Infantry

Winter 2023-2024
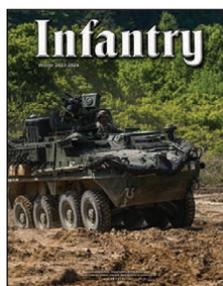
FRONT COVER:
Soldiers from 1st Battalion, 17th Infantry Regiment, 2nd Stryker Brigade Combat Team, 2nd Infantry Division, conduct a company live-fire exercise at Chipori Range in South Korea on 8 May 2023. (Photo by SSG Effie Mahugh)

BACK COVER:
Soldiers from the 82nd Airborne Division conduct a joint air assault operation during Joint Readiness Training Center Rotation 23-07 at Fort Johnson, LA, on 30 April 2023. (Photo by SPC Luis Garcia)
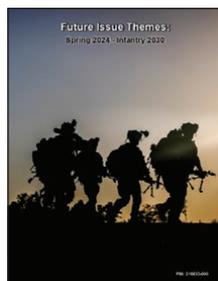
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By Order of the Secretary of the Army:

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Infantry

Commandant's Note

BG MONTE L. RONE
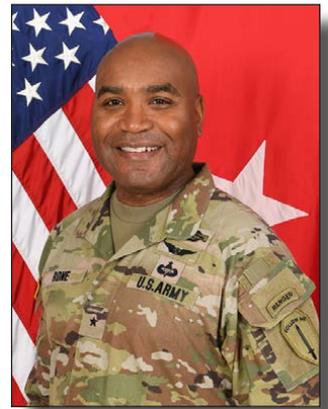
On 31 August 2023, I was given the privilege to assume the role as Commandant of the United States Army Infantry School (USAIS) and the Director of the Soldier Lethality Cross-Functional Team. I am deeply honored to serve in both positions and excited to have the opportunity to shape the Infantry of 2030 and beyond.

I would like to take this opportunity to share my thoughts on how we continue to train and develop Infantry Leaders and Soldiers for future conflict. Much of our approach reflects **CSA George's four focus areas for the Army**. We seek to deliver **warfighting** capacity with efforts to improve our <u>primary mission as the USAIS</u>. We contribute to **delivering ready combat formations and undergoing continuous transformation** with our efforts to <u>Transform Infantry 2030 and beyond</u>. We strive to **strengthen the profession of arms** with our efforts to <u>manage Infantry talent and maintain the health of the Infantry Branch</u>. Our most basic mission has not changed. The Infantry exists to <u>close with and destroy the enemy</u> utilizing <u>fire and movement</u> to defeat or capture enemy forces or repel their assault by <u>fire, close combat, and counterattack</u>.

Infantry Branch Vision (USAIS)

The vision of USAIS is to educate, train, and develop Infantry Soldiers and Leaders:

• Leaders and Soldiers who <u>thrive under conditions of uncertainty</u>.

• Leaders and Soldiers with an <u>unwavering commitment</u> to the profession of arms.

• Leaders and Soldiers who are imbued with the <u>Warrior Spirit</u> — those possessing <u>physical</u> and <u>mental toughness</u> and the innate ability to close with and destroy the enemies of our Nation now and in the future.

Train and Develop Infantry Leaders and Soldiers

We are aligning the outcomes of our initial entry training and professional military education to focus on warfighting and building strong teams. We seek to empower the NCO Corps through professional education focused on delivering infantry and small unit excellence, as well as, providing knowledge, skills, and abilities aligned with both Large-Scale Combat Operations and the changing character of warfare on the contemporary battlefield. USAIS must synchronize efforts to integrate improvements to remote sensing, loitering munitions, and robotics into its formations ahead of our competitors, and we will revise Infantry doctrine as part of the DOTMLPF-P effort to account for both the risks and opportunities the new technology provides. Nothing is off the table as we have already incorporated UAS, anti-armor training, medium and heavy machine gun training and qualification, and integrated combat platform familiarization into Infantry One Station Unit Training (OSUT). We have begun several initiatives to increase the number of Ranger-qualified Soldiers and Leaders across all BCTs through the Active Component Ranger Team Leader Initiative program with OSUT, as well as incentivizing programs for service in Ranger-qualified MTOE and TDA positions. The intent of all these efforts is to better prepare Infantry Soldiers for success on day-one of their arrival to the operating force.

Transform the Infantry Force of 2030 and Beyond

USAIS and OCOI recognize our responsibility to integrate efforts across a range of stakeholders as we continuously transform to the Infantry force of 2030 and beyond. Efforts to increase Infantry capacity in ABCTs, develop the transition plan for SBCTs to the Medium BCT, and increase the lethality of IBCTs requires coordination and governance across the Army enterprise. Our focus on the <u>Squad as a platform</u> and our ties to the Close Combat Integration Enterprise will enable Infantry formations to incorporate advances in Human-Machine Interface, lethality, mission command, mobility, and protection to increase Warfighting capability while reducing Soldier Load. Finally, we are committed to working across force design, development, and integrators to refine the ways and means to enable remote sensing, robotics and future munitions below the brigade level while reducing our risk in the electromagnetic spectrum.

Manage Infantry Talent and the Health of the Branch

We will not forget our responsibility to manage Infantry talent and critical role the health of the Infantry Branch has for our Army. We will reinforce efforts to strengthen the profession by promoting the development and distribution of Warfighting expertise through venues such as this. I encourage Infantry Leaders to take advantage by submitting articles to both dialogue and debate across the Infantry Community. In the end, we must ensure the strength of the branch aligns with both current and future force requirements.

Our career development models provide a road map for Infantry Leaders and Soldiers to remain competitive across the Army and Joint community. We look forward to working with Commanders, Soldiers, and Infantry Branch to align Soldiers and Leaders to career enhancing and broadening opportunities throughout their careers.

In closing, I want to tell you how proud CSM Dein and I are of our Infantry team. The young men and women who arrive to Fort Moore are simply the best. They are all eager to earn their spots on the Infantry team and live up to our standards of excellence. Our cadre and instructors spend long hours providing personalized training and education across over 50 programs of instruction overseen by the Infantry School. Thank you all for your investment in our branch. More importantly, thank you and your families for your service and the many sacrifices you have made and continue to make in support of our Army and the Nation.

Follow Me!

How the Stryker Brigade Fights

and the Alignment of the SBCT in Corps and Division Formations

LTC (RETIRED) BILL KOZIAR

> *"The most lethal part of our fast, quiet Stryker vehicles is the superbly trained, rested, and aware nine-man rifle squad that comes out of the back."*
>
> — COL Stephen Townsend[1]
> *Then-commander of the 3rd Stryker Brigade Combat Team, 2nd Infantry Division*

The purpose of this article is to examine how the Stryker brigade combat team (SBCT) fights in multi-domain operations (MDO) given its unique capabilities and limitations. It also examines how the Stryker brigade may further support the Army's shift in focus to the division and corps level by aligning an SBCT to each corps as well as the priority armored divisions, providing similar capabilities to what an Army corps had during the Cold War era. This would also provide corps and division commanders a much-needed increase in Infantrymen to augment an armored brigade combat team's (ABCT) number of Infantrymen (108 squads vs. 36 squads in an ABCT) to better allow for consolidation of gains. Aligning Stryker brigades to a corps and division can significantly enhance the warfighting capabilities of those formations and provide corps and division commanders better options in the fight. While the unique mission variables of a particular fight will often cause leaders to modify their employment, this article outlines how the Stryker brigade fights as well as provides an overview of the strengths and limitations of the brigade, a short review of how armored cavalry regiments (ACRs) were aligned with corps, and a recommendation on how to employ the SBCT in today's Army. Additionally, four of the six active-duty Stryker brigades are orphaned from any division structure and should maintain current enablers to provide the Army the greatest flexibility in future employment.

How the Stryker Brigade Fights

The Stryker brigade is a combined arms formation built around highly lethal infantry squads with inherent maneuverability and speed to move to the decisive point on the battlefield. It is designed to move rapidly to a position of relative advantage, dismount, and fight effectively in close and urban terrain. The Stryker infantry battalions employ tactically mobile combat vehicles to reach final assault

positions to close with and destroy enemy formations using a combination of dismounted infantry supported by 30mm heavy precision fire weapons, indirect fires, and anti-armor systems (Javelins; tube-launched, optically-tracked, wire-guided [TOW] missiles; AT-4s; and M3 Carl Gustaf systems) employed primarily by infantry squads, scout teams, and engineer sappers. An example of this mobility has been validated recently during the 2nd Cavalry Regiment's deployments to and from Estonia, Latvia, Lithuania, Romania, and Poland by ground from their home station in Germany.

Infantry Battalions

When operating in open terrain, our three Stryker infantry battalions are, by design, more lethal in the defense than on the attack. When they do attack, they do so by exploiting periods of transition to rapidly seize key terrain and gain a position of relative advantage over an adversary. This forces the enemy to attack the SBCT in hasty defensive positions (preferably in complex terrain) where their numerous anti-tank systems, secured with dismounted infantry, can have the greatest effect. Infantry companies within the brigade must, therefore, be experts at repositioning rapidly, often covering extended distances at high speeds and then transitioning rapidly to a hasty defense in complex terrain to overwatch enemy avenues of approach.

The Stryker infantry carrier vehicle (ICV) is not a helicopter, nor is it a Bradley. A helicopter is designed to transport infantry to the battlefield, withdraw from the fight, and then extract them when complete. Conversely, a Bradley is an infantry fighting vehicle that provides mobile protected firepower on the battlefield secured by organic Infantry Soldiers. The Stryker ICV falls between these two systems. The Stryker infantry carrier is a system consisting of a rifle squad, a two-man crew, and a Stryker vehicle. The Stryker's primary mission is to transport Infantry Soldiers to the probable line of contact, provide supporting fires to enable their advance against the enemy, and then be prepared to resupply them when needed, evacuate them when wounded, or extract them when complete. Strykers are not cached in distant hide sites, rendering their mounted firepower irrelevant to the dismounted Infantrymen, nor are they employed as an assaulting element in open terrain where their limited survivability can place 11 lives at risk simultaneously. While supporting dismounted maneuver, Strykers are crewed by competent and trained leaders who can maneuver all four vehicles in a platoon as a single unit or in split sections in support of the infantry squads.

Air Assault

All three infantry battalions are trained to execute air mobile and air assault operations to enable the vertical envelopment of enemy forces in the close fight. The brigade executes shallow insertions (less than 10 kilometers beyond the forward line of troops) with a deliberate plan for ground assault and link up by the unit's Strykers under the command of a tactical leader.

Reconnaissance

The reconnaissance squadron's primary job is to gain and maintain contact with the enemy throughout the depth of the brigade's operational environment to answer the brigade's priority information requirements that drive decisions and operational maneuver. The squadron is continuously active during combined arms maneuver and does not have periods of dedicated reconstitution. Given the brigade's superior ability to move rapidly out of contact, the reconnaissance squadron focuses its reconnaissance efforts on finding and confirming potential friendly avenues of approach that are free of significant enemy contact but allow infantry battalions to maneuver rapidly against assailable enemy flanks. Scout platoons in the reconnaissance squadron and infantry battalions are equipped to establish both dismounted and mounted observation posts using the Long-Range Advanced Scout Surveillance System (LRAS3) system, inserted by ground or air. Additionally, the reconnaissance squadron is the executor of the brigade deep fight and employs intelligence, surveillance, and reconnaissance (ISR); artillery; and aircraft to attrit and disrupt enemy forces ahead of the forward line of own troops (FLOT).

Fires

The brigade employs the towed M777s on specific targets that are essential to its scheme of maneuver. The brigade always seeks to mass the effects of at least two batteries on every brigade-level target. This enables immediate effects on target and the ability to reposition rapidly to avoid enemy counterfire. Given their slower displacement and movement times, M777

Soldiers assigned to 2nd Squadron, 2nd Cavalry Regiment dismount a Stryker during a live-fire exercise in Germany on 8 September 2023. (Photo by Kevin Sterling Payne)

platoons will bound to new locations after a number of rounds are fired. This requires agile batteries and fire direction centers that are highly trained at rapid limbering and emplacement procedures. Additionally, to maintain the rapid tempo of advance, the field artillery battalion generally has at least one battery moving to establish position areas behind the lead maneuver elements. The brigade employs reinforcing or general support rocket fires, when available, as its primary counterfire asset and to destroy enemy high priority targets in the deep area identified by the reconnaissance squadron. The brigade has 36 x 120mm Stryker mortar carriers which present an extremely lethal indirect fire capability to serve as the primary indirect fire asset to the infantry company and cavalry troop. In the attack, battalions leverage their mortars in the close fight primarily to suppress enemy defensive positions to enable the advance of dismounted infantry to a position of relative advantage.

Protection

For mobility and countermobility, the SBCT employs defensive obstacles to turn enemy maneuver forces into complex terrain where they can be engaged by their infantry squads' Javelins. The brigade conducts deliberate breaching using the principles of SOSRA (suppress, obscure, secure, reduce, and assault), but does so primarily in congested and complex terrain where it can avoid long-range fires from defending armor and heavy machine guns. Alternatively, battalions and companies are prepared to execute in-stride breaches in complex or urban terrain as part of continued offensive operations. For this reason, SBCT engineers are trained to support maneuver operations while decentralized in platoon formations. The SBCT currently has two sapper squads with Stryker Engineer Support Vehicles (ESVs). Keeping these like assets in the brigade is key to maintaining the speed and maneuverability of the formation. Other types of engineer battalions would not provide optimum support to the SBCT formation.

Sustainment

Since its inception, the SBCT has been lacking in sustainment assets. Originally designed as an interim force, the SBCT was short on logisticians with haul vehicles capable of being transported by C-130 (a requirement that has since been lifted). Given the limited logistics assets in a Stryker brigade, key capabilities are centralized in the brigade support area (BSA) where each battalion is represented by its forward support company command post. The brigade maximizes lift aircraft to push Class V and critical Class IX to all battalions to maintain momentum. The brigade support battalion (BSB) maintains a forward logistics element (FLE), commanded by the A Company/BSB commander, that positions behind the lead battalions to provide rapid ground resupply of critical commodities such a fuel and artillery ammunition.

The Armored Cavalry Regiment (ACR)

During the Cold War, with the U.S. Army at a strength of 780,000 and 18 divisions, the three armored corps each

Soldiers assigned to 1st Squadron, 2nd Cavalry Regiment fire 120mm mortar rounds during the Mortar Training and Evaluation Program in Germany on 28 June 2022. (Photo by SGT Randis Monroe)

included an armored cavalry regiment of 5,000 Soldiers that gave the corps commander a mobile armored force to perform a variety of missions.

The "Division of 86'" and the "Army of Excellence" restructuring during the mid-1980s changed the structure of the armored cavalry regiment. Restructuring was conducted for two main reasons:

1) It better supported the Airland Battle concept that relied on the corps commander to successfully execute the campaign plan, and

2) It helped to align the Army's combat requirements and force structure.

As the centerpiece of AirLand Battle doctrine, the corps required key assets to help influence the battle. The ACR was designed to reduce battlefield friction by providing the corps commander with detailed intelligence about the enemy and the terrain. The fundamental roles of cavalry formations are to perform reconnaissance and provide security in close operations. This intelligence allowed the commander to understand and control the critical portions of the corps' battlespace.

As inherently flexible and mobile organizations, cavalry units have historically executed various missions, including close reconnaissance, flank security, counterattack force, mobile reserve, covering retreats, and pursuit of the enemy. The regiment gained flexibility by possessing organic capabilities in all the battlefield operating systems (BOS): intelligence, maneuver, fire support, mobility and survivability, air defense, combat service support, and command and control. Field Manual 100-15, *Corps Operations*, prescribed a role for the cavalry regiment in both the close battle and the deep battle. In the close battle, the regiment conducts reconnaissance and security missions. In the defense, besides screen, guard, and cover, the cavalry regiment, usually augmented with infantry, could also conduct an effective economy-of-force mission.

How Can the Army Employ the SBCT Formation?

Because of the large number of mounted infantry with overwhelming firepower and anti-armor capabilities, the SBCT is well suited for a variety of roles for the corps and division commander to fill gaps, roles, or mission sets similar to the ACR in the Cold War era. With a disproportionate number of Infantrymen, the SBCT can fill gaps in the ABCT and provide light formations a highly mobile force with a significant upgrade in fire power, all while providing the optimal solution to consolidate gains.

Recommendations

Given the lack of world stability and an Army based mainly in the continental United States (CONUS), the need for an even more flexible brigade exists today. This is particularly critical since the Stryker brigade can deploy as part of a corps or division. The SBCT is equipped and structured to ensure the success of corps and division MDO operations. Its deployability, mobility, lethality, and versatility all focus on the neces-

Soldiers from the 56th Stryker Brigade Combat Team maneuver through the Mojave Desert during National Training Center Rotation 22-08 at Fort Irwin, CA. (Photo by CPT Cory Johnson)

sity to develop the correct type of formation that the corps and division commander can use to augment their existing forces. Each corps should be aligned to an active-duty Stryker brigade. The remaining active-duty SBCTs should then be aligned to the priority armored divisions to allow for combined training opportunities (warfighter exercises, combat training center [CTC] rotations, etc.) and assigned mission sets. This would entail leaving the current Stryker brigade with its organic field artillery battalion, reconnaissance squadron, and brigade engineer battalion intact to provide the corps and division commander with a robust and highly maneuverable force that is able to fill a variety of missions.

"In urban combat, no better vehicle exists for delivering a squad of Infantrymen to close in and destroy the enemy. The Stryker is fast, quiet, survivable, reliable, and lethal. Most important, it delivers the most valuable weapon to the battlefield: a Soldier."

— **LTC Michael E. Kurilla**[2]
Then-commander of 1st Battalion, 24th Infantry Regiment,
1st SBCT, 25th Infantry Division

Notes

[1] "Accelerating Momentum: The Stryker Brigade Combat Team as a Learning Organization," Association of the United Stated Army Torchbearer National Security Report, June 2006, https://www.ausa.org/sites/default/files/TBNSR-2006-Accelerating-Momentum-The-Stryker_Brigade-Combat-Team-as-a-Learning-Organization.pdf.

[2] Letter to the Editor, *The Washington Post*, 5 April 2005, https://www.washingtonpost.com/archive/opinions/2005/04/05/strykers-get-the-job-done/644b557f-84dc-4bed-ace1-bd2bbf581e31/.

LTC (Retired) Bill Koziar served as a military analyst for the Stryker Warfighters' Forum at Joint Base Lewis-McChord, WA, for 13 years. During that time, he conducted more than 500 combat leader interviews of returning Stryker Soldiers from Iraq and Afghanistan. He is a graduate of the Field Artillery Officer Basic Course and Cannon Battery Officer Course at Fort Sill, OK; the Infantry Officer Advanced Course at Fort Benning, GA (known as Fort Moore since 2023); and the Command and General Staff Course at Fort Leavenworth, KS. He earned a Bachelor of Arts in government and a Master of Education from the College of William and Mary as well as a Master of Business Administration from St. Martin's University.

Fighting Fast and Flat:

Use of 'Secure-but-Unclassified-Encrypted' Networks for C2 at the Squadron and Below
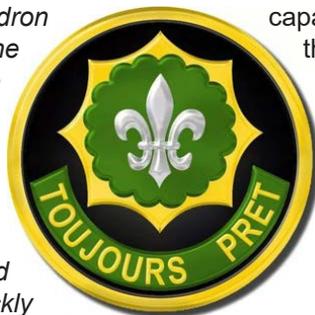
MAJ MICHAEL R. NILSEN
LTC PETE ERICKSON

In the not-too-distant future, a Stryker squadron commander in the offense learns that the enemy has shot a Family of Scatterable Mines (FASCAM) obstacle, engulfing one of the squadron's troops while it attempted to breach the enemy's integrated defensive belt. It is a perilous moment. Momentum stalls, and friendly forces face significant risk of sustaining greater casualties. As the commander and leaders in the tactical command post (TAC) quickly think through options to continue the attack, only one stands out: reposition the squadron's attached North Macedonian company so that it can bring its dismounted anti-tank weapons to the fight. However, speed is essential; failure to accomplish this task quickly risks the success of the entire NATO multinational division headquarters.

Fortunately, the Stryker squadron has integrated with the North Macedonian company via a Secure-but-Unclassified-Encrypted (SBU-E) partner network, which enables interoperability alongside Integrated Tactical Network (ITN) equipment. Use of such a network enables the squadron to disseminate required fighting products quickly and securely, resulting in a high degree of shared understanding. Within two hours of notification, the North Macedonian company receives a fragmentary order and a concept sketch from the squadron, makes and disseminates its plan, and repositions itself at key terrain near the forward line of troops (FLOT). The squadron resumes the attack, and the North Macedonians destroy more than a company's worth of enemy BMPs and tanks.

The scenario described above is not far-fetched. In fact, it describes what occurred to 3rd Squadron, 2nd Cavalry Regiment during the final day of Exercise Saber Junction 23, which occurred in September 2023 at the Joint Multinational Readiness Center.

As modern threats have evolved in recent years, Army units have recognized several imperatives, including trimming the size of command posts, maintaining connectivity in contested environments, and distributing useful fighting products that generate speed and shared understanding on the battlefield. This article describes one way that Army units at the squadron level and below can achieve the last two of these imperatives in cooperation with partner units. In most situations, Army tactical units can significantly increase their capabilities by exercising a SBU-E network rather than relying solely on their traditional classified networks. After framing the general need for a network that is widely accessible yet still secure, this article explains what a SBU-E network is and then highlights its major advantages, chief of which is the ability to better integrate and operate with our multinational partners.

The Need for a SBU-E Network

Most leaders who have worked with multinational partners at some point during their careers would likely agree that our current U.S. security processes, caveats, and authorities — which are in place for understandable reasons — do not always facilitate seamless integration with our multinational partners. And yet, the exercise of command and control (C2) and the achievement of shared understanding are essential to achieving unity of effort and success on the battlefield.[1] In the modern European theater, the opportunities and challenges of working with multinational partners can be especially acute. Indeed, the chance for U.S. forces to operate alongside of multinational partners enables NATO to become stronger together, but our current security measures can sometimes seem a necessary but frustrating roadblock to effective integration with these same partners. When tactical units cannot talk to each other, nor access the same battlefield information (such as common graphics, operation orders, and other reports and data), the same units cannot fight as effectively as possible, and the whole operation can suffer. A SBU-E network can help overcome this important challenge.

What is SBU-E?

Initially fielded as part of a new system that leverages technology known as the ITN, SBU-E is a cost-effective, secure-but-unclassified network that creates a flattened communications architecture across multiple types of electronic devices.[2] Using a level of encryption that is comparable to electronic banking, SBU-E provides a secure medium by leveraging advanced encryption protocols.[3] A primary feature of a SBU-E network is access to the Team Awareness Kit (TAK) software application, a flexible software suite that can be used in various operational environments. This common operating picture (COP) tool for squadrons/battalions down to the squad level is fielded as part of ITN to many infantry

brigade combat teams (IBCTs); better yet, numerous civilian and partner militaries use TAK.

Across the world, the ability for U.S. forces to operate with and alongside our multinational partners is paramount. And yet, the U.S. military's use of classified networks such as the Secret Internet Protocol Router (SIPR) can at times be both an advantage and a hindrance. On one hand, SIPR networks work very well within the U.S. joint force, mainly because access to these networks is not an issue. On the other hand, use of classified networks hinders the ability for U.S. forces to share critical mission data with most allies and partners. Other networks besides SIPR, such as the Mission Partner Environment (MPE), sought to overcome this challenge, and to some degree, they have. However, ensuring reliable and secure access for our multinational partners remains an enduring issue. Tactical formations require a simple and easy way to connect and share vital battlefield data, such as friendly and enemy position location information (PLI). A SBU-E network provides a simpler and more effective solution that leverages a commercial off-the-shelf (COTS) hardware and software capability to solve tactical communication and interoperability challenges.

Advantages of SBU-E

There are three main advantages that operating with a SBU-E network affords tactical military units. First, a SBU-E network is widely accessible yet secure. Users gain access by acquiring an internet connection, an end user device, and controlled-access permissions from the network administrator. Without significant classification caveats, allies and partners can use SBU-E to quickly integrate with U.S. units, greatly enabling shared understanding and decision-making. While U.S. classification caveats will always remain relevant and important, not every piece of warfighting data must be classified. Indeed, much of the intelligence that is most relevant to tactical-level units, such as enemy PLI, is

A Soldier in the 2nd Cavalry Regiment communicates using a Nett Warrior End User Device during Exercise Saber Junction on 9 September 2023 in Germany. (Photo by 1SG Michel Sauret)

highly perishable. Therefore, assigning a high level of classification to information that will be irrelevant or inaccurate in less than 24 hours inhibits battlefield coordination with multinational partners. Units can collaborate using a SBU-E network by sharing operation orders, full motion video, pictures, reports, and other data to help increase the speed and effectiveness of decision-making and fighting on the battlefield.

Second, a SBU-E network does not render legacy communication systems or higher-classified mediums obsolete. SBU-E can integrate with existing systems operating at higher classification levels when properly configured, thus ensuring security and preventing spillage. This allows innovation on SBU-E to continue concurrent with the use of existing capabilities.[4] By employing legacy networks and augmenting their use with SBU-E, commanders not only achieve the highest degree of intelligence prior to major operations or exercises, but they also position their commands to leverage the possibilities that data affords while warfighting — something that leaders have recognized as important moving into the future.[5]

Furthermore, the compatibility of SBU-E and networks such as SIPR and MPE means that command centers can track where units are on the battlefield, regardless of which network generates the data of a particular unit's location. For instance, during Exercise Saber Junction, the squadron TAC effectively led the squadron for more than 48 hours while dispersed and on the move using SBU-E. Ultimately, this compatibility enabled location data from sources such as smartphones and secret systems like the Joint Battle Command-Platform (JBC-P) to populate on a single common operating picture, greatly enabling the squadron TAC to make decisions and survive.

A final advantage is that a SBU-E is more cost-effective than previous legacy solutions.[6] SBU-E is a cloud-based system that avoids the expensive hardware and IT infrastructure that comprise traditional computer networks.[7] Thus, an ally or partner may pursue their own SBU-E network using various cloud-based commercial software solutions, such as Amazon Web Services, in a relatively simple manner.[8]

Balancing Operational Security with Operational Flexibility

Anytime the military works with partners, leaders must responsibly ask themselves: How can we secure our own intelligence formation while sharing enough with our trusted partners to both accomplish the mission and not place anyone at greater risk than what is necessary? It is a question that oftentimes lacks an easy answer.

There may be situations in which a SBU-E network is not appropriate. For instance, although the Army is keen to embrace SBU-E, our joint partners are still evaluating its utility. But practically speaking, these situations constitute a small minority of overall operations for echelons that are generally higher than a brigade. The situation involving the

North Macedonian company referenced in this article's introduction was dire. The North Macedonians could not and did not operate a legacy U.S. radio, such as an Advanced System Improvement Program (ASIP), due to U.S. disclosure laws. However, with access to a SBU-E network and new ITN equipment, the North Macedonians were able to communicate over TSM radios and on devices such as the End User Device (EUD), a government-provided smartphone. Their ability to do so constituted a critical component to their successful operation.

For the near future, as technologies continue to rapidly improve and evolve, a limiting factor to achieving the flat communications and enhanced situational awareness described in this article will not be technology itself but rather the authorities and methods that govern how tactical Army formations implement their networks and communications equipment. We are emphatically not arguing for the wholesale or irresponsible shedding of these important authorities, processes, and caveats that safeguard our national interests. Yet, there is an opportunity, particularly as conflicts all over the world unfold, to wisely adapt. We as military professionals should therefore continue this discussion about how to best balance perfect operational security and flexibility based on the unique facets of each mission. No two partnered forces are the same, but the need for tactical U.S. Army units to share vital information in order to integrate on the battlefield will remain constant.

Conclusion

This article emphasizes that tactical Army units, particularly at the squadron level and below, have much to gain by adopting and implementing a SBU-E network to share critical fighting products, such as operation orders and reports, and establish a COP. Compared to other networks of higher classification that the Army has previously used, a SBU-E network is easy to access and cost effective. Importantly, units can implement a SBU-E network in a manner that augments the capabilities provided by the Army's existing networks of higher classification. As Army and Department of Defense leaders have noted, our ability as a nation to implement strong deterrence against a variety of threats across the world requires U.S. military forces that can operate alongside our multinational partners.[9] Use of a SBU-E network in most situations helps achieve this important goal.

Notes

[1] Allied Joint Publication 1-0, *Allied Joint Doctrine*, December 2022, 112.

[2] "Integrated Tactical Network," Program Executive Office Command Control Communication-Tactical, https://peoc3t.army.mil/tr/itn.php; MAJ Matthew S. Blumberg, "The Integrated Tactical Network, Pivoting Back to Communications Superiority," *Military Review* (May-June 2020), https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/May-June-2020/Blumberg-Int-Tactical-Network/.

A troop commander in 3rd Squadron, 2nd Cavalry Regiment provides a status update to his higher command using a radio and Nett Warrior system during a training exercise in Lithuania on 13 June 2018. (Photo by PFC James Crowley)

[3] Sydney J. Freedberg Jr, "Keep Moving or Die: Army Will Overhaul Network for Rapid Maneuver in Big Wars," *Breaking Defense* (5 May 2023), https://breakingdefense.com/2023/05/keep-moving-or-die-army-will-overhaul-network-for-rapid-maneuver-in-big-wars/; Corinne Berstein, "Advanced Encryption Standard (AES)," TechTarget, https://www.techtarget.com/searchsecurity/definition/Advanced-Encryption-Standard.

