

Infantry

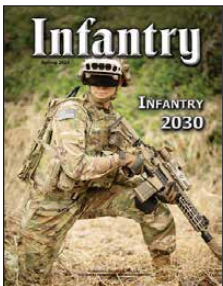
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INFANTRY
2030



BG MONTÉ L. RONE
Commandant,
U.S. Army Infantry School

MICHELLE J. ROWAN
Acting Editor

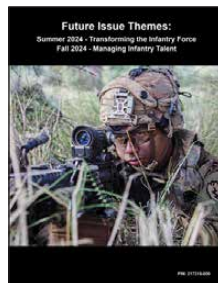


FRONT COVER:

A Soldier demonstrates the Integrated Visual Augmentation System (IVAS) and Next Generation Squad Weapon – Rifle (NGSW-R). (Photo by Jason Amadi)

BACK COVER:

A Soldier from 1st Battalion, 21st Infantry Regiment, 2nd Infantry Brigade Combat Team, 25th Infantry Division, pulls security during operations as part of Joint Pacific Multinational Readiness Center 23-01 at the Pohakuloa Training Area in Hawaii. (Photo by SGT Daniel Proper)



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By Order of the Secretary of the Army:

RANDY A. GEORGE
General, United States Army
Chief of Staff

Official:

MARK F. AVERILL
Administrative Assistant
to the Secretary of the Army
2407812

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Contact Information

Mailing Address: 1 Karker St., McGinnis-Wickam Hall, Suite W-141A, Fort Moore, GA 31905
Telephones: (706) 545-6951 or 545-3643, DSN 835-6951 or 835-3643
Email: usarmy.moore.tradoc.mbx.infantry-magazine@army.mil

Commandant's Note

BG MONTÉ L. RONE



On behalf of the Infantry Enterprise, I want to express my most sincere gratitude for Mr. Russ Eno who retired in January 2024 after 32 years as the editor of *Infantry* and a combined 56 years of exemplary Federal Service to our Nation! Russ served for 24 years on active duty as an Infantry officer. After commissioning in 1967, Russ graduated the Infantry Officer Basic Course before deploying to Vietnam where he served as an advisor with Military Assistance Command-Vietnam (MACV) in the Mekong Delta. His distinguished career included multiple assignments to Germany, assistant professor at West Point, chief of Communicative Skills Division at Fort Moore, and as chief of Logistics Plans in Saudi Arabia and Kuwait during Desert Shield and Desert Storm. Upon retiring in December 1991, Russ immediately took over as editor of *Infantry* in January 1992. During his 32 years as editor, Russ mentored hundreds of Soldier-writers that contributed to the conversation around the Profession of Arms and our beloved Infantry. We are incredibly thankful for his lifelong service to the branch and the profound impacts he made through the ideas shared in this magazine!

During the Maneuver Center of Excellence's (MCoE) Maneuver Transformation Week held in February 2024, we unveiled Infantry 2030, our campaign plan to unite and guide the education, training, and development of Infantry leaders and Soldiers while transforming the Infantry force to WIN on any battlefield in the world. In support of MCoE's role as the Army's proponent for Maneuver Force Modernization at Brigade and Below, Infantry 2030 establishes three lines of effort (LOEs) to synchronize across the Infantry Enterprise: 1) Train and Develop Infantry Soldiers and Leaders, 2) Forecast and Transform the Infantry Force of 2030 and Beyond, and 3) Manage Infantry Talent and the Health of the Branch.

A key initiative of Infantry 2030 is the Squad as a System (SaaS) framework. Infantry Soldiers do not fight as individuals, but as members of a squad. The squad is the most important, complex, and variable weapon system on the battlefield made more complex by the various physical differences and performance capabilities of each member. We must take a different approach to how we resource and modernize the squad, focusing on delivery of a formation versus separate individual programs. As both the Infantry Commandant and Director of the Soldier Lethality Cross Functional Team, our team remains focused on synchronizing efforts, aligning resources, and prioritizing initiatives of the Infantry Enterprise alongside our teammates in Training and Doctrine Command, Army Futures Command, and the Assistant Secretary of the Army for Acquisitions, Logistics, and Technology to enable transformation across the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) spectrum. Our squads deserve this because they are the formation who must have the training,

education, equipment, and right people to accomplish the mission and win the last 100 yards of the close fight.

The Spring issue of *Infantry* contains a variety of articles across the Infantry 2030 LOEs with multiple pieces discussing implementation of small unmanned aerial systems (SUAS) within our formations, addressing the threat of enemy UAS, as well as a truly innovative "How-To" guide by CPT Kendall Hamm and SSG Ryan Macleod on increasing the utility of SUAS in mounted formations. Despite the Army's recent announced force structure change that reduces cavalry squadrons within U.S.-based infantry and Stryker brigade combat teams, reconnaissance remains a critical enabling operation. COL Teddy Kleisner's "Infantry and Reconnaissance: Why Bush Hill is the Most Attacked but Least Reconnoitered Piece of Terrain on Earth" argues Infantry leaders must understand and value reconnaissance to succeed in large-scale combat operations (LSCO).

I also want to highlight LTC Tom Dull, commander of 2-11 Infantry, and his team's series on modernizing the Infantry Basic Officer Leader Course (IBOLC). CPT Michael Martino's "Weapons Maintenance: How IBOLC Keeps Students Fit to Fight" argues leaders should build the same positive culture around maintaining Soldiers and leaders that we do for maintaining equipment. MAJ Barkef Osigian writes an inspiring letter to future IBOLC platoon trainers stressing the critical importance of a platoon trainer's role not only in the near-term development of 2LTs at IBOLC but on the long-lasting impact leaders have on the careers of officers.

Thank you to all the contributors and readers of *Infantry*! The discourse found here is profoundly impactful on our profession and development as leaders and the branch. We continue to look over the horizon, aggressively investing in our people and our formations to maintain pace and tempo across our transformation efforts and stay on glide-path to deliver Infantry 2030. As a WARNO for the Summer edition, we want to focus on the Army's Continuous Transformation effort and solicit articles on LOE2: Forecast and Transform the Infantry Force of 2030 and Beyond. Finally, we look forward to hosting the competitors, their families, and visitors during Infantry Week occurring 5-15 April at Fort Moore.

I am the Infantry! Follow me!

Infantry Week





Infantry and Reconnaissance: *Why Bush Hill is the Most Attacked but Least Reconnoitered Piece of Terrain on Earth*

COL TEDDY KLEISNER

Editor's Note: *On 27 February 2024, the Department of the Army announced updates to its force structure that will modernize and continue to transform the service to better face future threats.¹ These changes include the inactivation of cavalry squadrons in continental U.S.-based Stryker and infantry brigade combat teams. Although these brigades stand to lose much of the reconnaissance expertise that resides in the leaders of their cavalry squadrons, the reconnaissance and security mission remains. Therefore, infantry leaders must be prepared to assume the mantle of reconnaissance and security expertise previously held by their scout comrades. This article provides a timely analysis of this issue.*

In his 1994 *Infantry* article "Company Reconnaissance," then-CPT John K. Carothers lamented that as a Joint Readiness Training Center (JRTC) observer-controller, he was beginning "to think that 'movement to daylight, then fire and maneuver' was an actual form of maneuver." After an October 2022 JRTC rotation, our brigade combat team's (BCT) second in my command, our habit of culminating short of intended objectives on the offense gave me similar cause for reflection. Our after action reviews and a subsequent survey yielded one clear explanation — **our infantry leaders**

either possessed an imperfect understanding of reconnaissance, did not value reconnaissance, or both. Plenty of evidence exists to suggest that our BCT was not alone in this pathology, and **this must be remedied to succeed in large-scale combat operations (LSCO).**

The Survey

A survey of 12 maneuver company commanders indicated that they collectively conducted 60 discrete offensive operations during our JRTC force-on-force phase of training. However, in support of these offensive operations, the same commanders only conducted 28 reconnaissance operations, six of which failed. The survey dug deeper into the 32 reconnaissance operations that never happened — asking why? The most prevalent reason provided was a lack of **time**. The second most prevalent was that the operation was a movement to contact, revealing a common misunderstanding that a movement to contact is just one big reconnaissance. Less prevalent but germane to this article were the excuses that

Paratroopers from the 82nd Airborne Division conduct operations during a Joint Readiness Training Center Rotation at Fort Johnson, LA. (Photo by SPC Luis Garcia)

companies and troops could not conduct reconnaissance AND keep up with the battalion or BCT **tempo** of attack, followed by my favorite reason — **enemy** contact!

But was a failure to reconnoiter causal in our inability to accomplish our offensive objectives? I argue yes because there is a path dependence to failure in the attack. When you reverse engineer a failed attack, you most often find that attacking units gained contact with the enemy in a position of disadvantage. The list of disadvantages is legion, but they all have their root in not knowing enough about the enemy's disposition, composition, and strength prior to becoming fully committed in the close fight. Is it possible for an attacking unit to stumble into contact and win? Sure, but this is what CPT Carothers was referring to. Infantry leaders must understand and value reconnaissance operations, and the best way to start this process is to dig into cavalry doctrine.

The Doctrine

Infantry doctrine for platoon, company, and battalion operations includes relevant coverage of reconnaissance and security operations. Infantry platoon doctrine and Ranger Course tactics and procedures are less tailored to LSCO or overemphasize the reconnaissance of the higher headquarters. Infantry company and battalion doctrine stress the reconnaissance phase of offensive operations but lack the conceptual constructs that would address the concerns identified in our unit's survey. A survey of archived *Infantry* articles reveals that most articles on reconnaissance narrowly focus on the "leader's reconnaissance" or organizational solutions to scouting. Therefore, commanders must turn to Field Manual 3-90, *Tactics*, and the expertly compiled Student Text 3-20.983 issued by the Cavalry Leader's Course. Let's look at the language of these documents in light of our BCT's survey.

Company and troop commanders reported the greatest detractor to reconnaissance was time — meaning, they possessed too little time from the line of departure to the time that an objective needed to be met. The doctrine that cavalry leaders apply to this problem is focus and orient on the reconnaissance objective. These concepts compel commanders to scope the problem and prioritize tasks, thus economizing time. There are five doctrinal reasons to cease reconnaissance, and lacking time is not one of them.

As the third most prevalent detractor of reconnaissance, junior commanders described how the tempo of the broader battlefield forced them to forego reconnaissance tasks so they could keep pace with adjacent units on the attack.² Cavalry leaders obsess over this dilemma by describing tempo in terms of the level of aggressiveness and level of detail of their reconnaissance. Doctrine further describes this using the forceful/stealthy and rapid/deliberate spectrum that is often depicted as a quad chart. Infantry leaders should appreciate how these concepts suspend all assumptions that reconnaissance decelerates the tempo of battle or that contact with the enemy is bad. To this latter point on enemy contact, also one that surfaced in our unit survey, the doctrine cavalry leaders use most describes engagement, disengagement, and bypass criteria very clearly. These are just a few concepts

that prevail in cavalry doctrine but were absent in the lexicon of almost all our infantry leaders. Infantry leaders must study the reconnaissance concepts that reside in the Armor Corps' literature to win in LSCO... but knowing is only half the battle.

Recommendations: Reconnaissance in Practice

Studying the advanced concepts of reconnaissance in the schoolhouse and in self-study is a great start. I propose two areas for further mastery of reconnaissance. First, the Maneuver Captain's Career Course (MCCC) currently includes an adequate overview of reconnaissance and security operations in its program of instruction (POI). However, according to an interview with a current instructor, the rubric for grading students' plans does not incentivize reconnaissance planning. Further, in the military decision-making phase of the course, students do not produce an Annex L — the reconnaissance and security operations annex. This should be remedied; our infantry students will value what we grade as senior infantry leaders.

Second, the MCCC teaches students to become exceptional planners. In 56 months of field grade command including four Combat Training Center rotations and one combat deployment, I never met a maneuver captain who couldn't plan well. However, I did assess that several maneuver captains could not rapidly read the battlefield and make sound tactical decisions in real time. I propose that the MCCC incorporate tactical decision gaming into its POI and tie these games directly to the graded plans. In execution, these leaders will learn the costs of neglecting reconnaissance and enjoy the advantages gained when information requirements are tied to well-synchronized reconnaissance tasks. This could effectively double the number of simulated battles a captain experiences before completing command.

Conclusion

The purpose of this article has been to share a diagnosis of one BCT's failures in the attack at JRTC and encourage infantry leaders to frame their thinking on reconnaissance through the study of doctrine most used by our cavalry forces. Current infantry doctrine and discourse omits important reconnaissance language at its own risk given the dubious future of some infantry BCT's cavalry squadrons. Embracing reconnaissance as a cornerstone will underscore its indispensable roll in informed decision-making on the battlefield.

Notes

¹ U.S. Army White Paper, "Army Force Structure Transformation," 27 February 2024, <https://api.army.mil/e2/c/downloads/2024/02/27/091989c9f/army-white-paper-army-force-structure-transformation.pdf>.

² This article does not address the second most common detractor, which reveals a misunderstanding of movement-to-contact operations. *Infantry* has published much about this over the years and should continue to do so.

COL Teddy Kleisner commanded 1st Brigade, 82nd Airborne Division from January 2021 to July 2023. His previous infantry assignments include service in the 187th Regimental Combat Team; Airborne and Ranger Training Brigade; 1st Battalion, 23rd Infantry Regiment (Stryker); and 75th Ranger Regiment. He attended an executive session of the Cavalry Leader's Course prior to a second JRTC rotation in brigade command.

C-SUAS at the Tactical Level

CW4 WESLEY K. WILK
CW2 RONALD E. BRAND

The purpose of this article is to summarize challenges and make recommendations regarding the integration of counter-small unmanned aerial systems (C-SUAS) at the infantry brigade combat team (IBCT) and below level in support of large-scale ground combat operations (LSGCO). These recommendations derive from observations and participation in multiple training events, tabletop exercises, and planning events conducted between January 2022 and January 2024.

Army Doctrine Publication (ADP) 3-0, *Operations*, defines LSGCO as “sustained combat operations involving multiple corps or divisions.” Summarized from Army Techniques Publication (ATP) 3-01.50, *Air Defense Airspace Management (ADAM) Cell Operation*, the ADAM cell’s role is to plan, coordinate, and establish connectivity for unified actions with communications systems; provide situational awareness and early warning; continuously plan and conduct airspace management requirements for the supported echelon; and conduct air and missile defense (AMD) and aviation planning to determine requirements across the spectrum of conflict. With the growing threat and proven use of SUAS on the battlefield, the modified table of organization and equipment (MTOE) personnel in AMD and ADAM cells across those corps, divisions, and their subordinate IBCTs cannot conduct doctrinal requirements to support commanders at echelon and simultaneously conduct engagement operations in support of C-SUAS. Therefore, C-SUAS must be a combined arms effort that is performed down to the lowest level, and Soldiers across the force at every echelon, but

especially those filling direct combat roles, should be familiar with ATP 3-01.81, *Counter-Unmanned Aircraft System*, and proficient in C-SUAS tasks. These tasks, which are located on the Combined Arms Registry, are:

- Plan Passive AMD Measures to Counter UAS (441-CUAS-0001)
- Plan for C-SUAS Operations (441-CUAS-2001)
- Develop a Unit C-SUAS Training Strategy (441-CUAS-1001)
- Operate C-SUAS Kinetic Systems (441-CUAS-1002)
- Manage Operational Status of C-SUAS Kinetic Systems (441-CUAS-1003)
- Operate C-SUAS Non-Kinetic Systems (441-CUAS-1004)
- Manage Operational Status of C-SUAS Non-Kinetic Systems (441-CUAS-1005)
- Operate C-SUAS Detection Devices (441-CUAS-1006)
- Manage Operational Status of C-SUAS Detection Devices (441-CUAS-1007)
- Perform Destruction of C-SUAS Equipment (441-CUAS-1008)

An Increasing SUAS Prevalence

Dropping grenades and explosives from SUAS isn’t necessarily a new technique on the modern battlefield, but only in the past few years



A paratrooper assigned to the 173rd Airborne Brigade uses a Dronebuster 3B to disrupt enemy drones as part of Exercise Shield 23 in Pula, Croatia, on 20 April 2023. (Photo by SGT Mariah Gonzalez)

have we seen how incredibly devastating this method can be at scale. Not only have we seen the lethality of what these machines are capable of, but we are also seeing the second- and third-order effects of their use for propaganda. Most concerning, these systems are incredibly cheap when compared to advanced UAS that have gone through a government-procurement process, or when compared to some of the Army's more advanced air defense munitions that we currently rely on to defeat them. Whether the systems are purchased from a major online retail site or created in someone's garage, they can be employed en masse and are truly considered a disposable piece of equipment. Any military force that is not bound by the bureaucracy of traditional military acquisition processes will most certainly make use of these tactics, techniques, and procedures (TTPs) for the foreseeable future. As we have seen with both insurgency forces (ISIS) and conventional forces (Ukraine/Russia), drone-dropped grenades are now being used by insurgency forces against Israel and in other ongoing conflicts around the world.

Loitering munitions and one-way (or kamikaze) unmanned aerial vehicles are also not new to the battlefield. It was only through the recent exploitation of social media for use as propaganda that the concept of loitering munitions became major headlines. The Azerbaijani military made extensive use of Israeli-made loitering munitions in the Second Nagorno-Karabakh War in 2020. Both the IAI Harpy and Harop were used to devastating effects against Armenian air defense units, opening the way for larger UAS to neutralize the remaining defenses and target unprotected frontline units. The Russia-Ukraine war has also shown the world the unique capabilities of these types of weapons. On the Russian side, professionally developed systems like the Zala KYB and Lancet series have shown their effectiveness against both personnel and material. On the Ukrainian side, first-person view (FPV) quadcopters modified into precision-strike, loitering munitions have made their presence known on social media and with the Russian military. With both loitering munitions and dropped explosives, there are a large variety of designs being employed, and each comes with a unique set of challenges that makes developing proper countermeasures difficult. These challenges become even more prevalent when discussing expeditionary-type maneuvers like large-scale, long-range air assaults, where units are regularly outrunning the C-SUAS coverage of larger systems like the Fixed Site-Low, Slow, Small UAS Integrated Defeat System (FS-LIDS) and Mobile-Low, Slow, Small UAS Integrated Defeat System (M-LIDS).

While the airborne threat of improvised explosive devices continues to be present, it is important to acknowledge additional technologies that are finding their way onto the modern battlefield. Artificial intelligence has made recent headlines, but it is important to note that autonomous decision-making logic has existed for some time now and is well within reach of low-budget insurgencies and hobbyists. Like the software used in self-driving cars, this type of automation relies on a set

of pre-determined rules and can be used for several different purposes, such as autonomously counting and identifying potential targets or being used for autonomous navigation in a denied, degraded, disrupted, space operational environment (D3SOE). A certain level of autonomy can also have benefits for ground control systems and operator survivability, increasing the stealth of an already hard-to-detect aircraft and increasing the lethality while flying beyond both visual and electronic line-of-sight.

Observations

The Air Defense Artillery (ADA) Branch has taken on the task of tackling C-SUAS by heading the Joint C-SUAS University at the Fires Center of Excellence at Fort Sill, OK. Corps, division, and brigade MTOEs all allocate air defense Military Occupational Specialties (MOSs), which include 14A (Air Defense Officer), 140A (AMD Systems Integrator), and 14G (Air Defense Battle Management System Operator). While the responsibility of a 14A is that of a generalized air defense officer, 140As and 14Gs are trained to integrate and operate specific equipment that provides information to and from the Joint Data Network which generates an integrated air picture for situational awareness. Currently, none of these MOSs are required to be trained through the professional military education pipeline on C-SUAS systems, tactics, planning, employment, and capabilities. While it is possible that some of these personnel have been to courses at the Joint C-SUAS University, much of what they know about C-SUAS, if anything, is solely from on-the-job training that they may or may not have been required to learn to facilitate an operation of which they played a part.

There are no dedicated C-SUAS personnel or organic equipment at any tactical echelon in the conventional Army, and the preponderance of C-SUAS equipment uses electronic warfare (EW) technologies with traditional air defense TTPs. While the air defense branch has enveloped the Joint C-SUAS University and the problem set that is C-SUAS, its personnel are simply not able to be solely responsible for the C-SUAS mission. This is a cause for concern when considering the potential Army 2030 regimental concept for personnel realignment. This realignment to more infantry-pure regiments will likely move the MOSs most closely associated with C-SUAS operations (EW, ADA, UAS) out of IBCTs altogether.

