germany's offensive operations. The Germans' superiority and their investment in technology led to the French failure to meet the objective of defending along the border. Together, the radio and the tank changed the character of war at the dawn of World War II.

The modern 2020 Nagorno-Karabakh conflict between Azerbaijan and Armenia not only illustrates a potential shift in the character of war, but also shows what multi-domain operations—particularly with the use of loitering munitions and other UAVs for targeting, sensors, and deep-strike capabilities—could look like in a future multidimensional fight. The conflict was fast-paced, and it enhanced kill chains (processes of finding, fixing, and finishing a target) with the synchronization of machines and technology across multiple domains—particularly air, land, and space.[7] With UAVs, countries can build large air forces on tight budgets and use the technology for deep strikes and to enable maneuver. Whereas the United States is investing trillions of dollars in the F-35 fighter jet and other air domain capabilities, other nations are investing in cheaper intelligence and strike assets. Modernizing the air force with additional capabilities and capacity is precisely what Azerbaijan did over the past 2 decades—and what Armenia failed to do.

In September and November of 2020, Azerbaijan and Armenia fought over rough, mountainous terrain in the Caucasus Region. The conflict lasted 44 days and resulted in an Azerbaijan victory. Estimates of Armenian losses include more than 900 tanks, mobile platforms, air defense assets, and command and control nodes. Unfortunately, Armenia's relic Soviet era air defense and technology could not detect or defeat Azerbaijan's loitering munitions and other UAVs. With the help of strategic partners (particularly, Turkey and Israel), Azerbaijan's battlefield victory demonstrated its ability to effectively synchronize capabilities from multiple domains in a unified manner against Armenian forces.[8]

Thanks to changes in geopolitics—especially in Israel and Turkey—Azerbaijan invested heavily in loitering munitions and other UAVs prior to its fight against Armenia in 2020. A loitering munition is a specialized UAV equipped with a warhead that is designed to attack ground targets. Loitering munitions have the ability to "loiter" in the air for a period of time, sense or detect a target, and strike. In addition, they can function as "suicide drones." This technology improves precision, detection, and lethality on the battlefield. In addition, some models of loitering munitions have a "wave off" feature that allows operators to cancel an attack while in flight.[9]

During the short Nagorno-Karabakh conflict, Azerbaijan targeted Armenia's air defense capabilities first. Next, Azerbaijan shifted its attention to command and control nodes in the support area. There was a stalemate in maneuver between the two countries in the close area. It was the deep targeting and the strikes in Armenia's rear area that turned the tide of the conflict in Azerbaijan's favor. Azerbaijan capitalized on information operations by publishing videos of its UAV strikes on the Internet and social media. This contributed to Armenia's defeat by breaking its intangible will. Videos that are still available across the Internet to this day show strike after strike in Armenia's rear area. Armenia incorporated protection and active and passive security measures (camouflage, concealment, movement control, emission controls, hardening of positions, and observation posts) and fought to the best of its abilities. However, these measures failed to mitigate Azerbaijan's sensors and synchronized strikes.[10]

The Nagorno-Karabakh conflict should be studied and lessons learned should be incorporated across DOTMLPF-P in order to prepare for future conflicts. The Nagorno-Karabakh conflict is a modern-day version of the Yom Kippur War. When conflict erupted in the Middle East in 1973, the United States studied the use of Soviet Union capabilities and modernized across DOTMLPF-P. The Yom Kippur War forced the U.S. Army to change its doctrine and focus away from counterinsurgency to active defense and then to air/land battle (large-scale combat operations). New force structure and modernization involved the big five—the Abrams tank, the Bradley fighting vehicle, the Apache helicopter, the Black Hawk helicopter, and the Patriot air defense system. New combat training centers were built to replicate combat operations against the Soviet Union. The United States shifted focus to a three-dimensional future war with a peer adversary. Just as with the Yom Kippur War, the Nagorno-Karabakh conflict could shape changes across the U.S. Army—particularly in the areas of doctrine, capabilities, and force structure.[11]

Adversaries closely watched the Nagorno-Karabakh conflict and noted Azerbaijan's air superiority and sensor-shooter integration, particularly in the areas of kill chains and deep strikes in the rear area. This change in the character of war, and possibly a revolution in military affairs may, hinder America's air superiority in future conflicts. Armenia incorporated several means of protection in its rear area: dispersion, camouflage, trenches, and air missile defense. None of these measures were effective in stopping the Azerbaijan dominance.

The impact and utility of drone strikes demonstrated during the Nagorno-Karabakh conflict create an interesting problem—especially as we again shift our doctrine and focus away from counterinsurgency to large-scale combat operations and the convergence of domains. Lack of rear area security command and control, air space control, mobility, and survivability has been identified as a couple of gaps (Gaps 6 and 7 of 17 critical gaps) in need of rectifying if we are to win against a peer adversary.[12] It is imperative that land forces continue to invest in survivability and protection measures to counter UAVs and machines while on the glidepath to WayPoint 2028 and AimPoint 2035.[13]

The subject of counter-unmanned aerial systems is included in the current protection war fighting function discourse. However, the corresponding doctrine is limited and in need of updates to reflect the recent shift. The current protection doctrine offers little direction in countering loitering munitions or other UAVs, other than discussions on basic tactical tasks and coordination measures.[14] The U.S. Army Military Police School (USAMPS), Fort Leonard Wood, Missouri, is incorporating the lessons learned from the Nagorno-Karabakh conflict in to the annual course updates to specific Captain's Career Course classes—particularly into the blocks of instruction that cover protection and threat analysis—to bring awareness to the new shift in the character of war. In addition, a USAMPS Captain's Career Course instructor participated in a course designed to deepen overall understanding of loitering munitions, other UAVs, and countermeasures in order to incorporate that information throughout professional military education.