[4] "Integrated Tactical Network."

[5] Erik Davis, "The Need to Train Data Literate U.S. Army Commanders," *War on the Rocks* (17 October 2023), https://warontherocks.com/2023/10/the-need-to-train-data-literate-u-s-army-commanders/.

[6] Blumberg, "The Integrated Tactical Network."

[7] "Key Differences Between Cloud Computing vs. Traditional," AZTech IT, 7 September 2018, https://www.aztechit.co.uk/blog/cloud-computing-vs-traditional.

[8] Enterprise Cloud Management Agency Public Affairs, "Griffin Shock 23 Strengthens NATO Readiness through Cloud-Enabled Applications," Army News Service, 1 June 2023, https://www.army.mil/article/267180/griffin_shock_23_strengthens_nato_readiness_through_cloud_enabled_applications; Defense Threat Reduction Agency's Chemical and Biological Technologies Department, video, "ATAK in the Field: Forging a Tactical Edge," 29 May 2020, https://www.dvidshub.net/news/367459/atak-field-forging-tactical-edge.

[9] David Vergun, "Austin Emphasizes Importance of Working with Partners in Center, South America," DoD News, 29 October 2021, https://www.defense.gov/News/News-Stories/Article/Article/2826812/austin-emphasizes-importance-of-working-with-partners-in-central-south-america.

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A Grunt's Reflections on Leadership

LTC JEFF FARMER

Throughout my time in the U.S. Army, I have benefited from the incredible decisive leadership of superiors, subordinates, and peers. The Army afforded me the privilege and opportunity to lead Soldiers and take care of their families across multiple echelons. Like others, I have led, followed, and served during incredible times of stress against a free-thinking enemy trying to kill us. I have also led, followed, and served in times of great ambiguity, and at times political turmoil. These experiences and the people I have met helped to shape, grow, and cultivate my personal philosophy on service and leadership. Many lessons in the art of leadership came from my own mistakes, and other moments of levity came from those who were honest and humble enough to share their mistakes with me.

The cost of preparing our Soldiers and their families for combat and lengthy periods of separation is never far from my mind. As leaders in the Army, our job is to accomplish the mission while caring for and protecting Soldiers and their families. Sometimes this comes at a painstaking cost. My hope is that I can pass along lessons I have learned, both positive and negative, to help you in your leadership journey.

Outside of combat, one of my greatest leadership challenges was leading a formation of more than 700 Soldiers and employees as an infantry battalion commander during the height of COVID while conducting an interagency mission to receive, stage, protect, and onward move our Afghan friends to enable their safety and opportunity in America. I was amazed at our young leaders' creativity and ingenuity to overcome significant and complex challenges outside the expertise of an infantry battalion, with minimal guidance. Below are seven maxims. They are not all my original thoughts, nor do they represent all critical and necessary leadership values, but ones I value greatly and will apply no matter where I serve in life as I continue to grow.

Followership

You must be a good follower before you can be a sound leader. Army Doctrine Publication (ADP) 6-22, *Army Leadership and the Profession*, states, "Every Army leader is a subordinate to someone, so all leaders are also followers."[1] Just like any job, the Army also subscribes to the "do" first before you can lead approach. For example, Infantry Soldiers enter the U.S. Army as riflemen. After serving time as riflemen, they may be promoted to carry and employ the squad automatic weapon (SAW), which has a higher volume and delivery of small arms. After demonstrating proficiency as the SAW gunner, Soldiers may then be elevated to team leader in charge of three to four personnel, then squad leader in charge of nine to 11 personnel, and so on. This model is not new to many organizations, and there are always exceptions based on the needs of the unit and levels of individual proficiency. However, those who can become proficient at their individual craft, learn the job of their superior, and perform the job of those they lead become the example of a proficient and skillful follower. This type of follower is not just individually proficient but capable of effective and concise communication and often requires minimal direction from their first-line supervisor. ADP 6-22 outlines, "Followers respond to the authority of a leader and specific direction. Following is more than just doing what one is told to do. Motivation is an aspect of following. Effective followership requires an ability to take the initiative to get things done when necessary. Effective leaders learn to be trusted followers."[2]

An infantry squad assaults through the breach during a platoon live-fire exercise at Fort Campbell, KY, in 2020. (Photos courtesy of author)

Today's young people want to know the "why" at every cost and availability. At times, this can be frustrating based on short timelines, or for a combat tactical unit, during times of high tactical risk. Over time, I learned to explain the "why" to your subordinates when you can, then be willing to trust the organization to accomplish its mission when time does not avail. This leadership technique requires building a foundation of trust and efficient processes that enables action within the entirety of the organization's leadership. This does not happen overnight. These processes and mutual trust require months and months of training, exercises, and refining those processes not only from the top down, but more importantly, from the bottom to the top. I was lucky; I had the best company commander any Soldier could ask for while serving in the 1st Battalion, 502nd Infantry Regiment. I would follow him anywhere and I did... so did the company for one year into Iraq's Sunni Triangle, aka the "Triangle of Death." Of my four combat deployments, this one was the most violent and brutal tour, and it required profound and unwavering trust amongst the formation, to include trust in our leadership to provide our Soldiers the necessary resources and assets to accomplish the mission as well as trust in one another to protect each Soldier with their own life. When our peers, superiors, and even subordinates trust in our ability to be a good follower, then we begin to transition into a ready and capable leader.

An infantry team leader assesses the battlefield and communicates with his fire team during a squad situational exercise at Fort Campbell in the summer of 2021.

Read the Room

Problem sets will always evolve and at times completely change direction or shape when confronted by individuals, resources, and allocated time to further analyze and solve the problem. Therefore, lead with empathy, compassion, love, and undying enforcement of doing the hard-right thing. I have learned that it is incredibly important to actively survey our changing environment; this can be from feedback and sensing sessions with bosses, peers, and our formation (employees). New and innovative ideas from brand new privates or a new employee can often provide fresh and enlightening perspectives or a unique way to tackle a problem.

Make the Tough Decisions

Respected versus liked — you must be willing to make the tough choices. As a battalion commander, I conducted platoon leader (first-line managers) physical training once a month, followed by breakfast. This gave me the opportunity to receive feedback from the lower echelon and gain an appreciation for the real and tangible challenges these young leaders were facing within their formations. I valued these sessions, and they helped me reinforce my priorities. More importantly, these sessions helped me understand where I needed to shift focus based on the ground truth. At the end of each session, I always walked away with information that I either did not know or had held a previous misconception.

Likewise, I was able to communicate the "why' to these young leaders. When we ended the session, I asked one thing of every platoon leader: Make the tough decision.

A deputy commanding general once asked me: "How do you want your organization to be remembered?" My answer was as premier warfighters. In my case as an infantry company and battalion commander, I wanted the organizations I was privileged to lead and be a part of to be the best infantry and combined arms warfighting force on earth. For instance, no one on an American football team practices and competes in a game wanting to lose, miss the playoffs, or intentionally fall short of a successful season. No one starts a season saying, "I sure hope we lose the first three games."

Similarly, as an infantry company commander and infantry battalion commander, I wanted to practice (train) the best I could with our team and be the most dedicated, lethal infantry formation in combat if called to fight and win our nation's wars. Why wouldn't you? At times, this was a personal challenge of mine, which gets at the root of the problem of explaining the "why" to our young leaders — and often why these decisions to train so aggressively are made to prepare our force to succeed in combat. I have commanded in combat and in peacetime; peacetime was harder. Part of this environment requires you, as a leader, to make the tough, often unpopular, decisions. Additionally, teaching your subordinates to make tough decisions will not only strengthen your organization through the empowerment of others but also increase trust in the organization. It will also foster a sense of pride that all are making a truly positive impact and that their voices are helping to build the organizational fabric of success.

Your decision may not always be popular, but this is a component that I believe is often missing from truly creating and maintaining a "people first" organization capable of warfighting. In an era that often promotes popularity over competency, making the tough decision is not as easy as it may seem. While serving in the 101st Airborne Division (Air Assault), our formation participated in a 30-day exercise with the rest of the division, which was deliberately protecting precious time and resources to enable subordinate units to hone their tactical proficiencies. It was summer in Kentucky, and it was hot. At the end of the exercise, I made the decision to conduct a 12-mile tactical foot march back to garrison. As you can imagine, this was wildly unpopular with Soldiers, family members, and even some of my superiors. I consulted with my senior NCO, several confidants, and even my wife. Yes, my wife. I weighed the options, analyzed the risk, and implemented risk-mitigating measures, such as walking at night to minimize the risk of heat exhaustion, and chose to stay the course. Walking at night also enabled the entire battalion to move under combat load with night-vision devices, which many units rarely train. I knew our formation not only was more than capable of completing this physical challenge but would be even more prepared for combat and find immense pride in its accomplishment. As usual, our Soldiers exceeded my expectations.

Make the tough choice and do the right thing. I find that when life is consistently easy, I may not be making enough tough decisions. Tough decisions can be made with dignity and respect for our employees, their welfare, and the efficacy of the organization. T.R. Fehrenbach wrote in his classic account of the Korean War, *This Kind of War*:

> "Americans fully understand the requirements of the football field or the baseball diamond. They discipline themselves and suffer by the thousands to prepare for these rigors. A coach or manager who is too permissive soon seeks a new job; his teams fail against those who are tougher and harder. Yet undoubtedly any American officer, in peacetime, who worked his men as hard, or ruled them as severely as a college football coach does, would be removed. But the shocks of the battlefield are a hundred times those of the playing field, and the outcome infinitely more important to the nation."[3]

Lead Up

Your leaders are human — so are you. Your leaders will make mistakes and so will you. If you have a leader who is unwilling to listen to your rationale, explain your plan and intended actions (how you plan to solve the problem), and if your direction and guidance is legal, moral, and ethical, execute. Communicate often and early. It may take a while, but your supervisor or leader will thank you later when they realize you not only solved a complex problem that they maybe did not have the time or capacity for but also helped to enhance the organization, allowing the leader to focus attention elsewhere. An incredible mentor taught me that we follow orders, but we have a moral obligation to not blindly follow orders. This may seem controversial to some, but as you mature in any organization and weigh levels of risk, you have a moral obligation to right the ship. Hopefully, your subordinates trust you enough to come to you when you are unintentionally missing the mark.

One of my greatest leadership struggles came during my time as a battalion commander. My boss would power down or turn off the minute I walked into the room, or even when I spoke during an office call or organizational meeting. Additionally, I had a few subordinate leaders who had their own agendas, which were not in the unit's best interest. I was feeling the pressure on both ends, and yes, it was still during COVID. I tried desperately reaching out to others for advice on how to better communicate, and I began to

An infantry squad traverses across dense terrain during a thunderstorm at Fort Knox, KY, in the fall of 2021.

doubt myself when I truly realized after many months that no matter what I did, said, or articulated how I was aiming to help the greater organization, there was nothing I could do to energize or gain my superior's trust. I had lost confidence in myself and my capabilities. I asked the leader if we could speak privately and shared that I felt he turned off when I spoke and was not truly present when I needed him to hear me. I also tried to articulate the problem could be me, and that I was working on my ability to effectively communicate. My boss expressed shock at this and then thanked me for my candor. At first, I was completely relieved; I thought we both had a breakthrough in a positive direction. Weeks later, I realized that this perceived groundbreaking conversation was a proverbial kiss of death; for the next year, this leader continuously brought up to me that I thought he was not present or focused. I was heartbroken — my intentions were sincere yet naive.

I had several choices going forward, and I was the senior battalion commander in our brigade. I was fully aware my actions had consequences and could negatively impact the greater organization. I could be argumentative, combative, defiant, or even silent. Or I could set a positive example and continue to communicate how our team was conducting remarkable feats, executing tough and realistic training, and solving the higher organization's problems without being asked. I chose the latter. Going forward, I invited this leader to every training opportunity and family event in the organization. I explained to my boss how our organization was supporting the higher organization and then just moved out and executed regardless of his lack of attention. The results of the amazing Soldiers and leaders did their own talking most of the time. I did not wallow in the lack of accolades or affirmation. The organization was all the better, and I grew to accept that you may not always be liked, but you can be respected. Your organization deserves your best regardless of its surroundings, which leads me to point five.

Effective Communication

I once had a leader who led with effective communication as the center piece of his leadership philosophy. This is especially true across all echelons but even more important at higher echelons. Do not take everything personally; most of the time a failure to achieve a task is not a direct snub on you as a leader but rather a miscommunication or lack of shared understanding. Do not leave matters up to interpretation. I give you the metaphorical blue square. If the square needs to be colored blue, tell your subordinates it needs to be blue; if you have time, tell them why it needs to be blue. If you do not have time, trust your subordinates to color the square blue, and then when you do have time circle back around and explain the reasoning behind the "why" blue. The concise coloring of the metaphorical blue square will save time, resources, and lives one day and is not a violation of trust or mission command; one day your subordinates will thank you when that "coloring of a blue square" becomes the timely prosecution of an accurate artillery fire mission in a foreign land against a lethal and devout enemy.[4]

> *Do not take everything personally; most of the time a failure to achieve a task is not a direct snub on you as a leader but rather a miscommunication or lack of shared understanding. Do not leave matters up to interpretation.*

As a company executive officer in 2006 in southwest Baghdad, my company commander gave me an order to take an element of about 40 Soldiers more than 20 kilometers away from our main post and establish a perimeter which would ultimately begin the generation of combat power to assist in the search and recovery of a downed U.S. aircraft and its pilot and further enable offensive operations for the brigade combat team. The place was called Rushdi Mullah, and it was a hot bed of activity for the Iraq origin of al Qaeda. Due to operational demands, risk, and the necessity for timely and quick execution, there was minimal time for long planning sessions and discussions. My company commander helped outline the problem set, identified the minimum force (assets and resources) requirements, and sent us on our way with confidence. Was I scared? Ummm… yes. Was I confident that my boss had provided me with the resources necessary to accomplish the mission, and that a team of teams surrounded me to execute the mission? Without question. The operation did not come without turmoil, blood, sweat, and tears, but we painted the square blue and it was a deep and resilient blue.

Failure Equals Success

Everyone fails — this is how we learn. In my experience, many senior leaders in the Army are often quick to give the magical recipe to success that more than likely mirrors how they achieved professional success. These leaders mean well, but many times this advice is obsolete (e.g., evaluation rankings, "you'll be okay, it worked out for me," or "never leave the operational force, keep a rucksack on your back.") Instead, the truly "elite" leaders outline their failures and mishaps and what they learned from those mistakes. Everyone clearly understands based on their rank or position if they were successful.

One of my many failures as a leader in the Army was not reaching down fast enough to ensure that all Soldiers at the lowest level heard from me about my intent and/or command philosophy on what I expected for a healthy and cohesive climate. I had written these thoughts down and disseminated them as COVID locked the world down, but I did not personally follow up fast enough. I learned quickly after a few months that you cannot rely on all leaders to carry your message in the manner that you would communicate it and spent the second half of my command communicating directly down to all levels. I circulated to every training event possible or subordinate locations during real-world operations. There is a time to allow for failure, and there is a time where failure

could cost lives. Understand the difference in environments and enable an environment that promotes innovation, healthy risk-taking, and the opportunity to succeed while learning from failure. If you are the boss, you own the risk, deliberately assess the risk, and underwrite the risk with your subordinates. Your team will amaze you — I promise.

Self-Care

Last but far from least, take time for yourself routinely; it will only benefit the organization you lead, whether that is snagging an extra couple of hours of sleep once a week, playing ball with your kids, going for a long run, having dinner with your spouse or friend at your favorite restaurant, or going rock climbing. The organization you lead requires you to make logical and sound decisions. Invest in your mental, spiritual, and physical well-being; it will benefit those you lead and help you to serve the greater purpose of achieving the unit's mission. No one will care for you like you or your immediate friends or family.

In conclusion, I have come to learn that life is not fair, nor is any organization completely. You cannot please everyone. Follow your heart, listen to others — truly listen, and empower junior leaders — they want to please their leadership. Our Soldiers and employees want to train hard and be a valued member of an elite, successful organization. If they were missing the mark, it was generally because I did not communicate my vision or intent clearly, and I needed to pause the action or organization and clarify myself. Sometimes it was even because I did not provide adequate resources to the problem set or effectively read the room to realize employee emotions with respect to the task. It is okay to admit when you are wrong or missing the mark; your Soldiers or employees will respect you even more. You can propel your organization to success by demonstrating and encouraging sound followership, by striving to better understand your environment and its surroundings, by leading up and making the tough decisions to help solve greater organizational problems, by exercising effective communication, and by taking care of yourself to allow your organization to get the best you. Your people deserve your best. You deserve your best.

Soldiers of Alpha (Hardrock) Company, 1st Battalion, 502nd Infantry Regiment, gather for a group photo in Rushdi Mullah, Iraq, in 2006.

Author's Note: *This article is dedicated to all those brave souls I have had the privilege to serve alongside with, to those who made the ultimate sacrifice, and to the future brave souls that carry the fire.[5]*

Notes

[1] Army Doctrine Publication (ADP) 6-22, *Leadership*, 25 November 2019, para 1-102.

[2] Ibid, para 1-103.

[3] T. R. Fehrenbach, *This Kind of War: The Classic Military History of the Korean War* (New York: Open Road, 1963), preface, xi.

[4] Mission command is the Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation. Further analysis on mission command can be found in ADP 6-0, *Mission Command*, 31 July 2019, para 1-3.

[5] Carry the fire is a metaphor for maintaining hope with nobility and honor. The metaphor was written by Cormac McCarthy, *The Road*, First Edition ed., (NY: Alfred A. Knopf, 2006).

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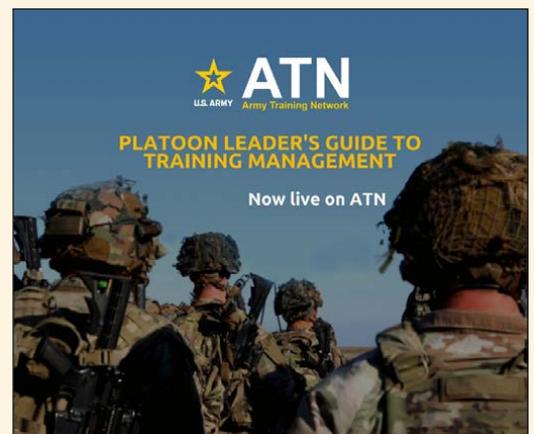
Assessment: The Hardest Part of the Operations Process

LTC MICHAEL A. HAMILTON

Author's Note: *It is unlikely that commanders and staff officers will learn anything novel to existing doctrine from this article. Its purpose is not to introduce any new concepts or techniques. Instead, I intended to provide a relatable vignette to clearly illustrate the risks of not following well-established doctrine for conducting continuous assessments throughout the operations process. This article should illuminate the importance of tactical assessments better than merely reading doctrinal publications.*

"Sir, I'm dead." That was the last radio transmission I heard from my A Company commander on the night we failed to seize Objective (OBJ) Sun — a medium-sized simulated urban area at the Joint Readiness Training Center (JRTC) at Fort Johnson, LA, in November 2022. During the preceding 19 hours, our battalion conducted a movement to contact to clear the brigade's main axis of advance west and seize key terrain to pass follow-on forces as the brigade transitioned to offense. I thought the first 12 hours of the attack went well, but by the time we culminated in defeat on the objective, I realized what we failed to do en route — we failed to continually, deliberately, and comprehensively assess the tactical situation between the end of planning and the beginning of the assault.

Army Doctrinal Publication (ADP) 5-0, *The Operations Process*, defines the operations process as "the major command and control (C2) activities performed during operations: planning, preparing, executing, and continuously assessing the operation."[1]

Plan, Prepare, Execute, and Assess

Our battalion's previous JRTC rotation in March 2021 was challenged by shortcomings in basic aspects of planning and execution — specifically, a lack of effective orders processes in austere, time-constrained environments and poor communications.

By our mid-rotation point in November 2022, I concluded that our unit had largely solved those old problems: We had an efficient, routine planning battle rhythm that consistently produced timely orders, and we could consistently communicate with subordinate units and the brigade headquarters.
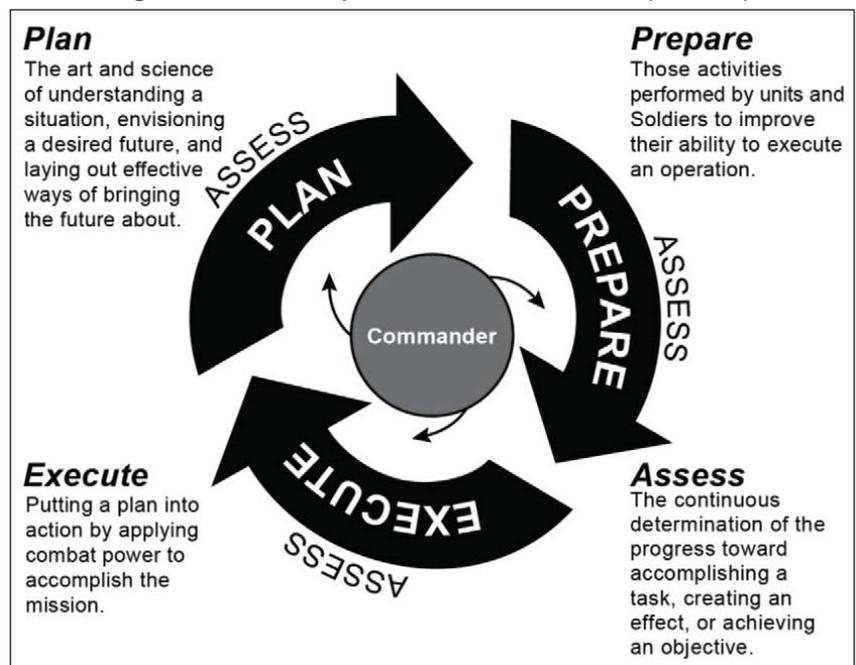
Subconsciously, I believed the following equation to be true: "Good planning plus good communication equals good execution." By the time we culminated on OBJs Sun and Europa, I realized that something was obviously wrong with that "math," but I couldn't figure out what. As time passed after the mission and I learned more about what happened on the OBJs, I came to the following two conclusions:

- We failed to mass on each of the OBJs, and
- We failed to effectively synchronize fires with maneuver.

As more time passed, I had the opportunity to further analyze the root causes of these failures. I kept asking myself: "How did this happen? We know better than that!" What I eventually realized was that we incorrectly thought we were doing all the above, but we were not. The missing ingredient was continuous assessment. ADP 5-0 dedicates an entire chapter to assessments as a critical activity within the operations process. During our battalion attack on OBJs Sun and Europa, we fell woefully short of this doctrinal emphasis on the importance of assessments. ADP 5-0 defines assessment as "the determination of the progress toward accomplishing a task, creating a condition, or achieving an objective."[2] The idea of assessments being continuous is critical. Unfortunately, during this operation, our focus on assessments essentially ended during planning. Our report-

Figure 1 — Plan, Prepare, Execute, and Assess (ADP 5-0)

Plan
The art and science of understanding a situation, envisioning a desired future, and laying out effective ways of bringing the future about.

Prepare
Those activities performed by units and Soldiers to improve their ability to execute an operation.

Commander

Execute
Putting a plan into action by applying combat power to accomplish the mission.

Assess
The continuous determination of the progress toward accomplishing a task, creating an effect, or achieving an objective.

ing, upkeep of staff running estimates, and analysis of commander's critical information requirements (CCIR) did not enable continuous assessment during execution, particularly in two warfighting functions: intelligence and fires.

Shortcomings in Intelligence Assessments

What We Thought — During planning, we made the following initial enemy assessments:

1. There was a company-sized enemy force within our battalion's area of operation (AO);

2. The enemy would either fight a retrograde defense in depth, culminating with platoon-sized defenses on key terrain at OBJ Sun and OBJ Europa; or

3. The enemy would strongpoint key terrain at OBJ Sun and OBJ Europa.

What Actually Happened — Three key aspects of the enemy situation changed that we failed to identify through continuous assessment:

1. The enemy actually had a battalion-sized enemy force within our AO — the difference was manifested through some combination of inaccurate initial assessments and repositioning of enemy forces from the southern portion of the brigade's AO.

2. The enemy did not fight a retrograde defense in depth, despite positioning obstacles along the routes and conducting harassing attacks with small elements.

3. The enemy established strongpoint defenses at the key terrain of OBJ Sun and OBJ Europa with company-sized elements on each objective.

What We Missed — As the battalion conducted the movement to contact west, most of the enemy activity we experienced was unobserved obstacle contact with unsynchronized harassing fire by small enemy elements. Laziness and not using critical thinking enabled us to interpret this activity as an enemy retrograde defense. The truth was our headquarters (tactical command post [CP] and main CP) had all the information needed to assess that this enemy activity did not amount to a retrograde defense. Intelligence reporting often contained the adequate size, activity, location, unit/uniform, time observed, equipment (SALUTE) report data to feed the tracking of enemy disposition, composition, and battle damage assessment. However, we did not assess or evaluate this information against indicators for our priority intelligence requirements (PIR) to drive the decision to change our plan to mass a battalion-sized attack on OBJ Sun rather than attack with only a company, with an additional company in a follow-and-assume role.

What is the Fix? — Throughout the entire operations process, the staff must prioritize the deliberate assessment of indicators for PIR that are tied to named areas of interest (NAIs) identified through the development of an enemy event template (EVENTTEMP). Army Techniques Publication (ATP) 2-01.3, *Intelligence Preparation of the Battlefield* (IPB), describes the relationship between the EVENTTEMP,
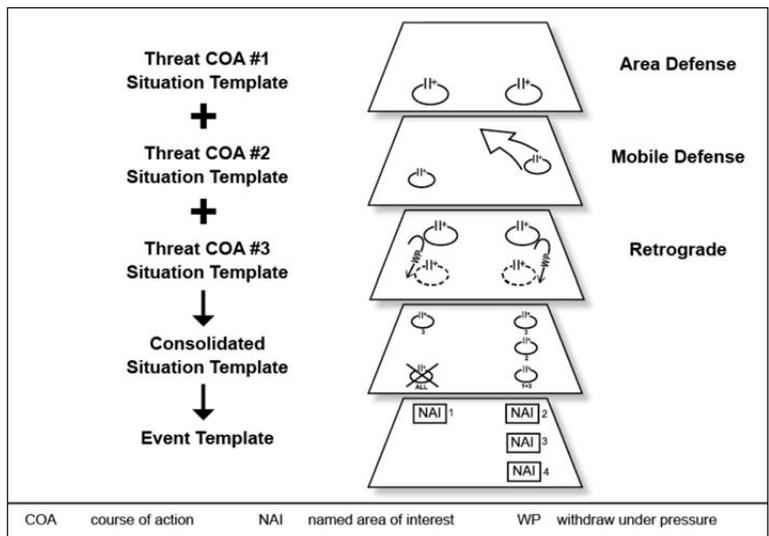

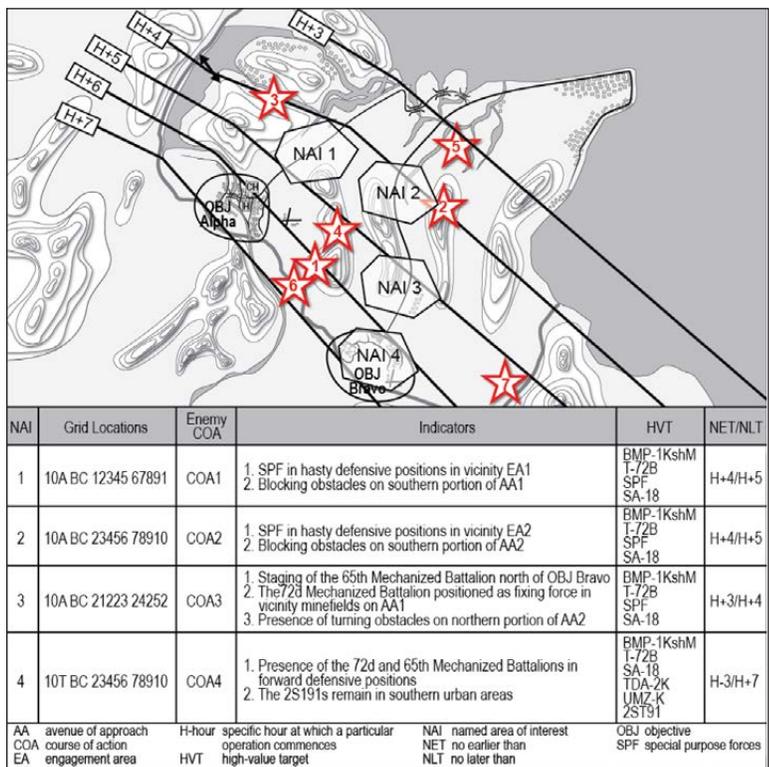Figure 2 — Steps to Create an EVENTTEMP (ATP 2-01.3)

Figure 3 — EVENTTEMP (ATP 2-01.3)

NAIs, PIRs as CCIR, and decision-making in excellent detail (see Figures 2 and 3).

According to ATP 2-01.3, an EVENTTEMP is a guide for collection planning that depicts the NAIs where activity, or lack of activity, will indicate which course of action (COA) the adversary has adopted.[3] The EVENTTEMP is used during the execution activity of the operations process to assist in determining which COA the threat has adopted.

In our case (and to our credit), during planning we did develop an adequate EVENTTEMP with associated NAIs, PIRs, and indicators to distinguish between two possible enemy COAs; however, our current operations (CUOPS)

staff subsequently failed to synthesize PIR indicators from intelligence reporting to determine which COA the enemy was executing. To say it differently: Our focus on deliberate assessments essentially ended during planning and did not carry over into CUOPS.