While many systems such as FS-LIDS, M-LIDS, and the Drone Buster have been fielded periodically as theater-provided equipment (TPE), these systems, aside from the Drone Buster, are not conducive for use by the combined arms community as is, let alone as part of an air assault or airborne BCT. When considering FS-LIDS, adding equipment that requires longer set up and tear down time, additional expert manning and storage space, and a different logistics tail are not practical ideas for any BCT and only make command posts (CPs) more vulnerable targets for enemy fires and effects. Equipment such as M-LIDS would most likely be relegated to a heavy weapons company



Above left, Kinetic and Electronic Warfare Mobile-Low, Slow, Small UAS Integrated Defeat System (M-LIDS) and, at right, Fixed Site-Low, Slow, Small UAS Integrated Defeat System (FS-LIDS) (Graphics courtesy of Integrated Fires/Rapid Capabilities Office)

inside of an infantry battalion as they would rarely be able to maneuver in the same terrain that a light infantry company would be required to traverse. Ounces equal pounds, and heavy weapons companies already have enough platforms and weaponry with which to effectively maintain and employ. These realities, and the fact that this equipment is not able to be effectively slung into combat for immediate action, show that they do not provide a common-sense approach to LSGCO for an IBCT.

Recommendations

While all Soldiers at every echelon should have a common knowledge and understanding of the “how-to” regarding C-SUAS in their area of responsibility (AOR), the reality of the matter is that if you can see or hear the SUAS, it is most likely too late. Electronic countermeasures should be actively utilized to deny threat SUAS freedom of maneuver inside of a corps, division, and BCT AOR. From the perspective of an air assault task force, this could be something like utilizing Bal Chatri to identify the presence of enemy SUAS and then using tactical-level EW assets to provide an active, wide-area countermeasure to the threat prior to its closing within visual intercept range. It is understandable that there is concern for EW fratricide, but given the vulnerability of an active and hot air assault landing zone, the benefits should and will outweigh the risks when discussing the employment of “blue” SUAS or communications networks in such a scenario. Ideally, an air assault task force should have the organic means of identifying and providing countermeasures to threat SUAS during, or in as little time as possible after, the initial insertion of troops.

The use of bulky systems such as FS-LIDS and M-LIDS seem to keep the tactical level in the counterinsurgency mindset that has accompanied the force over the last two decades. These systems will neither be conducive nor effective when being operated by forces who are responsible for closing with and destroying a near-peer enemy by means of fire and maneuver. While robust systems such as FS-LIDS or M-LIDS will likely have a place in the Army 2030 division air defense concept, they are not useful if given to the tactical maneuver echelons to utilize. If given to the tactical echelon's maneuver force, they should only be given to forces acting in

a dedicated protection role (i.e., assigned a specific mission set to defend specified critical assets at echelon) and not the forces actively conducting LSGCO.

C-SUAS cannot be considered solely an EW or air defense problem set when conducting operations. While the Soldiers executing engagement operations will likely be MOS immaterial, the staff function of planning and integrating C-SUAS planners at every echelon brigade and above must include EW Technicians (MOS 170B), UAS Operations Technicians (MOS 150U), and 14As. The first pages of Army Doctrine Publication 3-19, *Fires*, outline many fires warfighting function tasks, among which are surface-to-air fires, cyberspace operations/EW, and airspace management; these tasks all support the C-SUAS effort. Therefore, ensuring that 170Bs, 150Us, and 14As are housed inside of the fires cell of a brigade will best provide commanders with sound recommendations supporting the C-SUAS mission. To be lethal, effective, and win across the spectrum of conflict in LSGCO, the C-SUAS effort must be a combined arms effort using fires warfighting function tasks to support the efforts of the protection warfighting function.

CW4 Wesley K. Wilk currently serves as the UAS operations technician in Headquarters and Headquarters Company (HHC), 2nd Brigade Combat Team, 101st Airborne Division (Air Assault), Fort Campbell, KY. He served as an infantry squad leader before becoming a warrant officer and previously served as an OH-58D pilot in command with the 159th Combat Aviation Brigade before becoming a UAS technician. CW4 Wilk has served in various platoon-, company-, battalion-, and brigade-level positions and has operational experience with the RQ-7B, MQ-1C, RQ-11B, and Black Hornet Soldier Borne Sensor. He is a graduate of Army Flight School and Warrant Officer Basic Course, Air Assault Course, Tactical Unmanned Aircraft Systems Operations Warrant Officer Technician Course, Aviation Warrant Officer Advanced Course, and Joint Firepower Course. CW4 Wilk earned a Bachelor of Science in aeronautics and Master of Science in unmanned systems from Embry-Riddle Aeronautical University.

CW2 Ronald E. Brand currently serves as the air and missile defense systems integrator in HHC, 2/101. He previously served as an Infantryman and an air defense battle systems manager prior to becoming a warrant officer. CW2 Brand is a graduate of the Warrant Officer Basic Course, Air Assault Course, Joint Firepower Course, Army Space Cadre Basic Course, Multi-Tactical Data Link Planner's Course, Digital Intelligence Systems Gunner Entry Program, and Booze Allen Hamilton C-SUAS Operations Training. He earned a Bachelor of Science in business administration from Excelsior University and is currently working on a Master of Science in cyber security from Georgia Tech.

Experimenting with Commercial Quadcopters for Jungle RSTA

1LT ALEX CHOY

Crouched behind a berm, SSG Noah Jacques, a “Wolfhound” from 1st Battalion, 27th Infantry Regiment, 2nd Infantry Brigade Combat Team, 25th Infantry Division (2/25ID), manipulated the joysticks on his quadcopter’s controller. Hearing his radio crackle with a report of a rapidly approaching dust cloud, SSG Jacques sent the aircraft into a search pattern, spotting a tank through its high-resolution camera. Subsequently, as the tank closed within 300 meters, SSG Jacques buzzed its turret, distracting its commander and enabling his platoon’s Carl Gustaf team to acquire and neutralize their target.

The above vignette is just one example of how 2/25ID employed commercial off-the-shelf (COTS) quadcopters to fill a gap in the brigade’s short-range reconnaissance, surveillance, and target acquisition (RSTA) capability. By distributing a user-friendly and cost-effective solution down to the platoon level, 2/25ID enabled a tight sensor-to-shooter link, dynamically driving targeting and intelligence during an Operation Pathways field training exercise in complex jungle terrain.

The Capability Gap

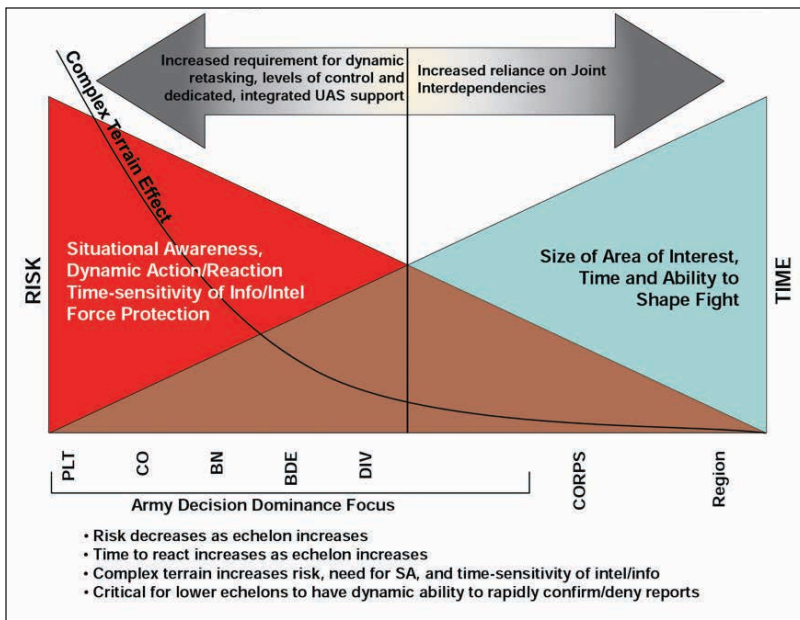
Because jungle patrols involve high levels of risk and require timely information due to frequent engagements, the need for dedicated and dynamically re-taskable RSTA is most critical at the light infantry platoon. This is to ensure immediate situational awareness for shortened decision-making cycles and exercising disciplined initiative (see Figure 1). Also, by distributing RSTA assets to the platoon, a battalion commander forms a web of sensors across the battlefield, increasing the larger intelligence picture by ensuring redundancy within the information collection plan.

High tactical risk also necessitates that any small unmanned aerial system (SUAS) distributed to platoons be attritable — in other words, low cost and simple enough that its loss is acceptable to the unit. However, given the challenges with the program of record SUAS currently in service, the platoon aerial RSTA capability remains largely unrealized.

The fixed-wing Raven SUAS typically investigates battalion-level named areas of interest (NAIs) far ahead of a platoon’s immediate objective. Consequently, having

Soldiers in the 25th Infantry Division employ a quadcopter during a training event. (Photo by SPC Benjamin Anderson)





only one Raven available per company limits opportunities for discretionary reconnaissance unless a company is its battalion’s decisive operation. Even if under the operational control of a platoon, the Raven’s cumbersome antenna array and ground control station (GCS) can make it unwieldy for dismounted patrols to employ during a short halt in restrictive terrain.

Furthermore, a thick jungle canopy denies fixed-wing flight below the tree line, leaving those monitoring line-of-sight (LOS)-dependent sensors grasping for glimpses of activity through gaps in the foliage. Target acquisition and laser return are often similarly degraded, especially when factoring in the jungle’s prevailing high humidity and precipitation that can cause beam scatter. Additionally, because a fixed-wing design requires obstacle-free open areas to generate enough lift for launch, a savvy enemy S2 can deduce friendly employment sites through terrain analysis, leading to friendly forces being targeted.

Delivering a rapidly deployable RSTA capability requires SUAS to be capable of translational flight (slow, fast, lateral, longitudinal, and hover) below the jungle canopy — in short, a vertical takeoff and launch (VTOL) SUAS. The two-ounce, single-rotor Black Hornet 3 — part of the Soldier Borne Sensor program of record — is one such system that already exists at the platoon level. Its range of 1.5 kilometers and 25 minutes of endurance is just enough for a dismounted patrol to check their immediate surroundings. One can take a knee and quickly launch it from their palm, viewing progress in real time on a chest-mounted Android Tactical Assault Kit (ATAK).

The Hornet’s compact design is also its deal-breaking shortfall. Its weight makes it highly susceptible to wind. Moreover, with only one rotor, even minor collisions with small branches mid-flight can result in a catastrophic loss of lift and unrecoverable fall. In combat, valuable time spent searching for a 7-inch object on the jungle floor is not a luxury one can

afford. Consequently, it is perhaps better suited for indoor environments that minimize unpredictable environmental interference.

Saddled with two sub-optimal program-of-record platforms, the brigade aviation cell researched a cost-effective solution on the consumer market, acquiring the Anafi Parrot, a “Blue UAS” Department of Defense-approved quadcopter. Unlike the Raven and Hornet, implemented Armywide as one-size-fits-all solutions, COTS platforms enable unit-level equipment specialization and rapid, bottom-up refinement via direct feedback from end users.

Leveraging COTS to Reduce Risk-Avoidant Behavior

Ensuring pilots fly regularly to maintain proficiency is a significant hurdle to maximizing RSTA potential at the battalion level and below. Far too often, instead of enabling commanders during training, “cumbersome regulations and mazes of doctrinal guidance” often compel a counterintuitive default to risk avoidance, fueling a vicious cycle of pilots’ degenerating skills and ever-increasing risk.² This problem’s root lies with the staggering costs of program-of-record SUAS, combined with barriers to employment from a training management and user-friendliness perspective.

Wary of accidents, company commanders often opt to keep their SUAS grounded to avoid paying for repair parts (Class IX) with scarce unit funds. Interviews of SUAS pilots by students at the Naval Postgraduate School reveal that risk avoidance is endemic across the force. One interviewee explained that because systems are so expensive, “units will never prioritize [them] over rolling stock or pacing items ... [and instead of purchasing Class IX] they will do controlled substitutions... leading to more unserviceable systems.”³

In contrast, the Parrot costs \$16,000, a fraction of the Raven. The price difference is likely attributable to the fact that quadcopters are mechanically simpler and consequently cheaper to produce than single-rotor systems. Additionally, a consumer market targeted at hobbyists incentivizes manufacturers to ensure competitive pricing. Repair parts can be purchased via government purchase card from an extensive list of local vendors, introducing another layer of price-gouging protection. Consequently, COTS quadcopters present a cost-effective and scalable solution for platoon jungle RSTA.

From a training management perspective, the more “red tape” installations have around procedures to fly, the more units will have underqualified pilots due to taking the path of least resistance in the face of competing requirements. Traditionally, flying SUAS in Hawaii necessitates a lengthy journey to either Makua Training Area in Northwest Oahu or Pohakuloa Training Area on the Big Island due to airspace restrictions and population density. To enable subordinate units’ training by alleviating administrative and logistical requirements, the 2/25ID’s Brigade Aviation Element estab-

lished a quadcopter ready range on Schofield Barracks with pre-approved airspace.

At the ready range, the aviation cell holds a monthly qualification to certify quadcopter pilots, combining classroom academics and flight training into a single day of instruction, with subsequent refresher flights as reinforcement. The quadcopter's intuitive controls make this short period of instruction possible — with most students feeling comfortable with flying in the first hour. Its controls are also generally easily translatable to other quadcopter models. In contrast, the minimum qualification for Raven pilots lasts three weeks, requiring a monthly simulation flight and bi-yearly live flight to maintain currency thereafter.

Field Testing and Recommendations

During Operations Pathways, 1-27 IN tested the COTS quadcopter's viability in an area characterized predominately by jungle savanna and rice paddies. Despite colliding with vegetation, it proved extremely durable, sustaining minimal damage. Flying approximately 200-500 meters ahead of their patrol during short halts, a pilot related the process to fly fishing. He would cast his line, check an area of interest, and then move on if no targets of opportunity were spotted. Upon acquiring a target, pilots relied on terrain association to rapidly call for fire, matching the quadcopter's camera to ATAK imagery to generate a 10-digit grid location.

Experimenting in a jungle environment also highlighted COTS SUAS' limitations. Thick vegetation can reflect and attenuate Global Positioning System (GPS) signals, resulting in large position errors — unacceptable for danger-close fire missions prevalent in the jungle. Dependent on a GPS signal to stay aloft, the quadcopter was forced to land upon losing its GPS link. On the other hand, although agile enough to penetrate the canopy to acquire a stronger GPS signal, flying above the tree line disrupted the LOS connection between the aircraft and controller, significantly degrading the quadcopter's effective range. Posing an additional challenge, due to its commercial origins, the quadcopter cannot operate on jam-resistant M-code (military) GPS.

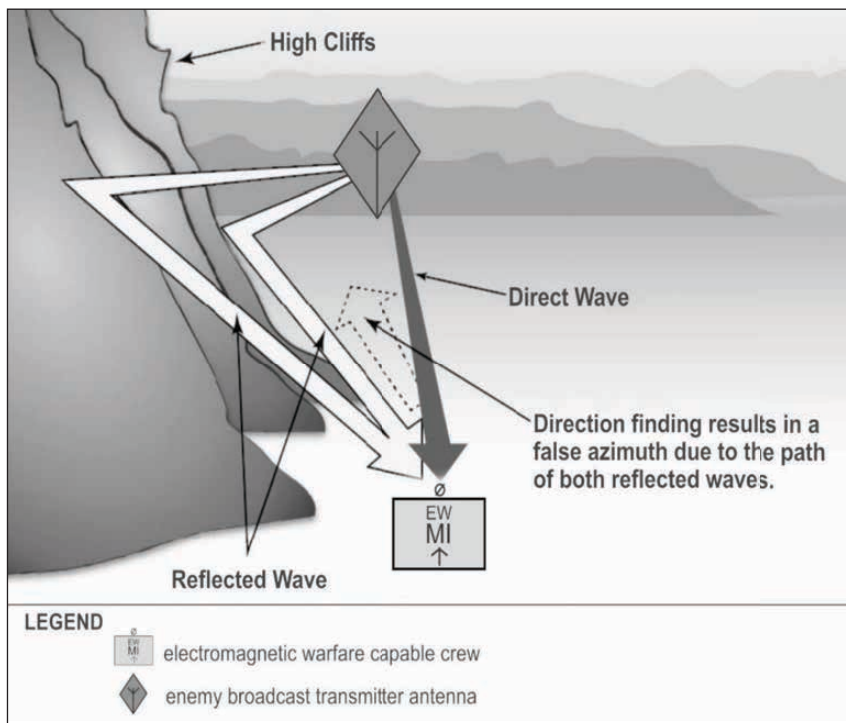
Procuring a platform with an inertial navigation system (INS) could provide a workaround for operating in a GPS-denied area. Once given a starting position, an INS utilizes accelerometers and gyroscopes to calculate its position, direction, and velocity by dead reckoning. Flying an INS-equipped quadcopter capable of delivering accurate positional data, a pilot could use the aircraft's distance and heading to call in a polar fire mission. However, a low-cost, tactical-grade INS's readings will quickly drift without subsequent GPS inputs. Moreover, INS error and instrument price/complexity are inversely correlated, making it difficult to reconcile for use in an "attritable" platform.

Utilizing visual inputs from the quadcopter's camera to estimate its location and avoid obstacles provides a possible workaround that does not detract from its limited payload capacity. Most notably, visual simultaneous localization and mapping (vSLAM) algorithms appear promising and warrant additional study. However, any vision-based approach will likely face significant hurdles while operating in heavily vegetated environments due to highly dynamic scenes and visual clutter that can interfere with image capture and processing.

While the quadcopter airframe was suited for reconnaissance and target acquisition, it fell short while conducting persistent surveillance due to its short flight time and lack of an efficient decentralized charging capability. To maximize battery life by minimizing flight time, Wolfhounds employed a *cueing* strategy: integrating observation posts and other intelligence enablers to trigger the quadcopter's follow-on collection of more detailed information. Additionally, experimentation with portable battery packs is ongoing to present platoons with a charging solution that avoids compromising the quadcopter's advantageous size and weight.

In a worst-case scenario, an enemy calls in indirect fires on a platoon after triangulating a quadcopter controller's radio-frequency (RF) link with signals intelligence (SIGINT) direction-finding equipment. To avoid compromise and subsequent exploitation, pilots should reduce their RF signature by implementing *terrain masking* during flight operations by placing a terrain feature between their controller and the enemy sensor. Similarly, pilots can attempt to fly near terrain that will reflect radio waves and result in a false azimuth to generate enemy direction-finding errors. For example, during jungle patrols in Indonesia, the denser

Figure 2 — Example of Radio Wave Reflection⁴



vegetation and steep slopes to the platoon's left and right helped limit detection. However, platoon leaders must take existing intelligence estimates into account when weighing the tactical risk of moving along canalizing terrain versus the likelihood of enemy SIGINT threat.

Since quadcopters' rotors emit a distinct sound, pilots should also take precautions to mask their acoustic signature. Flying the quadcopter in dense vegetation can help dampen the sound. When combined with a laser designator to maximize standoff distance, pilots can use the jungle's complex terrain to their advantage, since sound waves may travel around a hill or mountain before arriving at an enemy observer's position, providing a false azimuth to the aircraft.

Conclusion

The COTS quadcopter airframe proved agile and durable during testing. However, the lack of a GPS-denied flight capability was a major limiting factor for navigation and target acquisition. The 2/25ID has trained more than 100 pilots to date. Those trained are not limited to the rank and file — enthusiasm for the COTS quadcopter is evident, with senior enlisted leadership often qualifying on the system to better advise their formations. Accordingly, an increased willingness to employ the quadcopter compared to legacy systems has been observed due to the risk mitigation afforded by the platform's user-friendliness, lower cost, and increased opportunities for training.

The Army is currently testing the RQ-28 as part of the Short-Range Reconnaissance (SRR) program of record.

Because jungle patrols involve high levels of risk and require timely information due to frequent engagements, the need for dedicated and dynamically re-taskable RSTA is most critical at the light infantry platoon. This is to ensure immediate situational awareness for shortened decision-making cycles and exercising disciplined initiative.

Based on the Skydio X2D, a Department of Defense-approved COTS quadcopter, the Army intends for the RQ-28 to fill the platoon aerial RSTA capability gap. Because RQ-28 will take several years to field, units should continue to procure COTS quadcopters as a stop-gap solution to develop techniques, tactics, and procedures and a robust pilot base prior to RQ-28 fielding. After the RQ-28's adoption, units should continue to utilize and procure the COTS quadcopter as a training aircraft to build pilot competency while mitigating risk.

Notes

¹ U.S. Army Unmanned Aircraft System Center of Excellence, "U.S. Army Roadmap for Unmanned Aircraft Systems 2010-2035," n.d., <https://irp.fas.org/program/collect/uas-army.pdf>.

² Addison McLamb and Tanner Dane, "Risk Aversion and the Army's New Tactical Unmanned Aircraft: Buying Technology Is One Thing, Being Able to Employ It Is Another," Modern Warfare Institute, 20 July 2020, <https://mwi.westpoint.edu/risk-aversion-and-the-armys-new-tactical-unmanned-aircraft-buying-technology-is-one-thing-being-able-to-employ-it-is-another>.