Capabilities, force structure updates, and countermeasures are in development. However, we can take action now to counter drones and loitering munitions and other UAVs at the tactical level. At the tactical level, smaller and more dispersed command and control nodes with limited signatures make it more challenging for sensors to find, fix, and kill. In addition, at the tactical level, it is paramount to practice operations security and camouflage techniques to reduce signatures. Dispersion, mobility, and limitations across the electromagnetic spectrum (to operate in a denied, degraded, and disrupted operational environment) may increase survivability. Large footprints or command and control nodes that maintain static positions and high signatures increase the risk of detection by sensors.

The character of war continuously changes through time. We have witnessed such shifts throughout history, and we are now seeing a change in the air domain—the use of UAVs, as demonstrated in the recent Nagorno-Karabakh conflict. There are lessons to be learned from this conflict, and efforts to change must be made—especially within the protection war fighting function and our shift to a multi- or joint domain fight. It is paramount that we continue to study this conflict and that we continue to evolve. Our adversaries certainly are.

Endnotes:

[1]Christopher Mewett, "Understanding War's Enduring Nature Alongside Its Changing Character," *War on the Rocks*, 21 January 2014, <https://warontherocks.com/2014/01/understanding-wars-enduring-nature-alongside-its-changing-character/>, accessed on 4 October 2021.

[2]Ibid.

[3]Michael Adas, *Machines as the Measure of Men*, Cornell University, 1989, pp. 366–367.

[4]Blaine T. Browne and Robert C. Cottrell, *Uncertain Order: The World in the Twentieth Century*, Prentice Hall, 2003, pp. 68–69.

[5]MacGregor Knox and Williamson Murray, *The Dynamics of Military Revolution—1300–2050*, Cambridge University Press, 2001, pp. 151–174.

[6]Karl-Heinz Frieser, "The Blitzkrieg Legend—The 1940 Campaign in the West," *Canadian Army Journal*, Vol. 9, 2006, pp. 133–136.

[7]John Antal, "Top Attack: Lessons Learned from the Second Nagorno-Karabakh War," *Mad Scientist Laboratory*, 1 April 2021, <https://madsciblog.tradoc.army.mil/317-top-attack-lessons-learned-from-the-second-nagorno-karabakh-war/>, accessed on 4 October 2021.

[8]John Antal, "Death from Above—How Secure Tactical Video Transmission Impacted the Second Nagorno-Karabakh War," 2021, <https://www.academia.edu/45460690/Death_from_Above_How_Secure_Tactical_Video_Transmission_Impacted_the_Second_Nagorno_Karabakh_War>, accessed on 4 October 2021.

[9]Ibid.

[10]Ibid.

[11]Ibid.

[12]*Multi-Domain Large Scale Combat Operations (MD-LSCO) Army Organization Gap Study (17x Critical Gaps)*, U.S. Army Combined Arms Center, 16 October 2019.

[13]*Waypoint 2028–2029*, U.S. Army Combined Arms Center, 6 August 2021, <U.S. Army STAND-TO! | Waypoint 2028-2029>, accessed on 4 October 2021.

[14]Army Doctrine Publication 3-37, *Protection*, 31 July 2019.

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Terence T. Finn, *America at War: Concise Histories of the U.S. Military Conflicts From Lexington to Afghanistan*, Penguin Group, 2014.

James R. Fitzsimonds and Jan M. Vantol, "Revolutions in Military Affairs," *Joint Forces Quarterly*, Spring 1994, pp. 24–31, <https://apps.dtic.mil/dtic/tr/fulltext/u2/a360252.pdf>, accessed on 4 October 2021.

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("Paradigm Shift: . . . ," continued from page 17)

antiaccess and area denial technology, is the future fight reliant upon the primacy of the defense? Is the Army capable of countering these defenses and protecting an advancing force?

By employing the *Army Futures Command Concept for Protection 2028*,[8] the Army is capable of defeating stand-off and protecting the force. The central idea of the concept is that "Army forces, as part of joint, interagency, intergovernmental and multinational teams, conduct protection activities in all domains, the electromagnetic spectrum, and information environment, to preserve commanders' critical capabilities, assets, and activities; deny threat and enemy freedom of action; and enable access to achieve protected windows of superiority."[9] The concept outlines how protection expands beyond passive actions, checklists, and the prevention of enemy activities in friendly areas and is more active across broader spaces. Commanders must be able to see adversaries and deny them anonymity, counter specific strengths, achieve positions of advantage, and expand and exploit gained areas. The future Army must do more than simply create a list of things to be protected and describe the assets that will be used to protect them; it must simultaneously deny the threat in all domains while opening protected windows of superiority that enable access for friendly forces. For the Army to succeed, the whole of government and other joint, interorganizational, and multinational partners must expand the protection capability, increase capacity in competition, and operate at scale in armed conflict. Protection must be proactive and anticipatory in all domains and must be integrated with maneuver.

Endnotes:

[1]FM 100-5, *Operations*, 14 June 1993 (now obsolete).

[2]Ibid.

[3]FM 3-0, *Operations*, 6 October 2017.

[4]Ibid.

[5]FM 3-37, *Protection*, 30 September 2001 (now obsolete).

[6]Army Doctrine Publication (ADP) 3-37, *Protection*, 31 July 2019.

[7]U.S. Army Infantry School Soldier Handbook (SH) 21-76, *Ranger Handbook*, February 1985.

[8]U.S. Army Futures Command Pamphlet 71-20-7, *Army Futures Command Concept for Protection 2028*, 7 April 2021, <afc-pam-71-20-7-afc-protection-concept-vfinal-apr21.pdf>, accessed on 9 September 2021.

[9]Ibid.

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