One way to accomplish this in the future would be to conduct routine two-minute drills within the main CP specifically focused on assessing the status of all CCIR, including PIR that drive decision-making. There are several contributing factors for why this did not happen inside our battalion main CP, but one that I own as a commander is not demanding these deliberate CCIR assessments from the staff. I instead gave them a pass by trying to intuitively make these assessments on my own.

Shortcomings in Fires Assessments

What We Thought — The plan was to mass fires on OBJs Sun and Europa with a combination of artillery, mortars, and short-range rockets (courtesy of 2nd Company, 33rd Infantry Regiment, Japanese Ground Self-Defense Forces). It was a textbook echelonment of fires that we initially assessed would enable us to achieve mass and suppress the enemy during the isolation of the OBJs.

What Actually Happened — Although we shot a substantial amount of indirect fire on each objective, poor triggers, communications issues, and an ineffective observer plan led to the following outcomes:

1. The terrain en route to the OBJ was worse than we assessed during planning, causing the dismounted movement to be slower, effectively undermining our triggers for the fires plan.

2. As a result of failing to refine our triggers with updated terrain and time-distance factors, our indirect fires were not synchronized with our maneuver, causing the enemy to regroup between the termination of fires and the assault.

3. Because our forward observers were poorly positioned en route to the OBJ and we struggled to keep small unmanned aircraft systems (SUAS) in the air over the OBJ, we were unable to either adjust our fires or conduct effective battle damage assessments (BDA) to determine if our fires were achieving desired effects.
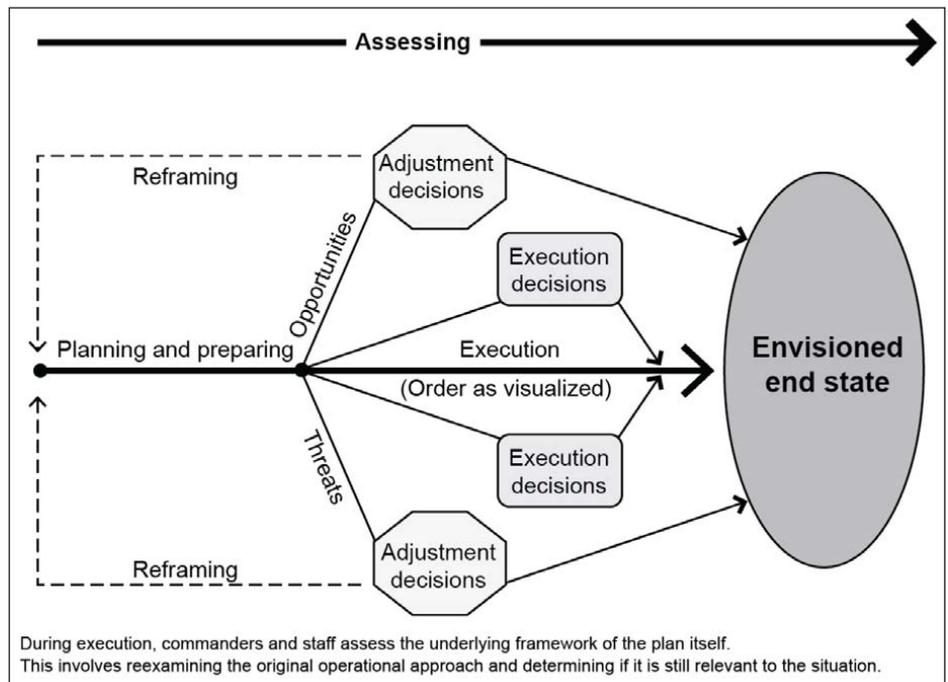
What We Missed — Our CUOPS processes were not effective in assessing whether our fires plan was having the desired effects — as if simply executing what we originally planned would magically result in success. It sounds obvious in hindsight, but the difficulties we experienced in running effective CUOPS (e.g., timely and accurate reporting; processing of friendly force information requirements [FFIR] such as "effective

observation of TGT AD 1000"; and receiving BDA) are critical to making the assessments required to drive decision-making to be successful in execution.

What is the Fix? — ADP 5-0 describes decision-making during the execution phase of the operations process as a continuous assessment of "execution decisions" and "adjustment decisions" that either confirm the plan is on-track, drive minor changes to the plan, or drive major changes to the plan. In any case, the first step is making the assessment to determine the current state of conditions that either trigger execution or drive minor or major adjustments to the plan.

Throughout the entire operations process, the staff must prioritize the deliberate assessment of FFIR that may drive either execution decisions (minor changes to the plan) or adjustment decisions (major changes to the plan). In my experience, a major obstacle for inexperienced battalion staffs to achieve successful execution and adjustment decisions is the development of meaningful FFIR that provide truly critical information amongst all the other information and data flowing through the main CP. One technique for staffs to determine what is truly critical as FFIR is to identify critical capabilities or conditions that must occur to either achieve the decisive point or maintain a favorable correlation of forces and means (COFMs) to accomplish the mission. If the friendly mission information does not directly affect achieving the decisive point or maintaining favorable COFMs throughout the mission, then it probably should not be FFIR. Giving this clear guidance to staffs enables them to focus their assessments on the conditions and associated triggers that matter to drive decisions. It is also recommended that pre-mission rehearsals place an emphasis on who owns these conditions and triggers — both sub-units and staff — to inform FFIR that drive decisions.

Figure 4 — Decision-Making During Execution (ADP 5-0)[4]

During execution, commanders and staff assess the underlying framework of the plan itself. This involves reexamining the original operational approach and determining if it is still relevant to the situation.

Paratroopers assigned to 2nd Battalion, 504th Parachute Infantry Regiment execute a live-fire exercise as part of Joint Readiness Training Center Rotation 23-02 on 14 November 2022. (Photo by SGT Jacob Moir)

The Decision Support Matrix and Why it Matters

ADP 5-0 states: "During execution, assessment involves deliberately comparing forecast outcomes to actual events while using indicators to judge operational progress towards success. Assessment during execution helps commanders determine whether changes in the operation are necessary to take advantage of opportunities or to counter unexpected threats."[5] ADP 5-0 describes two tools that drive assessments and inform decisions: running estimates and the decision support matrix (DSM). In my experience, most staffs at the battalion level struggle to manage both of these tools during operations, and our JRTC rotation in November was no exception. But updated running estimates and a good DSM are essential to conducting continuous assessments, maintaining situational understanding, and informing decision-making. I used to believe the DSM was primarily for the commander. Thus, my logic map of not putting emphasis on developing a DSM was as follows:

• If the DSM is mainly for the commander;

• And battalion staffs struggle to develop an effective DSM without significant help from the commander;

• And the DSM is an output of wargaming, which is hard enough without producing a DSM;

• Then I might as well just do the DSM myself, maybe with the S3 or executive officer's (XO's) help;

• So, I'm basically making my own DSM;

• Therefore, I won't make one, I'll just intuit the process.

The biggest problem with this logic starts with the first proposition: It's false. The DSM is primarily to drive the staff's assessments. Identifying CCIR that inform decisions focuses the staff's information requirements within their running estimates to maintain situational understanding. Without a DSM to focus the staff's assessment activities, they run the risk of not happening at all.

Another problem with this logic is that it presumes the

DSM is merely tangential to the COA analysis step of the military decision-making process (MDMP). On the contrary, the DSM is arguably the entire point of wargaming and COA analysis, much like development of the operation synchronization matrix (OPSYNCHMAT). Thus, staffs cannot be given a pass on developing the DSM as a key output of COA analysis — it must be prioritized as critical to effective assessments within the operations process.

The Danger of Commanders "Winging It" on Assessments and Decisions

This JRTC rotation was my second in command. I was comfortable in my understanding of how to maneuver the battalion and drive the operations process. Regarding my thoughts on the DSM and tactical decision-making, I assumed I could just "wing it" and still be more effective than following a mediocre output from an inexperienced staff. I had been relatively successful (read: lucky) in doing exactly that up until our attack on OBJs Sun and Europa in November 2022. What I soon realized is that there are more ways that the mission, enemy, terrain and weather, troops and support available-time available and civil considerations (METT-TC) variables can change during execution to derail the plan than any commander could ever personally track, and it is only a matter of time before the CCIR that you are not thinking of (and forcing subunits to report) will derail the plan without you knowing it. The bottom line is: Without putting significant thought into the friendly and enemy indicators that show the mission is either on track or not on track, this CCIR will not be monitored, reported, and analyzed to inform decisions. You are going to miss something.

Editor's Note: *This article first appeared on the Center for Army Lessons Learned website at https://www.army.mil/ article/265914/assessment_the_hardest_part_of_the_operations_process.*

Notes

[1] Army Doctrine Publication (ADP) 5-0, *The Operations Process*, July 2019.

[2] Ibid.

[3] Army Techniques Publication 2-01.3, *Intelligence Preparation of the Battlefield*, March 2019, 6-20, para 6-65.

[4] ADP 5-0, 4-6.

[5] Ibid, 5-1, para 5-3.

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The Need for an Infantry Technician

1SG CHRISTIAN H. NOONEY

In the complex environment we find ourselves in today, it is imperative that commanders at the battalion level and higher receive the best and most up-to-date counsel, free of bias such as "in my last unit" or "back when I was an instructor." The creation of an Infantry Technician (IT), akin to the infantry weapons officer or "gunner" program in the U.S. Marine Corps, can improve infantry formations through increased lethality and training proficiency.

The history of our Army is rooted in the formation and role of the Infantry. Since 1775, any decisive and total victory has been won with the work of 19-to-22-year-old Americans who served in the final 400 meters of diplomacy. As technology and equipment advanced, the field has employed countless pieces of equipment actively used in the inventory across companies and battalions today. A young team leader could be expected to direct not only the employment but also the maintenance and training of five direct and indirect fire weapons systems, three unique weapon-mounted optics, three different types of night-vision devices, and three different communications platforms ranging from high frequency (HF) to the Army Tactical Communications System (ATACS). While there are associated publications to help a team leader manage the maintenance, training, and employment of these systems, no single person or role brings everything together — this is where the IT will prevail.

NCOs have had varied levels of success with training and managing their formations because their leadership style is heavily influenced by their experience and the current directives of their sitting commanders at the company and battalion levels. We often rely heavily on NCOs who previously served as instructors at the Ranger Course or other various weapons courses, only to be caught flat-footed when they conduct a permanent change of station (PCS) or we discover what was taught in the schoolhouse five years ago is no longer part of doctrine.

ITs would ensure that battalion commanders and command sergeants major (CSMs) have the most up-to-date technical and tactical information. They can network across the force to develop best practices and establish a culture of continuity, reducing the learning curve for units and Soldiers during PCS season. This network would be invaluable for enlisted and officer Infantrymen alike returning to operational assignments after time away from the field.

In conflict, this technical expert can counsel the staff and commander on integrating enablers, support assets, and attachments to ensure that commanders can synchronize their efforts and get the maximum battlefield effects. During training and deployment preparation, the IT will oversee gunnery and live-fire exercise progression as well as weap-

> *ITs would ensure that battalion commanders and command sergeants major have the most up-to-date technical and tactical information. They can network across the force to develop best practices and establish a culture of continuity, reducing the learning curve for units and Soldiers...*

ons density, increasing overall safety and lethality. The unit would see improved kinetic and non-kinetic effects on the enemy, improved survivability of Soldiers, and additional time between initial contact and culmination.

Battalion commanders often find themselves at the confluence of several lines of effort, with access to enablers and support that rival what most NATO members see at their brigade and division levels. Unfortunately, these commanders may have also spent years between being in command of an operational unit with several staff and broadening assignments. The CSM of the unit is often expected to be the person who can bridge this gap, with much less time between their time as a first sergeant and as a CSM. However, the CSM's counsel is also limited by their experience and ability to speak the same language as their commander.

The IT would reduce the learning curve of the commander and provide stability to the formation during transitioning leadership. The IT would ideally be placed as a staff primary from the battalion level to corps, with the bulk of assignments being in U.S. Army Forces Command units and the remainder being in the U.S. Army Training and Doctrine Command to train and develop subsequent cohorts. Similar to the 131A (Field Artillery Technician) warrant officer, the IT would ensure training and development are anchored in doctrine and provide commanders an in-house expert, who has not only the formal training but also the network to go back to codify best practices across the field. As the conflict in Ukraine has shown, the modern battlefield is quickly changing, and those standing victorious will be the ones who can not only just adapt but enact change faster than their adversary.

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The Airborne Mechanized Raid:
A Russian Concept

DR. LESTER W. GRAU
DR. CHARLES K. BARTLES

Over time, U.S. military raids have decreased in size and become frequently air-inserted and multiservice.[1] Washington's Christmas Eve raid across the Delaware led to victory at Trenton. During the American Civil War, Jeb Stuart's cavalry brigade rode completely around George McClellan's force twice during McClellan's Peninsular Campaign. The World War II U.S. Army Ranger/Alamo Scout raid on the Japanese Cabanatuan prison camp in the Philippines freed some 500 U.S. prisoners. The Son Tay raid's attempt to free U.S. prisoners in North Vietnam failed, as did the effort to free the American Embassy hostages in Iran. The raid to kill Osama bin Laden succeeded.

According to the latest U.S. Army tactics manual, a raid is a variation of attack to temporarily seize an objective with a planned withdrawal. The purposes of a raid are to secure information, capture personnel or equipment, destroy a capability, rescue and recover individuals and equipment, or confuse an adversary. Raids are usually small, involving battalion-sized or smaller forces. Figure 1 illustrates the five phases of a U.S. Army raid. In the first phase, the raiding force inserts or infiltrates i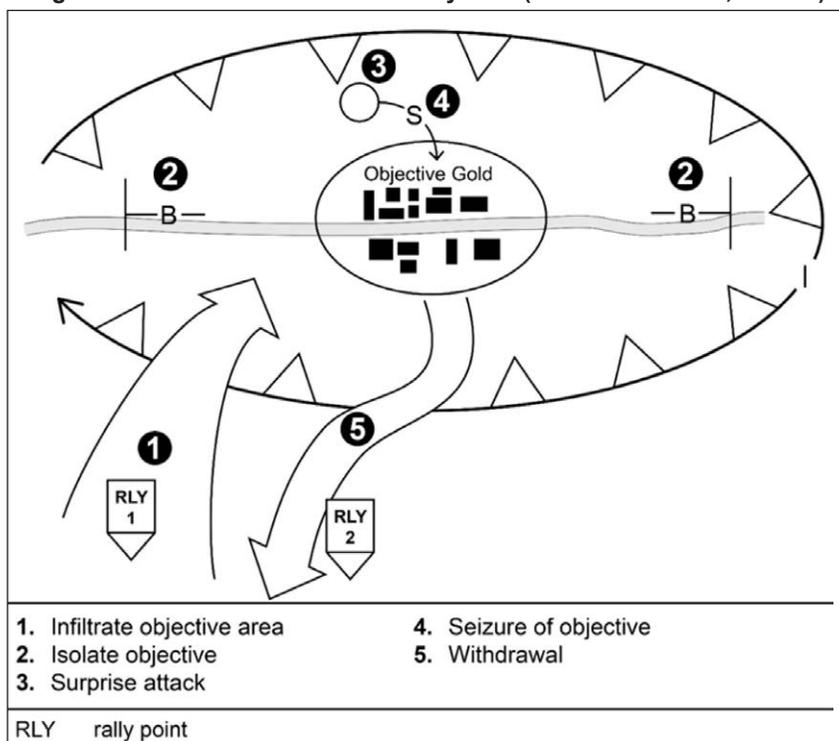nto the objective area. In phase two, the raiding force isolates the objective area from outside support or reinforcement, including enemy air assets. In phase three, the unit overcomes any enemy forces at or near the objective in a violently executed surprise attack, using all available firepower for shock effect. In phase four, the force seizes the objective and accomplishes its assigned task quickly before any surviving enemy forces in the objective area can recover or receive outside reinforcements. Lastly, in phase five, the raiding force withdraws from the objective area and is extracted, usually using a different route than it used for movement to the objective.[2] The U.S. view seems to reflect recent Afghanistan experience.

The Russian View

In Russian military science, a "raid" does not have a single, strict definition. The concept generally entails different interpretations, such as "a method of action of the troops," "a form of carrying out combat missions behind enemy lines," "a type of maneuver," and also as "a method or variety of offensive actions." Due to this nuanced understanding, Russian military science has several terms for the raid concept that all can be roughly translated as "raid:" *vylazka* [вылазка], *nalot* [налёт], and *reyd* [рейд]. A *vylazka* is a short, tactical sortie that is usually associated with an encircled and/or besieged force attacking to conduct reconnaissance and destroy or capture personnel, weapons, and kit.[3] A *nalot* is sudden, short, and tied to the means of delivery — such as an artillery or air raid.[4] The third term for the concept — *reyd* (borrowed from the English) — is described as an attack (a combination of maneuver and combat) carried out behind enemy lines.[5] In addition, it is important to note that the Russian concept of a raid cannot simply be seen as just an attack; raids also usually involve relatively long tactical road marches both to and from the objective, further differentiating them from traditional offensive actions. This third definition is the focus of this article and will hereafter simply be referred to as just "raid."

During the War of 1812 against Napoleon, the Russian armies conducted deep Cossack and cavalry raids using mounted detachments and horse-drawn light artillery under famous commanders such as Denis Davidov and Ivan Dorozhov. During the Russian Civil War, Semyon Budyonny and Kliment Voroshilov led

Figure 1 — Five Phases of a U.S. Army Raid (Field Manual 3-90, *Tactics*)

1. Infiltrate objective area
2. Isolate objective
3. Surprise attack
4. Seizure of objective
5. Withdrawal

RLY   rally point

the famed Red 1st Cavalry Army, and Konstantin Mamontov led the White 1st Don Army and then Don Cossack units in deep raids throughout the war. Cavalry and tactical maneuver groups used raids against Bashmachi insurgents (some coupled with aviation spotting and insertion of blocking forces). These proved effective in controlling the 1930s Central Asian breakaway attempts. During the Great Patriotic War (the Soviet War against Nazi Germany), Soviet tank raids, guerrilla raids, and cavalry raids were an important part of the struggle.

The goals of the raid also have changed little over the years, but in military conflicts of an intensity lower than war, such as "armed conflicts," raids may also be employed to exercise control over a given area. In the Soviet-Afghan War and the two Chechen campaigns, Soviet battalions and companies tried new techniques of combat to fight the mujahedin and breakaway Chechens. One of these was frequent, unconstrained raids by tactical maneuver groups [войсковая манёвренная группа], which would engage highly mobile guerrilla and irregular forces and their base camps. The groups would fight independently in raids of one- or two-weeks duration. The tactical maneuver groups made independent raids with the goal of capturing and destroying supply bases, ammunition depots, command and control facilities, and major "bandit" detachments in areas located at a considerable distance from these tactical force elements' bases. A motorized rifle battalion, and sometimes a motorized rifle company, was the basis of the tactical maneuver group.[6]

Tactical maneuver groups conducted raids based on intelligence, terrain, nature of the target, routes, and support required. An assault group (rocket-propelled grenade gunners, snipers, machine gunners, and combat engineers) and a covering group were designated. A recovery squad; armament and equipment servicing, maintenance, and repair squad; medical squad; logistic support subunit; and if necessary, a nuclear, biological, chemical (NBC) reconnaissance squad would also be attached to a company operating in the tactical maneuver group. A tank platoon attached to the company provided direct support. The tactical maneuver group commander controlled the actions of supporting artillery through an artillery observer and called in helicopters and target designations through a forward air controller.[7]

In the attack, the motorized rifle subunits advanced by bounding from cover to cover, going around hills through hollows, and taking advantage of terrain folds. The fighting men negotiated obstacles ahead of the forward edge of defense under cover of the fire of artillery, helicopters, tanks, BMPs (*Boyevaya Mashina Pyekhotas*) or BTRs (*Bronetransportyors*), and small arms. The safe distance from friendly artillery shell bursts was 200 meters for tanks, 300 meters for BMPs/BTRs, and 400 meters for personnel attacking in dismounted formation.[8]

This technique worked when fighting guerrillas and small armed groups, but it is not particularly well suited for large-

> *The goals of the raid also have changed little over the years, but in military conflicts of an intensity lower than war, such as "armed conflicts," raids may also be employed to exercise control over a given area.*

scale combat operations. Although raids can be conducted by conventional forces, doctrinally, Russia tends to prefer to use airborne troops when fighting a peer-level adversary on negotiable terrain.

The Russian Airborne Forces (VDV) is a 100-percent mechanized force that is capable of flying into battle and landing via parachute or helicopter dismount. If the objective is well defended, they can land near or at a distance from their objective, mount their airlanded BMD personnel carriers, assemble into units, and road march to their objective to conduct a mechanized combined arms attack. The airborne troops are a lightly mechanized combined arms force with their own customized artillery, air defenses, anti-tank weapons, armored assault vehicles, and logistics support force. The Airborne Combat Vehicle (BMD) [Боевая Машина Десанта (БМД)]-] is a miniature version of the BMP ground forces infantry fighting vehicle. It only weighs 14 tons with a forged aluminum alloy hull and a steel turret. The latest version, the BMD-4, has a 100mm low-pressure rifled 2A70 main gun with a 30mm 2A72 automatic co-axial machine gun. The 100mm gun fires high explosive (HE) fragmentation rounds and 9M112 Konkurs anti-tank guided missiles (ATGM). It mounts two additional machine guns, has a crew of three, and carries five dismounts. It has an operational range of 500 kilometers on good roads.[9]

A raid may be conducted after an air landing, the essence of which lies in sudden, swift strikes against enemy targets combined with high mobility of the entire or part of the air landing force airborne assault. For the successful conduct of raiding actions behind enemy lines, the airborne troops have modern military equipment that provide substantial firepower and mobility. Although less heavily armed than conventional Russian forces, they have significantly more vehicles and firepower than any Western airborne force. The airborne troops can carry out raids in almost all physical and geographical conditions. The most significant impact on the organization and execution of the raid will be the accessibility, protective, and masking properties of the terrain.[10]

An air landing raid seizes and destroys previously designated or newly identified objectives. A battalion (or company) can independently conduct a raid behind enemy lines in order to seize and destroy (disable) an objective (enemy command and control, rear areas, lines of communication, etc.) located away from the general direction of the brigade's/regiment's main force, or it can link up with the main force after landing at a different site and conducting its immediate

objective while separated from the main force of the air landing forces.[11]

A battalion typically conducts a raid as part of a brigade/regiment; it can act as part of the main force or independently as a forward detachment, vanguard, rear guard, raid detachment, reserve, or as a covering unit (see Figure 2). A company can act as part of a battalion or independently as a reconnaissance detachment, forward security detachment, flank security detachment, rear security detachment, plus the same independent roles as a battalion (see Figure 3). A platoon can act as part of a company or independently as a reconnaissance (combat reconnaissance) patrol, route security, or covering unit (see Figure 4).

The successful conduct of the raid by the battalion (or company) will depend on the subordinate units' skillful organization and thorough preparation, a well-organized reconnaissance of the enemy and terrain, route security, reliable air defense, the skillful use of surprise and firepower to defeat the enemy, and high unit mobility. The battalion (or company) usually starts a raid after seizing its immediate objective. Sometimes the beginning of the raid may be preceded by withdrawal from battle. In the first case, the battalion or company begins the raid in full force; in the second case, part of the force covers the subunit's exit from the battle to start the raid. In order to conduct the raid, the battalion needs reinforcements, a route (direction) of advance, an objective(s) for seizure/destruction, a mission, start time for the raid, and instructions for breaking contact or withdrawing from battle. The route should avoid populated areas, road junctions, gorges, areas of mass destruction, and irradiated areas.[12]

A battalion (or company) conducts a raid in a column. The movement is carried out at the maximum possible speed under the given conditions, using the masking and protective properties of the terrain. The march order of a battalion as part of the main force includes a column of its main force and a column of logistics units. The march order of the battalion
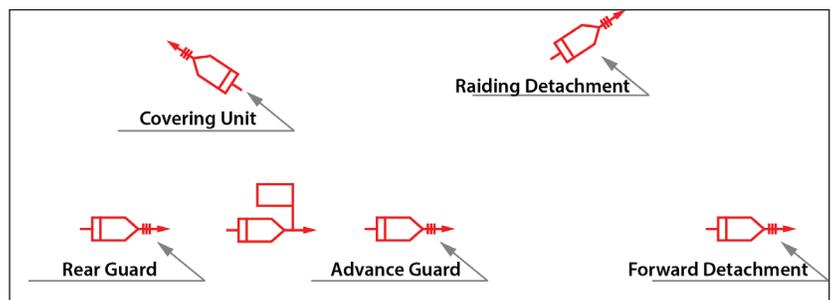

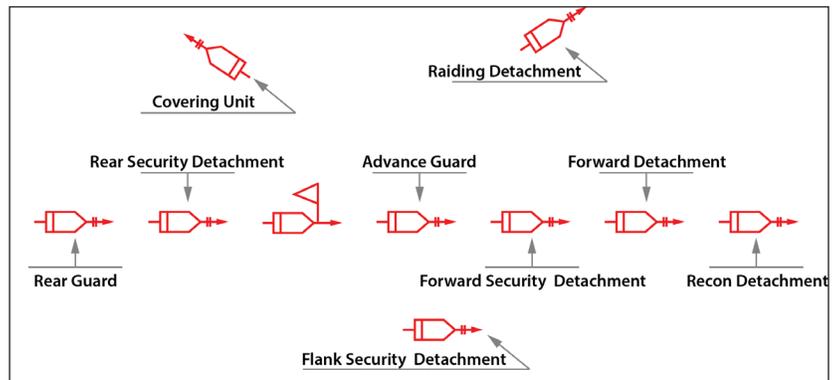Figure 2 — Role of a Battalion Acting Independently of the Main Force of a Regiment (Brigade)

Figure 3 — Role of a Company Acting Independently of the Main Force of a Battalion
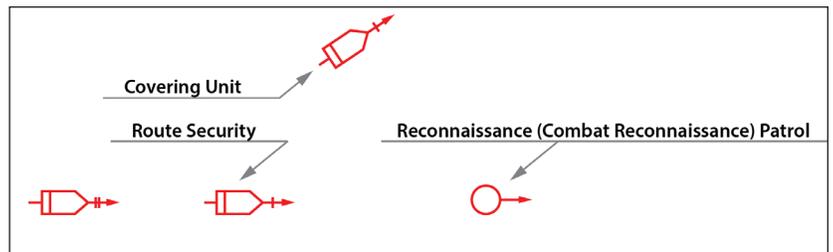

Figure 4 — Role of a Platoon When Conducting Raiding Actions

(or company) assigned to the forward detachment, vanguard, rearguard, and raiding detachment is determined by taking into account the rapid deployment of units into combat formation and entry into battle. For a battalion, this includes route security, the column of the main forces, and the column of logistics support units; for companies, this includes route security and a column of the main forces (see Figure 5).[13]

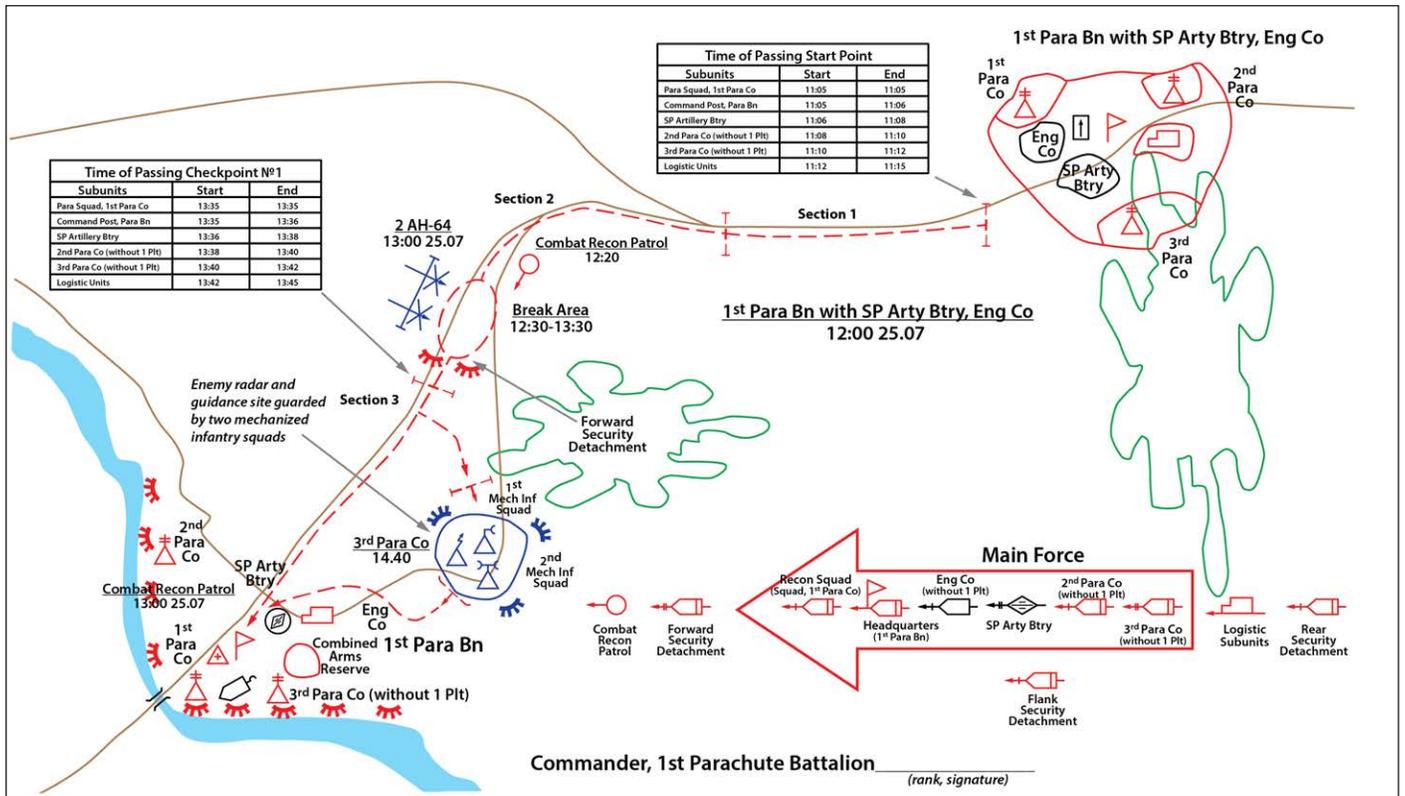Figure 5 — March Order of Battalion Conducting a Raid
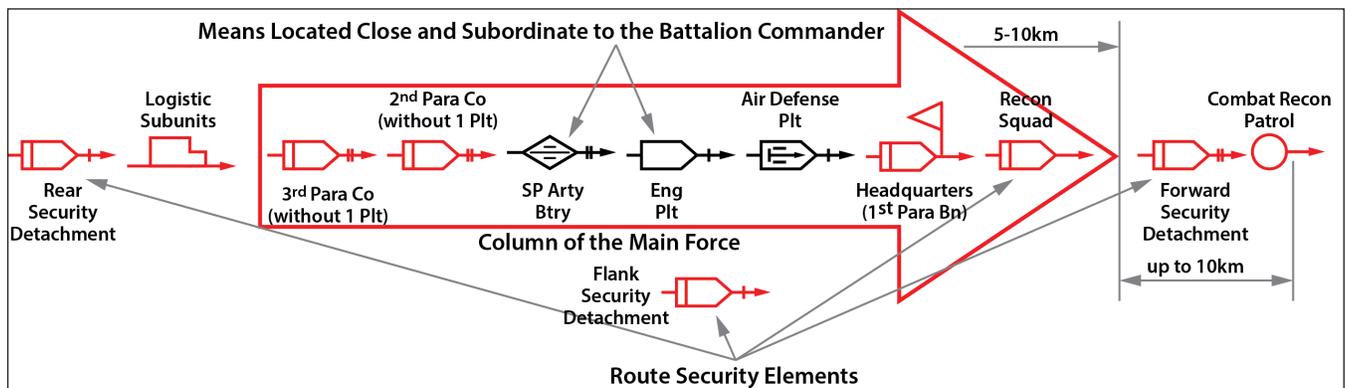
Figure 6 — Example of a Commander's Working Map for a Raid

The locations of subunits in a battalion column are determined by the order in which they will enter into combat according to the commander's plan. Typically, artillery subunits move closer to the head of the column to provide fire support to the maneuver companies' commitment to battle. The battalion commander and the battalion headquarters are at the head of the column so that when the battle starts, the commander can move quickly to the forward route security patrol to observe the situation. The commanders of attached units follow directly behind the commander of the unit to which they are attached. When distributing reinforcement subunits among parachute (air assault) units and forming marching columns, the march capabilities of the reinforcing units are considered so that they do not lag behind and hinder the movement of the main force. The reinforcement units' vehicles should have mobility characteristics similar to the vehicles of the units that they are supporting. Engineer and NBC reconnaissance are located with the forward route security patrol, towards the head of the column or as local security.