³ Catherine L. Collinsworth, Oscar Delgadoveana, Michael R. Griffin, Monica M. Holmes, and Joshua K. Mcmillion, "Analysis of Soldier Borne Sensor (SBS) Employment and Training Program," Defense Technical Information Center, December 2020, <https://apps.dtic.mil/sti/pdfs/AD1126837.pdf>.

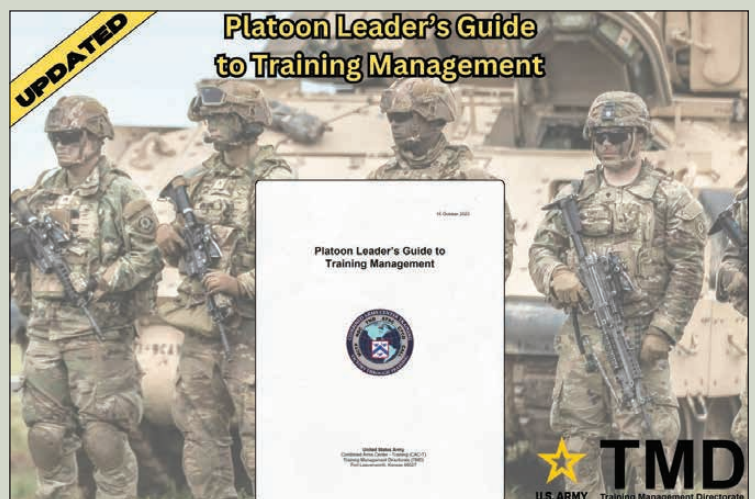
⁴ Army Techniques Publication 3-12.3, *Electromagnetic Warfare Techniques*, January 2023, 6-13.

At the time this article was written, **1LT Alex Choy** served as the assistant S2 in 1st Battalion, 27th Infantry Regiment, 2nd Infantry Brigade Combat Team, 25th Infantry Division. His operational experience includes completing a Combat Training Center rotation and two Operation Pathways missions. 1LT Choy currently serves as the brigade intelligence support element platoon leader in the 65th Brigade Engineer Battalion, 2/25ID. He is a 2021 graduate of the University of California, Los Angeles (UCLA).

Updated Training Guide Now Available

The Training Management Directorate, Combined Arms Center-Training recently updated the March 2023 training management guide "Platoon Level Training Management" to better reflect platoon-level training. Titled "Platoon Leader's Guide to Training Management," this updated guide provides leaders at platoon and below with effective training techniques and procedures that complement Field Manual (FM) 7-0, *Training*, and enable the processes that help achieve training proficiency.

[https://atn.army.mil/getmedia/c9e0e234-5ea2-40b4-819a-9106651a1fae/PLT-LDR-Guide-to-TNG-MGMT-\(FINAL\)-15OCT23.pdf](https://atn.army.mil/getmedia/c9e0e234-5ea2-40b4-819a-9106651a1fae/PLT-LDR-Guide-to-TNG-MGMT-(FINAL)-15OCT23.pdf)



More Than a Marksman: *How and Why Commanders Misuse Snipers*

CADET KNOX WATSON

Since 2014, the Ukrainian armed forces have learned the hard way that modern armies must not overlook their snipers — will the U.S. Army do the same? The U.S. Marine Corps made headlines last year when it announced it was cutting scout sniper platoons and supporting programs from line units, reflecting a broad divestment from these specialized warfighters.¹ The Army has not made any similar announcements about its sniper sections, but interviews with 10 active-duty snipers illustrate how and why the Army also underutilizes and under supports these assets.² In Ukraine, however, two years of warfare since the 2022 Fall issue of *Infantry* have revealed the importance of snipers to combat operations — especially the benefits of investment and usage of snipers for unique roles. The Army must therefore refine doctrine, practice, and investment in its snipers in order to benefit from the outsized intelligence and kinetic value snipers provide on the modern battlefield.

Although commonly known for their expertise in employing firearms, snipers provide an even greater benefit through their unique intelligence collection capabilities. In conven-

tional warfighting, the type of tactical intelligence which can quickly drive maneuver units in the field comes from a multi-source enterprise of assets organic and non-organic to the unit. From embedded human intelligence collectors to agencies controlling satellites from the homeland, all sources play a role in giving the commander a full spectrum understanding from which to make decisions. Army snipers, who are doctrinally organized into sections under each battalion commander, can provide not only a critical redundancy but a unique source of battlefield intelligence for commanders.

How do battalions otherwise collect information? According to Army Techniques Publication (ATP) 3-21.20, *Infantry Battalion*, battalions doctrinally collect information using a few unmanned aerial systems (UAS) at the company level and a scout platoon attached to the battalion commander.³ Doctrinal scout platoons, however, are not versatile or hidden enough to gain detailed intelligence on

Snipers with 1st Battalion, 506th Infantry Regiment, 1st Infantry Brigade Combat Team, 101st Airborne Division (Air Assault), conduct sniper field training at Camp Adazi, Latvia, on 20 September 2023. (Photo by SSG Oscar Gollaz)



the battlefield, especially in mechanized units. The Bradleys, Strykers, or Joint Lightweight Tactical Vehicles organic to the scout platoon can be seen or heard from kilometers away in the right conditions and are not likely to conduct detailed intelligence, surveillance, and reconnaissance (ISR). As ATP 3-20.98, *Scout Platoon*, notes, the purpose of the scout platoon is to conduct broad zone, route, or area reconnaissance and other related tasks.⁴ Additionally, the time dedicated to vehicle maintenance and conventional fighting in mechanized formations significantly reduces a scout platoon's ability to train for its role in collecting information. Scout platoons, without the training received by snipers, do not have nearly the same capabilities to conduct extended stealthy operations beyond logistical support — or shoot from afar. Thus, while they can function as effective combatants and collect intelligence on significant developments beyond friendly lines, scout platoons in both mechanized and dismounted platoons may leave a hole in intelligence collection for the battalion commander.

Although there are more sources of intelligence for the battalion commander, none have the specific capability snipers can provide. For instance, satellites above Ukraine may allow NATO to photograph broad enemy maneuvers or capture area imagery, but these satellites are subject to several limitations. These include the time needed to capture imagery, level of detail, and likelihood that a peer adversary would counter satellites in open conflict with the U.S. As a result, the Army is already training to operate in their absence.⁵ Meanwhile, UAS in Ukraine have evolved to play a key role in ISR as well as in kinetic operations. The use of these systems at a tactical level also decreases the time needed to analyze, disseminate, and act on collected information — better integrating intelligence and operations. Thus, the Army is and should be adapting UAS into doctrine.⁶ No good tool remains uncontested, however; the U.S. and its allies must be prepared for an operational environment in which effective counter-UAS measures are widely used. The Ukrainians already lose an estimated 10,000 drones a month at a 10-percent long-term survivability rate, according to the Royal United Services Institute. Only a third of aggregate UAS missions are successful at accomplishing their goals, and both sides are working on 10-kilometer electronic warfare complexes along front lines to improve C-UAS capabilities.⁷ Other avenues of intelligence collection such as human or communication sources add to the diverse spectrum of information coming from the environment. It is here that snipers can provide not only critical redundancy but unique access to battlefield information.

As a result of learned sniper field craft and training, battalion sniper sections possess a force-multiplying ISR capability unlike any other asset. According to the current active-duty snipers interviewed from multiple Army units, snipers can infiltrate ahead of friendly lines without logistical support,



A student in the U.S. Army Sniper Course participates in a stalking exercise on 2 January 2023 on Fort Moore, GA. (Photo by Markeith Horace)

remaining stationary or mobile for days on end undetected. According to one interviewed sniper, “field craft is what separates us from a typical rifleman.” Another sniper related how, in each of his section's teams, one of three snipers handles intelligence, providing the commander with detailed information about the enemy. This includes key pattern-of-life information. One sniper related his experience conducting force-on-force training in Bulgaria: His three-man team infiltrated just 50 meters from key enemy leaders, listening to significant discussions and relaying them to friendly forces before leaving undetected. Details such as enemy personnel numbers, base layouts, maneuvers, potential breach points, and more are all capturable by snipers in a well-disguised listening/observation post.⁸ More so than through satellites or secondhand reporting, snipers can distinguish a metal wall from a mud emplacement or quickly investigate signs of life in an enemy encampment. One interviewed sniper posited that he could send a live visual feed to the commander if provided with the right equipment, and with communications equipment, a sniper team can call for accurate and lethal fires at critical junctures.⁹

These capabilities come from the U.S. Army Sniper Course (USASC), where Soldiers are taught advanced camouflage, use of hides and terrain, concealed movement, range estimation, and more.¹⁰ Upon graduation from USASC, Soldiers earn the additional skill identifier “B4,” but the training does not stop there. If given the opportunity, Army snipers will regularly practice stalking: playing hide and seek at a range of just a few meters, where the glint of an eyeball is all it takes for the snipers to spot each other. Members of the sniper community also share tactics on avoiding conventional enemy assets such as UAS or thermal imagery. It is in this context that the stark difference between snipers and other ISR assets becomes clear. While human intelligence, satellites, communications intelligence, or UAS have valu-

able contributions, none can carve out an essential ISR niche quite like snipers.

Then, there is the sniper's rifle. Operating far behind enemy lines and oftentimes near key terrain or high-value targets, snipers can also employ precision fires to remove key individuals without warning and with detrimental impacts to enemy operations. Against a Russian or Chinese army weak in NCOs, removing key leaders could result in the operational breakdowns observed in Russian command and control early in their 2022 invasion. For example, Ukrainian snipers were famously credited with shooting Russian Major General Andrei Sukhovetsky, throwing a wrench into the operations of the 41st Combined Arms Army.¹¹ In addition to key leader removal, just two or three well-placed sniper teams could fix and destroy entire enemy battalion-sized elements. When formations take fire — and especially when they take casualties — whole columns can be fixed long enough to call in fires with lethal consequences.¹² One sniper summarized the previous, noting, “only [snipers] can infiltrate early to observe a target, stay on to support during an operation with direct precision fires, and stay back to observe after the operation to see how the enemy responds.”

If these capabilities are available to the battalion, why are snipers not regularly included in doctrine, planning, and operations? According to ATP 3-21.20, snipers are organized into teams under a section leader who reports directly to the battalion commander. The sniper section can also be attached to any unit in the battalion, usually the scout platoon of the headquarters company.¹³ This doctrinal setup, although

intentionally adaptable enough to attach snipers at any level, creates issues with representation. When placed with a platoon, as they often are, the snipers must compete against the priorities of the platoon leader, a situation even worse when snipers are placed with the battalion commander and his/her priorities. With representation by a staff sergeant to the battalion commander or S3, snipers are not always the first to be employed in training exercises despite their capabilities. Opponents will respond that the sniper section leader is the senior staff sergeant in the battalion, but even then, according to one sniper, “[snipers will] get an earful if we go right to the battalion level... it's considered jumping an echelon.” ATP 3-21.20 outlines a “sniper employment officer” to carry out these duties, but that task is doctrinally assigned to the headquarters company commander, scout platoon leader, or other officer with competing priorities; this half-solution does not solve the problem.¹⁴ Although sniper sections should market themselves to their units, the fact remains that status quo doctrine puts snipers at a disadvantage.¹⁵

Additionally, commanders may see snipers as risky assets to deploy beyond friendly lines. Beyond the obvious risk of snipers being discovered and overpowered by the enemy, commanders know that several safety measures must be emplaced when troops are sent forward of the front line. These include setting no-fire areas, preparing quick-reaction forces, and more, which can impact existing operations. Commanders must learn to work with snipers in order to mitigate the risks of deploying them beyond friendly lines. At the very least, commanders should recognize their own risk-averse biases. One interviewed sniper described how commanders can default to placing snipers on rooftops — ironically, a more dangerous position — to provide “support by fire” because of the apparent risk in sending snipers ahead of friendly lines. Without better representation at battalion, however, these issues are hard to fix and extend into how snipers are equipped and trained.



Snipers in the 1st Armored Brigade Combat Team, 3rd Infantry Division conduct range estimation and target detection training in Germany on 23 March 2022. (Photo by 2LT Marc Killian)

When units either don't know how to use snipers or lack the time and energy to work with them, snipers can be left undertrained and ill-equipped. According to several interviews, snipers are often treated as Infantry Soldiers to sign for property or asked to help with various monotonous assignments. When used for recruiting (“they love throwing us in front of the cameras in ghillie”) or to coach basic rifle marksmanship,

snipers may rarely be able to practice their very perishable shooting skills. Often not allocated enough ammunition, snipers may shoot an annual sniper qualifier and potentially a range every three months — hardly enough. For battalion commanders, why invest in ISR equipment or ghillie suits when tank engines need replacing? As one interviewed sniper put it, “commanders will see a [Soldier] with a high-powered optic and think they get everything a sniper section would provide.” For snipers who know the difference between themselves and a squad designated marksman, this may mean they will — but should not — cover the costs out of pocket. One sniper noted, “It’s well over \$1,000 just to stay in [my sniper] section.” These snipers are passionate, and battalions often conduct sniper section tryouts to select from the best of the unit, but underutilization and lack of support have their consequences.

When Soldiers cannot do the jobs for which they train, poor retention results. In his Fall 2022 *Infantry* article, SFC Kenneth Howell blames low training opportunities for poor sniper retention in Army units. Additionally, by rotating enlisted personnel through different positions to fulfill Army career requirements, he points out that units struggle to maintain institutional knowledge of sniping techniques.¹⁶ Finally, since line platoons must relinquish Soldiers to try out for the sniper section of a battalion, officers of those platoons are not incentivized to give up their best Soldiers or encourage them to stay in sniper sections. Thus, without a dedicated Military Occupation Specialty (MOS), snipers either intentionally or unintentionally leave their roles in the battalion’s sniper section without continuity of mission — and many never join. This is potentially why the Army Sniper Association states that the Army historically demonstrates “a lack of understanding and appreciation for the effectiveness and potential that snipers could add to the fight.”¹⁷

Unfortunately, the poor attention paid to snipers in peacetime has been historically revitalized in war, though at a high cost. According to David Stieghan, the Infantry Branch historian, the birth of the modern U.S. Army sniper occurred in the trenches of World War I, where snipers accounted for the second highest number of combat kills behind artillery.¹⁸ The Army, however, disbanded sniper teams and training after the war, believing them to be irrelevant in a future conflict. In World War II, “the U.S. Army’s lack of familiarity with sniping tactics proved disastrous in Normandy and in Western Europe, where they encountered well trained German snipers.”¹⁹ Thus, disparate programs were set up by units to leverage sniping capabilities, none of which were universally adopted after the war. In Marine Corps doctrine similar to that of the Army’s present doctrine, the Marines’ Tactics and Techniques Board suggested just before Korea that designating and training snipers was “the prerogative of Commanders.”²⁰ After Korea, in which snipers became the most casualty-producing ground assets late in the war, the Army established a sniper school at Camp Perry, OH — it lasted only a year. Just as before, the prevailing logic was that snipers would be irrelevant in future conflicts moving

too fast for these Soldiers.²¹ In Vietnam, however, Stieghan notes that commanders on the ground demanded the addition of trained snipers in the ranks, leading to the establishment of a school at Fort Moore, GA.²² Once again, it would not survive peacetime. Only in 1987 was the modern sniper school established again at Fort Moore as it exists today.²³

That trend is not limited to the U.S. Army. Since 2014, the Ukrainians have learned the hard way that snipers have a role to play in modern war. Having no distinction between infantrymen and scouts with few NATO-standard professional snipers, the Ukrainians suffered a third of their casualties due to sniper attacks early in the 2014 Russian invasion and have built a sniping program to match since then.²⁴ Graduates of the rigorous Ukrainian sniping selection and training programs have proven to be effective force multipliers since the 2022 Russian invasion by conducting reconnaissance, eliminating high-value targets at long range, and demoralizing enemy troops.²⁵

While the Army does not seem poised to cut its sniping programs, the sniper retention, usage, and training challenges all degrade the potentially outsized impact of snipers on the battlefield. There are several adjustments the Army could make to its current doctrine and operations to remedy these problems, however. The first is through officer familiarization. By adding sniper employment to the curriculums of the Basic Officer Leader Course (BOLC), Maneuver Captain’s Career Course (MCCC), and Command and General Staff College (CGSC), officers could learn how to send snipers behind enemy lines to conduct missions — doing so in a manner backed by education and experience despite the risk. Although the Army used to run the Sniper Employment Leader Course for officers, poor attendance ended it quickly: Officers cannot be expected to pause their work to attend a dedicated course on sniper utilization — especially when schools like Pathfinder or Ranger are an alternative.²⁶ Sniper utilization must therefore be included as part of an existing mandatory school.

Another structural option is integrating an officer as a sniper platoon leader. As needed, sniper teams could be tasked out, but the sniper platoon in its headquarters company would operate more insulated against the rest of the unit. One sniper interviewed suggested using a military intelligence officer as the platoon leader, demonstrating the extent to which snipers are dedicated to their ISR mission. The Marines are replacing the scout sniper platoon with a scout platoon, a change which reflects a force intended to work on small islands across the Pacific.²⁷ The Army, likely to operate in a land war during a potential fight against a peer adversary, will find the successful Marine scout sniper platoon model another potential reform.

For the snipers themselves, several solutions exist. Creating a dedicated MOS for snipers would allow them to retain focus and continuity of mission across formations. Similar to the old Marine Corps system, Soldiers could try out for a sniper MOS at USASC after Basic Combat



A student in the U.S. Army Sniper Course practices the art of stalking targets on 18 June 2020 at Fort Moore, GA. (Photo by Patrick A. Albright)

Training, and, if they fail, return to their Advanced Individual Training to try again in the future. While some may argue that it would become more difficult to fill sniper sections by forcing Soldiers to earn an MOS, manning sniper formations would be arguably easier if retention were better. That better retention comes from having an MOS or simply feeling more pride in being a sniper. Many snipers have an unofficial “Sniper” tab, and although needlessly risky in a combat environment, several snipers interviewed felt that being allowed to wear one in garrison would go a long way towards pride and retention. Even now, commanders can simply facilitate more sniper training and help insulate their snipers against conventional infantry or cavalry scout roles. That means more time at the range, more time practicing stalking, and less time doing other taskings.

While the extremity of a new MOS or platoon structure may be unpalatable to senior leadership, the takeaway message for commanders is that snipers need more insulation and need to be used. Any policies in support of that end state would be advantageous to the sniping community and the Army as a whole. In the meantime, as one sniper puts it, “we’ll continue to put in the legwork to make it happen.” The Army, however, cannot wait for the next major conflict to discover — at a high cost — that sniper employment is an essential tool for ISR and kinetic actions in modern warfare.

Notes

¹ Jeff Schogol, “The Marine Corps is Getting Rid of Scout Snipers,” *Task & Purpose*, 27 February 2023, <https://taskandpurpose.com/news/marine-corps-scout-snipers-elimination/>.

² In preparation for this article, I interviewed 10 Army snipers in a sniper section from a conventional active-duty Army unit. The snipers were interviewed under the condition that they remain anonymous. These interviews were conducted in July 2023 in person. Any references to interviewed snipers in this article refers to these interviews.

³ Army Techniques Publication (ATP) 3-21.20, *Infantry Battalion*, December 2019, F-41.

⁴ ATP 3-20.98, *Scout Platoon*, December 2019, 1-7.

⁵ Stew Magnuson, “U.S. Forces Prepare for a ‘Day Without Space,’” *National Defense Magazine*, 1 February 2014, <https://www.nationaldefensemagazine.org/articles/2014/2/1/2014february-us-forces-prepare-for-a-day-without-space>.

⁶ ATP 3-21.20, 2-262.

⁷ Jack Watling and Nick Reynolds, “Meatgrinder: Russian Tactics in the Second Year of its Invasion of Ukraine,” Royal United Services Institute, 19 May 2023, <https://rusi.org/explore-our-research/publications/special-resources/meatgrinder-russian-tactics-second-year-its-invasion-ukraine>.

⁸ SSG Michael Ommaha, “Reconnaissance and Security Tasks: How Commanders Control the Battlefield with Scouts and Snipers,” *Infantry* (Fall 2022), https://www.moore.army.mil/infantry/magazine/issues/2022/Fall/PDF/7_Ommaha.pdf.

⁹ CPT David M. Wright, SSG Andrew A. Dominguez, and SSG John A. Sisk II, “The Sniper’s Role in Large-Scale Combat Operations,” *Infantry* (Spring 2022), https://www.moore.army.mil/infantry/magazine/issues/2022/Spring/PDF/3_ProfessionalForum.pdf.

¹⁰ 316th Cavalry Brigade, “United States Army Sniper Course: Course Description,” 19 May 2023, <https://www.moore.army.mil/Armor/316thCav/Sniper/Description.html>.

¹¹ Tom Batchelor and Jane Dalton, “Russian Major General Andrei Sukhovetsky Killed by Ukrainians in ‘Major Demotivator’ for Invading Army,” *The Independent UK*, 7 March 2022, <https://www.independent.co.uk/news/world/europe/andrei-sukhovetsky-russian-general-killed-b2029363.html>.

¹² Wright, Dominguez, and Sisk, “The Sniper’s Role in Large-Scale Combat Operations.”

¹³ ATP 3-21.20, Appendix E.

¹⁴ *Ibid.*

¹⁵ Haley Britzky, “Snipers Need Commanders to Learn How to Use Them,” *Task & Purpose*, 10 May 2022, <https://taskandpurpose.com/news/snipers-commanders-training-combat/>.

¹⁶ SFC Kenneth W. Howell, “The Retention of Army Snipers,” *Infantry* (Fall 2022), https://www.moore.army.mil/infantry/magazine/issues/2022/Fall/PDF/5_Howell.pdf.

¹⁷ Army Sniper Association Staff, “Army Sniper History,” Columbus, GA: Army Sniper Association, <https://armysniperassociation.org/history/>.

¹⁸ David Scott Stieghan, “A Short History of Army Snipers and the U.S. Army Sniper Course,” *Infantry* (Fall 2022), https://www.moore.army.mil/infantry/Magazine/issues/2022/Fall/PDF/2_Stieghan.pdf.

¹⁹ American Shooting Journal Staff, “History of the Sniper,” *American Shooting Journal*, 2022, <https://americanshootingjournal.com/history-sniper/>.

²⁰ Army Sniper Association Staff, “Army Sniper History.”

²¹ *Ibid.*

²² Stieghan, “A Short History of Army Snipers.”

²³ *Ibid.*

²⁴ Vera Zimmerman, “The Role of Snipers in the Donbas Trench War,” *Eurasia Daily Monitor* (No. 17, Issue 26), 25 February 2020, <https://www.ecoi.net/de/dokument/2025262.html>.

²⁵ Neil Hauer, “Elite Ukrainian Snipers Describe Their War from the Shadows,” *Military Times*, 3 April 2023, <https://www.militarytimes.com/news/pentagon-congress/2023/04/03/elite-ukrainian-snipers-describe-their-war-from-the-shadows/>.

²⁶ SFC Derek J. Brookshire, interview with the author, 15 July 2023, West Point, NY. SFC Brookshire has experience as a sniper and was able to comment on the history of the Sniper Employment Leader Course.

²⁷ Schogol, “The Marine Corps is Getting Rid of Scout Snipers.”

Editor’s Note: As with all *Infantry* articles, the views expressed in this article are those of the author; they do not reflect the position of the U.S. Military Academy, the Department of the Army, or the Department of Defense.

In his third year at the U.S. Military Academy at West Point, NY, **Cadet Knox Watson** is a specialty staff sergeant major with the U.S. Corps of Cadets’ 2nd Regiment.



An Infantry Basic Officer Leader Course student conducts training at Garnsby Range on Fort Moore, GA, on 27 September 2023. (Photo by Denise Mosley)

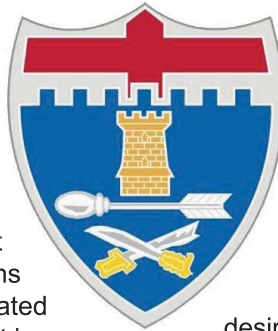
Modernizing How IBOLC Assesses Leaders

LTC TOM DULL

Recently, the Infantry Basic Officer Leader Course (IBOLC) at Fort Moore, GA, reviewed and restructured the way it assesses junior officers who attend the specialized Infantry course. The 2nd Battalion, 11th Infantry Regiment (IBOLC) has a specific mission to train and develop Infantry lieutenants to become mentally, physically, and morally fit leaders who are prepared to lead Infantry platoons and win. For decades, this course has been dedicated to developing Infantry officers to lead and act right in any environment.

However, after an internal and comprehensive review of this product, it was evident that performance measures of the student officer were the only actions being evaluated with great weight. In his book *Infinite Game*, Simon Sinek conveys that valuing performance alone can potentially drive one to lead in a counterproductive manner. In other words, something more is needed for the leader to lead than just performance marks. Additionally, followers must know the depth of their leader is founded not in presentation alone but in a profoundness of uprightness, which not only compels the led to follow but establishes sincere trust between the leader and the led.

To this end, IBOLC developed a holistic or “full-person” approach to evaluate and consider the measure of the junior officers under their charge for development. Predicated on the Army officer’s Oath of Office where officers state they will “well and faithfully discharge the duties of the office on which I am about to enter,” leaders reviewed Aristotelian ethics and developed an assessment based on character and virtue combined with performance and execution. By gauging the civil, intellectual, moral, and performance qualities of the officer, they believe IBOLC will produce



a better officer to lead and serve a platoon (and loved ones) in any environment.

Along with performance assessments such as land navigation, troop leading procedures, and the Army Combat Fitness Test, IBOLC added four points or virtues for consideration that strive to understand the character of the respective officer to their assessment method:

1. **Drive** (performance virtues): Do students desire achievement, growth, and to push/better themselves (as Infantry officers)?
2. **Integrity** (moral virtues): Do students’ actions align with Army values and leadership attributes (Army Doctrine Publication 6-22, *Army Leadership and the Profession*)?
3. **Humility** (intellectual virtues): Do students ask for help/assistance? Do they look to grow?



IBOLC students discuss team- and squad-level operations after conducting training in November 2023. (Photos courtesy of 2nd Battalion, 11th Infantry Regiment)

4. **Teammate** (civil virtues): Do students look out for the best interest of others? Do they display service over self-interest?

This method of assessment, through these four virtues, assists IBOLC cadre in gauging if student officers understand their commitment made by their Oath of Office. This method also conveys whether student officers are pursuing leadership and service in a worthy manner to ultimately stand in front of Infantry formations. This is not an end-all method but rather a framework to develop our student officers to lead and serve with honor. It focuses them on being leaders in any environment — both on and off duty.

IBOLC cadre use this framework in counseling and coaching. Peer evaluations match the framework but are greater embedded in the Army Leadership Requirement Model. Counseling from the cadre, coupled with the feedback from the peer evaluations, provides student officers with 360-degree critique or commentary of their character and performance. This feedback can be used by officers to spur leader development and self-assess their individual leader needs and strengths. These assessments are useful to student officers in the course as they practice and are graded on leadership patrols, writing assignments (including a leader philosophy), and presentations. But even greater, these assessments are provided so every Army infantry platoon has an officer who is reliable and trustworthy in any and every environment.



CPT Conrad Jenne conducts an after action review with students in Infantry Basic Officer Leader Course 09-23 following an iteration of a team live-fire exercise.

LTC Tom Dull, an Infantry officer, currently commands the 2nd Battalion, 11th Infantry Regiment (Infantry Basic Officer Leader Course) at Fort Moore, GA. He has served as a platoon leader, company executive officer, troop and company commander, aide-de-camp, and battalion and brigade executive officer. LTC Dull has deployed in support of Operations Enduring Freedom, Iraqi Freedom, Unified Response, Freedom Sentinel, and Atlantic Resolve.

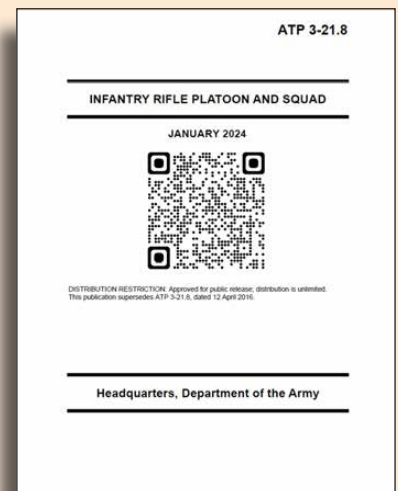
New ATP 3-21.8 Now Available!

Army Techniques Publication (ATP) 3-21.8 provides doctrine for infantry rifle platoons and squads within the infantry brigade combat team (IBCT) against a peer threat. It incorporates the significant changes in Army doctrinal terminology, concepts, constructs, and proven tactics developed during recent operations as well as incorporates changes based on newly published Army capstone doctrine and the multidomain operations operational concept found in Field Manual 3-0, *Operations*.

ATP 3-21.8 addresses the tactical application of techniques associated with the offense and defense for the infantry rifle platoon and squad. It describes relationships, organizational roles and functions, capabilities and limitations, and responsibilities within the infantry rifle platoon and squad. The new ATP discusses techniques, non-prescriptive ways, or methods used to perform missions, functions, or tasks and is intended to be used as a guide. It applies to the total Army, with the principal audience being the commanders, staff, officers, NCOs, and Soldiers within the infantry battalion.

ATP 3-21.8 is published as the first of three books to separate the doctrine for the rifle, mechanized, and Stryker infantry platoon and squad formations. Look out for ATP 3-21.71, *Mechanized Infantry Platoon and Squad*, coming in the 4th quarter of Fiscal Year (FY) 2024 and ATP 3-21.9, *Stryker Infantry Rifle Platoon and Squad*, coming in the 2nd quarter of FY 25.

https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN40007-ATP_3-21.8-000-WEB-1.pdf



WEAPONS MAINTENANCE:

How IBOLC Keeps Students Fit to Fight

CPT MICHAEL MARTINO

The slogan “Maintenance is Training” is still stenciled proudly on the wall of an old 1st Battalion, 9th Infantry “Manchu” maintenance bay in the remnants of Fort Ord, CA. The Manchus there inactivated in 1993 and Fort Ord closed in 1995, yet the mantra of maintenance prevailed. Maintenance is inherent in our Army culture, and it is ingrained in our being as Soldiers. However, how well does maintenance culture translate from the high mobility multipurpose wheeled vehicle (HMMWV) in the unit motor pool to our most precious combat implement, the Soldier?

The 2nd Battalion, 11th Infantry Regiment, which facilitates the Infantry Basic Officer Leader Course (IBOLC) at Fort Moore, GA, has taken a deliberate approach towards Soldier care. Grounded in Field Manual (FM) 7-22, *Holistic Health and Wellness*, the unit focuses on three major components: physical fitness, mental and emotional performance, and experiential learning. Oriented on a target population within the battalion’s headquarters and headquarters company (HHC), the employment of enablers like a Tactical Athlete Performance Center (TAP-C) and Ready and Resilient (R2) Human Performance cadre work to rehabilitate, optimize performance, and prepare Soldiers for follow-on assignments.

The HHC serves a large population of 400-800 students grouped into six platoons. Course graduates from training companies are assigned there to pursue additional training like the Ranger Course and eventually conduct a permanent change of station (PCS) to their gaining unit. The company also serves students who are injured, pending administrative action, or those who recycled IBOLC for academic or medical reasons. Regardless, every student passes through a critical gate prior to assignment to HHC. Much like the battalion’s maintenance meeting run by the executive officer (XO), the battalion commander chairs reviews of student performance for all injuries, administrative matters, and medical issues. Each student in these categories is personally reviewed, and through this process, the unit diagnoses faults,



The remains of the 1st Battalion, 9th Infantry Regiment footprint at Fort Ord, CA. (Photos courtesy of author)

identifies resources, and then determines an effective rehabilitation plan.

Physical Performance

In the realm of physical fitness, the battalion leans mightily on the 199th Infantry Brigade’s TAP-C. The training center, which is adjacent to the battalion footprint, is stocked with equipment and expertise. It also sports one of the installation’s four swimming pools. The true value of the center lies in the physical therapists, athletic trainers, and specialists who support the service members. These professionals provide instruction and education while facilitating performance enhancement and rehabilitation on a level far beyond that of a generic Army physical training (PT) session. The staff can also document injuries and work with the on-post medical clinic regarding profiles and therapy plans.

Platoons meet with a TAP-C trainer quarterly to validate their PT plans. The training sessions are geared to accommodate each platoon’s population. Those preparing to attend the Ranger Course receive specialized plans with emphasis on push-up improvement and cardiovascular endurance. The PCS platoon utilizes a plan built around maintenance and recovery for students who have experi-



Infantry Basic Officer Leader Course students conduct physical training by injury category under the supervision of physical therapists and trainers.

enced 11 months or more of maneuver training. The unit's recycle platoon exploits a menu of PT plans tailored to each student's needs. Five-mile-run and foot-march improvement programs are among the most popular for those in the recycle population.

Special attention is paid to students who have sustained injuries. Whether pending a medical evaluation board (MEB), on profile, or nursing an ache or pain, students cycle through the battalion's Maneuver Tactical Athlete Care (MTAC) therapist as the first role of care. With an office and small gym on the unit footprint, the specialist assesses students prior to their visit to the troop medical clinic to see a provider. The MTAC provides in-house physical therapy that often solves students' physical issues before they seek and are granted a profile.

If students are placed on profile, they are assigned to the medical platoon and begin a recovery regimen administered by the TAP-C. PT hours are adjusted to later in the day from 0800-1000. This encourages proper sleep habits and aids in recovery. Students are then grouped by injury category, counseled, and educated on an individualized plan which is then supervised by athletic trainers. The HHC commander reviews student progress and profiles with the athletic staff monthly, identifying injury trends and forecasting students' return to duty.

The unit's approach towards physical fitness is total. The battalion's task organization, PT schedule, and empowerment of subordinate leaders all facilitate the mission to "provide a practical and scientific approach to physical dominance for the modern Army Soldier."¹

Mental and Emotional Health

Failures to meet IBOLC course requirements by students do occur. Depending on the type of failure, the battalion commander may determine that a student can recycle and re-attempt the course requirement. If recycled, students are placed in a platoon specifically designed to rehabilitate them.

The recycle platoon utilizes the last step of the eight-step training model and retrains students on a myriad of tasks. A unique aspect is the engagement of the R2 program to build confidence and cognition. Cognitive performance experts facilitate recurring introductory sessions and follow-on mastery courses, focusing on the maintenance of human performance and the mind.

Every month, new recycles receive a briefing and instruction on how to frame and

overcome failure. They are taught at the small group level about acceptance, coached to understand that shortfalls are inevitable, and encouraged to trust in their rehabilitative plans. This is all done after drafting an individual view of success and identifying the systems available to help the student succeed. This results in all students having the ability to schedule mastery sessions, which are one to three days in length. These sessions specifically address the event they failed, how they view and effectively deal with that failure, and how they will work to succeed on the next attempt.

Additionally, IBOLC is piloting a Leader Development Course designed to teach Soldiers leader identity that can be used to enhance self-awareness and specific virtues that define how they lead. Soldiers will develop a leadership philosophy that indicates how they can use these virtues with the Soldiers they lead, as well as how they can leverage their values in their leadership style.

Experiential

With the intent of continuous development, HHC executes a leader development program that takes advantage of opportunities unique to Fort Moore. Personalized training plans at Army courses, training opportunities with One Station Unit Training (OSUT) units and the 75th Ranger Regiment, and relevant developmental briefs from senior leaders at the Maneuver Center of Excellence are a few examples of activities students may experience before they PCS to their gaining unit.

The 75th Ranger Regiment offers students the opportunity to participate in specialized training as opposing force (OPFOR) personnel and augmentees. Every quarter, about 30 students plan and affect urban defenses to counter a Ranger raid during house-to-house fighting. Other opportunities involve role playing as high-value targets or civilians on the battlefield. All scenarios serve as an opportunity to train



Second lieutenants participate in a platoon leader panel.

with some of the best Soldiers our Army has to offer and exposes them to the capabilities of special operations forces.

Soldiers are also able to volunteer to lead a platoon during OSUT's final field training exercise. IBOLC graduates are coupled with an executing company where, as an acting platoon leader, they plan an operation, brief an operation order, and lead a platoon of Infantry trainees through an attack. The experience provides student officers with an opportunity to apply what they've learned and build rapport with future Infantry Soldiers they may one day lead.

Any leftover time is occupied with the lessons learned and experiences of leaders on the installation. Officers in a variety of roles are invited to share their experiences with the newer officers. Often, students in the Maneuver Captain's Career Course speak about their experiences as platoon leaders and staff officers to provide context on future assignments.

Maintenance is continual. The same processes put forth to observe student performance, provide specialized services, and encourage self-care work to extend the service life of our end item — the Soldier. The need for institutional knowledge

The same processes put forth to observe student performance, provide specialized services, and encourage self-care work to extend the service life of our end item — the Soldier.

is addressed constantly through the courses and training offered in the unit's approach to experiential learning. Physical fitness is affected through the science of athletic performance professionals applying their skills and the willingness of the organization to implement the techniques prescribed by the experts. This same willingness and use of experts coincide with an honest admission about the impact of mental and emotional readiness on human performance. Together, these

three domains targeted by 2-11 IN ensure the maintainability, reliability, and availability of future Infantry officers.

Notes

¹ Fort Moore Tactical Athlete Performance Center (TAP-C).

CPT Mike Martino currently serves as the commander of Headquarters and Headquarters Company, 2nd Battalion, 11th Infantry Regiment (Infantry Basic Officer Leader Course) at Fort Moore, GA. His previous assignments include serving as a mechanized rifle and mortar platoon leader in 2nd Battalion, 7th Infantry Regiment, 1st Armored Brigade Combat Team, 3rd Infantry Division; an operations officer for the Airborne and Ranger Training Brigade; a platoon tactical trainer for 4th Ranger Training Battalion; a logistics officer for Task Force 1st Battalion, 28th Infantry Regiment, 3rd ID; and a rifle company commander of B Company, 1-28 IN. He earned a Bachelor of Science in military history from the U.S. Military Academy at West Point, NY, in 2014.

INFANTRY NEEDS YOUR ARTICLES

Infantry is always in need of articles for publication. Topics for articles can include information on organization, weapons, equipment, training tips, and lessons learned from training exercises and deployments. We can also use relevant historical articles with an emphasis on the lessons we can learn from the past.

Our fully developed feature articles are usually between 2,000 and 3,500 words, but these are not rigid guidelines. We prefer clear, correct, concise, and consistent wording expressed in the active voice. Please spell out all acronyms on first reference.

Suggested graphics — sketches, photographs, maps, or line drawings — are always appreciated. When you submit your article, please include the original electronic files of all graphics. Also include the origin of all artwork and, if necessary, written permission for any copyrighted items to be reprinted. Authors are responsible for ensuring their articles receive an operations security and public affairs review through their

respective organizations before being submitted. We have a form we can provide that can aid in the process. We also run short author biographies along with each article; we typically include current duty assignment, any previous assignments you'd like to include as well as military and civilian education.

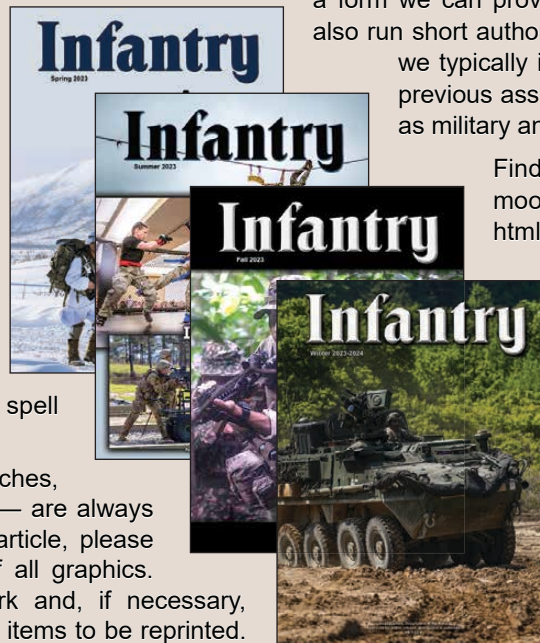
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Leaving a Legacy at IBOLC: The Key Terrain of the Infantry

MAJ BARKEF OSIGIAN

“What you leave behind is not what is engraved in stone monuments, but what is woven into the lives of others.”

— Pericles

People are motivated by purpose. Many of you joined the military, in part, because you wanted to be part of something greater than yourselves. Consciously or subconsciously, you routinely ask yourself tough questions, such as “What is my contribution? Am I making a difference? What is my legacy?” If you seek an answer to these questions, look no farther than joining the Infantry Basic Officer Leader Course (IBOLC) cadre team. Here, more so than anywhere else, you will leave a legacy.

Welcome to IBOLC — you are about to take over as a platoon trainer. You will be responsible for training 40 Infantry lieutenants per class, for two to three classes a year. You’ll work long hours in austere conditions. Most of the 19-week course is spent in the field, and when your students are out there shivering and sweating, you’ll be there too. You have a mountain of instruction to give them in a relatively short amount of time. But these inconveniences are nothing compared to the incredible sense of stewardship you will feel over the students you influence. This will be a highly rewarding experience, and it may be, in the grand scheme of things, the biggest and most lasting contribution you make to our force during your time in the military.