Raid capabilities are characterized by the ability of the battalion (company) to conduct combat in isolation from the main force, the average speed of column movement, the depth and duration of the raid, level of enemy resistance, the state of the route, season, time of day, weather, ability of commanders to direct columns, the vehicle maintenance, the training level of the drivers, and logistic support. The average speed of movement on roads is 30-40 kilometers per hour for wheeled vehicle columns and 25-30 kilometers per hour for mixed and tracked vehicle columns. Since a full-
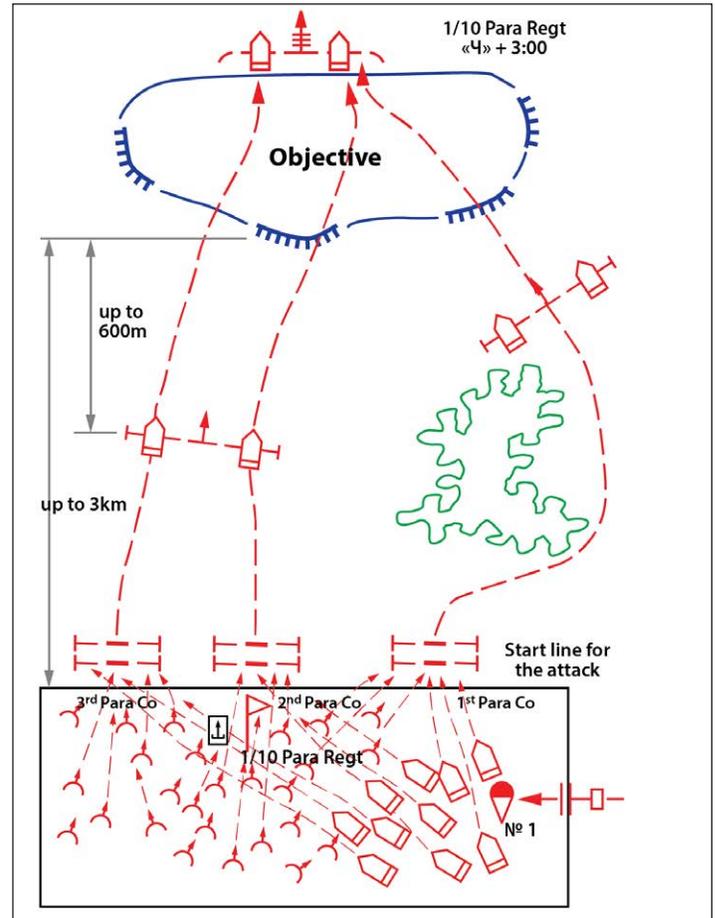

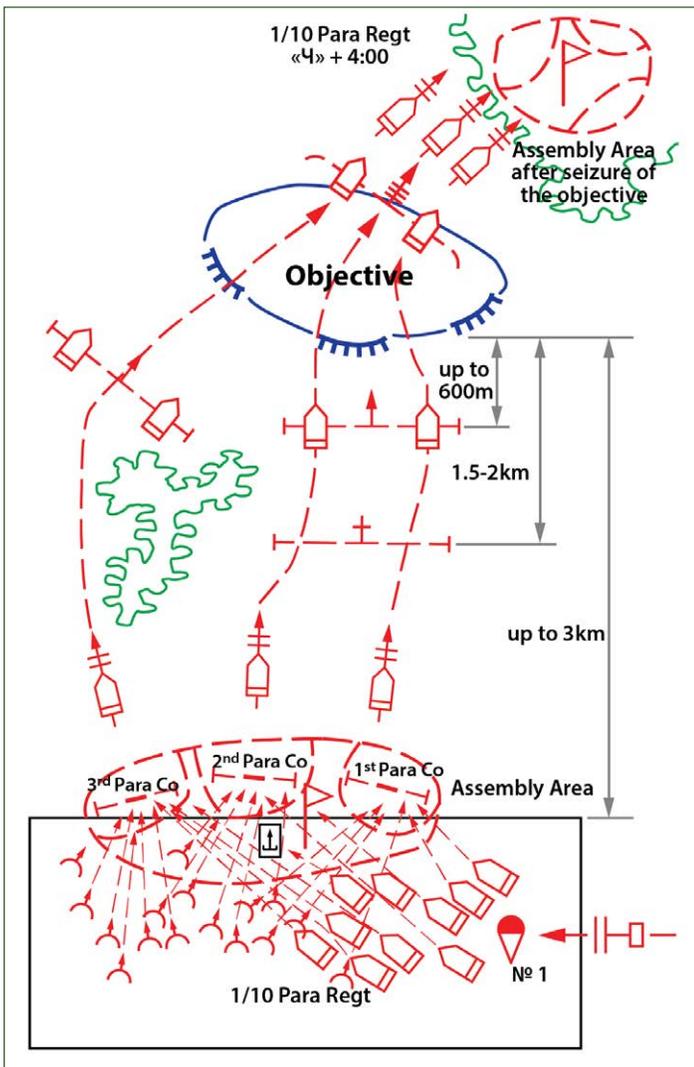**Figure 7 — Air Landing Near the Objective**

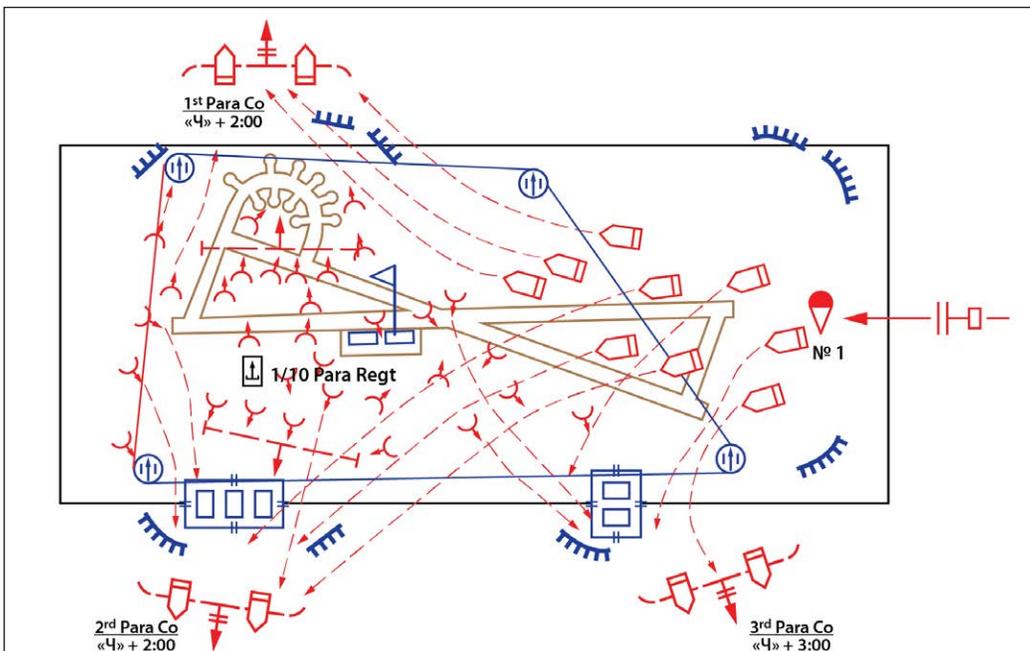**Figure 8 — Air Landing at a Distance from the Objective**

Figure 9 — Air Landing on the Objective

strength raiding battalion will seize or destroy objects, repel enemy counterattacks, and hold important lines of communication for the time specified by the senior commander, the raid speed will be significantly lower than the average march speed. The average raid speed can be up to 10 kilometers per hour. The duration of a raid depends on the mission assigned as well as available logistical support. A battalion (company) that is adequately supplied can conduct raid actions for about two days.[14]

Russian airborne troops are an elite force that fights as a light mechanized combined arms formation. Unless the primary objective is undefended, airborne commanders prefer to land in a relatively "safe" or inactive area near or at a distance from the objective, where it can efficiently load personnel onto assigned carriers and assemble units before advancing on the objective as a fully mechanized force (see Figures 7-9). The airborne column(s) can include artillery, air defense, engineers, logistics, and even tanks. Most combat vehicles have some amphibious capability, and wet gap crossings are regularly practiced. Therefore, the depth of an airborne raid can be deep and unexpected.

In the Russian view, as military conflict becomes more intense and dynamic, the conduct of raids by its airborne troops will significantly increase. In modern warfare, the absence of a continuous line of contact between the parties, the increase in spatial scope of the military conflict, and the expansion of troop mobility will create conditions favorable for raid actions with an "airmobile" character.[15]

Conclusion

The practice of conducting a raid after an air landing has not been a regular feature of current fighting in Ukraine, but there is preliminary evidence that suggests that Russian actions on Hostomel airfield during the first few days of Russia's 2022 invasion of Ukraine may have been a failed attempt to conduct a raid similar to the Soviet takedowns of Czechoslovakia and Afghanistan, where Soviet airborne and spetsnaz decapitated the governments and attempted to keep their armies in barracks. If a Soviet-style political "decapitation" was the Russian intent, the Hostomel airfield would be a logical starting point due to its close proximity to Kiev (10 kilometers).

According to most accounts, on 24 February 2022, a few hours after President Putin announced the beginning of a "special military operation," elements of the airborne troops' 31st Air Assault and

45th Spetsnaz brigades successfully air landed on Hostomel airfield. After landing, the Russians quickly seized an adjacent bunker facility. Ukrainian Defense Minister Oleksandr Reznichenko has since stated that he and his staff were supposed to relocate to this bunker facility one or two days after the start of hostilities, implying that if they had been in the bunker at the time of the air landing, a significant portion of the Ukrainian command and control would have been captured.[16]

Russian Colonel-General Vladimir Shamanov, who commanded the airborne troops until his retirement in 2016, has since described the operation's initial objectives, stating that the intent of the operation was to seize two strategic targets in Kiev, the Vasil'kov and Hostomel airfields, by employing assets of the 31st Air Assault Brigade, 45th Spetsnaz Brigade, 76th Air Assault Division, and 98th Airborne Division. Although Hostomel airfield was seized, Ukrainian air defenses were not sufficiently suppressed to allow an appropriate flight corridor for incoming flights of IL-76MDs to offload reinforcements and supplies.[17]

Shamanov further elaborated on the operation's problems: "The forces that were air landed destroyed the enemy guards force and dug in at designated positions. But the forces of the [Russian] Western Military District were unable to reach the airfield in time. Further, the Central and Eastern Military District forces were unable to carry out their mission to blockade Kiev from the east and south which was reinforced with groups of forces from the enemy reserve. The routes of advances were not reconnoitered, traffic control was not properly conducted, and a linkup between the airborne and ground forces did not occur. The airborne troops had only a day's supply of weapons, ammunition, and food. By the third day, they had to fire rubber bullets [carried for riot and crowd control]…"[18]

Although the Russian airborne troops' foray into Kiev was ultimately a failure, it is very possible that if one or both of the airfields could have been seized and reinforced, an airborne mechanized raid intended to "decapitate" the Ukrainian regime may have been attempted. In the coming months and years, more information will undoubtedly surface to confirm or refute this hypothesis, but what is certain is that the airborne mechanized raid will continue to be at the forefront of Russian military thought for large-scale combat operations.

Notes

[1] This article is based on a chapter from the authors' forthcoming book tentatively titled *The Russian Way of War: History, Force Structure, and Tactics of the Russian Airborne*.

[2] Field Manual (FM) 3-90, *Tactics*, May 2023, 5-27 and 5-28, https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN38160-FM_3-90-000-WEB-1.pdf.

[3] "Вылазка" [Raid], Russian Military Encyclopedia, https://encyclopedia.mil.ru/encyclopedia/dictionary/details.htm?id=4717@morfDictionary.

[4] "Налёт" [Raid], Russian Military Encyclopedia, https://encyclopedia.mil.ru/encyclopedia/dictionary/details_rvsn.htm?id=6801@morfDictionary.

[5] Valeriy Kiselev, "Тактика: в рейде — маневренная-группа" [Tactics:

Maneuver Group on a Raid], Армейский Сборник [Army Digest], December 2001, pages 36-41.

[6] Ibid.

[7] Ibid. Examples of Chechens fighting tactical maneuver groups are found in Dodge Billingsley with Lester Grau, *Fangs of the Lone Wolf: Chechen Tactics in the Russian-Chechen Wars 1994-2009* (Fort Leavenworth, KS: Foreign Military Studies Office, 2012), 9-41, 97-101, and 113-121. See also, Ali A. Jalali and Lester W. Grau, "The Campaign for the Caves: The Battles for Zhawar in the Soviet-Afghan War," *The Journal of Slavic Military Studies* (September 2001), https://community.apan.org/wg/tradoc-g2/fmso/m/fmso-monographs/252376?pi296680=89.

[8] "Рейд" [Raid], Russian Military Encyclopedia, https://encyclopedia.mil.ru/encyclopedia/dictionary/details.htm?id=12246@morfDictionary.

[9] Airborne divisions have main battle tank battalions assigned and can airland these full-sized tanks should the airborne seize a proper landing zone.

[10] L. P. Serova, L. G. Ilchuk, and N. V. Kopylova (Eds.), Тактика: Воздушно-Десантных Войск (часть вторая) [Tactics: Of the Airborne Troops (part two)] (Ryazan Guards Higher Airborne Command School, Ryazan, 2016), 89.

[11] Ibid.

[12] Ibid, 90-91.

[13] Ibid.

[14] Ibid, 90-94.

[15] Ibid, 88.

[16] As posted on Telegram on 10 April 2023, accessed from https://t.me/uniannet/94913.

[17] Vladimir Shamanov, Vladimir Kulakov and Olga Kashirina, "Операция Промежуточный Этап [The Operational Intermittent Phase], Зашита и Безопастностъ [Defense and Security], No. 2,(105), 2023, 15.

[18] Ibid.

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Describing Russian Infantry's Breaching and Clearing Techniques

DR. LESTER W. GRAU
DR. CHARLES K. BARTLES

Breaching entryways and clearing buildings, particularly in urban combat, are particularly complex and dangerous infantry tasks. These techniques are not universal, but the organization and equipment of a nation's infantry squad seem to determine size, composition, and weaponry of this choreographed combat. In terms of size and organization, the four-man stack has been part of U.S. infantry training for urban combat for a long time. Apparently, its origins were based on the nine-man infantry squad, where each squad could form two similarly armed four-man stacks with the squad leader controlling them. This is not the Russian model.

To begin with, a Russian motorized rifle squad mounted on a BMP (*Boyevaya Mashina Pyekhota*) infantry fighting vehicle has a two-man vehicle crew — the driver-mechanic and the gunner — and a seven-man dismount squad with the squad leader acting as the vehicle commander. The dismount squad functions with a fire support group, including the squad leader, machine gunner, grenadier, and assistant grenadier, along with a maneuver group that includes a senior rifleman and two riflemen. Unlike the U.S. Army infantry squad's symmetrical fire teams, the Russian maneuver group moves and assaults while the fire support group, along with the BMP, provides covering fire. Their roles are seldom interchangeable.

In the fighting in Ukraine, full-strength Russian motorized rifle squads are a rarity, and many BMPs or BTRs (*Bronetransportyors*) are manned with only five dismounted infantrymen. In these cases, the more heavily armed fire support group may be fully manned and equipped, while the maneuver group may have fewer soldiers and weapons. To make up for this disparity, Russians rely on their overmatch in artillery to assure their missions. However, artillery cannot do everything. Clearing and breaching buildings remains the exclusive job for dismounted infantry of the maneuver group.
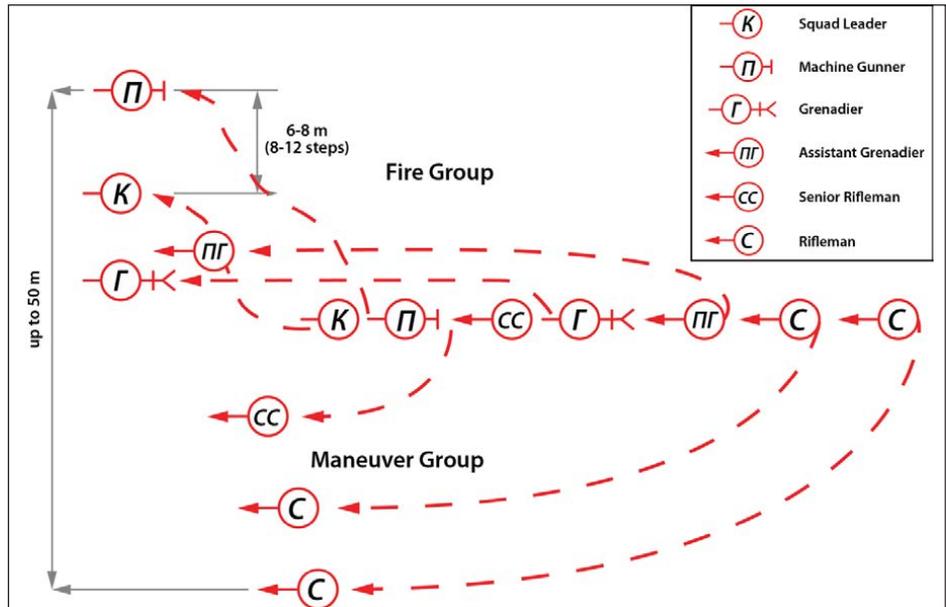

Figure 1 — Russian Motorized Rifle Squad on Foot Moving from Column to Line
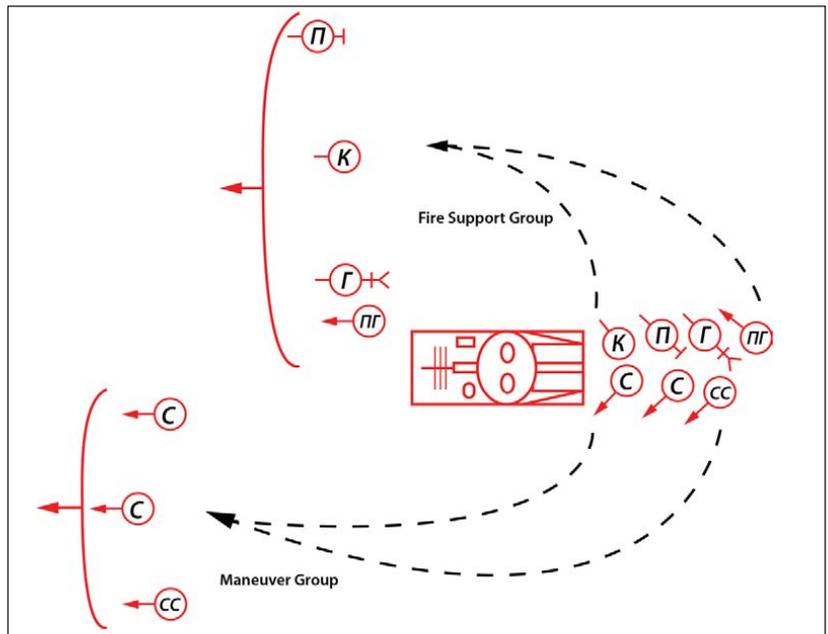

Figure 2 — Deployment of the Motorized Rifle Squad from Behind a BMP

The figures on the following pages illustrate basic building clearing techniques taught to spetsnaz (special operations) candidates, first as individuals and then as part of a three-man breaching stack. The individual soldier learns to move down

a corridor, find the enemy, and react quickly and decisively while firing. He is trained not to move directly across a T-intersection but to be wary of intersections and angled corridors. The soldier is taught not to hug the wall since an enemy might detect the soldier and fire into leading exposed parts of the soldier or into the soldier's corridor trying for a ricochet to kill him (see Figure 3; the enemy is in blue).[1]

If fired at from around a corner, the soldier returns fire while moving sideways (step-drag) to increase his field of vision and engage the enemy (see Figure 4).[2]

If not fired on at close range at an unsecured intersection, the soldier still moves sideways [step-drag] ready to engage. In this manner, the soldier has a greater chance of detecting the enemy, even if located some distance from the corner (see Figure 5).[3]

When approaching a door, it is safer and better to first inspect the room though a narrow slit of a partially open door and then fully open the door. The soldier controls the possible zone of fire with his weapon and then enters the room in the same manner as a T-shaped corridor (see Figure 6).

Stairs

Stairs and stairwells are particularly dangerous while clearing a building. The stairway entrance, stairway turns, and the area under and above the stairs must be kept covered by weapons. While moving on the stairs, the soldier must avoid the areas of the stairway where an enemy can shoot him from above or below. He approaches the stairs as one would approach a doorway, observing the entire area and the entry and exit to the stairwell. He then flattens his back or belly to the stairs while making a turn. At every step, he maintains the maximum cover and observes the entire area (see Figure 7).

When climbing the stairs, he is very observant and keeps the barrel of his weapon pointed in the direction of possible danger (see Figure 8). He remembers that some stairs have open spaces under each step through which an enemy can fire.[5] Upon receiving the order to clear an unfamiliar building, it is necessary to evacuate the wounded, redistribute ammunition, suppress enemy firing, and so on. When training cadets, the Russian trainers issue blank ammunition to prepare them for the actual event.[6]

Three-Man Stack

After the soldier has mastered firing at corners and intersections, team training begins. Team members learn to keep their backs to the corridor wall to put maximum fire and ricochets down the
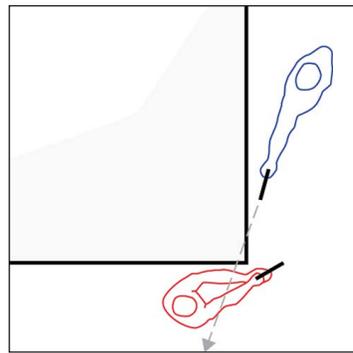

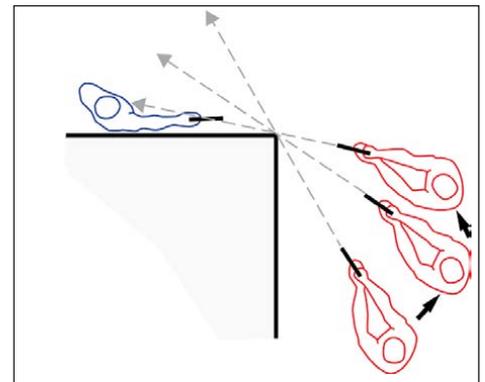**Figure 3 — Position of the Firer while Firing from a Corner**

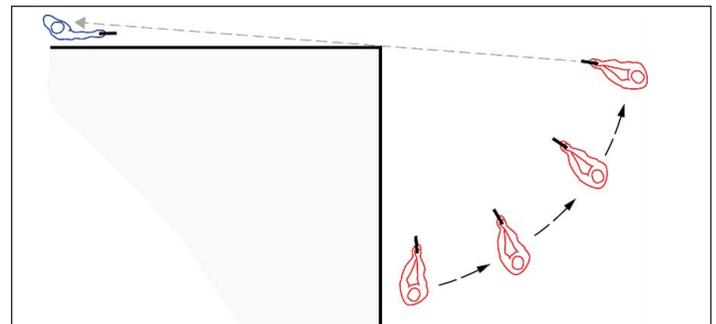**Figure 4 — Approaching a Corner**

Figure 5 — Gaining a Field of Vision around a Corner
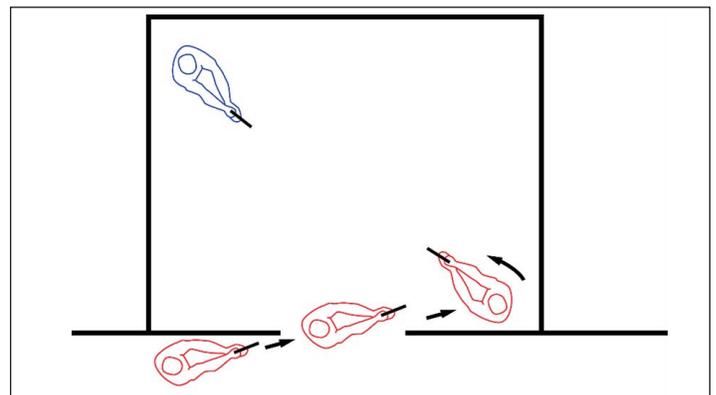

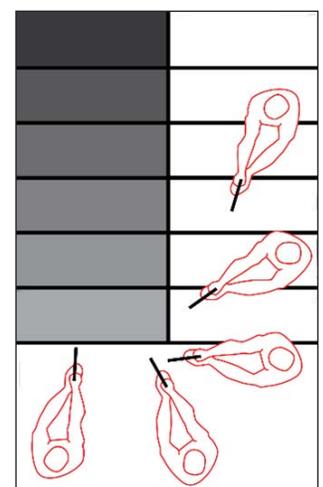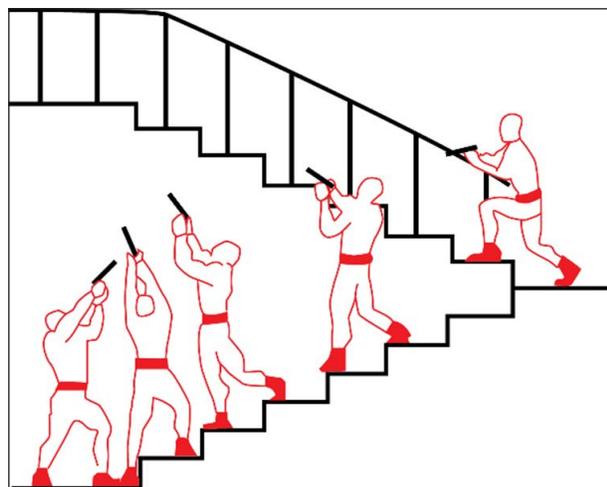**Figure 6 — Single Shooter Entering an Inhabited Room[4]**

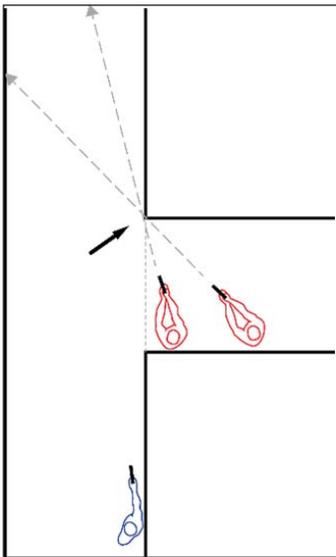**Figure 7 — Movement along a Stairwell (at the Turning Point); Figure 8 — Movement along a Stairwell (while Climbing)**
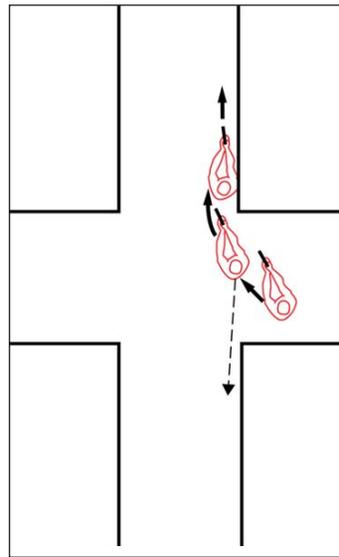
Figure 9 — Viewing a T-shaped Corridor

Figure 10 — Entering a T-shaped Corridor

Figure 11 — Movement from a Corridor into a Room (Step 1)[9]

Figure 12 — Movement from a Corridor into a Room (Step 2)[10]

Figure 13 — Movement from a Corridor into a Room (Step 3)[11]

Figure 14 — Movement from a Corridor into a Room (Step 4)[12]

intended corridor of advance (see Figure 9). When entering a T-shaped corridor, the lead soldier searches in one direction and moves quickly in the desired direction through the new corridor, staying on the right-hand side.[7] The second man checks the corridor behind him and, if necessary, clears it and follows, as does the third. If facing a corridor intersection, the open-facing corridor is searched first and then both sides of the corridor are searched (see Figure 10). The first shooter is the leader who directs the combat formation and views and evaluates every obstacle. The second shooter covers the leader, and the third shooter covers the group and their rear. During their movement down a corridor, the group is close together with weapons at the ready for tactical contact and to take their sector under fire (see Figure 11).[8]

When the stack approaches a door, the second and third shooter break off. One moves to establish a firing sector into the room, and the other covers the corridor. The leader covers the opposite firing sector into the room. The leader and second shooter then enter the room in opposite directions while the third shooter backs into the room (see Figures 12, 13, and 14).