Infantry lieutenants come to IBOLC from every commissioning source. Whether they attended the U.S. Military Academy (USMA), Officer Candidate School (OCS), or Reserve Officers’ Training Corps (ROTC), every single Infantry officer passes through the Leader Battalion, and then from Fort Moore to every unit in the Army. Not only does every infantry platoon leader pass through this pipeline, but so

does every future infantry company commander, field grade staff officer, battalion commander, and brigade commander. In this unit, you could be mentoring the future Chairman of the Joint Chiefs of Staff. IBOLC is key terrain for the Infantry Branch. It is the primary access valve where good doctrine, tactics, and leadership principles are infused into our Infantry leaders. Even a small adjustment to our course will echo for decades, having second and third order effects across the Army for generations. The 40 men and women who you train and prepare each class will move into the force and lead 40 Infantrymen in their platoon. That means every cycle a platoon trainer is impacting up to 1,600 Soldiers. If those same students go on to lead companies, battalions, and brigades during their careers, that reach is expanded exponentially. There is no other job in the Army where a single officer can have such an expansive impact on the future. A good platoon trainer will provide the Infantry with a host of good Infantry leaders, while bad platoon trainers can create a generation of disillusioned, disgruntled junior leaders. The seeds we plant here set the tone for the future of the Infantry.

To prepare officers is to prepare leaders. The influence and responsibility you have over the next generation of Infantry officers is difficult to exaggerate. Your platoon will learn almost everything they know about the Infantry from you. This means you will have a lasting impact on the values, priorities, and leadership style of every student under your tutelage. You’ll be their first impression of an Infantry officer, and the example that you set will be a lasting one. Most of your students will become reflections of you and mirror your example. They will imitate your communication style, the way you stand, the way you wear your kit, the way you joke with your NCOs, and the way you act when frustrated or proud. After IBOLC, they will go into the larger force and be given positions of immense responsibility of their own, carrying on the example you provided them at the start point of their career. In the Infantry, we expect our officers to be highly competent tacticians. We expect them to be confident, decisive, and comfortable with public speaking. We expect them to look the part, have their Ranger Tab, be fit, and lead with character. To raise the next generation of Infantry officers, we



Students in Infantry Basic Officer Leader Course Class 09-23 conduct a platoon live-fire exercise. (Photos courtesy of 2nd Battalion, 11th Infantry Regiment)



Students assault an objective during Leader Forge, their culminating exercise in IBOLC. Infantry lieutenants come to IBOLC eager to learn, and it is remarkable how much they improve during their 19 weeks in the course.

must provide exemplars who embody this ideal. Our students learn more from the examples of their instructors than they do from the instruction they receive in our course. There is no substitute for the modeling provided by our platoon trainers.

Here, you will realize quickly that these students learn fast. It is amazing to see how rapidly they grow in a short period of time. Their physical fitness, competence in small unit tactics, and skill in the troop leading procedures will improve at an unbelievable rate. Many of our students come to IBOLC with an exceptional foundation of values and habits that they learned from their ROTC instructors or OCS cadre. However, it does not take long for IBOLC instructors to notice the differences in student competence based on where they came from. IBOLC is the great equalizer. It is the single point of greatest influence for Infantry leaders on their way to the force. It is often the most formative period in their career, a time when they are still eager and impressionable, not jaded or set in their ways as they may be when they get to the Maneuver Captain's Career Course. The Army is still romantic to them, and they are eager to lead and win. Most of the things they learn here they are learning for the first time, and many of the things we teach them are being taught to them for the last time. IBOLC is the only training experience that every single Infantry officer shares, which means we have to get it right. The weight of this responsibility is heavy, but if you are anything like me, you'll find it incredibly motivating.

Most of us Infantry officers joined the Infantry to fight. We wanted to be the boots on the ground, the tip of the spear. We grew up dreaming about crawling under barbed wire, shooting machine guns, jumping out of planes, and kicking in doors. We were inspired by video games like *Call of Duty* and movies like *Saving Private Ryan*, *We Were Soldiers*, and *Black Hawk Down*. We picked this branch because the

Infantry is hard and cool. We understand that our nation's next fight will come when we least expect it, and it will likely be larger and bloodier than anything our military has seen in years. The students we teach will fight our next war, and we will lead them. This assumption inspires and motivates IBOLC cadre. It makes us jump out of bed in the morning. The knowledge that we are responsible for our student's performance in combat adds a sense of urgency to everything we do here. As a platoon trainer, your students' success on the battlefield is up to you — their survival is up to you. It will be determined by the foundation you give them now, at this early and fragile stage in their development. If you train them well, they will be successful on America's next battlefield, they will defeat our enemies, and they will bring their Soldiers home. The better you train them now, the fewer of them will die, and the fewer of the men and women they lead will die. Everything we do here matters, from the physical training (PT) we conduct, to the classes we teach, to the patrols we observe, to the papers we grade, to the example we set. The impact you will have here is incalculable, and the stakes are high.

Let's get started!

MAJ Barkef K. Osigian IV currently serves as the operations officer for the Infantry Basic Officer Leader Course (IBOLC) at Fort Moore, GA. His previous assignments include serving as the commander of both Baker Company, 2nd Battalion, 11th Infantry Regiment (IBOLC), and Blackfoot Company, 1st Battalion, 501st Infantry Regiment (Airborne), 4th Brigade Combat Team, 25th Infantry Division at Joint Base Elmendorf-Richardson, AK. He deployed to Northern Syria as part of Operation Inherent Resolve, where he served as the squadron liaison officer to Task Force 9.5. He also served as a long-range surveillance detachment leader in D Company, 52nd Infantry Regiment at Fort Cavazos, TX; and as a rifle platoon leader and company executive officer in Sabre Squadron, 3rd Cavalry Regiment at Fort Cavazos. CPT Osigian earned a bachelor's degree in Spanish from the U.S. Military Academy at West Point, NY.

The Dilemma of a ‘Tactical’ Surrender

COL DAVID J. KRYNICKI
MAJ CHRISTOPHER GAMBLE
MAJ JOSEPH LAMBERT
MAJ MATTHEW J. SMITH

As the training focus shifts from counterinsurgency (COIN) to large-scale combat operations (LSCO) in the near-peer strategic environment, a different set of dilemmas with legal implications will present themselves to maneuver leaders. The majority of maneuver leaders are not strangers to conducting detention operations in a COIN environment, and some have recently experienced detention operations associated with a LSCO environment at one of the Combat Training Centers (CTCs). However, the concept of a “tactical” mass surrender by enemy forces in the vicinity of the forward line of own troops (FLOT) is a dilemma that maneuver leaders should be aware of as they prepare their formations for a LSCO fight.

The concept of the enemy purposefully utilizing their forces to inhibit the maneuver of an adversary’s formation is always a planning consideration.

However, the idea of the enemy accomplishing this via the execution of a “tactical” mass surrender is an unconventional but distinct possibility. Whether the adversary’s decision to execute this course of action (COA) is due to their enemy organization being undertrained and out of supplies, or simply because they believe this COA is their best option to delay friendly forces, options and implications associated with this COA should be understood throughout respective formations. A brigade combat team (BCT) experiencing a “tactical surrender” of an enemy battalion tactical group (BTG) with all their associated personnel, weapons, vehicles, and equipment at their FLOT could extensively impact an operation. This impact could be exponentially compounded if the affected BCT is en route to a time-sensitive objective that is a critical element of the higher headquarters’ mission.

The dilemma: A relatively isolated maneuver unit encounters a number of personnel that are willing and able to surrender, which amounts to 25-35 percent of the friendly maneuver force on the ground, and that will be on the ground for a period of time between 4-36 hours. (Example: 400 personnel surrender to a 1,455 Soldier ground force.)

In a LSCO environment, the options for maneuver leaders



An Infantry Soldier in 1st Battalion, 26th Infantry Regiment, 101st Airborne Division (Air Assault), strips a surrendering enemy combatant of weapons during Exercise Southern Vanguard 24 in Oiapoque, Brazil, on 15 November 2023. (Photo by SPC Joseph Liggio)

posed with this dilemma are extensive thanks to *reasonableness* and the *risk* that must be assumed due to *military necessity*. The initial tactical decision that the maneuver leader must make is whether or not they detain the surrendering personnel. If the decision to detain is made, ensuring that applicable international law is followed is the next challenge.¹ What the “detention” of the surrendering personnel will look like over time will be heavily mission and situation dependent, especially for a relatively isolated unit. Maneuver leaders need to understand their options concerning the detention of personnel in a LSCO environment should a similar situation present itself, and how these options can be tailored with respect to what is required by the applicable law when *military necessity* is factored in. We encourage maneuver leaders to consult their legal teams and explore this dilemma (at scale) at training events, as this is a dilemma that should be experienced and understood as we prepare to fight and win in a LSCO environment.

What this Impact Could Look Like: Joint Forcible Entry (JFE) Mission

Examining this unique dilemma in an example may offer more context. Through the lens of the 82nd Airborne Division

(hereinafter "82nd"), we will explore this dilemma with respect to a JFE operation. The JFE is a significant capability of the 82nd, and due to the nature of these operations, a mass surrender incident occurring during the execution of the JFE could be detrimental to the success of the operation. The JFE doctrinally has five phases:

- Preparation and Deployment (Phase I),
- Assault (Phase II),
- Stabilization of the Lodgment (Phase III),
- Introduction of Follow-On Forces (Phase IV - situational dependent), and
- Termination or Transition Operations (Phase V).²

This article will focus on Phase III of the JFE for analysis. Further, the mission of the hypothetical JFE we will analyze includes time-sensitive follow-on objectives intended to expand the lodgment achieved during the assault phase.

For the hypothetical JFE, the personnel encountered that are willing and able to surrender is a BTG-minus comprised of 400 combatants and associated individual equipment and weapons systems (no vehicles). The mass surrender occurs during Phase II (assault phase) of the JFE, while only the **alpha echelon** has reached the objective. The alpha echelon is comprised of approximately a brigade-sized element that arrives on the objective via air drop capabilities.

JFE Phase II (Assault): Inserting enemy actions into any plan complicates the execution of an operation. However, this is exacerbated when enemy forces use unexpected non-doctrinal means to cause dilemmas for friendly forces. During the assault phase of the JFE, a brigade minus will be the first wave to reach the objective, doctrinally known as the **alpha echelon**. Alpha echelon's paratroopers and their associated equipment arrive at the objective and begin to establish security on the objective, assemble, and accomplish follow-on tasks to ensure the feasibility for the airland arrival of bravo and charlie echelons of the JFE. Within the first 90 minutes, in the vicinity of the objective, the alpha echelon makes contact with approximately 400 combatants waiving white flags, weapons slung (not in hand), verbally confirming their intent to surrender (for this scenario the 400 combatants' surrender is "genuine" and "clear and unconditional").³ Currently, with roughly 1,200 paratroopers on the ground and the tasks to expand the lodgment and secure/improve the objective for the arrival of the bravo echelon (second wave) in approximately four hours, the commander comes to the staff asking for his/her options for dealing with the dilemma they are now facing. As the staff and subordinate commanders begin offering solutions, the brigade commander asks the judge advocate: What are my left and right limits legally? What is the capability of this finite number of troops to manage detainees and the continued needs of the mission?

Maneuver leaders need to understand their options concerning the detention of personnel in a LSCO environment... and how these options can be tailored with respect to what is required by the applicable law when military necessity is factored in.

JAG: As the judge advocate on the ground, what do you advise? In reference to international humanitarian law, is it feasible to accept surrender? If surrender is accepted, what requirements does that trigger?

CDR: As the commander, what are you comfortable with doing? Where will you assume risk?

Detention Operations and Some Expected Challenges During a JFE

Detention Operations:

The implied standard is for U.S. service members to treat all detainees humanely at all times, and a detainee is any person captured by or transferred to Department of Defense personnel pursuant to the Law of War. Detainees' status can vary from combatants (lawful and unlawful) to noncombatants and civilians.⁴ Depending upon their status, detainees are afforded different protections. Of note, the presumption, until proven otherwise, is that all persons taken into custody by U.S. forces will be provided with the protections of prisoners of war (POWs) under the Geneva Convention. In summary, when detainees are under the control of the United States, the detainees and their property must be protected, and they must be provided adequate food, water, shelter, medical care, hygiene facilities, sufficient clothing, and the ability to exercise their religion.⁵

Detention operations requirements are cumbersome, and the scale of the detention operation can accentuate the associated challenges. In an austere environment with limited assets, what options are available to commanders regarding detention operations, especially when these operations impact the potential success or failure of the mission? There are options, and these will be heavily fact/situation dependent. However, the first time this dilemma is contemplated should not be during a kinetic operation amid a conflict, but rather during a training exercise or professional development discussion.

JAG: As the judge advocate, what are the legal requirements, and where can the requirements expressed in law or regulations be reasonably flexible with regard to military necessity?

CDR: As the commander, what is required for the mission, and what risk is willing to be assumed?

Isolated Unit with Limited Assets and Supplies:

Providing detainees with adequate food, water, and shelter.

Detainees are to be treated humanely at all times; inherent to this is an adequate supply of food and water. During the initial phases of the JFE operation, supplies are extremely limited. Paratroopers plan to insert loaded with limited

supplies on their person and no “shelter” capability. The ability to provide these limited supplies to personnel outside the formation is a risk to the welfare of the paratrooper and the mission. This supply issue pertaining to detainee operations is an area where specific facts/circumstances can lay the grounds for *military necessity* as to the *temporary* abandonment of the requirements for providing detainees with food and water. The time period will be limited, and the decision on what can/will be provided should be reevaluated continuously as the operational environment evolves. In the hypothetical JFE, it would be reasonable for the commander of the alpha echelon element to not provide the 400 detainees with food, water, and shelter during the infancy of the operation; however, this decision should be reevaluated as the operation matures and airland elements arrive. The analysis may be a math problem that will change upon the arrival of bravo and charlie echelons in Phase III (stabilization of the lodgment). At this point in the JFE operation, there would be multiple battalion-sized elements on or within the vicinity of the JFE objective to assist with the 400 combatants willing to surrender.

Detainees and their property must be protected.

The JFE operation is likely in the vicinity of an airfield or open area that could support the airborne insertion of the assault force and subsequent airland operations. Until the lodgment is stabilized and improved, there will likely be limited cover and concealment available for detainees. Commanders should protect their detainees reasonably during this phase of the operation. They need not provide the limited battle positions offering cover to these detainees nor construct assets providing cover during the infancy of the operation. However,

this decision on protection and what constitutes protection for the detainees should be reevaluated periodically. In the hypothetical JFE, it is reasonable for the commander to not provide the detainees with covered positions during Phase II and Phase III of the operation as the lodgment is stabilized. However, a prudent legal advisor would recommend that this decision is reevaluated periodically and that the opportunity and tools are reasonably provided to the detainees to construct their own covered positions (foxholes) to provide themselves protection.

What “type” of detainee?

Once a surrender occurs that is genuine, clear and unconditional, and feasible to accept, the ground force commander will have a number of detainees to care for. The first step in understanding the legal requirements tied to caring for these detainees is understanding what type of detainee you have within your control. Generally, the categories of persons detained will be combatants (lawful and unprivileged belligerents), non-combatants, and civilian internees. Each respective classification has nuances for the required rights and privileges associated with their status; when there is any doubt as to the status of the detainee, provide the status with more privileges in the interim (typically POW status), and when feasible, use the tools available such as a Geneva Convention III Article V tribunal to determine the detainee[s] status. However, understand that no matter the classification of detainee or conflict, humane treatment is the minimum standard of care. *Military necessity* can dictate the level of care provided; as practicable consult with your servicing judge advocate when dealing with detainee operations.

Soldiers with the 2nd Brigade Combat Team, 2nd Infantry Division watch over a detained enemy combatant during training as part of Decisive Action Rotation 17-09 at the National Training Center on Fort Irwin, CA. (Photo by SPC J.D. Sacharok)



Takeaway

This limited analysis of a hypothetical JFE operation was to provide an example and drive the discussion as to what the dilemma of a “tactical mass surrender” may mean to your respective organization. Whether during the execution of a JFE, a defense in depth, or a convoy operation, the dilemma of a “tactical mass surrender” can delay and disrupt friendly forces and the mission. An operation encountering a surrender is an operation with a unique legal role, and ensuring our commanders understand their options when dealing with this potential situation is paramount as we shift into the LSCO environment. Commanders have options — insert this dilemma or similar dilemmas into your organization’s training plan!

Notes

¹ Applicable dependent upon the classification of the conflict, International Armed Conflict (IAC) or Non-International Armed Conflict (NIAC), the proper provision[s] of the Geneva Convention (GC) and Department of Defense Directive (DoDD) 2310.01E, Joint Publication (JP) 3-63, and Field Manual 3-63 are followed; GC III, Article 12, 118 apply to prisoners of war (POW) in an IAC, and GC Common Article III and Additional Protocol II* in a NIAC.

² JP 3-18, *Joint Forcible Entry Operations*, 9 July 2021.

³ DoD Law of War Manual 5.9.3.3.

⁴ Detainee classification will also be dependent upon the classification of the conflict, IAC or NIAC.

⁵ Requirements are nested in Common Article 3 of the Geneva Conventions and further directed in DoDD 2310.01E and Army Regulation 190-8, *Enemy Prisoners of War, Retained Personnel, Civilian Internees and Other Detainees*, October 1997.

COL David J. Krynicki is the Staff Judge Advocate for the 82nd Airborne Division at Fort Liberty, NC. He is a graduate of the Judge Advocate Officers Graduate Course and Command and General Staff College (CGSC). COL

Krynicki earned Bachelor of Science from West Virginia University College of Business and Economics and a Juris Doctor from West Virginia University College of Law.

MAJ Christopher Gamble is the executive officer (XO) for 2nd Battalion, 508th Parachute Infantry Regiment, 2nd Brigade, 82nd Airborne Division. His previous assignments include serving as the operations officer for Regimental Headquarters, 75th Ranger Regiment, Fort Moore, GA; commander of C Company, 1st Battalion, 77th Armor Regiment, 3rd Brigade Combat Team, 1st Armored Division Fort Bliss, TX; XO of the Sabalauski Air Assault School, Fort Campbell, KY, and a platoon leader with F Company, 4th Battalion, 101st Aviation Regiment, 159th Combat Aviation Brigade, 101st Airborne Division, Fort Campbell. MAJ Gamble is a graduate of the Infantry Basic Officer Leader Course, Maneuver Captain’s Career Course (MCCC), Command and General Staff Officers’ Course, as well as Ranger, Airborne, Jumpmaster, Air Assault and Pathfinder courses. He earned a Bachelor of Science in biology from The Citadel and a Masters in Operational Studies from CGSC.

MAJ Joseph Lambert currently serves as the operations officer for 2nd Battalion, 325th Airborne Infantry Regiment, 2nd Brigade, 82nd Airborne Division. He is a graduate of the Ranger Course, Jumpmaster Course, and CGSC.

MAJ Matthew J. Smith is the former chief of National Security Law for the 82nd Airborne Division and is currently a student at the Judge Advocate Legal Center and School. His previous assignments include serving as a military justice advisor for the 82nd Combat Aviation Brigade, 82nd Airborne Division; aide-de-camp to the U.S. Army Armor School Commandant, Fort Moore, GA; a platoon leader in a tank platoon and mortar platoon in the 3rd Infantry Division. MAJ Smith is a graduate of the 72nd National Security and Law of Armed Conflict Course, 11th Emergent Topics in International & Operational Law Course, Judge Advocate Officer Basic Course, MCCC, Armor Basic Officer Leader Course, as well as Ranger, Airborne, and Pathfinder courses. MAJ Smith earned a Bachelor of Science in political science from The Citadel, a Master of Public Administration from Columbus State University, a Juris Doctor from Boston College Law School, and a graduate certificate in Cyber Security Policy and Governance from Boston College.

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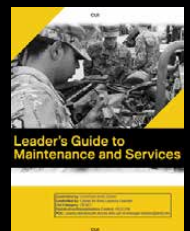
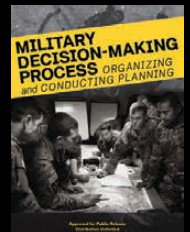
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Words Matter: Demystifying ‘Maneuver’

LTC MICHAEL A. HAMILTON

Author’s Note: *U.S. Army doctrine is truly outstanding. It is not my intent to denigrate it. On the contrary, the intent of this article is to provoke the critical thinking and professional dialogue necessary to keep our doctrine strong and relevant. As the character of war changes, there will always be tensions between existing doctrinal concepts and innovation, along with the associated impetuses to create, expand, redefine, or jettison ideas. This article is about deliberately critiquing and influencing those impetuses to ensure the best outcome for our Army in the future.*

Maneuver is one of the most common doctrinal terms in the Army, but what does it really mean? For a concept that is so central to the Army’s mission, it deserves close examination. Doctrinal use of the term *maneuver* is expanding.

The changing character of war has inspired new warfighting concepts for how the Army conducts maneuver with new technologies as part of a joint force. Contemporary military leaders and planners describe warfighting in emerging domains and dimensions such as space, cyberspace, the electromagnetic spectrum (EMS), and the information environment using terms such as “cross-domain maneuver” and “expanded maneuver.” For those familiar with *maneuver* in its traditional application — land warfare — this begs the question: How can we accurately describe warfighting in virtual domains in the same manner we describe it on the ground, especially at the strategic level and across the entire spectrum of conflict? While it is not misguided to draw these conceptual parallels for descriptive purposes, it’s worth considering the risk of misunderstanding such important concepts.

Why This Matters: The Risk of Misunderstanding Maneuver

“Clear-cut nomenclature is essential to clear thought.”

— B.H. Liddell Hart¹

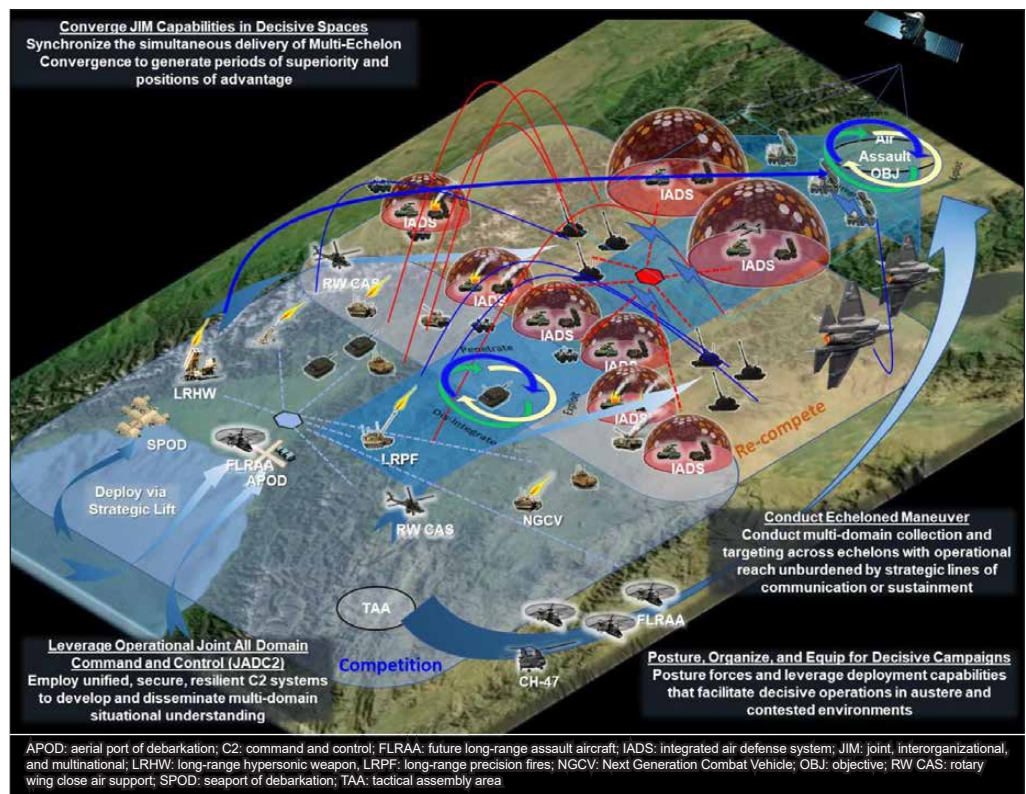


Figure 1 — Illustration of Maneuver in Multidomain Operations (AFC Pamphlet 71-20-1)

This is not merely an academic topic. How we think about *maneuver* as a specific activity that achieves a specific purpose translates directly to how we think about problem solving in war. Maneuver is an important solution to a specific problem: *How does a force gain the advantage with the minimum possible risk from an initial point of parity or disadvantage?* At present, the assumed answer to this question within our Army is overwhelmingly *maneuver*. But without a clear vision of what *maneuver* is, this answer is found to be ambiguous as a kind of synonym for everything considered to be “good tactics,” which is unhelpful from a descriptive standpoint. And the ambiguity is growing with the scope of its use.

This lack of precision in the meaning of *maneuver* carries two risks:

- The risk of institutionalizing ineffective maneuver due to ignorance of its core aspects, and
- The risk of systemically overlooking other tools of tactics, operational art, and strategy in the cognitive fog of *maneuver*.

Understanding the true nature of maneuver both enables its effective execution through understanding its essential elements and distinguishes it from other important warfighting concepts to enable their skillful application in competition and conflict.

An Argument for Maneuver: Position, Advantage, and Evasion

For the term *maneuver* to hold any significance beyond platitudinous “military movement,” it must convey unique attributes. So, what are the unique attributes of *maneuver*? The following is a rational, if not-so-original (reference Clausewitz, B.H. Liddell Hart, John Boyd, and Edward Luttwak) or thoroughly historical argument for those attributes. Through describing these attributes in detail and juxtaposing them with alternative methods, the intent is to illuminate the essence of maneuver and influence doctrine to take a stronger, less ambiguous, and more consistent position on what constitutes *maneuver*.

1. Maneuver seeks positional advantage. Maneuver leverages favorable position to gain advantage. Thus, it depends on position as the primary means of winning advantage above all other instruments. The advantages won by maneuver are local in nature, not global or absolute. In fact, a principal benefit of maneuver is the ability to overcome absolute disadvantages in strength or capability by the agile and creative employment of force against localized parts of an adversary’s whole. The instrument of effective maneuver is not a complete overmatch in strength or capability, but the ability to ***create a local overmatch by altering the disposition of forces or capabilities in relation to the enemy.*** Alternatively, the employment of forces, capabilities, or combat power without regard to achieving a favorable position should not be considered *maneuver*.

Maneuver often employs an indirect approach to the enemy’s main orientation or bearing. The reason for this is common sense: Assuming adversaries cannot be strong everywhere, they tend to focus their strengths or capabilities in critical areas or directions. Thus, the goal of maneuver is to seek an alternative to assenting to the enemy’s expectations. As B.H. Liddell Hart argued in favor of such an approach, “in face of the overwhelming evidence of history, no general

Understanding the true nature of maneuver both enables its effective execution through understanding its essential elements and distinguishes it from other important warfighting concepts to enable their skillful application in competition and conflict.

is justified in launching his troops to a direct attack upon an enemy firmly in position;” and “with the exception of Alexander [III of Macedon], the consistently successful great commanders of history, when faced by an enemy in a position strong naturally or materially, have hardly ever attacked it directly.”² Although Hart’s analysis has been criticized as biased in its perspective and skewed in its conclusions, the point it makes is the immense potential of indirect approaches to increase the probability of success in war. The idea of creating local advantage through an indirect approach is critical to understanding the true nature of maneuver. Conversely, the application of overwhelming force from a straightforward or direct approach should normally not be considered *maneuver*. Effective maneuver generally employs an indirect approach to problem solving.

Vignette: Turning Movement

Field Manual (FM) 3-90, *Tactics*: “A **turning movement** is a form of maneuver in which the attacking force seeks to avoid the enemy’s principal defensive positions by attacking to the rear of their current positions forcing them to move or divert forces to meet the threat.”³ By threatening the Austrians’ lines of communications and supply to their rear, Napoleon’s outnumbered Army of Italy forced the numerically superior Austrians to divert forces away from their attack on Verona.⁴ (See Figure 2.)

2. Maneuver exploits enemy weakness. Effective maneuver leverages the relative advantage against an enemy weakness. If not, its utility as a means of increasing the probability of success is greatly diminished. There are certainly other reasons to maneuver (such as achieving surprise or

Figure 2 — Napoleon’s Turning Movement against the Austrians at the Battle of Arcolé on 14-15 November 1796
 (Screenshots from “Napoleon in Italy: Battle of Arcole,” Epic History TV, <https://youtu.be/hmyq99G5bfg?si=EWQfURf9CgRGIMt>)



seizing the initiative), but the best maneuver **maximizes relative advantage by massing strength against weakness**. As the classic treatise on tactics *Infantry in Battle* describes: “To determine the location for his principal effort, the leader seeks to discover the enemy’s weakness. The flanks and rear of an enemy being weak points, he will strike at these when they can be reached. Often the ground itself will be the deciding factor. By a careful study the leader will be able to determine those parts of the terrain where the enemy cannot employ his weapons to advantage... Having made his choice, the leader’s dispositions must correspond to his scheme of maneuver. The density of deployment is greater where the main effort is to be made.”⁵ Alternatively, the application of overwhelming force or capability to attrit enemy strength and create vulnerabilities where none already exist is not maneuver. Although maneuver seeks to exploit an adversary’s vulnerabilities through relative advantage, it is not the direct object of true maneuver to create them.

Relative advantage, like *maneuver*, is a slippery term that can be interpreted in many ways, but whose clear and precise meaning is key to understanding maneuver. The Army’s doctrinal description of *relative advantage* in the context of maneuver is ambiguous: “a favorable condition that provides temporary freedom of action to enhance combat power over an enemy or influence the enemy to accept risk and move to a position of disadvantage.”⁶ How exactly this happens — the specific mechanism that creates this “favorable condition” — is unclear in this description, but combat power is alluded to as the causal factor. The common association of combat power with relative advantage is mainly concerned with what can be considered “objective advantage” — overmatch in strength, firepower, or resources. Despite this common understanding

of *relative advantage* as objective advantage, it is important to acknowledge that a broader understanding of *relative advantage* makes room for legitimate “subjective advantages” such as surprise, initiative, or favorable terrain. **This broader interpretation of relative advantage is likely one of several contributing factors of maneuver’s runaway usage, since anything that can be considered advantageous immediately becomes “maneuver.”** However, if we clarify *relative advantage* in the context of *maneuver* as mainly that which generates overmatch and exploits weakness in enemy objective capability, we empower *maneuver* with clarity of meaning and unlock its utility as a distinct problem-solving tool.

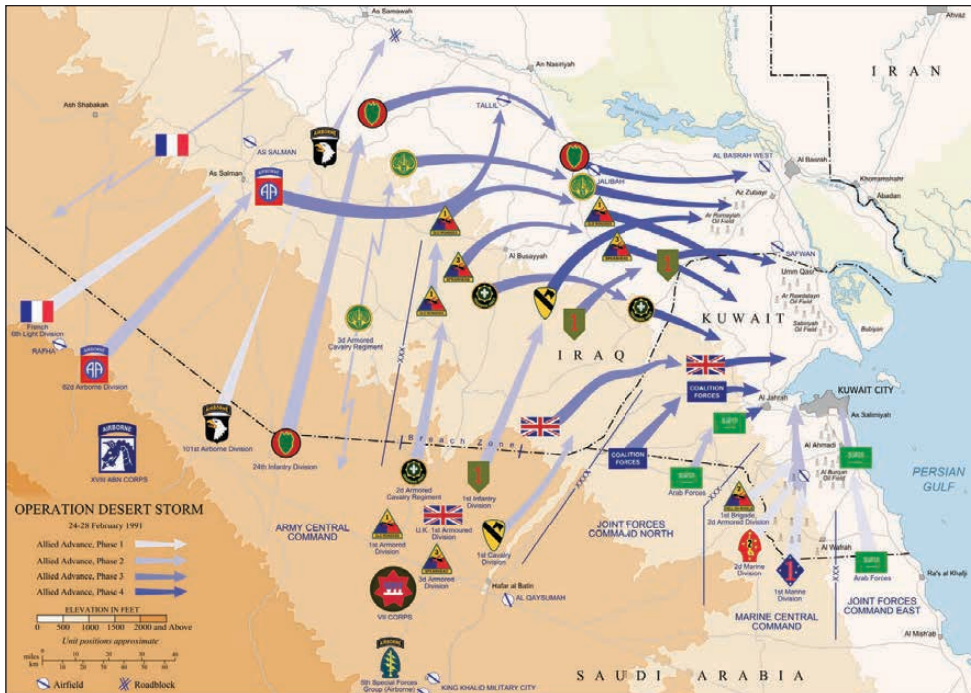
Vignette: Envelopment

FM 3-90: “**Envelopment** is a form of maneuver in which an attacking force avoids an enemy’s principal defense by attacking along an assailable flank. An envelopment avoids the enemy force’s strength — the enemy’s front — where the effects of enemy fires and obstacles are generally the greatest and attacks the enemy to the flank or rear.”⁷ The famous “left hook” of Operation Desert Storm took advantage of the vulnerable western flank of the Iraqi Army, enabled by coalition fixing and deception operations targeting the Iraqi’s principal defenses oriented to the south.

3. Maneuver avoids enemy strength. The indirect approach of maneuver is inherently evasive. It avoids an enemy’s parity or advantage in combat power as an imperative. Although this idea can be viewed as the simple inverse of the previous point of exploiting enemy weakness, it is worth distinguishing the two to fully understand the utility of each. Avoiding enemy strengths is not synonymous with exploiting weaknesses.

The former focuses on mitigating risk, while the latter focuses on creating opportunity. There are situations in which avoiding such risks in confronting enemy strengths is either impractical or unavoidable but can be mitigated by other means such as surprise or massing of fires and effects to suppress, neutralize, or attrit enemy capabilities. These are important alternative tactical solutions that deserve to be considered distinctly from maneuver in its purest sense. ***Maneuver seeks to completely bypass the risk of enemy strength rather than reduce it.*** A direct approach that seeks to suppress, neutralize, or attrit the enemy’s strengths rather than avoid them is not maneuver. Maneuver renders the enemy’s principal strengths irrelevant through creatively circumventing them via the path of least resistance.

Figure 3 — “The Left Hook:” Operation Desert Storm Envelopment (Map courtesy of U.S. Army Center of Military History)





Paratroopers from the 82nd Airborne Division infiltrate an enemy engagement area in the vicinity of a low water crossing. (Photo courtesy of author)

Vignette: Infiltration

FM 3-90: “An **infiltration** is a form of maneuver in which an attacking force conducts undetected movement through or into an area occupied by enemy forces... A successful infiltration requires the infiltrating force to avoid detection and engagement by enemy forces.”⁸ Note: The potential of infiltration to achieve a position of relative advantage with little to no supporting fires and effects highlights a doctrinal inconsistency in the conception of maneuver as merely “movement in conjunction with fires,” which will be discussed later.

Understanding Alternatives to Maneuver

Maneuver is not a panacea — it requires “freedom of maneuver” that is not always at hand and often must be created. It also demands sufficient intelligence on enemy dispositions, strengths, and weaknesses, which is often challenging to say the least. Maneuver also requires a critical variable of warfare that is often precious and fleeting: time. It requires suitable mobility for the METT-TC (mission, enemy, terrain & weather, troops & support available, time available, civil considerations) conditions and is also highly sensitive to enemy freedom of action and counter-maneuver, which must be limited for maneuver to be effective. After all, if the point of maneuver is to exploit weakness and avoid strength in the enemy’s disposition, then the enemy’s disposition must be relatively fixed. If *maneuver* is the indirect approach to gain a position of relative advantage by exploiting weakness and avoiding strength, “non-maneuver” (for lack of a better term) is the direct approach to fix, deceive, disrupt, suppress, neutralize, or attrit the enemy through other means that set the conditions for successful maneuver. This “non-maneuver” has historically been cast

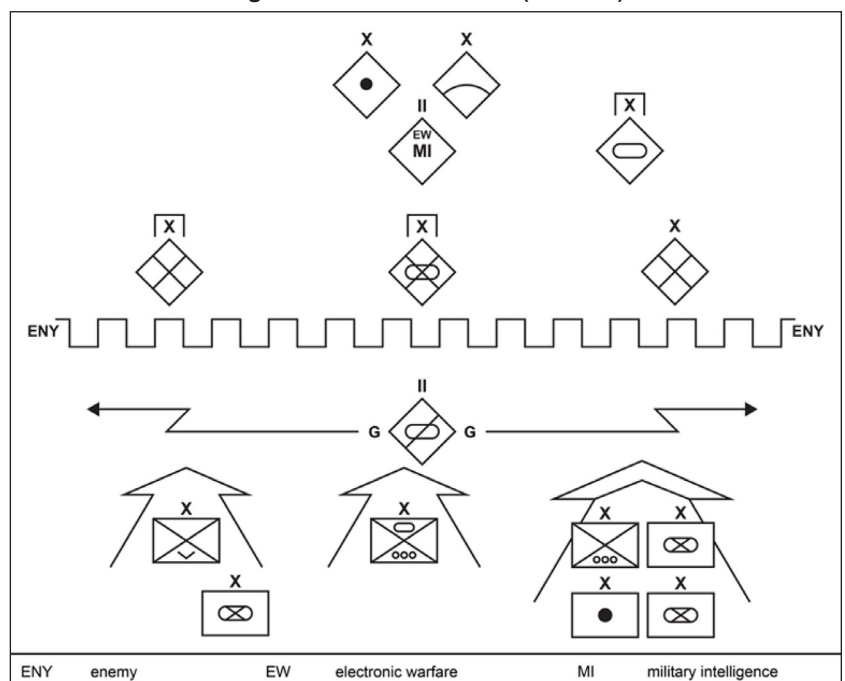
in a negative light by military theorists and practitioners alike, describing it in terms loaded with negative connotation such as “attrition” or “annihilation” tactics and establishing a false dichotomy that is unnecessarily narrow; as Sir Lawrence Freedman observed, “military history gave little support to the dichotomous view of attrition and maneuver, or that maneuver could serve as an overall doctrine rather than an occasional opportunity.”⁹ However, when we have a clear understanding of the concept of *maneuver*, we understand the utility of alternative direct approaches and how they enable maneuver.

Vignette: Frontal Attack — An Alternative to the Indirect Approach of Maneuver

FM 3-90: A **frontal attack** “seeks to destroy a weaker enemy force or fix a larger enemy force in place over a broad front... A frontal attack is necessary when assailable flanks

do not exist... units rarely conduct frontal attack when they lack overwhelming combat power unless fixing the enemy is vital to a larger operation’s success.”¹⁰ Note: Doctrine greatly confuses the concept of maneuver by including frontal attack as a “form of maneuver,” while simultaneously describing it as a tactic to be avoided unless supporting other more indirect forms of maneuver or possessing an overwhelming advantage that renders an indirect approach unnecessary. In other words, conceiving frontal attack as a form of maneuver undermines the purpose of maneuver — achieving a position of relative advantage — by drawing equivalence with a direct approach that does not seek this as an end.

Figure 4 — Frontal Attack (FM 3-90)



Struggling to Define *Maneuver* in Doctrine

“When language is used without true significance, it loses its purpose as a means of communication and becomes an end in itself.”

— Karl Jaspers
German existentialist

At present, a singular definition of *maneuver* does not exist in U.S. military doctrine. But it does have a well-established — and recently expanded — range of usage. Army Doctrine Publication (ADP) 3-0, *Operations*, the Army’s proponent document for the term *maneuver*, defines it simply as “movement in conjunction with fires.”¹¹ FM 3-90 employs this same definition but also mentions that “direct fire and close combat are inherent in maneuver.”¹² ATP 3-21.8, *Infantry Platoon and Squad*, reinforces this idea by stating that “maneuver begins once a unit has made contact with the enemy.”¹³

However, ADP 3-0 also defines the *maneuver* warfighting function as “the related tasks and systems that move and employ forces to achieve a position of relative advantage over the enemy and other threats.”¹⁴ FM 3-90 further employs two different definitions of *maneuver* as a principle of war. One definition of the principle states *maneuver* “places the enemy at a disadvantage through the flexible application of combat power,” while another definition adds “maneuver is coordinated movement and fire in relation to enemy forces to put them at a disadvantage with the least cost to friendly forces.”¹⁵

Joint Publication (JP) 3-0, *Joint Campaigns and Operations*, describes *maneuver* in several ways, including:

- 1) “The employment of forces to gain a position of advantage with respect to the enemy;”¹⁶
- 2) “The disposition of joint forces to conduct operations securing positional or informational advantages across the competition continuum;”¹⁷
- 3) “The employment of forces while in, or expecting, contact with the enemy;”¹⁸ and
- 4) “Assuring the mobility of friendly forces.”¹⁹

This description of joint force *maneuver* in JP 3-0 is further expanded to include strategic and operational applications, including flexible deterrent options, operational reach, and theater posture.

Finally, Army Futures Command (AFC) Pamphlet 71-20-1, *Army Futures Command Concept for Maneuver in Multi-Domain Operations 2028*, defines *cross-domain maneuver* as “the employment of mutually supporting lethal and nonlethal capabilities in multiple domains to generate overmatch, present multiple dilemmas to the enemy, and enable Joint force freedom of movement and action.”²⁰

If we aggregate all these wide-ranging descriptions of *maneuver*, we arrive at the

following: “Movement in conjunction with the flexible application of combat power to achieve relative advantage over the enemy and other threats, minimize risk to force, and enable joint force freedom of action across all domains and dimensions, the competition continuum, time, and all levels of war.” It is only a slight exaggeration to summarize this de facto definition as: “Conducting military operations and activities everywhere, all the time, to win” — a completely vacuous description of a critical concept.