When approaching an intersection, the leader and second shooter move back-to-back in the last portion of the corridor and observe as much of the intersecting corridor as possible, looking for an enemy along the near wall. The third shooter covers them from the rear. Then the first and second shooter step-drag into the corridor for better visibility. The third shooter then turns around and aims down the unchecked area of the corridor. Then the first and second shooters begin movement. One follows the other, maintaining some distance between them. The third shooter then follows them backwards covering their rear.

Regarding weapons and training, the relatively small Russian breaching and clearing team aims to combine its small arms weapons with practiced agility. The RPG-7 grenade launcher is clumsy inside a building and usually a hazard to all when fired from indoors, and machine guns in close quarters have their limitations as well. For the Russian breaching team, pistols and assault rifles are better suited for the close quarters and close ranges involved in clear-

ing buildings. In 2018, the Russian Federation introduced tactical shooting for inclusion in the training of contract motorized riflemen.[16] The Russian Army is now introducing tactical shooting with the goal of enveloping the reflexes and muscle memory for close-in, accurate, rapid gunfights commonly found in urban terrain. Like the U.S. Army, the Russian Army previously restricted tactical shooting training to elite direct-action forces but is now conducting it as part of regular unit training for all its longer-term contract infantry. Fitting this into the regular training year is a challenge but, if successful, would produce more effective squads and platoons.[17]
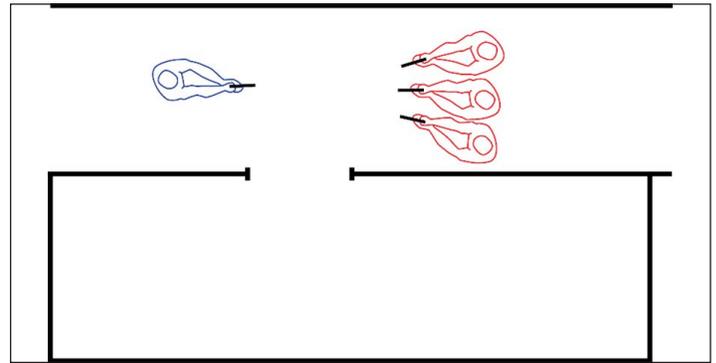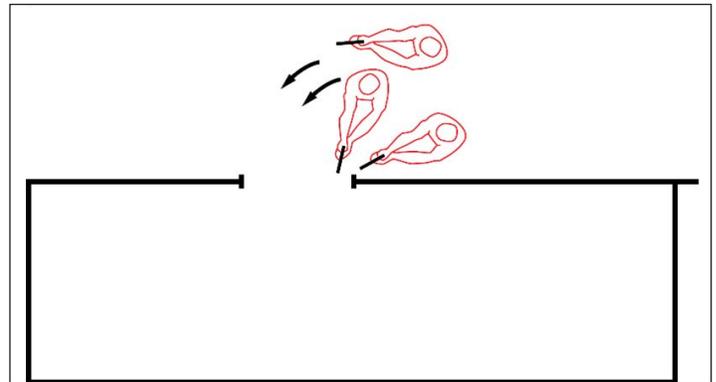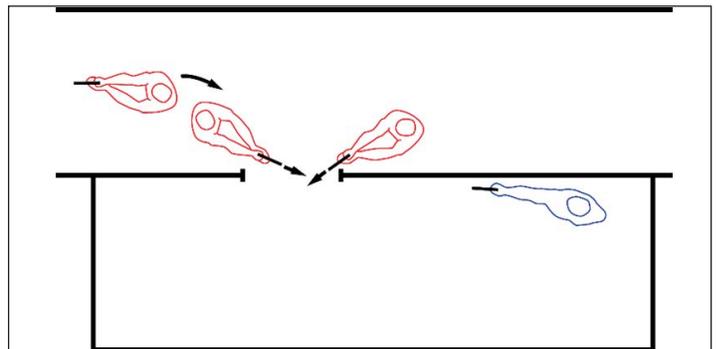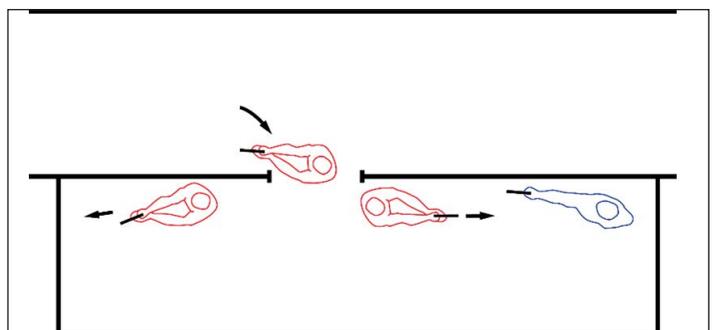
Tactical shooting and the Kalashnikov assault rifle go hand-in-glove. The issued 9mm MP-443 "Gratch" or the older Makarov pistol are also well-suited for this close quarters combat training.[18] The infantry mission of clearing buildings requires special techniques which go well with tactical shooting training. Tactical shooting training for all the longer-term contract infantry, which includes motorized rifle, airborne, spetsnaz, border guards, and National Guard soldiers, is a lofty, perhaps unattainable, goal. And that training must be repeated regularly. Most likely, the elite forces are getting it first. This will not be part of shorter-term conscript soldier training due to all the other basic training and skill development that must be accomplished in their short period of service.

After mastering these beginning techniques, training may expand to the use of grenades, smoke grenades, demolition and pyro techniques, and flash-bangs. Follow-on training in the use of supporting machine guns and grenade launchers — as well as climbing ladders, battering rams, special-purpose demolitions, and the like for building clearance — can also be introduced.

Building clearing techniques are not universal, but the table of organization and equipment of any infantry squad seems to determine size, composition, and weaponry. Because of the size of the Russian dismounted squad, breaching and clearing teams are smaller. Their ability to train to be agile — even

> *Building clearing techniques are not universal, but the table of organization and equipment of any infantry squad seems to determine size, composition, and weaponry. Because of the size of the Russian dismounted squad, breaching and clearing teams are smaller.*

to have the muscle memory — with fewer, lighter weapons is also key. For this reason, though training for infantry breaching and clearing teams have expanded beyond just elite units in the Russian armed forces to include regular units, naval infantry, and National Guard, it remains an advanced technique that longer-term contract soldiers will do most competently. In those units, mission accomplishment can be counted with the smaller size, lightly armed teams. However, dismounted Russian squads without those more experienced, specially trained members will be greatly challenged in this dangerous task.

Figure 16 — Method of Controlling an Intersection within a Building (Step 2)[14]
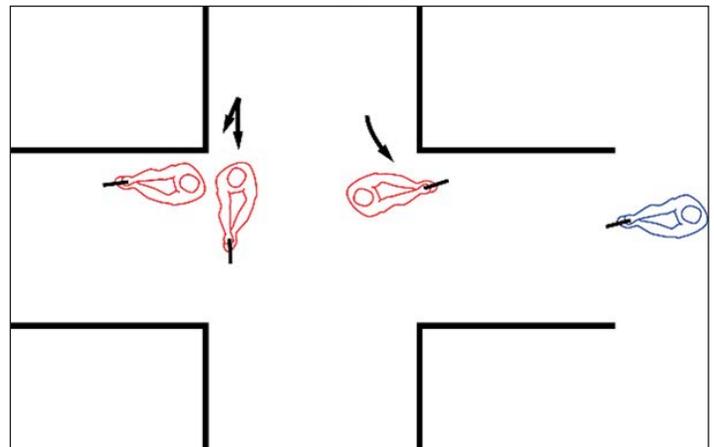

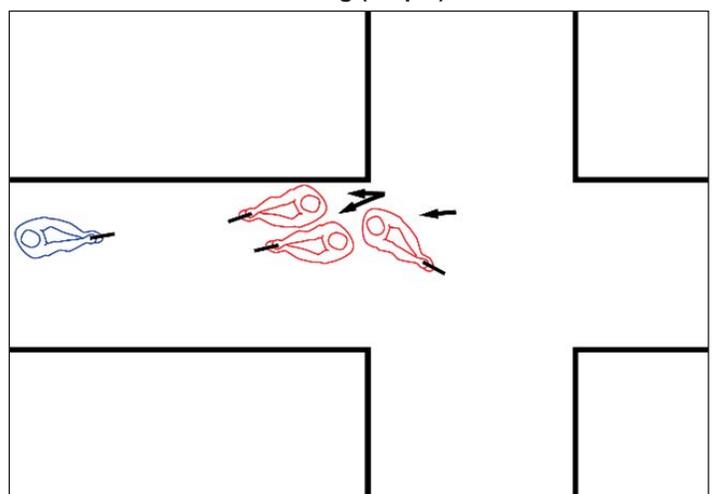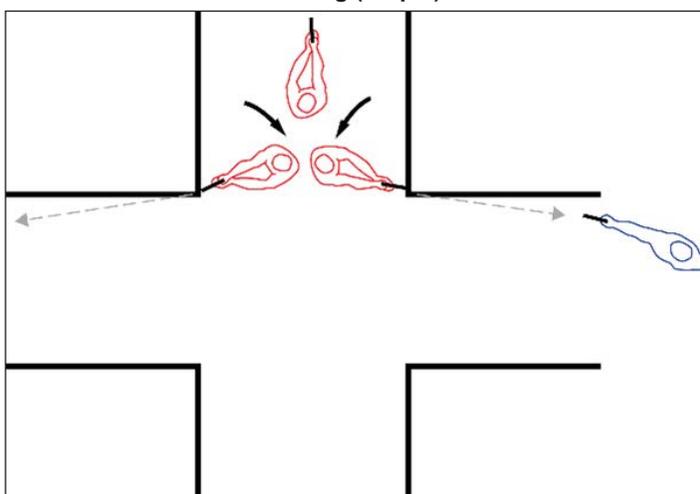**Figure 15 — Method of Controlling an Intersection within a Building (Step 1)[13]**

Figure 17 — Method of Controlling an Intersection within a Building (Step 3)[15]

Notes

[1] S. Katanskiy, A. Dryzhinin, G. Sergienko, "Врагу за стенами не скрыться" [The enemy next to the walls is not concealed"], Армейский Сборник [Army Digest], August 2022, 206.

[2] Ibid.

[3] Ibid.

[4] Ibid, 207.

[5] Ibid.

[6] Ibid.

[7] Ibid, 206.

[8] Ibid, 207.

[9] Ibid, 208.

[10] Ibid.

[11] Ibid.

[12] Ibid.

[13] Ibid.

[14] Ibid.

[15] Ibid.

[16] For this article, tactical shooting is specialized firearms training designed for close, quick, accurate combat involving firing multiple rounds to kill or disable another gunner. Such training is designed for law enforcement and military personnel and usually employs compact rifles, pistols, or shotguns.

[17] Aleksandr Pinchuk, "It has been decided to introduce a New Applied Military Discipline to the Troops," Krasnaya Zvezda, www.redstar.ru, 30 August 2019.

[18] The MP-443 Gratch [Rook] is replacing the Makarov semiautomatic pistol. The Gratch fires the 9x19mm Luger round and has an 18-round magazine. The Makarov, first issued in 1951, fires the less-powerful 9x18mm Markarov round from an eight-round magazine.

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Unleashing Fire and Fury:
The TOS-1A's Impact in the Russo-Ukrainian War

JORGE L. RIVERO

Introduction

As the Russo-Ukrainian War forges into its second year, the prevailing Western narrative surrounding the conflict fixates primarily on Russian setbacks. Highlighting the apparent demise of Russian forces, it stresses Russian equipment losses, faltering determination among frontline troops, extensive logistical setbacks, and corruption as the driving forces behind this perceived downfall. Undeniably, Russia has experienced significant setbacks and equipment losses on the Ukrainian battlefield. Open-source research group Oryx estimates that approximately 11,800 pieces of Russian equipment have been destroyed, abandoned, or captured since the war's inception.[1] However, the inclination of some Western military analysts to generalize the Russian military's underperformance based on personal biases and flawed analysis may have hindered their ability to recognize successful systems, thus leading to a dangerous tendency to underestimate the true potential of the Russian military.

Amidst underperforming Russian weaponry, the TOS-1A thermobaric rocket system has emerged as an effective tool extensively used by the Russian forces in offensive and defensive operations, guided mainly by a combination of unmanned aerial vehicle (UAV) assets and special operations forces. Even though scrutinizing the ongoing war to draw lessons learned could be premature, preliminary observations may shed light on how Russia employed specific weapons in the first year of the war. Doing so requires a critical appreciation of Russia's military capabilities and the employment methods of one of Russia's go-to weapon systems. Harnessing open-sourced information and video analysis, this article examines a vast repository of information and footage capturing the persistent deployment of the TOS-1A in Ukraine, showcasing its strong impact that echoes across the battlefield.

Figure 1 — Russian TOS-1A Solntsepek 220mm Heavy Flamethrower System (Photos from OE Data Integration Network)

History of the Soviet and Russian Thermobaric Weapons

The history of the TOS-1, the predecessor to the TOS-1A, can be traced back to 1971 when then-commander of the chemical forces and former artillery officer, General Vladimir Karpovich Pikalov, began coordination for his troops to employ a multiple-launched rocket system. While the Design Bureau of Transportation and Engineering began designing the vehicle, the Research Institute of Applied Chemistry in Sergei Posad, near Moscow, created the thermobaric warhead that would later be named MO.1.01.04.[2] An enhanced iteration of the MO.1.01.04 rocket was introduced as the MO.1.01.04M, which features an extended range and a heavier warhead. The warhead comprises a solution of liquid isopropyl nitrate encompassed by magnesium, encased around a bursting charge within the 220mm rocket.[3-4] Upon activation by the MRV-U1 fuze, the bursting charge triggers the release of the isopropyl nitrate and magnesium solution into the surrounding atmosphere, which subsequently undergoes ignition, generating an immense blast overpressure capable of obliterating enemy bunkers and structures at a range of six kilometers. Magnesium serves as a fuel to the mixture

and boosts heat production during detonation, creating the bright flash of light often seen in TOS-1A videos.[5-6] The peak detonation temperature, soaring to 3,700 degrees Celsius, leads to a sustained post-detonation heat that perseveres even after the initial blast has dissipated.

Those affected by the blast pressure but not killed in the process endure severe injuries such as burst eardrums, internal organ damage, concussions, traumatic brain injuries (TBI), and burns.[7] One TOS-1A salvo of 24 rockets can inflict devastating damage covering 200 by 400 meters.[8] In Ukraine, Russian radiological, chemical, and biological defense (NBC) forces have employed TOS-1As with success, and heavy flamethrower systems play a pivotal role in augmenting combat capabilities, effectively bolstering the overall strength of Russian Ground Forces. The firepower unleashed by a salvo of two TOS-1A companies, consisting of six TOS-1A systems, is equivalent to the destructive impact of a salvo launched from a Smerch rocket battalion, typically comprising 18 multiple rocket launchers. Furthermore, according to Russian sources, the destructive potential of the TOS-1A matches the firepower unleashed during a 10-minute assault executed by a regiment equipped with 152mm howitzers, amounting to approximately 54 Msta 152mm self-propelled howitzers.[9] The TOS-1A system consists of the BM-1 launcher and the TZM-T transport-loader vehicle, which carries additional rockets.[10]

Soviet forces extensively employed thermobaric weaponry during their operations in Afghanistan, demonstrating efficacy in neutralizing adversarial forces concealed within caves and fortified positions. In May 1985, Junior Sergeant S. V. Mgar used his man-portable system (RPO) to destroy a fortified Mujahideen strongpoint near Khost, killing four fighters and destroying a mortar system.[11] In 1987, a Soviet patrol in Logar Province was attacked from several caves on a mountain slope close to their base. After hours of suppressing enemy forces with small arms and mortars, the unit commander, Sergeant A. V. Sergunov, engaged the enemy with his RPO, killing five Mujahideen and destroying

Figure 2 — TOS-1 Buratino

a machine gun and a recoilless rifle that had pinned down his patrol from 500 meters away. During that pivotal era, the Soviet military possessed astute insights into the undeniable advantages of harnessing thermobaric weapons in combat situations. After years of rigorous testing and refinement, the TOS-1 system stood poised for deployment in Afghanistan's challenging theater of war.

In 1988, the USSR launched operations across the Panjir Valley, with elements of the 108th and 201st Motorized Rifle Divisions playing the leading role. On 12 February 1989, three days before the famous video of Lieutenant General Boris Gromov, commander of the 40th Army, crossing the "Friendship Bridge" in Afghanistan, the Soviets deployed the TOS-1 in a devastating attack on a mountain range as their last soldiers withdrew from Soviet garrisons.[12] During combat operations in cities and mountainous terrain in Chechnya, Russian forces used the TOS-1 in the battle for Grozny and Komsomolskoye, proving themselves well in combat operations.[13]

Today, operators typically undergo three months of comprehensive training on the TOS-1A system, which includes immersive sessions within a BM TOS-1A simulator.[14] This training regimen covers many critical aspects, such as firing calculations, scenario-based exercises, safety protocols, and tactical deployment. The simulator familiarizes the crews with the technical intricacies of the TOS-1A, ensuring they are well-versed in its operations. Furthermore, the simulator trains new crews in communication protocols, significantly streamlining the overall training process while reducing associated costs.[15] Russian NBC forces prioritize training for the TOS-1A crews, engaging in rigorous exercises to sharpen their proficiency. For example, the TOS-1A has consistently featured in all annual strategic military exercises since 2018, including Zapad 2021, where Russian forces conducted a large-scale exercise close to the Ukrainian border six months before the invasion of Ukraine began.[16]

Offensive Operations

Since the beginning of the "special military operation," Russian Ground Forces have deployed the TOS-1A to disturbing effects by providing direct fire support to advance ground forces during offensive operations. The first images of Russian forces crossing the Ukrainian-Belarusian checkpoint on 24 February 2022, show a company-size element advancing with T-72 tanks, MT-LBs, trucks, and TOS-1As.[17] Generally seen at the NBC defense regiments within the Russian armed forces, the TOS-1A heavy flamethrower company typically supports the army group, combined arms armies, tank armies, or army corps.

On the offense, Russia has opted to deploy a single BM-1 launcher with 8-12 rockets across the line of contact, often using artillery to cover the TOS-1A movement close to the line before firing. On 28 February, four days after Russian troops crossed into Ukraine, 70 Ukrainian soldiers from the 91st Support Regiment were killed by Russian artillery and TOS-1A rockets in Okhturka, Sumy Oblast.[18] On 4 March,

Sergeant Sergei Gubarev, whose unit came under intense Ukrainian artillery fire after attempting to cross a river in northern Ukraine, deployed his TOS-1A and, according to Russian sources, cleared the way for his unit when he destroyed 14 Ukrainian weapons in the Chernihiv area. After the TOS-1A attack, Gubarev's motorized rifle brigade crossed the river without damage.[19] During the well-known battle of Mariupol, Russian and "DNR" forces used the TOS-1A to dislodge Ukrainian troops from the Azovstal Iron and Steel Works plant along the Sea of Azov after it became clear that Ukrainian forces were well entrenched inside the plant.[20]

As the Russian military refocused its efforts on the Donbas following its unsuccessful attacks on Kyiv, the TOS-1A was used extensively in the offensives in Izyum, Lysychansk, and Mykolaiv Oblast (near the village of Ochakiv) to name just a few sites.[21] In a notable example, the 1st Army Corps bombed the city of Pisky for seven days in early August. As Ukrainian reinforcements entered the small village from the northwest, around Stepova Street, the Russian 1st Army Corps deployed a TOS-1A to destroy Ukrainian fortified positions. Immediately after using the TOS-1A, the 1st Army Corps resumed its attack westward, breaking through the Ukrainian positions downtown.[22] According to Russian sources, the TOS-1A played a critical role in the breakthrough, and by late August, DNR forces controlled the village and hoisted the Soviet flag near the city's center. The breakthrough in Pisky is significant as the tactical employment of the TOS-1A broke Ukrainian defenses in an area where Ukraine had seven years to prepare.[23]

In late October 2022, a rifleman and medic with the Ukrainian 59th Separate Mechanized Rifle Brigade found himself in a firefight with members of the Russian 40th and 155th Naval Infantry Brigade who attacked from the southeast corner of Pavlivka, south of Vuhledar. Both brigades had taken massive losses as Russian forces continued to press the attack to take the village, aiming to gain a foothold close to Vuhledar. While repelling Russian attempts to capture the small town, Ukrainian forces intercepted Russian communications stating that Russian naval infantry was preparing to bring a BM-1 launcher to the front line to reduce Ukrainian defensive positions in the city. The rifleman's position, a building in the city's center, became the target of the incoming salvo of 16 rockets, impacting within 50 yards of Ukrainian lines. Even though Ukrainian forces intercepted Russian communications and took cover in the basement of the town's cultural center, Russian forces inflicted significant damage, killing four and wounding five Ukrainian soldiers. The employment of the TOS-1A created a breach in Ukrainian lines, which Russian forces promptly capitalized on. Recognizing the situation's urgency, Ukraine mustered reinforcements from neighboring settlements. Nevertheless, after enduring five months of continuous conflict in the area and the devastation of two Russian naval infantry brigades taking the small city, Pavlivka eventually fell to advancing Russian forces by mid-November.[24]

> *The TOS-1A has demonstrated greater efficacy in urban environments, where enemy forces tend to concentrate in significant numbers around fortified structures, which the system can then target to devastating effects.*

The TOS-1A has demonstrated greater efficacy in urban environments, where enemy forces tend to concentrate in significant numbers around fortified structures, which the system can then target to devastating effects. In Bakhmut, private military company (PMC) Wagner and Russian Airborne Forces effectively employed the TOS-1A against Ukrainian strongholds, demonstrating the Russian ability to deliver significant firepower in urban areas.[25-26] In early April 2023, Ukrainian forces utilized Soviet-era buildings with interconnected fields of fire as part of their defenses in the downtown area located 75 meters northwest of the bridge over Horbatova Street and the Bakhmutka River. Since the buildings provided good fields of fire, gaining ground across the river proved difficult for PMC Wagner. In April, its forces deployed a TOS-1A to break through entrenched Ukrainian positions across the Bakhmutka River, creating a 300-meter gap in Ukrainian lines.[27] Using the TOS-1A allowed PMC Wagner to make significant progress, covering a distance of 1.25 kilometers in just one day, a significant achievement considering the previous challenges in the city. By effectively coordinating combined attacks with infantry and armor and employing electronic warfare equipment to disrupt enemy reconnaissance capabilities, the TOS-1A can effectively dismantle fortified positions, proving its worth in urban combat.

Defensive Operations

Russia has also utilized the TOS-1A thermobaric rocket system in defensive operations in Ukraine, employing the system against amassing troops in the open, deterring enemy advances, and maintaining a strong defensive posture, often using the weapon in a final protective fires role at close distances to prevent Russian lines from being overrun.[28] In March 2022, in one of the first instances in which Russia acknowledged the use of the TOS-1A in Ukraine, the Russian Ministry of Defense recognized Lt. Alexei Zoteyev, a TOS-1A platoon commander, for repulsing a Ukrainian counterattack destroying 10 Ukrainian vehicles and killing 40 soldiers.[29] In the aftermath of the Ukrainian rout of Russian troops in Kharkiv Oblast, Russian Ground Forces switched its focus to defensive operations, utilizing the TOS-1A in final protective fires roles, often at very close ranges, in last-ditch efforts to halt Ukrainian assault forces and prevent significant breaches of Russian lines.[30]

For instance, in the late stages of the Ukrainian counteroffensive in Kharkiv, Russia's 752nd Guards Motorized Rifle Regiment, Third Motorized Rifle Division employed the

TOS-1A to halt Ukraine's 92nd Mechanized Rifle Brigade, which had just captured Novoselivke, 20 kilometers northwest of Svatove. Feeling pressure on their flanks, Russian troops deployed the TOS-1A against the attacking 92nd Mechanized Brigade.[31] In a gripping video that circulated on social media capturing a decisive assault, the footage reveals a Ukrainian company-sized element moving towards an assembly line close to Russian defenses. Positioned between a southern rail line and an expansive open field to the north, their movement toward Russian lines was carefully concealed by the protective cover of a dense tree line. Using a reconnaissance UAV to spot Ukrainian forces, Russian Ground Forces deployed the TOS-1A to, what can be seen from the video, good effects and shows its effectiveness in a final protective fires mode. The Ukrainian troops withdrew after the attack, in which Ukrainian forces took heavy casualties. Two weeks later, the Russian 20th Combined Arms Army again executed a final protective fires mission with a TOS-1A against the 92nd Mechanized Brigade in Novoselivke, inflicting casualties again. Likewise, in late November, the Ukrainian General Staff reported that Russian troops had employed the TOS-1A in Stelmakhivka, 14 kilometers from Svatove, to defend the Svatove-Kreminna line from ongoing assaults.[32]

The TOS-1A's firepower and the Russian military's effective employment have rendered it a prime target for Ukrainian commanders, drawing the attention of artillery, reconnaissance assets, and UAVs. In their pursuit, Ukrainian units stationed near the forward line of troops appear to have dedicated considerable resources to locating and neutralizing TOS-1A systems after enduring months of relentless targeting. On 14 February 2023, Telegram channels began showing a video of the Ukrainian 72nd Mechanized Brigade destroying a TOS-1A and its ammunition supply point using artillery.[33] In another clip released on social media by the Ukrainian SBU Alpha team, a Russian TOS-1A is destroyed by a first-person view (FPV) loitering munition near the front line.[34]

Amidst Ukraine's much-anticipated summer counteroffensive, Russian forces swiftly deployed the TOS-1A during the commencement of Ukrainian assaults. An exemplary instance unfolded during the initial days of the counteroffensive, where Russian forces engaged elements of the 9th Ukrainian Corps near the village of Lobkove, situated in Zaporyzhzhya. Citing Russian sources, the TOS-1A was employed multiple times to impede Ukrainian forces from consolidating their positions and launching mass attacks. In the village of Pyatikhatki, located south of Lobkove, Russian forces unleashed 96 rockets upon Ukrainian forces as they broke out from Lobkove.[35] Russian special operations forces functioned as forward

observers, compensating for the obstruction caused by Ukrainian electronic warfare equipment, which hindered the use of drones. Furthermore, on the left bank of the Dnipro River, Russian forces extensively utilized the TOS-1A to forcefully dislodge a Ukrainian bridgehead, exhibiting its devastating effectiveness.