Sifting Through the Clutter

There are five themes of competing demands in the current doctrinal melee of *maneuver* meaning: (1) relative advantage, (2) fire and movement, (3) joint, combined arms, multidomain synchronization, (4) application at all levels of war, and (5) application throughout the competition continuum. Of these demands, two (relative advantage and application at all levels of war) are legitimate and constructive; another (application across the competition continuum) is ill-advised; and the remaining two are counterproductive. It betrays the purpose of precision in doctrinal language to put all of these “big rocks” in the conceptual rucksack of *maneuver*. Unpacking all of this is critical.

The most counterproductive semantic demand on *maneuver* is “fire and movement.” **The current doctrinal definition of *maneuver* in ADP 3-0 is at the heart of the confusion. While “movement in conjunction with fires” is certainly important and tactically sound in many situations, it is not elementary to true *maneuver*.** The mandate of fire and movement is simple: suppress the enemy to enable friendly freedom of action. As important as this is, it is also painfully devoid of considerations for relative advantage, exploiting weakness, and avoiding strength as critical outcomes. The different demands are also mutually exclusive: The conduct of fire and movement does not necessarily require the



Soldiers in the 2nd Armored Brigade Combat Team, 1st Cavalry Division conduct operations during an exercise in Finland on 5 May 2023. (Photo by SGT John Schoebel)

conduct of movement to achieve relative advantage and vice versa. Forces may be employed to achieve positions of relative advantage while not in contact with the enemy, just as forces may execute effective fire and movement and still achieve no relative advantage. It seems especially prudent to separate these two concepts given the fact that there are legitimate forms of maneuver and conceivable METT-TC conditions in which suppressive fires and effects are inappropriate for the situation.

As an aside, it is worth carefully examining how “fire and movement” came to be doctrinally confused with maneuver. The drift of fire and movement into equivalence with maneuver seems to indicate, at least superficially, a tendency to confuse ways and means with ends in themselves. In stressing the importance of setting conditions for effective maneuver with fires and effects to fix, suppress, neutralize, or attrit the enemy, the institution seemingly lost sight of the distinction between the two activities. Reclaiming this important distinction will do good service to both.

Another counterproductive semantic demand on *maneuver* is joint, combined arms, and multidomain synchronization. The impetus set forth in AFC Pamphlet 71-20-1’s definition of *cross-domain maneuver* to employ “mutually supporting lethal and nonlethal capabilities in multiple domains to generate overmatch” and “present multiple dilemmas to the enemy,” while important and tactically sound, is also not constitutive of maneuver. It also seems to be semantically redundant in doctrine with two apparently diluted terms: *combined arms* and *multidomain operations (MDO)*. The meaning and significance of *combined arms* is clear in doctrine: The synchronized and simultaneous application of arms to achieve an effect greater than if each element was used separately or sequentially.²¹ Likewise, the meaning of *MDO* is also clear in doctrine: Operations conducted across multiple domains and the EMS in contested spaces to overcome an adversary’s strengths by presenting them with several operational and/or tactical dilemmas.²² Assuming these definitions sufficiently describe the desired outcomes of the employment of joint, combined arms, and multidomain capabilities, it may be beneficial to delink this concept from maneuver for the sake of clarity. It is curious why this oversight of *combined arms* and *MDO* as redundant to the formulation of *cross-domain maneuver* was possible with such clarity of doctrinal definitions that seem to suit the conceptual demands. The most likely culprit is a tendency for certain terms within institutions to become overused tropes that eventually lose their significance — precisely the situation from which we need to rescue the concept of *maneuver*.

Regarding the conduct of maneuver across the competi-

Maneuver is neither omnipotent nor a universal dogma, but its utility as a problem-solving tool at all levels of war is critical. We must prevent maneuver from becoming a meaningless cliché that fails to convey unique and specific attributes. If “maneuver” means almost everything, then it means almost nothing.

tion continuum at all levels of war, the issue at hand is highly subjective but worth consideration in the broader context of promoting strategic acumen. While it is true that maneuver can be executed in strategic competition, **the problem is the implicitly tactical connotation the term *maneuver* invokes in the context of strategic competition, at the expense of emphasis on *strategy*.** It is also curious that this “expanded” view of maneuver in strategic competition is presented as a new concept, despite not being new at all.²³ The conceptual expansion of *maneuver* into strategic competition seems to be grasping

at describing the specific mechanisms of successful strategy by leveraging tactical concepts and terminology. Perhaps part of the problem: Joint doctrine provides detailed descriptions of *strategy* and its desired outcomes without a strong emphasis on recommended tools and approaches for how to achieve it. This lack of fulsome illustration of strategic art through the mechanisms of effective *strategy* (e.g., posture, deterrence, strategic reach, alliances, whole-of-government integration, etc.) seems to have created a conceptual void which verbiage like “expanded maneuver in space and time” attempt to fill with implicit references to warfighting and tactics.²⁴ Military history and literature is replete with insights on effective strategy that might contribute to more illustrative recommendations for strategic art, so it seems awkward that our joint concepts for “expanded maneuver” in strategic competition would forego these ideas in favor of co-opting implicitly tactical vocabulary.

Conclusions and Recommendations

***Maneuver* is movement to achieve a position of relative advantage in combat power over the enemy through avoiding their strengths and exploiting their weaknesses to increase the probability of success while exposing friendly forces to the minimum possible risk.** Maneuver is neither omnipotent nor a universal dogma, but its utility as a problem-solving tool at all levels of war is critical. We must prevent *maneuver* from becoming a meaningless cliché that fails to convey unique and specific attributes. If “maneuver” means almost everything, then it means almost nothing. It is also not mere fire and movement, nor is it the synergy of combined arms, joint, or multidomain capabilities, despite greatly benefitting from all the above. Although suppressive fires, combined arms, and multidomain operations are critical to supporting maneuver, we must guard against the drift of these concepts into equivalence with maneuver. Each of these concepts are critical to warfighting and deserve to be appreciated in themselves as distinct ideas. The essence of true maneuver is inherently enemy oriented rather than friendly performance based. Developing true tacticians for future conflicts demands a clear

understanding of maneuver as enemy oriented in terms of dispositions, strengths, and weaknesses. Otherwise, we risk a fate of rigid incompetence described by B.H. Liddell Hart:

“The training of armies is primarily devoted to developing efficiency in the detailed execution of the attack. This concentration on tactical technique, in peace-time exercises, tends to obscure the psychological element. It fosters a cult of soundness, rather than of surprise. It breeds commanders who are so intent not to do anything wrong, according to ‘the book,’ that they forget the necessity of making the enemy do something wrong. The result is that their plans have no result. For, in war, it is by compelling mistakes that the scales are most often turned.”²⁵

Maneuver in Virtual Domains? If we accept this formulation of *maneuver*, then we must think critically about what constitutes effective maneuver in virtual domains. Is the movement involved in virtual maneuver focused on the disposition of physical capabilities and infrastructure in terrestrial domains? Maybe. Or is this “movement” in virtual domains more concerned with dominating networks, spectrums, and narratives? If so, does this make the physical disposition of capabilities merely administrative/logistical and not the principal mechanism of achieving relative advantage — like repositioning ground forces within an area of operations prior to commencing an attack? If the mechanisms of successful maneuver in virtual domains are themselves virtual, how can they leverage indirect approaches to exploit enemy weaknesses and avoid enemy strengths? Does this even matter in virtual domains, or does the unique nature of these domains change the considerations of risk in leveraging direct approaches?

Creative reflection on these questions by subject matter experts will undoubtedly lead to countless possibilities to achieve this in the cyber and information domains and EMS. If not, then arguably cyberspace, EW, and information operations are not necessarily achieving *cross-domain maneuver* in the truest sense, but they are nonetheless tremendously important for achieving the intent of MDO: overcoming an adversary’s strengths by presenting them with several dilemmas. Is this direct approach “good enough,” or should we

endeavor to achieve more indirect approaches to exploit weakness and avoid strengths to achieve success in these virtual domains? Perhaps, but only if we first understand this as true *maneuver*.

Notes

- ¹ B.H. Liddell Hart, *Strategy*, 2nd edition (NY: Plume Publishing, 1991), 22.
- ² Ibid, 175.
- ³ Field Manual (FM) 3-90, *Tactics*, May 2023, 2-22.
- ⁴ Carl von Clausewitz translated by Nicholas Murray and Christopher Pringle, *Napoleon’s 1796 Italian Campaign* (Lawrence, KS: University Press of Kansas, 2018), 242.
- ⁵ The Infantry Journal Incorporated, *Infantry in Battle*, 2nd edition (Washington, D.C.: Garrett & Massie, 1939), 55.
- ⁶ Army Doctrine Publication (ADP) 3-0, *Operations*, July 2019, 4-5.
- ⁷ FM 3-90, 2-19.
- ⁸ Ibid, 2-24.
- ⁹ Sir Lawrence Freedman, *Strategy: A History*, 1st edition (NY: Oxford University Press, 2013), 209.
- ¹⁰ FM 3-90, 2-13, 2-14.
- ¹¹ ADP 3-0, Glossary-6.
- ¹² FM 3-90, 1-16.
- ¹³ Army Techniques Publication (ATP) 3-21.8, *Infantry Platoon and Squad*, April 2016, 2-56.
- ¹⁴ ADP 3-0, Glossary-7.
- ¹⁵ FM 3-90, 1-8, A-3.
- ¹⁶ Joint Publication (JP) 3-0, *Joint Campaigns and Operations*, June 2022, III-38.
- ¹⁷ Ibid, III-37.
- ¹⁸ Ibid.
- ¹⁹ Ibid.
- ²⁰ Army Futures Command Pamphlet (AFC) 71-20-1, *Army Futures Command Concept for Maneuver in Multi-Domain Operations 2028*, July 2020, 75.
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- ²² U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*, December 2018, GL-7.
- ²³ Theresa Hitchens, “The Joint Warfighting Concept Failed, Until It Focused on Space and Cyber,” *Breaking Defense*, 26 July 2021, accessed 16 November 2023 from <https://breakingdefense.com/2021/07/the-joint-warfighting-concept-failed-until-it-focused-on-space-and-cyber/>.
- ²⁴ Ibid.
- ²⁵ Hart, *Strategy*, 208.

LTC Michael A. Hamilton is a 19-year Infantry officer currently assigned as the J55 Deputy Chief of Strategy for U.S. Southern Command (SOUTHCOM). He has six deployments to Afghanistan and Iraq, and his previous assignments include command of 2nd Battalion, 504th Parachute Infantry Regiment, 1st Infantry Brigade Combat Team, 82nd Airborne Division, as well as duty with the 1st Armored Division, 75th Ranger Regiment, and 1st Security Force Assistance Brigade.

Soldiers conduct a patrol during a rotation at the National Training Center at Fort Irwin, CA. (Photo by William Farrow)





Restoring Offensive Maneuver During a Reconnaissance Strike Complex Duel

LTC SCOTT DAWE
MAJ ANTHONY MOLLICA

As military practitioners and policy makers alike continue to watch the war in Ukraine and ground war in Gaza, one cannot help but marvel at the reversion to clearly drawn lines on the map demarking one side from another. The assumed fluidity of the modern battlefield has reverted to World War I-style trench complexes and obstacle belts. Well-designed elastic defenses, supported by dynamic precision fires, punish fervent appeals to the offense. Instead of offensive maneuver, war (in Ukraine at least) has devolved into a duel of the opposing forces' reconnaissance strike complexes more indicative of a conflict of attrition than one of decisive battle. This can leave the military thinker in an uncomfortable place wondering: "How does one restore freedom of offensive maneuver in the stasis created by a reconnaissance strike complex duel?" This article proposes a mental model to do so.

First, because the reconnaissance strike complex does not exist in U.S. Army doctrine, it is important to clearly define it. In Soviet (later Russian), as well as British doctrine, the "reconnaissance strike complex" is one-half of the twin concept that comprises the "reconnaissance fire system." The second half is the "reconnaissance fire complex." While forces execute the reconnaissance fire complex at tactical echelons employing tactical artillery, the reconnaissance strike complex resides at operational and strategic echelons employing coordinated targeting of real-time intelligence prosecuted by high-precision, long-range weapons. The Soviet Union developed, then matured, this system now employed by Russia, to detect and destroy high-value targets in near-real time.¹ The current state of the reconnaissance fire system in Europe has shown that adversaries' strike complex

Above, Ukrainian soldiers with the 56th Mariupol Motorized Brigade conduct operations in December 2022. (Photo courtesy of the Ministry of Defense of Ukraine via Wikimedia Commons)

capabilities have exceeded each other's fire complex capabilities. The resultant stalemate has spurred the search for a potential skeleton key from military theorists and the global military industrial complex alike. Various responses include organizations developed to organically conduct the reconnaissance strike complex mission (i.e., the UK's 1st Deep Recce Strike Brigade Combat Team); rapidly matured drone technology to conduct reconnaissance across the land, sea, and air domains; and intelligence systems supported by artificial intelligence to reduce the time required to transform data into targetable intelligence. Unfortunately, the only doctrinal solutions brought to bear on the problem return to the old soldiers' adage of "dig hard and dig often."²

Before you can break the stalemate present in the reconnaissance strike complex duel, you must first accept the stalemate exists. This is hard for military thinkers. Forces justifiably scorn and shun attrition. The dynamism of a Moltkeian double envelopment or a Schwarzkopf-ian *Left Hook* are the standard. The grinding of the Somme or Bakhmut are not. But the reality of the current situation in Ukraine is inescapable. If you are in an attritional fight, own that fact — fight the enemy, not the plan. Or, to use a sports metaphor, "take what the defense is giving you," even if it is not what you would prefer or are best at.

What follows is a way for commanders and military thinkers to own their understanding of the current fight and, if patient, wear down the enemy in an efficient and effective manner to then restore freedom of offensive maneuver. The

process is as follows:

- Be resourced and empowered to conduct offensive maneuver;
- Finish the reconnaissance strike complex duel (fighting it is unavoidable);
- Continually assess and reassess the duel to then...
- Identify and exploit discrete opportunities of localized superiority, nested within the overarching operational concept.

Friendly forces must be resourced and empowered at the strategic/operational/tactical echelons to execute offensive operations. They need to have or generate the resources, guidance, morale, and popular/political support to begin to resolve the reconnaissance strike complex duel. This also requires building strategic and whole of government depth that can absorb necessary resource losses/employment and regenerate combat power.

Next is to finish the reconnaissance strike duel (finish the fight). Executing the fight is unavoidable given the context of the current operational environment as well as the relative parity of adversaries. Resolution will come through degradation of enemy reconnaissance strike capabilities while protecting and preserving friendly reconnaissance strike capabilities. Winning (even if temporary) can occur in one of two ways:

- The first is through brute force overmatch, a technique characterized by massed and overwhelming effects to achieve results. Adversaries are more likely to employ brute force as it is unpalatable to western nations and militaries.
- The second technique is through dynamic time-sensitive targeting of discrete elements of the enemy's sensor-shooter linkage, through a period of convergence provided by echelons-above-brigade assets, to sever or slow the linkage such that the friendly sensor-shooter linkage is both faster, more accurate, and more dynamic.

The three components of the reconnaissance strike complex are the sensors, the command and control (C2) architecture linkages, and the strike assets. Forces must target all three components of the enemy's complex while preserving all three components of our own complex.

- Forces can target enemy capabilities through a combination of aggressive counter-recon at echelon, electronic warfare/cyber/space/information operations to spoof or disrupt their ability to communicate, and deliberate targeting of strike assets and counter-battery fires. Outright defeat may not be possible, but simply slowing the enemy reconnaissance strike complex such that the plurality of their strikes land late or harmlessly in the wrong locations is sufficient.

- Degradation of the enemy's reconnaissance strike

Friendly forces must be resourced and empowered at the strategic/operational/tactical echelons to execute offensive operations. They need to have or generate the resources, guidance, morale, and popular/political support to begin to resolve the reconnaissance strike complex duel.

complex occurs while actively increasing the survivability of friendly capabilities; this can be achieved through combining deception, dispersal at echelon (strategic/operational/tactical), signature discipline, passive/active counter-unmanned aerial systems (C-UAS), and deliberate planning on how to rapidly seize upon offensive maneuver opportunities.

Forces must determine if they have met measures of effectiveness (MOE) and measures of performance (MOP) goals by conducting continuous assessment of the effects of the duel (data of the battle, to

information, to further refinements, to prior established win-conditions). The desire is to identify enemy weakness that may indicate areas of localized defeat. The lengthy continuous assessment process will require patience to execute as enemy capabilities are attrited.

Finally, identify and exploit areas of localized superiority to allow a modicum of offensive freedom of maneuver. This may not occur where desired but at a location pursuant to where the enemy has assumed risk. These fleeting opportunities are likely to be acute, discrete, and limited, but with continued exploitation they can accumulate over time and result in the regaining of the initiative and thus the return of offensive freedom of maneuver.

Risk is inherent throughout this process. Every individual targeting and protection decision is a deliberate assumption of risk the commander must make. A commander must also assume risk on the level of degradation desired of the enemy capabilities knowing complete defeat is impossible. Additionally, a commander must assume tactical and operational risk when identifying and exploiting areas of perceived localized superiority.

To paraphrase the meme, "you may not be interested in attrition, but attrition is interested in you." Doctrinal wish casting will not solve the current military problem set in Ukraine or Israel. Assertions of "if only they achieved wider convergence" or "more closely adhered to aggressive offensive doctrine" they would restore offensive freedom of maneuver are farcical. In November 2023, General Valerii Zaluzhnyi, then-commander-in-chief of the Armed Forces of Ukraine, made this abundantly clear in his article "Modern Positional Warfare and How to Win in It."³ In it, General Zaluzhnyi articulated his struggle to accumulate the resources to break free from the reconnaissance strike complex duel in the Ukrainian operational environment. Lack of air superiority, the inability to reduce mine barriers in depth, ineffective counter-battery (or not effective enough), insufficient personnel reserves, and a limited quantity of electronic warfare capabilities prevented him from arraying his forces to finish the duel. When a

military is only empowered or resourced to find a skeleton key that facilitates winning a positional conflict, the resultant stalemate is unavoidable.

The modern battlefield is incredibly congested, and congestion breeds a slog akin to the battlefield of 1917 where forces are scraping for inches, not miles. Forces will achieve success through intellectually accepting the situation and orienting their military thinking around acute, patient, and discrete thrusts when the conditions properly align. Or, as General Zaluzhnyi observed, “the need to avoid transitioning from a positional form to a manoeuvrable one necessitates searching for new and non-trivial approaches to break military parity with the enemy.”

Notes

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³ General Valery Zaluzhnyi, “The Commander-In-Chief of Ukraine’s Armed Forces on How to Win the War,” *The Economist*, 1 November 2023, <https://www-economist-com.usnwc.idm.oclc.org/by-invitation/2023/11/01/the-commander-in-chief-of-ukraines-armed-forces-on-how-to-win-the-war>.

LTC Scott Dawe currently serves as the branch chief of Security Force Assistance Brigade Doctrine, Directorate of Training and Doctrine (DOTD), Maneuver Center of Excellence (MCOE), Fort Moore, GA. He earned a Bachelor of Science in history from the U.S. Military Academy at West Point, NY; a Master of Business Administration in supply chain management from Syracuse University’s Whitman School of Management; and a Certificate of Advanced Study in national security affairs from Syracuse’s Maxwell School of Citizenship.

MAJ Anthony Mollica currently serves as the branch chief of Infantry Brigade Combat Team Doctrine, DOTD, MCOE. He earned a Bachelor of Science in computer security and information assurance from Norwich University and a Masters in Operational Studies from the U.S. Army Command and General Staff College.

Safety Message — M106 Bursting Obscuration Hand Grenade (Quick Smoke Grenade)

The **M106 (DODIC: GG25) Bursting Obscuration Hand Grenade (BOHG)** — or the “Quick Smoke” as it is commonly known — provides near-instantaneous obscuration for our Soldiers. Particularly useful to provide quick smoke cover during sniper or enemy fire, this grenade can be employed in conjunction with the M83 smoke grenade for long duration smoke/obscuration effects when conducting operations that need to break enemy line of sight (e.g., casualty evacuation from the battlefield).

The M106 BOHG is shaped similar to other smoke grenades such as the signaling grenades (M18: red, violet, green, or yellow) and the M83 smoke grenade. Although these grenades use the same M201A1 fuze which has a delay time of 1.0 – 2.3 seconds, their arming sequences are different. The M106 BOHG should be thrown immediately once the pin is pulled as the body bursts immediately after the fuze functions. The other smoke grenades have a lag time of almost 15 seconds before smoke vents slowly through the bottom vent hole. Soldiers who are not trained on the M106 BOHG may mistakenly hold onto the grenade and milk/cook-off the safety lever to allow smoke to billow before employment. This is a serious safety violation when arming and employing both bursting- and burning-type grenades, however, and casualties will result when employing the M106 BOHG. Numerous injuries (hand, fingers, etc...) due to grenade misidentification, milking, and cook-off of the safety lever before employment of the M106 have resulted in the M106 being considered for restriction to combat operations only, therefore reducing units’ ability to train with this capability before employment during training and combat operations.