Lastly, recent accounts from Ukrainian soldiers highlight the psychological impact of the TOS-1A during combat operations in Ukraine. Soldiers have reported enduring long-term neuropsychiatric damage resulting from traumatic brain injuries sustained during thermobaric attacks. The consequences of such injuries can encompass a range of physical and psychological symptoms, including fatigue, tremors, confusion, nightmares, and impaired vision. The overwhelming toll of widespread combat can further exacerbate these conditions. The TOS-1A's unmistakable appearance and its well-documented devastating capabilities may instill fear in enemy forces, effectively deterring them from launching subsequent aggressive assaults.[36]

Figure 3 — Russian NBC Defense Units (Graphics courtesy of Dr. Charles Bartles, Foreign Military Studies Office)
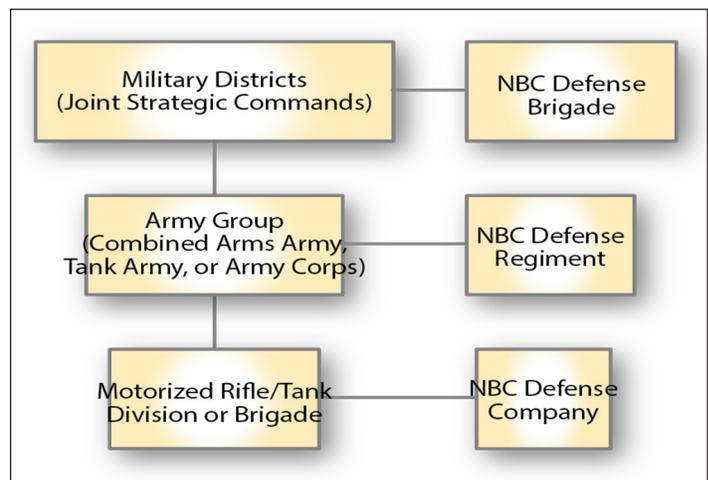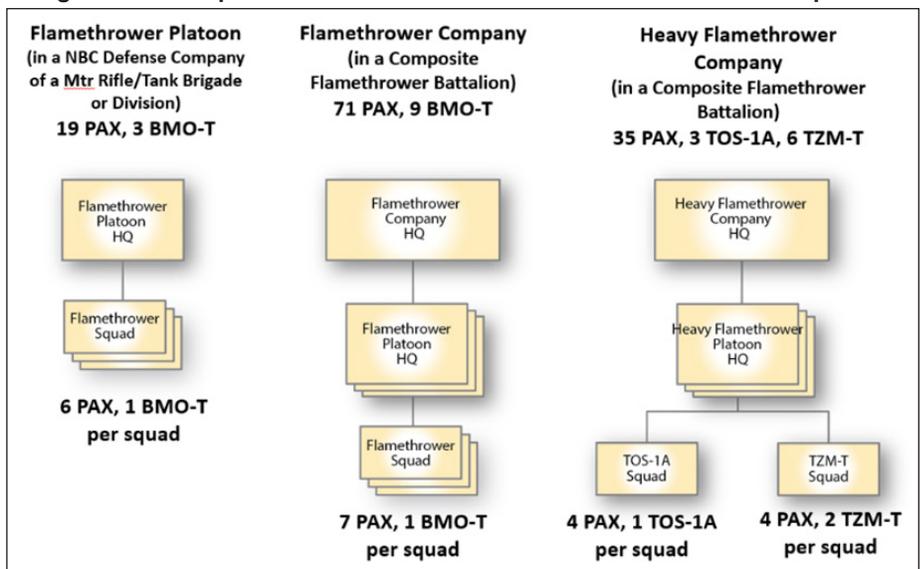

Figure 4 — Composition of Russian Flamethrower Platoons and Companies

Limitations

Despite its effectiveness on the Ukrainian battlefield, the TOS-1A has been hampered by significant limitations throughout the conflict. Diverging from most missiles' and multiple rocket launch systems' design that allocate a large segment of their length to the engine and propellant, the TOS-1A predominantly allocates its entire length to the thermobaric mixture. Because of this, the system's restricted range of six kilometers presents a formidable obstacle, leaving it susceptible to detection by contemporary sensors as the system must deploy close to the line of contact.[37-38] In particular, the proliferation of UAVs has made it easier to detect and track the movements of large, slow-moving vehicles such as the TOS-1A, leaving them vulnerable to artillery fire and coordinated attacks. Notably, the vehicle is equipped with four 81mm Toucha 902B grenade launchers, which discharge ZD-6 smoke grenades, capable of generating an extensive smoke screen spanning up to 30 meters in width and 10 meters in height for 60 seconds. The BM-1 can also create a smoke screen through exhaust fuel injection.

Despite all these upgrades, the TOS-1A system still faces significant challenges regarding battlefield detection. Additionally, the TOS-1A has limited armor protection, ranging from 30-60mm around the hull roof, floor, and sides, and reportedly only able to withstand up to 12.7mm cartridges. This leaves the system vulnerable to artillery, anti-tank-guided missiles, and grenades.[39] Another significant limitation is the TOS-1A's reliance on the aging T-72 chassis, which has been known to suffer mechanical failures during combat operations in Ukraine.[40]

Russian method of employment reflects their astute awareness of the TOS-1A's vulnerabilities. Instead of utilizing the system in numbers that would potentially cause greater devastation, Russian forces frequently opt for employing the BM-1 launcher as a single launcher.[41] This approach enables commanders to position the TOS-1A near the front line, avoiding undue attention to the movement of multiple systems that Ukrainian forces could target and neutralize. Additionally, Russia's TOS-1A inventory, conservatively estimated at approximately 48 units according to Jane's World Armies' open-source reporting, faces challenges in production due to constraints resulting from losses in Ukraine and the existence of rival programs for the T-72 chassis and the 220mm rockets. This complex scenario makes replacing the current losses in Ukraine, currently standing at seven units, a complicated and formidable undertaking.

Conclusion

While it is true that Russian forces have faced significant challenges in Ukraine, generalizing Russian failures is not only inaccurate but also potentially dangerous. As with any military conflict, there are nuances in personnel and equipment performance. In this case, the TOS-1A has proven to be a formidable weapon. In defensive operations, it has halted Ukrainian advances and inflicted heavy casualties. Similarly, when used in offensive operations, the TOS-1A has enabled Russian forces to create gaps in Ukraine's defensive lines, which Russian Ground Forces have exploited to gain ground. To fully comprehend the war in Ukraine, it is imperative to avoid biases and groupthink and evaluate each aspect of the conflict on its merit. Underestimating the effectiveness of a particular system could lead to improper planning and the unnecessary loss of Ukrainian lives. Thus, a complete and unbiased analysis of the weapons employed in the war is crucial to understand the situation and make informed decisions.

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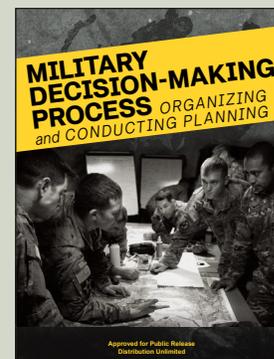
Training Notes

Take the Training Wheels Off Your CPX:
The Benefits of a Free-Thinking, Free-to-Win, and Equal-Sized OPFOR

MAJ TOM HAYDOCK

In June 2023, the 3rd Battalion, 161st Infantry Regiment (Dark Rifles) conducted "Rifle Wrath," a command post exercise (CPX) against a battalion-sized opposing force (OPFOR) that was free thinking and free to win with its own command structure. It was by far the best CPX I've participated in, and I'll never go back to the old way with an OPFOR that obeys nice and tidy force ratios and is kept on a leash by the exercise control (EXCON) cell. CPXs should train staffs to overcome chaos, make decisions faster than the enemy, and employ better tactics; overall, they should be contests of wills where either side can win. The Dark Rifles chose to "take the training wheels off," and we will perform even better during our next CPX. This article will compare the traditional and improved CPX models and share other ways you can improve your exercises to train staffs to master chaos and outthink any opponent to win the next fight.

The Traditional CPX Model

The traditional model, or at least how I've experienced CPXs over the course of my 15 years of service, is underwhelming. The typical CPX usually goes something like this:

• Your unit will probably face an OPFOR that is on either snail or turbo mode, with the speed set to meet your commander's training objectives.

• If your commander wants a nice progression for the staff, the OPFOR will probably be on snail mode, and the staff can manage things well and work out processes. Staff members learn, but they won't learn to master chaos and probably won't be forced to outthink their opponent since it's designed for them to win.

• If the commander wants chaos, you'll probably face a turbo-mode OPFOR. This can provide the chaos experience, but it's often a no-win scenario by design and doesn't present the opportunity for the staff to quickly outthink their opponent.

Staff members from 3rd Battalion, 161st Infantry Regiment conduct the rapid decision-making and synchronization process following a change of mission during a command post exercise in June 2023. (Photo courtesy of author)

• Similarly, the doctrinal force ratios are typically enforced so that you won't attack a unit more than a third of your size or defend against a force more than three times your size. (Exceptions to this are OPFORs on turbo mode that can often drastically outnumber you).

• The OPFOR "commander" is often a retiree-turned-contractor, Department of the Army Civilian, or an intelligence Soldier whose job is to play OPFOR. The OPFOR commander will know your plan and have great clarity as he

or she personally controls things in the simulation software. The EXCON will then control the OPFOR to enable your unit to get after its training objectives.

• The CPX will be largely scripted, run off the master scenario event list (MSEL) that will have actions occur at preplanned times. The MSEL will be designed to allow your unit to accomplish training objectives. Events from the MSEL can be OPFOR driven (like an attack on your unit at a certain time/place), happen with notional adjacent friendly units to simulate the wider scenario, or occur to friendly units like a power loss or jamming situation. They can occur in the simulation (like the OPFOR attack) or in real life (like shutting down generators for power outages). MSELs are useful and should be part of every CPX, but they should replicate things that the simulation software can't (e.g., power outages) and not script the event and constrain free will.

This traditional model provides training wheels for the blue force (BLUFOR). It does this by controlling the chaos, following force-ratio guidelines, and not training the BLUFOR to outthink an opponent that wants to win but can also make mistakes. Fortunately, there is a better way.

The Improved CPX Model

• Free-thinking OPFOR. Don't try and constrain or control the OPFOR with MSELs. Have them fight generally in accordance with the doctrine of the threat they're intended to replicate, but let them make choices, be creative, and even surprise you. A free-thinking OPFOR is an adaptive enemy. It will also show your staff the effectiveness (or ineffectiveness) of the wargaming process they conducted in the military decision-making process (MDMP).

• Free-to-win OPFOR. You can learn a lot when you lose, and it should steel your resolve to win. When you lose, you have the opportunity to pore over the reasons why you lost, learning what does or doesn't work. The right leadership will focus the staff on actually learning lessons.

• Get rid of traditional force ratios. Field Manual (FM) 5-0, *Planning and Orders Production*, includes the age-old list of recommended planning ratios that everyone is familiar with.[1] If there is a place to disregard this, it's a CPX where

> *If you can beat an opponent of comparable size and capabilities, you can beat them if they ever fall in line with the recommended ratios. The CPX is an opportunity to push yourself — you can restart, try new tactics, and weave in deception.*

only electrons fight each other. In future large-scale combat operations (LSCO), we are deluding ourselves if we think that we will actually have those kinds of ratios every time we want them. We may never have the textbook force ratios, especially against a numerically superior force like China. We could paralyze ourselves by waiting, ceding the initiative to the enemy and squandering fleeting opportunities.
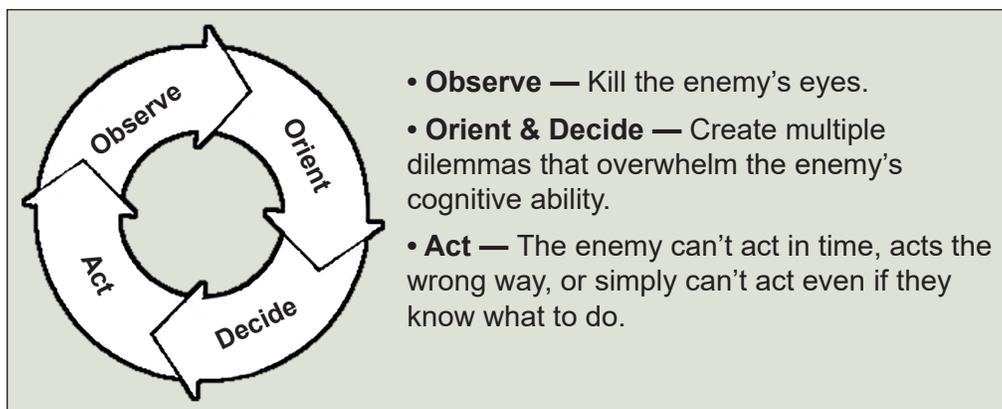
Having two closely matched forces provides a far better experience for a CPX. If you can beat an opponent of comparable size and capabilities, you can beat them if they ever fall in line with the recommended ratios. The CPX is an opportunity to push yourself — you can restart, try new tactics, and weave in deception. You are wasting an opportunity if you don't push yourself.

• Give the OPFOR a command structure. A CPX introduces friction and fog, and it's better if both sides experience it. Carl Von Clausewitz defined friction as "the concept that differentiates actual war from war on paper." The BLUFOR naturally experiences friction from battling communications hardware, misunderstood orders and reports, and the difficulty of coordinating so many moving pieces. It experiences fog with an incomplete understanding of the enemy, terrain, and friendly units. Give your OPFOR a command structure rather than having those personnel just sit in front of the computer playing a video game.

With a command structure, the OPFOR will experience fog and friction — and make mistakes. Most importantly though, it's an opportunity for the BLUFOR to try and overwhelm the enemy's command and control. Let the BLUFOR try and create multiple dilemmas to paralyze the enemy (part of the "disintegrate" defeat mechanism) and overcome the enemy's observe, orient, decide, act (OODA) Loop.[2] Reward BLUFOR for creative thinking — if they request jamming (and higher control approves it), replicate that against the OPFOR by forcing them to turn off radios for a while or some other means.

Further, whoever serves as the OPFOR commander and staff will get real training value from a

Figure 1 — Techniques for Getting Inside an Enemy's OODA Loop that a CPX Can Facilitate

• **Observe —** Kill the enemy's eyes.

• **Orient & Decide —** Create multiple dilemmas that overwhelm the enemy's cognitive ability.

• **Act —** The enemy can't act in time, acts the wrong way, or simply can't act even if they know what to do.

Friction (what OPFOR can't replicate) and Initial Tempo (to ease the BLUFOR into the simulation)	After Culmination Tempo (to keep things going after culmination)
• Enemy prisoners of war (EPWs) • Power loss • Jamming or similar electronic warfare/cyber effects • Vehicle stuck/rollover • Displaced civilians • Route congestion from other units • Emergency resupply	• Change of mission (for example, winning side receives a new order to conduct a pursuit or exploitation) • Commitment of OPFOR reserve • OPFOR higher headquarters uses unconventional munitions or destroys key infrastructure
* To better replicate real life, both BLUFOR and OPFOR should experience friction MSELs.	

Figure 2 — Example MSELs that Won't Constrain the OPFOR

command structure. They will probably be a secondary training audience, but they will learn how to manage operations, how to think in order to win, and have to really learn how to fight in accordance with the doctrine of the chosen OPFOR. If you do this right, they can get just as much out of the exercise as the BLUFOR.

• Use MSELs for the training objectives that the simulation software can't replicate. As I previously stated, MSELs should be part of the CPX, but they shouldn't be used to constrain the OPFOR. MSELS are great for things like captured enemy prisoners of war (EPWs), power loss, and general things that OPFOR can't replicate for BLUFOR; the converse is true if you are also training the OPFOR. MSELS can do one more thing — they can keep up the tempo, especially in the beginning or end.

The beginning of the simulation is generally slow paced as one or both sides have to find the other. Using MSELs in that initial period, say a simulated vehicle rollover that requires medical evacuation and maintenance recovery, is a way to allow the staff to practice before things get intense

(see Figure 2, left column). These don't constrain the OPFOR and allow the BLUFOR to get a low-key practice rep, and you can regenerate the friendly unit in the software after the situation has been resolved. They also simulate the friction of real life that units need to train for (see Figure 2, left column). Similarly, using MSELS at the end, after one side has culminated, will keep up the tempo and keep units learning and under high stress. And, if you are serious about training the OPFOR, you can do the same for them.
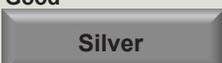
Other Ways to Improve Your CPX

Begin with the mindset of "taking the training wheels off." It's possible to take this too far, but in general most CPXs go the opposite, making things too easy and not replicating the effects of real LSCO. But to win in these operations when we're fatigued and stretched thin by coughing up personnel for liaison duties, security, day/night shifts, etc., we need to take the training wheels off and train hard during the CPX.

Figure 3 illustrates ways to scale your CPX up or down. You can include real-life command post protection exercises or jumps. Also, you can — and most definitely should — surprise your staff.

Surprising the staff is one of the most effective ways to build a capable group of winners who can outthink any adversary. You can give the OPFOR a totally different task organization than what the friendly operation order (OPORD) predicts or give them a mission that BLUFOR isn't expecting (such as having the friendly OPORD assess the enemy to be defending but they have actually been reconstituted and are now attacking). Further, a surprise change of mission, like a follow-on exploitation or pursuit following an attack, will allow you to keep up the tempo (and thus keep the learning going). A change of mission also forces rapid decision-making, tests

Figure 3 — Example Good/Better/Best Methodology for Scaling a CPX

	Command and Control (C2)	OPFOR
Best Platinum	Transfer C2 to a secondary command post (combat trains command post [CTCP] or tactical command post [TAC]) and practice comms emissions controls (including blackout windows)	Two different units (for example, 3-161 IN vs 1-161 IN)*
Better Gold	Practice comms emissions controls (including blackout windows)	Day shift (BLUFOR) vs. night shift (OPFOR)
Good Silver	Unrestricted comms	Assistant S2 with a small staff
	*Next level would be two dissimilar formations vs each other (for example, a combined arms battalion vs an infantry battalion, but with terrain that either side can turn to an advantage with creativity).	

Soldiers from 3rd Battalion, 161st Infantry Regiment take part in a CPX on 13 June 2023. (Photo by Joseph Siemandel)

branch or sequel plans (or emphasizes why you should have them), and exercises current operations and future operations simultaneously. There is tremendous value in surprising your staff — it builds mental agility, forces the staff to reexamine assumptions and mental paradigms, and really trains them to outthink an opponent. If you aren't surprising your staff, you aren't using the potential of a CPX to train for dilemmas at a level as hard or harder than real life.

Conclusion

A CPX should be a major training event for staffs that both improves and tests them. It should teach them to master chaos and outthink the enemy so they can win our nation's next fight. However, the traditional model of the CPX leaves a lot of untapped potential. It usually has an OPFOR that only completes actions dictated by the MSEL in support of training objectives. Thus, on one side we typically have a staff that is conducting what should be a major training event, and on the other is someone who may be halfheartedly playing a video game while following a script. There is a better way.

The better way is to make the OPFOR and BLUFOR comparable in size and capabilities. We can't expect traditional force ratios very often in future LSCO, and we should always practice harder than real life. There are multiple ways to give the OPFOR a command structure, and doing so not only gives this team a learning experience but allows the BLUFOR to try and outthink the OPFOR. BLUFOR can try and create multiple dilemmas to paralyze the enemy and overcome their OODA Loop, which you can't do with the traditional CPX model. A free-thinking OPFOR, empowered to win, will teach your unit so much more by serving as an adaptive enemy. It will also allow for more effective after

action reviews (AARs) as staffs can explore why they lost and judge the effectiveness of their wargaming process.

The sky is the limit with ways to take the training wheels off and make a world-class CPX. Generally, units go too easy in these exercises and end up training at the little league level when we need to train for the major leagues. MSELs should replicate things that the OPFOR can't: friction. MSELs are also good for building or maintaining tempo — in the beginning they can ease the unit into the exercise with events that are easier to manage. At the end, a change of mission or enemy reserve can keep up the tempo, keep the learning going, and present unexpected surprises, like switching to an exploitation or pursuit.

A CPX is an opportunity to train staffs to master chaos and outthink an opponent, not just a training block to check off. To reach the potential, CPXs need an OPFOR that is free thinking, free to win, and has a command structure. The OPFOR should be comparable in size and capabilities, since that's what a peer fight will look like. Following this model revolutionized the CPX experience for the Dark Rifles. Innovative thinking and experimentation are what premier organizations do — join us!

Notes

[1] Field Manual (FM) 5-0, *Planning and Orders Production*, May 2022, 5-29.

[2] FM 3-0, *Operations*, October 2022, 3-20.

MAJ Tom Haydock is currently a student in the Advanced Military Studies Program within the School of Advanced Military Studies at Fort Leavenworth, KS. He previously served as the executive officer for 3rd Battalion, 161st Infantry Regiment (Dark Rifles) and was the battalion's S3 prior to that. MAJ Haydock served as the exercise director for Rifle Wrath 2023.

Bringing LSCO to Leaders:
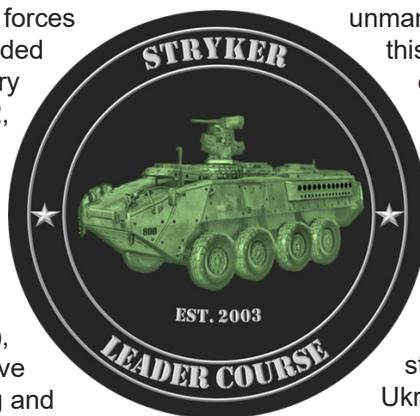## *Stryker Leader Course Update*

CPT WILLIAM JOHNSON
SFC ADAM LOPEZ

On 24 February 2022, the armed forces of the Russian Federation invaded Ukraine. The largest military campaign in Europe since World War 2, the invasion consisted of multiple simultaneous assaults from land, sea, and air. The initial invasion was an unmitigated failure, and one year into the war Russia has reportedly lost more than 100,000 personnel in addition to thousands of tanks, armored personnel carriers (APCs), and aircraft.[1] The events in Ukraine have demonstrated the difficulties of conducting and sustaining large-scale combat operations (LSCO). After focusing on counterinsurgency operations for 20 years, the Army must now adapt to the modern battlefield to prevail in future wars.

In the last year, instructors of the Stryker Leader Course (SLC) have worked to revise the course's program of instruction (POI) to focus on LSCO. SLC is a three-week course designed to prepare junior officers and NCOs for leadership positions in Stryker-equipped formations.[2] Operating under the U.S. Army Infantry School (USAIS), most SLC students are recent Infantry Officer Basic Leader Course (IBOLC) graduates preparing to lead rifle platoons in Stryker brigade combat teams (SBCTs). In recent years, the course has expanded to train officers and NCOs from other branches such as Armor, Engineer, Field Artillery, and Air Defense Artillery.

To better prepare these students for future battlefields, the SLC instructor team first reviewed current Army doctrine. Army Doctrinal Publication (ADP) 3-0, *Operations*, defines LSCO as "extensive joint combat operations in terms of scope and size of forces committed, conducted as a campaign aimed at achieving operational and strategic objectives."[3] It also describes the dangers of modern peer threats, as well as the need for success across multiple battlefield domains (land, air, maritime, space, cyberspace). The SLC instructors created a strategy for the POI rewrite based on three principles. First, all lesson plans had to tie back to supporting combined arms maneuver. Second, SLC's tactical content would reflect peer threats pulled from the Army's decisive action training environment (DATE).[4] And third, SLC's POI had to address the other battlefield domains, with a strong emphasis on preparing for the air threat posed by small unmanned aircraft systems (SUAS). The result of this strategy was SLC version 6.0, a POI that enables leaders in Stryker formations to prevail in large-scale ground combat.

Orienting on Combined Arms Maneuver

Combined arms maneuver is defined as "the synchronized and simultaneous application of arms" which creates an effect greater than the sum of its parts.[5] Russia's struggle with combined arms maneuver in Ukraine is evident. In one day, Russia lost most of a battalion tactical group attempting a wet gap crossing of the Siversky Donets River.[6] Russian infantry, armor, engineers, and fire support were not able to coordinate effectively against Ukrainian defenders.

One of the most significant changes to SLC has been the renewed emphasis on combined arms operations. SLC naturally focuses on the Infantry's role in an SBCT, but new instruction aims to educate students on the wider capabilities of the SBCT. Stryker organizations are unique in that one common platform is utilized across numerous warfighting functions. Across the SBCT, riflemen, cavalry scouts, sappers, forward observers, medics, and more all utilize variants of the Stryker to achieve their mission. The Army's recent adoption of the Maneuver Short Range Air Defense (M-SHORAD) Stryker demonstrates the utility of the platform in combined arms maneuver.

Students at SLC learn every variant of the Stryker and their role in combined arms maneuver. As most SLC students are new Infantry lieutenants, their practical knowledge of combined arms operations can be limited. To close this gap, instructors leverage the knowledge of students coming from other branches. In some cycles, students volunteer to teach small segments of their subject area expertise to the rest of the class. As the Infantry students learn about other branches, the reverse is also true with non-Infantry students gaining a deeper understanding of infantry operations from their peers. This student-led learning model greatly enhances the quality of the POI and prepares these Stryker leaders to work together in the operational force.

With the increased emphasis on combined arms maneuver, Stryker leaders must execute planned, responsive, and anticipatory sustainment.[7] Sustainment is one the major

outcomes of the course, encompassing topics such as maintenance, resupply operations, and casualty evacuation (CASEVAC). These lessons cover both the immediate impact of sustainment on company-level operations as well as the wider implications at higher echelons. The maintenance lesson covers the basics of preventive maintenance checks and services as well as two-level maintenance, parts flow across an SBCT, and the role of various specialty maintainers at the battalion and brigade levels.[8] In the resupply lesson, students calculate fuel consumption for an SBCT infantry rifle company conducting high-tempo combat operations. SLC instructors break down the path of a logistical package from the brigade sustainment area all the way to the forward line of troops. The medical support lesson outlines an SBCT's ground CASEVAC plan from the point of injury through the various "Roles" of medical care. Students leave SLC with a firm understanding of an SBCT's logistical support systems and how they can sustain the depth and duration of the fight.

Students in the Stryker Leader Course prepare to conduct a live-fire familiarization of the Stryker Infantry Carrier Vehicle's Remote Weapon Station (RWS) at Ruth Range. During the exercise, students engage a variety of targets with RWS-mounted M2A1 .50 caliber machine guns and MK19 40mm automatic grenade launchers. (Photo courtesy of SLC)

Presenting Students with Peer Threats

Across all three weeks of the course, SLC students are presented with multiple tactical decision exercises (TDEs) that test their ability to plan offensive and defensive platoon operations using the Stryker platform. When creating LSCO-oriented TDEs, the SLC instructor team looked for DATE resources that reflected current U.S. adversary tactics and equipment. The scenarios incorporate threats from the fictional Olvana (employing Chinese equipment and tactics) and the fictional North Torbia (employing Russian equipment and tactics). The Operational Environment Data Integration Network (ODIN) provided the instructor team with detailed information as well as pre-built force structures. By staying in the DATE Pacific Theater, SLC instructors could ensure the scenarios had a continuous flow and simulated a true large-scale conflict.

The most dramatic change to the TDE scenarios was the introduction of vehicular threats. Previously, most SLC TDEs arrayed students against a light infantry threat, but after reviewing Russian and Chinese doctrine as well as lessons learned from Ukraine, it became apparent training against a light infantry threat was no longer sufficient or realistic. Most Chinese and Russian formations rely on mechanized support to fight in combined arms formations. SLC TDE scenarios

Figure 1 — Entry for ZBL-09 Chinese 8x8 Armored Personnel Carrier from the OE Data Integration Network

ZBL-09 (Type 09/VN1) Chinese 8x8 Amphibious Armored Personnel Carrier (APC)	
Hull and Turret Armor	High hardness armor steel, which provide a protection against 12.7mm armour-piercing incendiary (API) strikes frontally at 100m,
Side Armor	7.62mm API on the sides at 100m
Rear Armor	7.62mm ball at the rear.
Applique Armor	Available, the ZBD-09 can also be fitted with add-on armor package enables the vehicle to survive 25 mm API frontally at 1,000m and 12.7mm API on the sides at 100m.
Explosive Reactive Armor	INA
Active Protection System	Yes
Mine Clearing	No
Self-Entrenching Blade	INA
NBC Protection	Yes
Smoke Equipment	Yes, 12 Smoke Grenade Launchers (6 on each side)
Central Tire Inflation System	Yes, The tires are fitted with a CTIS and RFIs, which means that the tyres will continue to support the vehicle once punctured for 100 km at a speed of 40 km/h.
Automatic Fire Extinguishing System	Yes
Air Conditionning System,	Yes

Tabs: Dimensions | Automotive | Communcations | Main Gun | Anti-Tank Guided Missiles (ATGM) | Auxiliary Weapon System | Fire Control | **Protection**

Notes

The ZBL-09 (Type 09) Chinese 8x8 Amphibious Armored Personnel Carrier (APC)is the latest wheeled platform series to enter service with the People's Liberation Army (PLA) of China. The family was designed by China North Industries Corporation (NORINCO) and is expected to replace obsolete wheeled vehicles in service with the PLA. The family bears some resemblance to the US Stryker Brigade Combat Team concept and may reflect recent shifts in China's doctrine to mimic the rapidly deployable and mobile formations used by the US and Russia. The ZBL-09 is the most numerous variant of the Type 09 family, which as a result it is often the designation used to describe the entire genus of Type 09 variants. It is designed as an IFV, armed and protected to provide an equipped infantry section with the necessary fire support and shelter needed to effectively influence a battle.

now feature Olvanan and North Torbian formations that utilize Stryker-equivalent vehicles (high-mobility APCs). In each scenario the enemy is supported by SUAS, indirect fire support, engineers, and air defense. These variables, while initially overwhelming to some students, emphasize the true dangers and realities of LSCO.

Stryker leaders must understand these threats and how to leverage Stryker formations against them. Unlike the M2A3 Bradley, the Stryker platform is not a fighting vehicle. The introduction of the 30mm Medium Caliber Weapon System (MCWS) and Common Remotely Operated Weapon Station-Javelin (CROWS-J) have dramatically increased the lethality of Stryker infantry formations. SLC's TDEs challenge students to leverage their dismounted infantry to close with and destroy these combined arms threats while at the same time set the conditions to pull their Strykers forward in support.

Breaking Into Multidomain Operations

The modern battlefield is becoming increasingly complex and interconnected. LSCO will occur simultaneously across every battlefield domain. Over the last year in Ukraine, the air domain has become hotly contested battle space. Despite vastly outnumbering the defending forces, Russia has been unable to achieve air superiority with conventional fixed- and rotary-wing assets.[9] Both sides utilize reconnaissance and munition-carrying SUAS to disrupt operations. SLC students must be prepared to fight under contested airspace. Throughout the course, students learn to analyze the operational environment and plan across multiple domains, and every SLC TDE features some form of enemy UAS or attack aviation asset. To plan against these threats, students are taught passive and active defensive measures.[10]

> *Unlike the M2A3 Bradley, the Stryker platform is not a fighting vehicle. The introduction of the 30mm Medium Caliber Weapon System (MCWS) and Common Remotely Operated Weapon Station-Javelin (CROWS-J) have dramatically increased the lethality of Stryker infantry formations.*

Passive defensive measures protect friendly forces by deceiving enemy observers and providing early warning to the main body. Maneuver forces at every level can employ passive defensive measures by properly utilizing cover, concealment, and noise and light discipline. These measures are difficult for Stryker-equipped formations. Students are taught simple survivability techniques such as properly employing camouflage netting over vehicles, dispersing vehicles over a wide area, and cycling engines off when the formation is set in the defense. During training events in the field, students are taught how to incorporate air guards, which enhance situational awareness of what is on the ground and in the air. These passive air defense techniques are vital to preserving lives in future conflicts.

Active defensive measures require leaders to train, integrate, and employ air defense measures to neutralize or destroy air threats within the area of operations. SBCT infantry rifle companies employ Stinger man-portable air defense systems (MANPADS), which are designed to coun-

At left, students in the Stryker Leader Course practice self-recovery operations during Week 1 of the three-week course. Below, Soldiers in SLC Class 24-001 listen as an instructor discusses the MK19 grenade machine gun. Students learned how to clear, disassemble, reassemble, and conduct functions checks on MK19 and M2 .50 caliber machine guns prior to their mounting on a Stryker Infantry Carrier Vehicle Remote Weapon Station.

ter low-level fixed- and rotary-wing aircraft, as well as UAS.[11] SLC students learn how to integrate these teams into their schemes of maneuver and identify MANPADS battle positions, develop sensor plans, and design Red Air rehearsals for both Stryker crews and dismounts. SLC continues to integrate new counter-UAS solutions into the course.

Conclusion

While SLC has made strides towards a LSCO-centric POI, the instructor team continues to refine and improve the course. Future projects in consideration include incorporating MCWS and CROWS-J variants into live-fire events, integrating SUAS assets into the tactical exercise without troops, and spending more time in the field reinforcing tactical lessons. These proposed projects, while important for the long-term health of the course, take time and money to fully implement. The goal of SLC's new POI was to transition the course into LSCO without expanding time and resource requirements, and the SLC instructor team has met this goal. The SBCTs and M-SHORAD batteries that make up the Army's Stryker Community require strong, adaptable leaders.[12] SLC will continue to produce Stryker leaders ready to join the operational force and prevail in large-scale ground combat.

Notes

[1] Phil Stewart and Idrees Ali, "More Than 100,000 Russian Military Casualties in Ukraine, Top U.S. General Says," Reuters (9 November 2022), https://www.reuters.com/world/europe/more-than-100000-russian-military-casualties-ukraine-top-us-general-2022-11-10/.

[2] For more information on Stryker Leader Course and how to attend, please visit the SLC website: https://www.moore.army.mil/Armor/316thCav/Stryker-LC/index.html.

[3] Army Doctrine Publication 3-0, *Operations*, July 2019.

[4] ODIN can be accessed at https://odin.tradoc.army.mil/.

[5] ADP 3-0, 3-52.

[6] Oleksandr Stashevski and David Keyton, "Russia Takes Losses in Failed River Crossing, Officials Say," AP News (13 May 2022), https://apnews.com/article/russia-ukraine-kyiv-finland-a21a06ac0235bb89c9e8368e0ff-ca2c9.

[7] ADP 3-0, 3-75.

[8] Army Techniques Publication (ATP) 4-33, *Maintenance Operations*, July 2019.

[9] David Axe, "After Losing an Eighth of Their Helicopters, Russian Attack Regiments Are Switching Up Their Tactics," *Forbes* (14 February 2023), https://www.forbes.com/sites/davidaxe/2023/02/14/after-losing-an-eighth-of-their-helicopters-russian-attack-regiments-are-switching-up-their-tactics/?sh=6154260a4de9.

[10] ATP 3-01.81, *Counter-Unmanned Aircraft System Techniques*, April 2017.

[11] ATP 3-21.11, *SBCT Infantry Rifle Company*, November 2020, Appendix C: Man-Portable Air Defense Systems.

[12] Stryker leaders in the operational force seeking resources on the platform can visit the SLC MilSuite at https://www.milsuite.mil/book/groups/

Figure 2 — Example Tactical Decision Exercise
The SLC MilSuite site features a collection of squad, platoon, and company TDEs. These exercises can enhance leader professional development programs and prepare units for major training events.
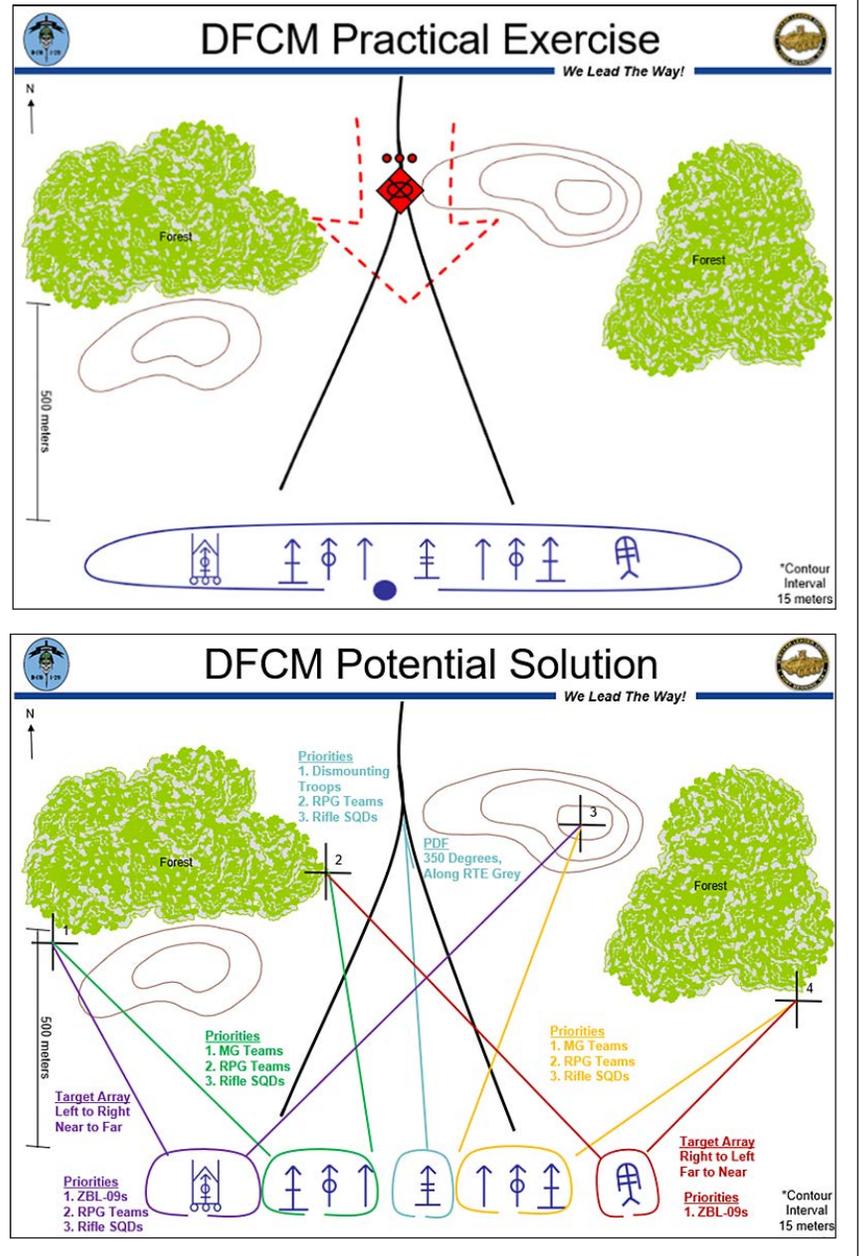
stryker-leader-course. They should also visit StrykerNet on SharePoint at https://armyeitaas.sharepoint-mil.us/teams/strykernet. StrykerNet is a new resource designed by I Corps and the Stryker Warfighters' Forum to bring together the Stryker community.

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Lessons from the Past

Effective Mission Command:
COL Paul Freeman and the Battle of Chipyong-ni

CPT CHAN D. KIM

Exercising command and control is often a critical factor for combat success. However, with immoderation, centralized command and excessive control create heavy reliance on command nodes. This elongates decision-making and discourages initiative on the rapidly evolving battlefield — leaving exploitable vulnerabilities. For success and efficiency in combat, command and control must therefore empower "subordinate decision-making and decentralized execution appropriate to the situation" — simply put, one must exercise mission command.[1] One example of effective mission command is COL Paul Freeman during the Korean War's Battle of Chipyong-ni. In February 1951, the Communist Chinese Forces (CCF) continued to push back the United Nation (UN) forces. This left COL Freeman's 23rd Regimental Combat Team (RCT) of 5,000 Soldiers behind enemy lines and encircled at Chipyong-ni by five CCF divisions with an estimated 25,000 troops.[2] Despite facing an overwhelming enemy force, COL Freeman successfully employed the mission command principles of mutual trust, commander's intent, competence, and risk acceptance in his 23rd RCT, emphatically defeating the CCF during the battle.

Mutual Trust

Mission command is only effective when there is mutual trust among commanders, subordinates, and partners.[3] Personal relationships and shared hardship often build this trust, a bedrock of teamwork that one another can be relied upon. COL Freeman

effectively developed mutual trust within his unit through his charisma and emotional intelligence. He fostered interpersonal relationships by "communicating with his Soldiers on their terms in places like the mess hall" and going wherever "he needed to go where his men would see him," which built cohesion.[4-5] By being relatable and approachable, COL Freeman's presence instilled confidence in his team. His genuine care for the 23rd RCT was on display during his frequent and numerous interactions with his Soldiers, establishing trust and buy-in of his teammates.

Additionally, COL Freeman and his team successfully integrated a French battalion through shared hardship to the
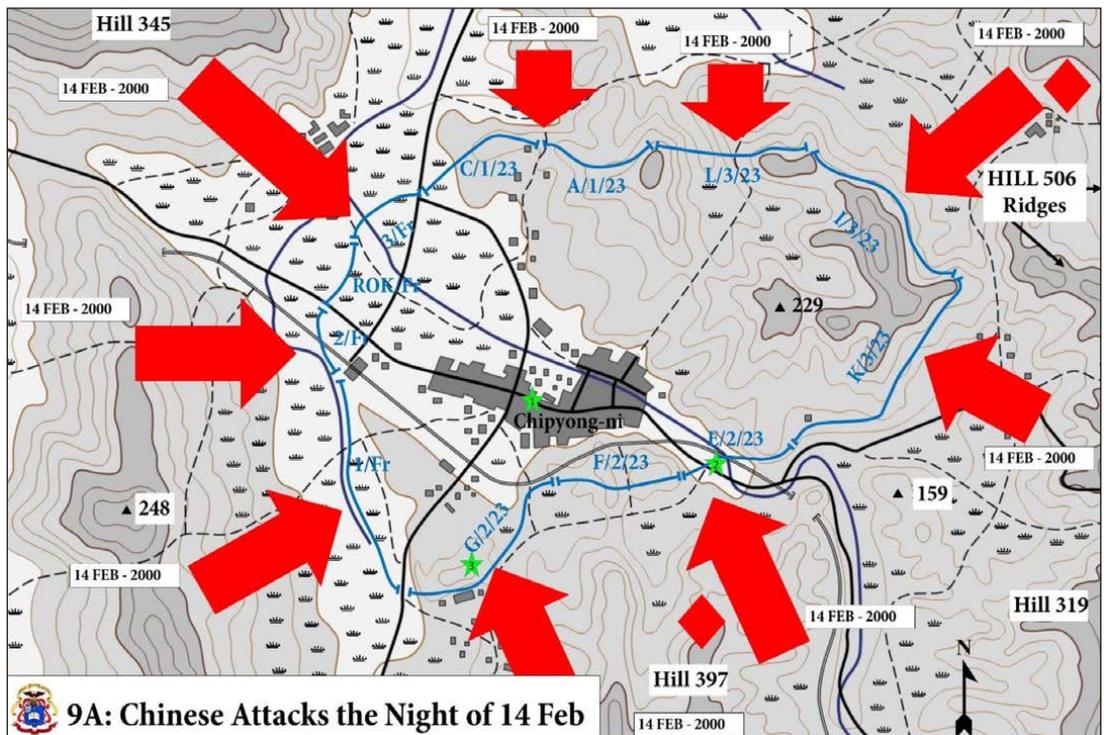

COL Paul Freeman (center), French Lt. Col. Ralph Monclar, and other members of the 23rd Regimental Combat Team meet with MG Edward M. Almond, X Corps commanding general, at the 23rd's command post prior to the Battle of Chipyong-ni. (Photo from U.S. Army Heritage and Education Center collection)

point where the French unit was considered "just another battalion in the regiment… [U.S. forces] intermingled often with the French troops, and sometimes they would share their daily ration."[6] The 23rd RCT and the French battalion forged a close relationship during the hard fighting at the Battle of the Twin Tunnels. The mutual trust gained from the shared hardship there paid dividends when the fighting broke out at Chipyong-ni two weeks later. The 23rd RCT's oval defensive formation at Chipyong-ni required each element to hold up its sector; if penetrated, it spelled doom for the regiment. The mutual trust within the 23rd RCT formation was strong, and "the confidence between the U.S. and French armies paid off as the French soldiers were able to hold key terrain along the southwest perimeter."[7]

Map — Battle of Chipyong-ni (Chipyong-ni Staff Ride, Combat Studies Institute)

After being wounded by shrapnel during the battle, COL Freeman further amplified the established mutual trust among commanders, subordinates, and teammates when he "refused evacuation and hobbled around the area to review the situation and urge his troops to continue to fight."[8] Although such heroic gestures do not necessarily earn trust, they were impactful in maintaining the trust that COL Freeman had already built.[9] His inspirational actions cemented 23rd RCT's trust that Freeman was a genuine leader who put the mission and his Soldiers first before his own safety. COL Freeman's actions, thus, strengthened mutual trust and boosted the morale and "will to fight" in his men, leading to an effective defense of Chipyong-ni.

Commander's Intent

In addition to mutual trust, a clear desired end state is also essential to effective mission command. Having a clear commander's intent — or expression of purpose of operation and the desired military end state — levels communication and establishes a common goal that a subordinate can pursue without direct supervision.[10] COL Freeman established a clear and concise commander's intent of "stay and fight," and he communicated this to not only his commanders but to individual Soldiers as well.[11] Such communication is evident as 23rd RCT Soldiers recalled, "it was clear that every Soldier knew their mission and individual purpose."[12] COL Freeman also flattened any misunderstanding by visiting "his subordinate leaders and answer[ing] their questions."[13]

With a direct and perspicuous commander's intent of "stay and fight," the lowest echelon of Soldiers understood the defensive undertaking at Chipyong-ni. This understanding of the intent established expectations for COL Freeman's 23rd RCT and enabled his Soldiers to take part in any necessary actions to accomplish the defense, which became critical when the CCF briefly broke through the line. COL Freeman's subordinate commanders sent "reinforcements from F and K company and an artillery battalion… [to] stop the Chinese advance and re-established the defensive line," demonstrating comprehension of Freeman's intent.[14] Commanders, without COL Freeman's direct orders or supervision, took immediate action by shortening the decision-making process and facilitating initiatives in support of the mission. This rapid reaction by subordinate leaders negated exploitation opportunities for the CCF, thwarting the enemy from its offensive gains. Clear, concise, and compelling, COL Freeman's intent of "stay and fight" was effective and essential in the successful defense of Chipyong-ni.

Competence

Competence is another mission command principle that influenced the outcome of the Battle of Chipyong-ni. "Commanders and subordinates achieve the level of competence to perform assigned tasks to standard through training, education, assignment experience, and professional development."[15] Much of COL Freeman's success in Korea was due to his experience as a language student and military attaché in China. Notably, he "worked with the British and their long-range Chinese patrols behind the Japanese lines," becoming an expert in Chinese language, culture, and doctrine.[16] Using these experiences, COL Freeman deduced that the Chinese

would engage in "three days of reconnaissance, probing attacks, and engaging with civilians for intelligence."[17] He correctly assumed that the Chinese would push and probe the high ground around Chipyong-ni, which he countered with constant patrols that seized surrounding hills. Weary of hills offering the potential for reconnaissance and indirect fire positions, 23rd RCT elements countered the CCF prior to the breakout of the battle. When the French battalion was attempting to seize Hill 583, "Freeman sent two platoons and three tanks from Lory's E Company to assist..."[18] Such denial of reconnaissance on higher grounds impacted the CCF's avenues of approach to the predictable roads of Chipyong-ni, creating an exploitable advantage for the 23rd RCT.

Furthermore, COL Freeman understood how the Chinese fought after his experience during the Battle of Twin Tunnels where the CCF engaged in waves of attacks. The CCF's "human swarm" attack style was a highly complex offensive scheme of maneuver that involved penetration of enemy lines. By continuously assaulting through the created gaps and simultaneous flanking maneuvers, these waves of attacks confused adversarial forces. This led to delayed reinforcements from the reserve force and often resulted in defensive failure for CCF's adversaries.[19] COL Freeman concluded he could only repel the overwhelming CCF waves with artillery-supported defensive positions that controlled avenues of approaches, much like the positions in the Battle of Twin Tunnels. He therefore instructed construction of numerous fighting positions and enabled his commanders to the point where "the defenses at Chip'yong-ni were as good as any regimental-sized perimeter had ever been in the Korean War."[20] Such defensive positions hardened the defense and were later critical in repelling penetration by "placing heavy fire on an enemy concentration trying to advance along the road into Chipyong-ni west of the tunnel and railroad trestle."[21] COL Freeman's competence, drawn from previous military experiences with the Chinese forces, undoubtedly influenced the employment of his assets, which set conditions for a successful defense of Chipyong-ni.

Risk Acceptance

Although there are inherent risks in combat, commanders must balance the tension between protecting the force and accomplishing the mission.[22] COL Freeman understood this, especially when faced with the outnumbering, overwhelming, and rapidly advancing Chinese forces. He accepted calculated risks such as yielding key terrain to solidify the defensive posture of his forces. COL Freeman was "originally directed to occupy the hills that surrounded Chipyong-ni, as it was thought that this would be safest way to secure the village."[23] However, with limited troop numbers, he deduced that dispersing his forces at the periphery along numerous hills, rather than concentrating them along the perimeter, would spell defeat.[24] COL Freeman, thus, chose to "give up the surrounding hills so that his outmanned troops could focus on a tight perimeter."[25] He notably placed his troops near the roads to deny the enemy avenues of approach from these hills. With a combination of close air support and tight

It is without a doubt that COL Freeman's successful use of the mission command principles of mutual trust, commander's intent, competence, and risk assumption played a critical role in defeating the CCF during the Battle of Chipyong-ni.

perimeter security from well-positioned troops, the risk of yielding higher grounds were well mitigated.[26] This tactical risk assumption paid off, as the CCF took control of some hills surrounding Chipyong-ni but could not effectively penetrate the village due to the heavily fortified roads.

COL Freeman also assumed tactical risk by delaying the employment of his reserves. Knowing the CCF's waves of attacks would not cease easily, he understood he could not commit his reserve elements too early or his defensive lines would be overrun. COL Freeman, therefore, "did not utilize his reserve until near the end of the battle when it was absolutely necessary."[27] Despite multiple penetrations by CCF elements and heavy fighting along the defensive lines, the delayed insertion of his reserve forces enabled COL Freeman to maintain combat power. This preservation of combat power set conditions for a key counterattack that proved decisive. Notably, his reserve force (B Company) "rose up, firing into the retreating forces, then advancing and regaining some of the lost positions… the hill was now back under the 23rd's control and the entire perimeter was secured."[28] By yielding the use of some key terrain and delaying the employment of his reserve forces, COL Freeman gained consolidation of combat power — combat power that was critical to the Battle of Chipyong-ni against an overwhelming enemy.

Conclusion

It is without a doubt that COL Freeman's successful use of the mission command principles of mutual trust, commander's intent, competence, and risk assumption played a critical role in defeating the CCF during the Battle of Chipyong-ni. Mutual trust developed by his personal relationships, concern for his unit over personal safety, and his team's shared hardships were essential to the oval defense that required reliance on one another. The clear communication and leveling of any misunderstanding of COL Freeman's intent to "stay and fight" fostered a will to fight and established a common understanding among the 23rd RCT to defend Chipyong-ni. COL Freeman's competence, drawn from his experience with Chinese forces, enabled active patrolling and construction of hardened defensive positions that set advantageous conditions. Furthermore, his assumption of tactical risk to yield key terrain and delay the use of his reserve force to consolidate the defense in a smaller perimeter established a foundation for an effective defense and counterattack opportunities. Therefore, COL Freeman's mission command employment in the Battle of Chipyong-ni was masterful and its impact is

beyond the success of the battle. It boosted the morale of UN forces, enabled offensive operations in Korea, and initiated peace talks among the belligerents — simply put, the Battle of Chipyong-ni was a decisive point of that conflict and is now well known as the "Gettysburg of the Korean War."[29] Although its strategic and operational outcome was substantial, COL Freeman and his 23rd RCT made a larger impact in military history: a compelling argument for effective mission command for years to come.

Notes

[1] Army Doctrine Publication (ADP) 6-0, *Mission Command and Control of the Army Forces*, July 2019, x.

[2] LTC Roy E. Appleman, *Ridgway Duels for Korea* (College Station, TX: Texas A&M University Press, 1990), 255-257.

[3] ADP 6-0, 1-7.

[4] Jamie I. Hickman, "Turning Korea Around: An Analysis of Mission Command at Chipyong-Ni," *Journal of Defense Management* (June 2018): 174.

[5] Kenneth E. Hamburger, *Leadership in the Crucible* (College Station, TX: Texas A&M University Press, 2003), 68.

[6] LTC Sherman W. Pratt, *Decisive Battles of the Korean War* (NY: Vantage Press, Inc., 1992), 165.

[7] CPT Andrew Lightsey IV, "A Master Class in Mission Command: LTG Matthew B. Ridgway's Leadership at Chipyong-ni," *Infantry* (Fall 2022), 51-53.

[8] Spencer C. Tucker and Paul G. Pierpaoli Jr. (eds.), *Encyclopedia of the Korean War: A Political, Social, and Military History* (Santa Barbara, CA: ABC-CLIO, April 2000).

[9] Daniel P. Michalski, "Mission Command Principles in the Battle of Chipyong-ni," *Safety & Defense* (2017): 38.

[10] ADP 6-0, 1-10.

[11] Hamburger, *Leadership in the Crucible*, 57.

[12] Ansil Walker, "Recalls the Battle of Chipyong-Ni during the Korean War," Historynet, https://www.historynet.com/ansil-lwalker-recalls-the-battle-of-chipyong-ni-during-the-korean-war/ (accessed 26 August 2023).

[13] Michalski, "Mission Command Principles," 39.

[14] Louis Riedmann Jr, "Lory's Story: The Korean War – In the Footsteps of Lawrence J. Riedmann," 19, accessed from https://riedmannfamily.com/wp-content/uploads/2022/12/Lorys-Story-2022.pdf.

[15] ADP 6-0, 1-7.

[16] Hamburger, *Leadership in the Crucible*, 20.

[17] Todd Qiu, "Red Hordes: American Perception of Chinese Troops During the Korean War," *Intercollegiate U.S.-China Journal* (IUCJ) (Winter 2022), 29.

[18] Riedmann, "Lory's Story," 16.

[19] Qiu, "Red Hordes," 29-30.

[20] J.D. Coleman, *Wonju: The Gettysburg of the Korean War* (Washington, D.C.: Brassey's, 2000), 181.

[21] Appleman, *Ridgway Duels for Korea*, 266.

[22] ADP 6-0, 1-13.

[23] George F. Hofmann, "Tanks and the Korean War: A Study of Unpreparedness," *Armor* (September-October 2000), 7.

[24] David Halberstam, *The Coldest Winter: American and the Korean War*, (New York, NY: Hachette Books, 2007), 512-513.

[25] Hickman, "Turning Korea Around," 173.

[26] Ibid.

[27] Ibid.

[28] Riedmann, "Lory's Story," 22.

[29] Coleman, *Wonju*, xi.

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Department of the Army Poster 21-47, Breakthrough at Chipyong-ni, illustrates when an American armored unit broke through from the south. The valiant 23rd Regimental Combat Team smashed out of the perimeter to break the encirclement and rejoin the Eighth Army.

The Importance of Studying Military History

MAJ SHAMEEK DE LANCEY

> *"Let him read and meditate upon the wars of the great captains: It is the only way to learn the art of war."*
>
> **— Napoleon[1]**

Military professionals have debated the usefulness and value of studying military history for centuries. The debate within the U.S. Army has ebbed and flowed depending on the Army's operations tempo (OPTEMPO) or leaders' emphasis and beliefs about the "practicality" of studying military history for the average serving military professional. I believe the study of military history is critical and mandatory for the development of well-rounded and effective Army professionals.

The study of military history informs the long-term development of military professionals in three ways. First, studying history nurtures and cultivates critical- and creative-thinking skills. It is imperative that military professionals possess these skills, especially as military operations become more complex and the time available for leaders to make decisions decreases. Second, the study of military history allows military professionals to develop, adapt, and evaluate current doctrine. Lastly, military history develops military professionals by exposing them to prior examples and experiences before they are personally tested in combat.

The positive benefits of exploring military history allow leaders to learn the art of war from others' experiences, which is critical for the military profession and the success of our force in future conflicts. Michael Howard described the nature of the military profession and the frequency with which a military professional might exercise his or her duty in war as "almost unique that he may have to exercise it only once in a lifetime, if indeed that often. It is as if a surgeon had to practice throughout his life on dummies for one real operation; or a barrister appeared only once or twice in court towards the close of his career; or a professional swimmer had to spend his life practicing on dry land for an Olympic championship on which the fortunes of his entire nation depended."[2]

As military professionals, we owe it to our organizations and the nation to be ready when called upon. We routinely conduct realistic and demanding training, but one often neglected element in our preparation for future war is developing a deeper and richer understanding of military history in our Army professionals and within our Army organizations.

Develops Critical- and Creative-Thinking Skills

Our Army should use the study of military history to challenge and develop officers over the length of their careers. Without a doubt, this initiative should be driven by the institutional Army. However, individual military professionals should strive to improve in these areas through their own self-development plans as well. An easy way to begin this journey is to start with your current unit's organizational history. We owe it to our Soldiers to tie their current service to that of those who came before us, and knowing our unit history is a way to make those connections. This builds pride in the force and inspires Soldiers to live and work to the high standard of those who served in their unit before them.

Knowing and talking about unit lineage is an excellent way to discuss military history in the operational force. History in the institutional Army is also a difficult subject to teach and study. Some professional military educational (PME) programs superficially cover military history and miss the mark on truly gaining the benefits of deep military history study. Often consisting of disjointed and brief wave-top discussions of battles, campaigns, and military leaders, this approach does not allow students to truly understand historical events or the full context in which the events take place.

In "Military History, Is It Still Practicable," Jay Luvaas cites Field Marshal Earl Wavell as saying, "the real way to get value out of the study of military history is to take particular situations, and as far as possible get inside the skin of the man who made a decision and then see in what way you could have improved upon it."[3] Wavell's approach takes time and a deliberate effort, but it allows students to truly exercise their critical- and creative-thinking skills. These skills are required to develop successful commanders and staff officers capable of winning on the modern battlefield.

Techniques such as requiring students to conduct a thorough battle analysis, like the requirement at the Maneuver Captain's Career Course (MCCC), are excellent opportunities that require students to study the decisions and actions made by prior commanders to learn from those experiences. Additionally, conducting a staff ride is another opportunity to learn from military history and get firsthand context to the conditions previous commanders experienced as they participated in a military operation. These techniques exist in our modern PME system but should increase to allow students more opportunities to participate in these educa-

tional events. Additionally, focusing on the self-development domain in regard to military history should be a requirement for leaders in the operational force. This would ensure these skills are continuously developed throughout the length of an officer's career and not just occur while the Soldier is a student enrolled in PME.

Develop and Evaluate Current Doctrine

The consistent and deep study of military history equips military professionals to better understand, implement, evaluate, and develop U.S. Army doctrine. In the shadow of our wars in Iraq and Afghanistan and as we shift to a focus on large-scale combat operations (LSCO), it is the perfect time for the Army to reflect, learn, and review our current doctrine. In 2010, Robert Scales warned against the failure to maintain a learning organization by stating, "my sense is that the military has begun to circle X its officer seed corn.

During a staff ride at Gettysburg National Military Park in Pennsylvania, a military historian describes the battlefield situation to Soldiers from the 44th Infantry Brigade Combat Team, New Jersey Army National Guard on 12 June 2022. (Photo by SFC Devlin Drew)

A bias toward active service in our protracted small wars is making our military an institution too busy to learn."[4] Scales warned against an emphasis on action over education and offered ways the Army could promote and reward scholarship for military professionals. The continuous exploration of military history will equip military professionals to develop more effective doctrine and provide leaders with additional lenses to view the effectiveness of our current doctrine.

Studying the evolution of our military doctrine will provide context for military leaders currently trying to understand the Army's new operating concept — multidomain operations (MDO).[5] Military history will equip leaders with an appreciation of the historical consistencies within MDO and better illuminate what is new and different in the doctrine. This understanding will allow leaders to better analyze if and how our MDO concept addresses the current operational environment or the challenges our pacing threats pose to our ability to conduct successful military operations.

This could require military professionals to progressively work on a thesis project, periodically publish in professional journals, or require top performers to teach, observe, coach, or develop doctrine periodically throughout their career.

The need to evaluate and develop better military doctrine is not the sole responsibility of Combined Arms Doctrine Directorate (CADD) doctrine writers and developers. All Army professionals owe it to their units and the force to evaluate doctrine's effectiveness when conducting home-station collective-level training or a combat training center (CTC) rotation. Feedback from the force of doctrine applied during training or operations allows leaders to strengthen our doctrine by understanding what does and doesn't work.

Additionally, CTC observer-coach-trainers and PME instructors should be heavily grounded in military history to better assist them in their official duties and could actively promote historical examples as a way of relating and connecting experiences of their training audience to the greater historical legacy their operations originated from.

Learn From Others/Gain Experience

Lastly, and more commonly, military history is a great tool to train military professionals without having to actually conduct military operations. This benefit can be implemented as an annual training type requirement or through mechanisms discussed in previous paragraphs. Military professionals should have an area of expertise that assists them in better understanding the complex character of warfare and exercises their judgement by replicating future situations they may find themselves in.

Clausewitz's concept of coup d'oeil, or inward eye, refers to the "quick recognition of a truth that the mind would ordinarily miss or would perceive only after long study and reflection."[6] All Army professionals should develop and cultivate their individual coup d'oeil regardless of their duty position as a commander, staff officer, or functional area officer. Deep and deliberate study of military history is one of the best ways to develop your individual coup d'oeil. Studying military history and exploring what others have done in similar situations builds your ability to recognize "the truth" in any military context. It is important that Clausewitz highlighted "long study and reflection" as the means to develop coup d'oeil and not training or practical experience. Long study and reflection can come after training and personal experience, but the unlimited opportunity to learn from others

through the study of military history is what the great theorist was referring to.

Conclusion

The study of military history to empower the current Army professional is an underappreciated tool that should be emphasized and leveraged in every unit's leader development program and in individual self-development programs. Studying history can be intimidating for some who may not know how to begin their journey or may be hesitant in not wanting to draw the wrong lessons or insights from historical experience. Antulio Echevarria II expertly cautioned against some of the troubles and pitfalls of studying military history in his article, "The Trouble with History."[7] However, his warning is no excuse not to incorporate deep and meaningful study of military history in PME. Nor does Echevarria's warning abdicate our leaders' responsibility to leverage the benefits of studying military history throughout their careers.

The long-term study of military history will benefit military professionals by improving their critical- and creative-thinking skills; improving their ability to evaluate, implement, and develop doctrine; and acting as a training and education tool during periods of low OPTEMPO. The study of military history is greater than the ability to recall historical facts or extrapolate solutions from previous historical examples to solve current military problems. Professor Michael Howard perhaps said it best: "…it must never be forgotten that the true use of history, military or civil, is, as Jacob Burckhardt once said, not to make men clever for the next time; it is to make them wise forever."[8]

Notes

[1] Jay Luvaas, "Military History: Is It Still Practicable?" *Parameters* 12

> *Deep and deliberate study of military history is one of the best ways to develop your individual coup d'oeil. Studying military history and exploring what others have done in similar situations builds your ability to recognize "the truth" in any military context.*

(March 1982): 9.

[2] Michael Howard, "The Use and Abuse of Military History," *Parameters* 11/1 (1981): 13.

[3] Luvaas, "Military History," 10.

[4] Robert Scales, "Too Busy to Learn," *Army History*, No. 76 (Summer 2010): 28.

[5] Field Manual 3-0, *Operations*, October 2022.

[6] Carl von Clausewitz, *On War*, translated and edited by Michael Howard and Peter Paret (Princeton, NJ, 1976), 102.

[7] Antulio J. Echevarria II, "The Trouble with History," *Parameters* 35 (Summer 2005): 78-90.

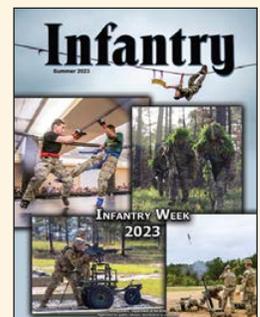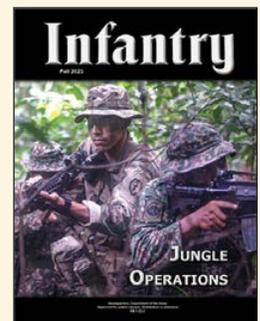[8] Howard, "The Use and Abuse of Military History," 14.

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We Lead Human Warfighters

LTC (RETIRED) CHARLES D. HENRY

For American Soldiers, warfighting is a life and death profession to protect the defenseless, our nation, and human freedom. In the disciplines required by our training, our organizations, and our needed personal behavior, we can lose sight of the humans we need to inspire, develop, lead, protect, and respond to. Instead, we may see the warfighter — NCO, officer, or Soldier — as only a component that fits into the military machine we are trying to manage. We may see a replaceable component and not an organic contributor to our mission success.

Modern warfare continues to become ever more complex. We keep nesting complex systems within complex systems and publishing great piles of detailed guidance and instruction, but we are continually challenged to find ways to manage these systems. It can be too easy to lose sight of the one essential component of each and every system — the human who makes our military work under the stresses of deployment and in the chaos of combat.

The core of our efficiency as a military rests on the competence, discipline, courage, self-sacrifice, and flexibility of the American warfighter. The foundation of our human qualities rests in human discipline and morale. We cannot coerce real discipline or morale; we must inspire and encourage it in the human head and heart. While physical compliance is the minimal demonstration of its presence, it is not the wholeness of it. We can see examples of fine drill and march performances but see no such capability displayed in the field. The professional qualities we desire and need are those that will unleash their owner's potential strength, competence, independence, and stamina at will and focused on the

enemy's vulnerabilities. What follows are some examples to help remind us that everyone in our military is a human being — you, me, our seniors, and our subordinates.

Some time ago, I was tasked to design, resource, and command an air mobile long-range surveillance unit for a mission. Upon arriving to the area of responsibility, it was discovered that the size and ruggedness of the terrain prohibited most communications. We discovered that if we could establish a radio relay site on a particular mountain we could carry on the mission. I was warned that one of the NCOs had issues. I reviewed what was known of this former Marine and went to see him myself. What I found was a basically sound, experienced sergeant (SGT) who seemed a bit uncertain of himself at the time. I praised his wealth of experience and pointed out that we had to create a new team of mostly communications specialists to enable our task force mission. I told him we needed a solid NCO to provide control and arrange security for the team at a remote site, which was at least five hours away from cross-country support in an uncertain security environment, and asked him to volunteer. After a short hesitation, the SGT volunteered and we pulled his team together. We encountered no problems with this team or its operations during the duration of our mission. After returning to home station, I learned more of his previous problems, some apparently involving alcohol. Since returning to home station, however, he was an outstanding example of a professional NCO. Through a personal channel, I was told he revealed that since someone believed in him, he could believe in himself. Our warfighters are people, not mere components of our military machine.

Paratroopers with the 82nd Airborne Division conduct operations during Joint Readiness Training Center Rotation 23-07 at Fort Johnson, LA, on 30 April 2023. (Photo by SPC Luis Garcia)

Another example occurred many years ago while I was serving on a task force in the jungle. As a security team chief, I became concerned about a staff sergeant (SSG) who was a key leader on the team. He had become distracted and inattentive. I took the SSG aside and probed, looking for trouble spots. The cause was easy to find: His infant son was suffering from a serious medical condition, and not knowing his status was driving him crazy. This transpired in the days before cell-phone technology was available. Any communication we had with home station was through authorized use of government equipment. So one night, while our team was on duty on the perimeter, I made arrangements to relieve the SSG temporarily and for him to use our official equipment to call home for an update. I received flak from some for creating a hole in our security but got it covered. The SSG returned to us happily reporting that his son had turned the corner and was healing; he then returned to his normal stable, competent self. Humans can have families that can be the center of their lives; machine components do not.

After completing another mission, a challenge I faced was how to properly recognize members of the provisional task force. Several had done truly outstanding work enabling the task force to complete its mission in very complex conditions. After negotiating with a senior officer, I was authorized to submit four recommendations and identified four Soldiers from different contributing units. I described the excellent efforts of these Soldiers in the course of completing their normal Military Occupational Specialty (MOS) duties within context of the task force. Each of the awardees, their commanders, and some members of their units individually contacted me to thank me for recognizing their efforts. Brilliant psychologists have repeatedly pointed out the universal human need for recognition — to be acknowledged. Machine components have no such sensitivity. In addition to line Soldiers, don't forget to also consider your support personnel who work hard to supply units with food, fuel, ammunition, and equipment.

I went through basic training during the draft era. My platoon included a real mixed bag of enlisted reservists, National Guardsmen, draftees, and regular enlistees. We were given a drill sergeant, SGT Neil, who looked and acted as if he had just stepped off a recruiting poster. He never raised his voice, speaking clearly and making sure he was heard and understood. He never put up with any nonsense. He took the time to let us understand and get coordinated. Our very mixed bag of people came together quickly and began to work as a team. About halfway through basic, the platoon was called together and given shocking news: We were losing SGT Neil! It turned out he was a draftee and his time was almost up. Rather than taking his 10 days to clear post, he kept working with us and had only three days left to out-process. There had been nothing at all to indicate he was not a committed lifer. This loss seemed to tear the heart out of us. We were given another drill sergeant, SGT Joe, who was loud, authoritarian, and prone to angry outbursts. The platoon teamwork came unraveled. Our performance faltered, and SGT Joe gave us additional two-hour blocks of physical training (PT) to encourage us to better perform. During one of these evening sessions, SGT Joe berated us and said he knew who was holding us back. He then began to call out names of those who would be given additional PT to adjust their attitudes. As he called out names, a few of us realized that he was calling out only members of the platoon with a certain religious affiliation. After having to put up with such behavior, we were determined to send a delegation to the company commander early the next morning to present a complaint. The first lieutenant was at first reluctant to accept our story but became convinced by the number of us who had trooped into his office and by our earnest promise to bring in the rest of the platoon to verify our story. SGT Joe was removed that day, and a third SGT was brought in the next day to provide administration for the platoon until graduation. The platoon gentled down a bit and we graduated, not in the brightest of spirits, but we had gotten the job done.

The United States is the most heterogeneous nation in human history. We have citizens from virtually every nation and culture on this planet. Differences can lead to conflict if not understood, tolerated, and accepted. Warfighters are human and need to be both understood and able to understand others in order to be stable, happy, and competent in our tasks as members of a team.

In another example, I was privileged to work with a truly outstanding infantry company commander at the National Training Center at Fort Irwin, CA. One day we were in the field coordinating operations. As I was sitting in a Jeep, I noticed another vehicle nearby whose driver I knew to be a capable warfighter. This specialist (SPC) was obviously frustrated and agitated, apparently struggling with a manual. The captain (CPT) also noticed this agitation as he walked back to the Jeep. As busy as we both were, the CPT walked over and asked the SPC how he was doing. The SPC revealed that he was trying to prepare for common task testing and was really struggling with land navigation. The CPT asked if he could sit and go over the material with him, and the SPC accepted his offer. He then asked the SPC to take him through the problems he was facing. One problem at a time, the CPT asked the SPC to talk him through to the solution. The CPT never corrected the SPC beyond asking if he might have forgotten a component of the problem. A couple of times, the CPT provided low-voiced instruction regarding map reading or compass use. The SPC came to understand the basics that had eluded him and became confident of his knowledge. It was great experience watching a very good teacher at work. It was easy to see why this CPT had such a great reputation as he demonstrated his expertise and his concern for his warfighters.

Readers who are experienced parents probably recognize the truth in the observation that "our children never listen to what we say, but always watch what we do." Seeing the behaviors of SGT Neil and this CPT remain vivid memories whereas hours of verbal instruction fall into the "Things Forgotten" column. The basis of all that we do and try to get done is with and through human beings. We need to

remember this no matter what confusion and time pressure we might be confronted with. And since we are all human, we will fail sometimes because we are not all knowing while often working in sometimes-confusing uncertainty. Some of us will fail through ignorance or some deficiency within us. As we are part of a team, the failure of one will affect others, senior and subordinate. The very best of us will recognize the failure and work very hard to fix the problem. It seems that most of us will sort of, maybe, patch things up.

Years ago, I was assigned to a senior command staff during a conflict where death and injury were daily possibilities. The great misfortune of this assignment was that my senior (a lieutenant colonel [LTC] acting as the executive officer) could only be described as heavy handed, self-centered, and incompetent. He once told me that "whatever the colonel does not know can't hurt me." This LTC avoided assuming any responsibility or even having the appearance of being responsible. I was to find out that he was detested by several seniors on the staff. In part for self-defense and admittedly a growing strong personal dislike, I minimized personal interaction with him. This limited my working sphere, constrained some options for planning and execution, interfered with work production and performance, and became an all-around unfortunate situation. At the time and after several efforts to create a real working relationship, however, this personal withdrawal seemed the only way to avoid possible open conflict. I cannot set aside the thought that I failed in my duties by being unable to find a way to develop a better working rapport with this senior while maintaining professional standards. We are all human — senior and subordinate — and can be imperfect and subject to failures. Our challenge is to recognize the situation, cope with it as best we can, and find ways to improve it.

Each of us has our foibles, weaknesses, and shortfalls that can affect how we lead subordinates and interact with our seniors. Leadership is difficult because it is a human interaction, and nothing is more daunting, more frustrating, and more complex than trying to lead men and women during tough times and working with and for our seniors. The structured and disciplined procedures of our military are designed from experience to cope with chaos and uncertainty and provide a machine-like efficiency to create stability. It works well when the involved humans are "all on the

same sheet of music," disciplined, motivated, and focused.

To borrow from ADM (Retired) William H. McRaven, we must never forget as leaders that there are those problems that need solving at the lowest possible levels of our units. Problems that, if not addressed, result in inefficiency, ineffectiveness, and low morale. Problems that the lower echelons in the organization may struggle to solve but that the leader can solve with one short directive. And sometimes the only way to ferret out these problems is to get out of our offices and talk to the Soldiers who do the hard work on our behalf. Human understanding and communication together are the lubricant for our team to oppose chaos and impose order on the situation to create the possibility of peace and stability.
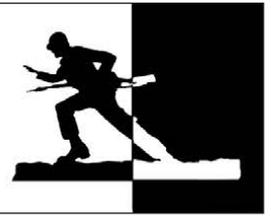
The only essential elements in our defense establishment are the individual human beings who we hope to inspire, guide, support, train, and lead to find the strength, courage, and discipline within themselves to be their very best and do the very best at the time it is needed.

For those readers interested in looking deeper into human relations, I recommend Dale Carnegie's *How to Win Friends and Influence People*. For those interested in becoming better leaders and making leadership work more effectively, I suggest reading *The Wisdom of the Bullfrog* by ADM (Retired) William H. McRaven. I believe this book should be on all military leadership schools' required reading lists and wish it had been available when I began to assume leadership responsibilities.

LTC (Retired) Charles D. Henry was on the Army's roll for 31 years. More than 60 percent of his career was spent serving in special operations units and activities. He was a commander five times and officer-in-charge six times.
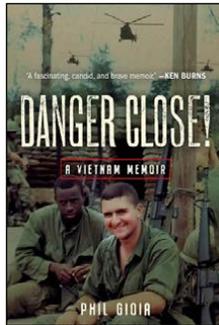

Soldiers with the 1st Infantry Brigade Combat Team, 101st Airborne Division (Air Assault) scan for the enemy during a training exercise on 16 September 2023. (Photo by SSG Oscar Gollaz)

Book Reviews

Danger Close!
A Vietnam Memoir

By Phil Gioia

Essex, CT: Stackpole Books, 2022

Reviewed by LTC (Retired)
Rick Baillergeon

Never judge a book by its cover. How many times in life have you heard that old adage? Yet, despite this sage advice, many of us will literally judge a book by its cover (or title). More specifically, we will make an assumption on the content of a book by its title. This is exactly what occurred to me when I first picked up Phil Gioia's *Danger Close! A Vietnam Memoir*. My first thought was this was a volume focusing solely on Gioia's Vietnam War experience. After completing this superb book, I found it was far more comprehensive in scope than the title suggested.

Before addressing the book itself and its numerous merits, it is imperative that a review of a memoir should provide a concise biography of the author. In regard to Gioia, he grew up in a military family and graduated from the Virginia Military Institute (VMI). Upon graduation, he served as an Infantry officer for nearly 10 years. During his service, he served two tours in Vietnam (as a platoon leader and then as a company commander) and earned two Silver Stars, a Bronze Star with 'V' device, and two Purple Hearts. Upon leaving the Army, he spent 30 years in the civilian sector in the areas of technology, finance, and consulting. He has additionally been published many times in military history publications and appeared in several military history documentaries.

As my opening paragraph emphasized, Gioia has crafted a memoir which delves into significantly more than his two tours in Vietnam. In fact, the memoir focuses on three specific aspects of his life from the period of 1946-1970. These years include his childhood years, his Army schooling (mainly Airborne and Ranger Courses), and his two tours in the Vietnam War. Through it all, he weaves a narrative on what life was like during specific periods of the memoir.

Gioia alludes to this focus in the volume's initial paragraph. He states, "This memoir is a window into a life begun seventy-five years ago, in a very different America. It is of growing up in an Army family during the Cold War, and of combat as a young infantry officer, in a war fought long ago, and far away." I would like to address each of his areas below.

The author's discussion of his childhood years is superb. Gioia grew up in an Army family, and he provides a unique perspective on many things most of us are very familiar with. These include moving numerous times, changing schools, meeting new kids, etc. Gioia is a superb storyteller, and he offers abundant short stories that will clearly keep you engaged. He sums up his childhood and its effect on him by stating "…in spite of the challenges, it was a great way to grow up. It informed my future character with three traits I may not have developed otherwise: flexibility, volunteerism, and leadership."

Gioia essentially devotes the second portion of the memoir to address the period from the time he entered VMI until his first deployment to Vietnam. Personally, the highlight of this discussion is his reflection of Airborne and Ranger Courses. The author dedicates a significant amount of copy to describe these experiences. They are pages well spent, and for many it will bring up some fond (and not so fond) memories.

The remainder of the volume keys on the author's two combat tours in Vietnam. These were as a platoon leader in the 82nd Airborne Division from February-April 1968 and as a company commander in the 1st Cavalry Division (Airmobile) from April 1969 to April 1970. In both cases, he was medically evacuated back to the U.S.

Gioia's discussion of this experience in Vietnam is brilliant. It rivals any prior Vietnam War memoir I've read in the past. There are several reasons why this discussion is so special. First, the author has an innate ability to capture on paper the spectrum of emotions displayed before, during, and after combat. Second, he is incredibly skilled at describing the sights, smells, and tastes of the battlefield. Third, Gioia translates the human dimension of war better than any author I've read in many years. Finally, he selects content which greatly interests and appeals to readers.

I found the biggest surprise of the memoir was Gioia's decision to weave commentary and discussion on what America was like during different periods of the memoir. Consequently, readers will get insight into what the country was like following World War II, during the Korean War, and before and during the Vietnam War. I found this to be a tremendous added benefit to the volume, and it provides a better understanding of the author's life.

In a volume of this quality, there are obviously many strengths displayed throughout its pages. The first is the book's superb readability; this is an incredibly conversant memoir. Gioia writes in a very informal and free-flowing style. Additionally, as addressed earlier, he has the ability to articulate in words areas which most authors struggle with. In total, you will not find a more readable book, no matter the genre, than *Danger Close!*

The organization of the volume is clearly added value to readers. Gioia has decided to structure the volume into 22 chapters. Within each chapter, he positions numerous "diary" entries (with outstanding titles) related to the chapter focus.

I found this organization extremely easy to navigate, and the breaks between the entries make for excellent reflection time for the reader.

Another significant strength of the memoir is the visuals Gioia has inserted. In two separate sections, he has inserted nearly 60 visuals. They are predominately photographs but also include maps, cartoons, a division Christmas card, and a unit "business card." These visuals superbly complement Gioia's words and are even more powerful because of the outstanding captions the author has added to each of them. In the volume's afterword, Gioia summarizes his life experiences by stating, "It has been quite a journey." In detailing this journey, he has crafted one of the best books I have read. It is a volume which is beautifully written, skillfully organized, and impossible to put down once you begin reading. It is also a book which reinforces that you indeed can't judge a book by its cover!

Forging the Anvil: Combat Units in the U.S., British, and German Infantries of World War II

By G. Stephen Lauer

Boulder, CO: Lynne Rienner Publishers, 2022, 463 pages

Reviewed by LTC (Retired) Jesse McIntyre III
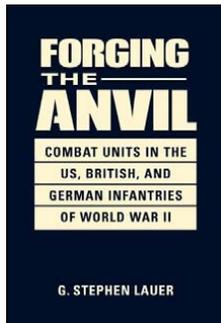
The late G. Stephen Lauer, who served as an associate professor of military theory and history at the U.S. Army School of Advanced Military Studies, defines how the United States, Britain, and Germany forged the anvil — their infantries — for World War II. In doing so, Lauer's work examines the widely held perception that average German infantrymen displayed a greater individual and small unit capability in combat.

Among Lauer's many significant observations and reflections, three stand out. First, his research reveals that all three countries placed a premium on infantry being the decisive weapon in war. All three realized infantry forces possessed the ability to seize, hold, and control terrain. Infantry units possessed the ability to break and destroy the enemy; all other branches and organizations played a supporting role. As a result, all three countries sought to create infantry units with members of society with the highest intelligence and physicality. Lauer's research indicates this was not what occurred in practice due to competing requirements of aviation, naval, elite units, and industry.

Second, Lauer's research indicates all three approached the role of junior officers and NCOs differently. The German Army, realizing that combat required independently thinking and acting fighters, placed a greater importance on the selection and training of infantry officers and NCOs. Given that junior officers were often closest to the fighting and took the brunt of officer casualties, they placed a greater emphasis on the leadership and tactical preparation of their NCOs. This is in stark contrast to the American model where the Army viewed an NCO as simply an enlisted man, temporarily elevated at his officer's pleasure to a supervisory position. U.S. Army NCOs lost their rank upon transferring out of the unit. A telling fact is that NCOs consisted of 50 percent of the American Army in 1945, while German NCOs never exceeded 16 percent during the war despite commanding infantry platoons.

Third, Lauer's research indicates "tooth-to-tail" ratio of combat troops to support troops was a major issue for all three countries. For example, a single U.S. infantry division in June 1944 consisted of only 2,916 riflemen with an assigned division strength of 14,253. Given that infantrymen bore the brunt of combat, infantry units quickly found themselves unable to replace losses or maintain their sharpness in combat. Germany's Sixth Infantry Division reported a strength of 4,755 on 10 April 1942, down from its full strength of 17,734. All three countries' replacement systems simply could not keep up with losses incurred by their infantry units. Lauer describes how each was forced in identifying replacement strategies that further degraded the quality of average infantrymen.

Forging the Anvil: Combat Units in the U.S., British, and German Infantries during World War II's strength is Lauer's use of graphics, primary source documents, numerous perspectives of senior leaders, and a writing style that conveys the urgency and complexity in creating and sustaining infantry units faced by the United States, Britain, and Germany leading up to World War II. It informs us that the Allied victory was more than quality infantry — it was the creation of combined arms that enabled the Allies to attack Germany strategically and operationally in defeating the superior quality of German Army's infantry. This work is highly readable and provides a comprehensive examination of a lesser-known area of World War II. It would be an excellent addition to the library of any historian or student with an interest on the subject.
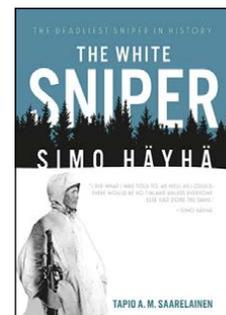

The White Sniper: Simo Häyhä

By Tapio Saaerlainen

Havertown, PA: Casemate Publishers, 2020, 190 pages

Reviewed by SFC (Retired) John C. Simpson

As a student of military and sniper history, I've often been disappointed by most coverage of snipers that usually takes the form of "Private Muskelunge of Bayonne, NJ, was point man for the patrol on Hill 835" or "the unit conducted extensive training in marksmanship" and so on. To me, this has always been pretty useless information for anyone wanting to actu-

ally learn something from the past that can be applied to the present day.

The good news is that *The White Sniper,* a recently re-released book about a Finnish national hero named Simo Häyhä, is just the kind of military history book I look for but so seldom find. It is a very useful and informative biography of the Finnish sniper written by Tapio Saaerlainen, who himself has served as a sniper instructor in the Finnish Army for more than 20 years and co-authored the Finnish Army sniper manual. Anyone who wants to learn more about sniping needs this book in their library.

For most Americans, World War II started at Pearl Harbor on 7 December 1941, but for the people of Finland, it's sometimes called the Continuation War because they had just finished fighting the Soviet Union to a standstill during the Winter War. On 30 November 1939, the Soviet Union invaded Finland, and when it signed a peace agreement with the undefeated Finns on 13 March 1940, Finland kept its independence but had to give up 10 percent of its territory to the Soviets (as well as a 30-year lease for a naval base at Hank). During those three and a half months, the Finnish forces of approximately 340,000 men, 10 working tanks, and 114 combat aircraft faced Soviet forces of approximately a million men, 6,500 tanks, and 3,800 aircraft. The Finns suffered 21,396 dead, 1,434 missing, and 43,557 wounded.

One of the hardest defensive battles occurred during the Battle of Kollaa, and the most famous Soldier to come out of that encounter was Häyhä, who served as a Finnish sniper from the start of the war until he was wounded on 6 March 1940 (more about that later). Using an iron-sighted Mosin-Nagant rifle and a Suomi submachine gun in an environment that ranged from -4 to -40 degrees Fahrenheit, he racked up 542 kills with a personal best of 25 confirmed kills in one day on 21 December 1939.

The man that the Finns referred to as the "Magic Shooter" was born in 1905 to the life of a farmer, an occupation that he returned to after the war. At the age of 17, he joined the Civil Guard and received extensive combat marksmanship training at the hands of veterans of the 1918 Finnish Civil War. Given the shortage of ammunition in the country at that time, training was limited to the essentials of combat firing without an undue emphasis on match target shooting.

At the beginning of December 1939, Häyhä's unit was ordered to fall back eventually to the Kollaa River where the actions there became the source of a phrase still in use in Finland today: "Kollaa will hold." His company commander assigned him as a free-roving sniper rather than to a rifle squad due to his marksmanship ability.

On 6 March 1940, the Soviets tried advancing into Kollaa (a day that Häyhä later recalled with Saaerlainen that he had killed 40 enemy soldiers before the enemy began to get through). On that day, Häyhä was injured by a Soviet exploding-rifle bullet (and I don't mean hollow point, it contained explosives). As the author described the circumstances of Häyhä's injury, I'll confess I was drawn into the story even though I knew he had survived. We're talking about being left for dead after a devastating injury to his jaw; the other members of his squad searched for him and eventually found him on a pile of dead Finnish soldiers. They checked for a pulse to find that he was still alive.

Although promoted to lieutenant from sergeant six months after his wounding, the Magic Shooter's military career was over. He reentered civilian life in May of 1941 after having undergone 26 surgical operations to repair the damage from his injury. He went back to being a farmer, although the village he grew up in had been lost under the terms of the peace treaty with the Soviet Union. His last bone transplant wasn't until 1948.

This book does a very good job of telling the man's biography, but if that's all it did, I probably wouldn't even be writing a review to recommend this book. What the author of this book was fortunate enough to do was to be able to get to know and talk to Häyhä over a long period of time, no doubt asking the same questions that I would have. Now, I've corresponded with Saaerlainen over the years since the first edition of this book came out, and I find him a fellow sniper with a dedication to doing his job in the smartest way possible. I also respect the fact that rather than keeping what he learned secret, he included Häyhä's lessons in the Finnish Army sniper's manual that he helped to write.

Almost as a bonus (and worth the price of the book, in my opinion) is a series of chapters with titles like "The Secrets of Simo Häyhä's Success" and "Simo Häyhä's Experiences for the Finnish Army." In the last chapter mentioned, we learn about the course of fire for Finnish snipers named after Häyhä that's conducted in six stages from varied ranges and positions (thoughtfully translated into English by the author).

In my own case, I always liked using Häyhä as an example because he never used a rifle scope, favoring iron sights for reasons covered in the book. One time while on active duty as an instructor of a Sniper course, I was telling a younger instructor how in 1985 we had conducted moving target training on the old M21 rifle, first with iron and then telescopic sights. I still remember the look of confusion on his face when he asked how it was possible to hit a moving target without a mil dot reticle. That's tunnel vision born of a lack of smart training and ignorance about useful sniper history.

Another example is the insight that a cash-strapped and (previously mentioned) ammunition-poor Finnish Civil Guard had relied on what the U.S. Army used to refer to as the Target Box Exercise for marksmanship training. The author mentions this assuming that everyone reading the book today would be familiar with the exercise. Unfortunately, the latest revision to the Army rifle marksmanship training circular no longer includes this exercise.

Lastly, I need to point out that this book is published by a company called Casemate that's done a terrific job of presenting it with really nice, clear photographs. I also had to look pretty hard to realize that this is an English translation of a Finnish text.

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