Units that request the M106 should refer to Training Circular 3-23.30, *Grenades and Pyrotechnic Signals*, and the current Joint Munitions Command (JMC) Safety Of Use Message (SOUM) before training and employing the M106. The new SOUM will inform the user on the older version of the M106 (the Screening Obscuration Device Visual Restricted Terrain – SOD-Vr) and the newer version developed by Joint Program Executive Office Armaments and Ammunition; the M106 BOHG’s double tooth safety lever has an orange shrink wrap band at the top of the lever bands with “Bursting” text to help Soldiers distinguish this “Quick Smoke” grenade from burning-type smoke grenades and an unmarked bottom band to aid in lever recovery.



Figure 1 — M106 BOHG (new configuration with orange shrink wrap and band on safety lever)



Figure 2 — Safety lever close-up with orange shrink wrap and band that reads “Bursting”



Figure 3 — Older variant of the M106 without distinguishable orange markings

Increasing the Utility and Mobility of the Raven SUAS in Mounted Formations

CPT KENDALL HAMM
SSG RYAN MACLEOD

Author's Note: *Just as this issue was going to press, the Army publicly announced the planned divestiture of the Raven system.¹ Given this announcement, the purpose of this article remains twofold and unchanged: to provide an example of critical thinking that led to tactical innovation and to share lessons laterally. The operation of unmanned aerial systems (UAS) at the company level will continue to be a force requirement indefinitely, although the platform will change. Our hope is that this article spurs creative thinking and for Soldiers across the force to see any system, UAS or otherwise, and think "How can I make this equipment/system/standard operating procedure better?"*

The RQ-11B Raven small UAS (SUAS) is the infantry company commander's organic aerial intelligence collection platform. The Raven adds value with a range of approximately 10 kilometers and provides both an infrared and daytime sensor capability. Even with these capabilities, many commanders have no love lost on the Raven due to its size, user interface, reliability, and two-

A Soldier in the 1st Security Force Assistance Brigade prepares to launch an RQ-11B Raven during training at Fort Irwin, CA, on 17 August 2023. (Photo by MAJ Jason Elmore)

person crew requirement, all of which feel a bit clunky when compared to the most current commercial off-the-shelf (COTS) technologies. To compound these factors, it was routine throughout the global war on terrorism for infantry battalions and companies to have consistent dedicated manned or unmanned intelligence, surveillance, and reconnaissance (ISR) platforms, ranging from AH-64 air weapons teams (AWTs) to MQ-1 or MQ-9 Predators/Reapers, or even multi-layered combinations.

The costs to employ the Raven and lack of need to do so led many commanders to assess the cost/benefit trade off of employment as unfavorable, so many a Raven remained in the container express (CONEX). However, routine direct support of AWT or unmanned ISR at the company level should not be expected in future large-scale combat operations (LSCO). Self-reliant maneuver units should use all of their organic capabilities to maximize their own (as well as the battalion's and brigade's) understanding of the operational environment, which will allow more efficient employment of higher-level assets and buy decision space for commanders at all echelons.



Other articles have provided excellent descriptions of integration of the Raven at the company level and the potential value added to all warfighting functions.² This article will provide a technical how-to guide for configuring a Raven crew and fieldcrafting a commander's real-time viewer internal to a Stryker or MaxxPro Mine Resistant Ambush Protected (MRAP) vehicle as well as discuss mobile launch techniques and benefits. Training the Raven crew to operate from inside a vehicle lowers the time associated with setup for each flight, keeps the crew mobile versus static, and allows the range of the sensor to be as dynamic as the mounted formation. Fieldcraft improvisation for this real-time viewer can give the commander an instantaneous view of the Raven's sensor in a vehicle that doesn't allow him or her to look over the shoulder of the operator, closing the performance gap between the Raven and other COTS technologies. Using these techniques, infantry commanders can become more comfortable with Raven employment and maximize their company's organic strengths and opportunities within the intelligence warfighting function.

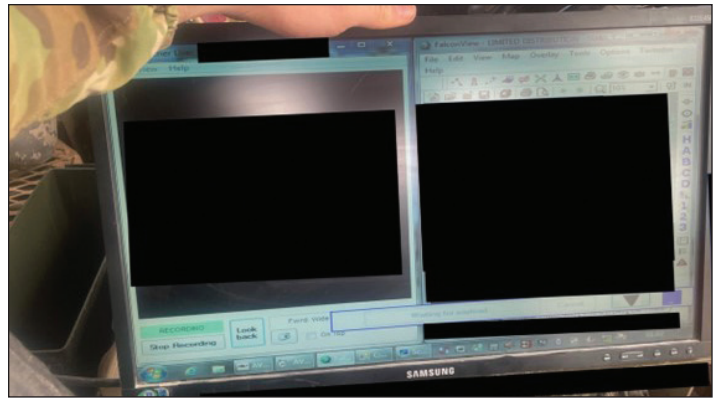
Materials Required

- RQ-11B Raven, complete kit in flying condition with Panasonic Toughbook (omnidirectional antenna preferred)
- Trained two-person Raven crew
- Vehicle with operational 12V or 24V inverter
- 81mm mortar ammunition can/PVS-14 Basic Issue Item (BII) can
 - 1 light duty ratchet strap/other tie down equipment
 - Packing spacers (4-6 empty water bottles)
 - Standard office computer monitor, the smaller the better to ensure it fits in the mortar/BII can. (If your unit has a tablet, this may be a better option if it can be configured to display a video feed from the Panasonic Toughbook.)
 - Monitor AC (alternating current) cord, 3-5 feet
 - DVI (digital visual interface) cord, 3-5 feet
 - 550 cord, 5 feet
 - 100 mph tape, 2 feet
 - Optional: depending on monitor/tablet used, you may need additional DVI to HDMI (high-definition multimedia interface) splitter cables, etc.

Crew Configuration

For the purposes of this article, the term "commander" will describe the leader who is currently utilizing the Raven asset for collection. This could be a company commander, first sergeant, executive officer (XO), platoon leader, platoon sergeant, or other leader within the company. The crew required is a standard two-person crew: a pilot and an alternate Raven operator. A third crew member may be utilized in a different vehicle to conduct mobile launches.

The pilot and alternate Raven operator should locate themselves in the commander's vehicle. The seating configuration of a MaxxPro or Stryker supports this given the commander is in the vehicle commander (VC) position. Existing articles recommend arranging the Raven in the XO's vehicle — this would be prudent placement in many scenarios.³



Example Commander's Real-time Viewer in a MaxxPro
(The 81mm ammunition can for monitor stowage is in the left of the picture, and the cables for the monitor are routed on the bottom of the screen to the Panasonic Toughbook and the inverter.)

Hardware Assembly

To wire the Stryker or the MaxxPro for Raven use, start with the omnidirectional antenna, which is connected to the coax cable and ready for use. Using 550 cord, tie a clove hitch around the omni antenna and tape it off. Then, tape the omnidirectional antenna to one of the taller antennas on the vehicle. For a Stryker, the wire cutter in front of the vehicle commander's hatch may be preferable. Tie the free running end of the 550 cord to the antenna or other fixed object on the vehicle using either a clove hitch or bowline. If desired, the Raven's mast for static operations can be affixed to the top of the vehicle and the antenna affixed to the mast. The tie down ensures that if the antenna does come off somehow it is not lost. Route the cable from the base of the antenna through the top of the vehicle, parallel to other antenna wires. Once internal, this cable needs to terminate with the free running end readily accessible to the Raven operator's seat with approximately 2-3 feet of play.

The inverter's purpose is to invert the 24V direct current (DC) electricity from the MaxxPro batteries into 110V AC that is utilized in standard U.S. appliances. Plug the Raven's Panasonic Toughbook into the 110V AC outlet that is connected to the inverter and switch the inverter on. From this point on, the Raven operators configure their equipment in a similar fashion to if they were flying from a static location.

The commander's real-time viewer is a fancy name for a simple fieldcraft solution that allows the commander to use a standard computer monitor and view the output of the Raven Panasonic Toughbook without being immediately adjacent to the operator. The computer monitor is plugged into the Toughbook via a DVI or HDMI cable and plugged into the inverter via the AC adapter cable. This will mirror the image from the Toughbook onto the monitor. Smaller monitors tend to work best as space is limited in most vehicles.

An 81mm mortar ammunition can ratcheted to the radio console of the MaxxPro works well as a storage location for the viewer's screen when not in use. Ensure to pack the mortar can appropriately using packing materials or empty

water bottles around the screen to prevent damage to the screen during driving operations, and also confirm that the can is appropriately tied down in the vehicle. It is not necessary to utilize the commander's real-time viewer in all Raven applications — rather, this is an additional option made available to commanders should they need to view the Raven feed in real time.

Mobile Launching and Operations on the Move

While not always needed, launching the Raven on the move is an option. Operators should learn how to do this at home station with their unit's Raven master trainer and then perfect this technique during a Combat Training Center rotation. Commanders should know that this is a capability for their operators and that the vehicle must have external roof access (turret or air guard hatch). Static (traditional) launching is still possible when the pilot is operating the Raven from inside the vehicle should the Raven team prefer to employ this technique instead.

Once on the move with the Raven overhead, the Raven operator's vehicle is now the center of the omnidirectional antenna's range. Whenever the operator's vehicle moves, the Raven's operational range "circle" moves with it. The Raven can fly ahead of the unit during movement or on flanks, as the operator desires.

Potential Pitfalls

- Selecting Raven operators and prioritizing Raven training can be challenging while at home station, but these are critical to maximizing utility of the capability.
- Understanding the total air picture and establishing a Raven restricted operating zone (ROZ) are essential to reducing risk to both manned and unmanned aircraft.
- ROZ procedures and unit standard operating procedures can make impromptu Raven training difficult as many installations require 72-hour notice. Proactive early planning by live-fire and situational training exercise planners at battalion and brigade staff levels can build optional Raven employment into training scenarios ahead of time through Range Facility Management Support System (RFMSS) requests and staff generic Notice to Airmen (NOTAMS) through the brigade aviation element (BAE). This can allow commanders to elect to use the Raven if they feel the operation dictates.
- While the range will be reduced, the omnidirectional antenna seemed to be the best fit for Raven operations in a moving vehicle due to frequent changes of direction inherent to driving.
- The inverter uses a significant amount of power to invert the direct current to alternating current and is an additional load to the electrical system of the vehicle after the radios, Joint Capabilities Release (JCR), etc. Running the inverter for significant periods of time without the vehicle alternator running could cause batteries to die sooner than expected and is not recommended.
- Operators should preplan the loss of link (LOL) rally points to coincide with mounted route checkpoints and reset the LOL rally point in the Raven system often to allow for

rapid recovery when on the move. If the Raven experiences loss of link and the LOL rally point has not been changed since launch, it is possible that the unit could be forcing the Raven to double back a significant distance to the original LOL point.

Practice Locations

Raven operations are executed best after being rehearsed. The National Training Center at Fort Irwin, CA, provides several scenarios to rehearse mobile launches and mounted Raven flights:

- Any mounted movement to contact;
- Forward passage of lines to breach Whale Gap into Siberia;
- Reconnaissance and occupation of support-by-fire positions around Razish; and
- Approaching the probable line of contact to confirm or deny enemy presence and optimize vehicle dismount point relative to enemy positions.

When practiced, these techniques can significantly increase the value provided by the RQ-11B Raven while simultaneously reducing the natural friction of employment. This will make the overall employment cost/benefit ratio more favorable for use and increase the infantry company commander's understanding of the operational environment. The ongoing war in Ukraine has demonstrated the incredible scope of influence SUAS can have on the modern battlefield, and the U.S. Army is iterating on newer unmanned vehicles.⁴⁻⁵ In the meantime, it is imperative that we maximize our own SUAS opportunities in training and in practice.

Notes

¹ Jen Judson, "U.S. Army Spent Billions on a New Helicopter that Now Will Never Fly," *Defense News*, 8 February 2024, <https://www.defensenews.com/air/2024/02/08/us-army-spent-billions-on-a-new-helicopter-that-now-will-never-fly/>.

² Christopher J. Colyer, "Tactical Employment of the Raven SUAS," *Infantry* (April-June 2016): 64-65.

³ *Ibid.*

⁴ Ivan F. Ingraham, "Off the Shelf, Above the Fight: How Cheap Drones Are Completely Changing Warfare," *Task & Purpose*, 1 July 2022, <https://taskandpurpose.com/opinion/drones-uas-warfare-ukraine-russia>.

⁵ Sam Skove, "Army Moves Ahead on Ukraine-Style Bomber Drones," *Defense One*, 4 October 2023, <https://www.defenseone.com/technology/2023/10/army-moves-ahead-ukraine-style-bomber-drones/390918/>.

CPT Kendall Hamm is currently completing a Master of Science in civil engineering at North Carolina State University. Most recently, CPT Hamm served as the company commander of Brave Company, 2nd Battalion, 23rd Infantry Regiment, 1st Stryker Brigade Combat Team, 4th Infantry Division. He has also served in the 4th Brigade Combat Team (Airborne), 25th Infantry Division and 3rd Battalion, 75th Ranger Regiment. His operational experience includes deployments to Syria and Afghanistan. He earned a bachelor's degree in civil engineering from the U.S. Military Academy at West Point, NY.

SSG Ryan Macleod is currently a drill sergeant in the 197th Infantry Brigade at Fort Moore, GA. He previously served as the mortar section sergeant for Brave Company, 2-23 IN. SSG Macleod has also served in 2nd Stryker Brigade Combat Team, 25th Infantry Division; 3rd Infantry Brigade Combat Team, 10th Mountain Division; and 2nd Squadron, 11th Armored Cavalry Regiment. His operational experience includes deployments to Afghanistan, Iraq, and Syria. His military education includes the Advanced Leaders Course, Infantry Mortar Leaders Course, and Master Combatives Trainer Course.

Considerations on Engagement Area Development — *Light Infantry Vs a Mounted Opponent*

CPT ROBERT BARGER

“C^{urrahee}” is the well-known motto of the 506th Infantry Regiment, a Cherokee word best translated as “stands alone.” It was fitting then that Baker Company, 1st Battalion, 506th Infantry Regiment, alone was tasked to serve as the opposing force (OPFOR) during a cycle of Enhanced Forward Presence (EFP) Battle Group Latvia’s combined arms field exercise in August 2023. While Baker Company faced apparently insurmountable odds, we successfully planned and executed a company defense against what was essentially a mechanized brigade (-). In our preparations and execution of the defense, we gained a greater understanding of defending against a mechanized threat and walked away with sustains, improves, and a few poignant lessons that improved our chances of winning during Silver Arrow, our next training exercise with the battle group.

For this exercise, EFP Battle Group Latvia (our enemy) consisted of a multinational force with main battle tanks, infantry fighting vehicles (IFVs), and artillery pieces. It employed snipers, Ravens, and a platoon of armored personnel carriers (APCs) equipped with a 105mm main gun in its reconnaissance and had other dedicated unmanned aerial system (UAS) assets attached to each maneuver company and its

fires cell. Its overall order of battle was three mechanized/motorized infantry company teams, one pure tank company, three batteries of heavy artillery, and organic engineer, air defense, and sustainment nodes.

Prior to the start of the exercise, it was made clear that adjudication of battlefield effects would not be a priority for the observer/controller (O/C) teams on the ground. The training objectives of the battle group required simultaneous maneuver, command and control, and echelons of brigade-level systems and drills that necessitated a phased approach to the training event. Baker Company’s role in the exercise was to operate independently of the operations cell and force the battle group to exercise each of its warfighting functions for the first time against a “living and breathing” enemy. Our defensive preparations themselves, and not the fight itself, thus became our priority.

Historically, light infantry has a mixed record when defending against a mechanized opponent. The fundamental dilemma

Soldiers in 1st Platoon, Baker Company, 1st Battalion, 506th Infantry Regiment, 1st Brigade Combat Team, 101st Airborne Division (Air Assault), receive a brief on their platoon defense scheme of maneuver prior to rehearsing its execution. (Photo by SSG Oscar Gollaz)



we face is that of a mismatch in firepower and mobility, but this does not necessarily imply a predetermined outcome. During the Korean War, Task Force Smith — a light infantry battalion(+) — was overrun by advancing North Korean armor that penetrated their linear defenses and quickly destroyed supporting artillery in their rear. We would not repeat this mistake, and in each engagement of the iterative exercise, we experimented with methods and triggers that would trade space for time in our defensive operations. Baker Company remained a light infantry formation and lacked the ability to quickly move across open ground. In all our defensive preparations, we made use of the available terrain to destroy our opponent piecemeal at inopportune moments. We planned to maximize the available terrain to use concealment and dispersion to our advantage before our enemy could mass on the bulk of our force.

Adazi Training Area is only a few kilometers wide at its narrowest point and does not have the area to support a continuous three-day training exercise for a mechanized force. Given these restrictions, the battle group planned to conduct a movement to contact throughout the entire training area from south to north on the first day with an emphasis on platoon maneuver. For this, we provided six sections with an anti-tank (AT) system and machine-gun team to defend various river crossings throughout the training area until the battle group was consolidated in the far north. On the second day, companies were tasked to seize two river crossings and a road junction. These positions were preplanned by the battle group to ensure a meeting engagement. The final deliberate attack — our main training objective — would occur with Baker established in a company defense in the north.

Due to notional losses from the previous two days of fighting (my 3rd Platoon was assigned a separate, scripted role in support of a combined arms breach 4 kilometers south of our company battle positions), Baker Company was reduced to two platoons, a 60mm mortar section, and a 28-Soldier engineer platoon that brought heavy equipment and three M113 APCs to the fight. It was with this force that we would plan and execute our company defense.

In preparation for the final company defense, my first task was to evaluate the terrain from the attacker's perspective. Range restrictions for mechanized vehicles created an unpassable notional minefield running northwest to southeast across the majority of the northern portion of the training area. Given the mobility and size of the enemy force, I believed that they were canalized into two potential avenues of approach to the south and east. After determining this, we then analyzed the terrain in support of our scheme of maneuver to set our engagement areas. Both avenues of approach converged into an "L" 500 meters north of the end of the southern lane through the minefield and provided tree cover to the north. The rolling terrain provided some

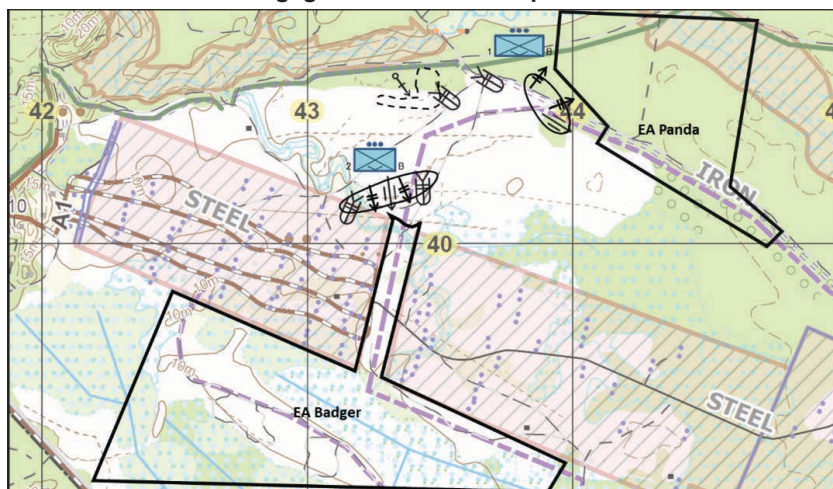
defilade at this intersection, and we first planned our final subsequent battle positions and mortar firing point (MFP) at this location. By planning our final positions first, our scheme of maneuver became clearer to everyone involved in the initial reconnaissance.

Acknowledging the speed advantage of our opponent, we next planned to use what terrain we had available to screen our movements from our primary battle positions back to the MFP/command post (CP). The open area to the south had a northeast-southwest ridgeline that allowed observation over the minefield to a road 1,700 meters to the south. This ridgeline did not have significant overhead cover, but the height advantage and its unrestricted fields of fire were deemed necessary to echelon our organic weapons within our engagement area. Additionally, this ridge provided cover and concealment for anyone moving to their subsequent positions from direct fire weapons and observers anywhere in the engagement area. I placed one platoon along this 250-meter ridgeline with an engagement area focused on the southern minefield lane where the enemy would be most canalized. I positioned another platoon in the woods to the north, oriented northeast into the woods and east along the road, to prevent dismounts from enveloping our position while providing AT teams and observation on the eastern avenue of approach.

With our engagement areas and direct fire weapons placed, our attached engineer platoon worked to emplace two AT obstacles within observation of our battle positions while also digging fighting positions for both platoons. Due to the nature of the exercise, our final battle position was in the section of the training area that had been occupied hours earlier. Thus, we were more limited in our time available to employ the engineer platoon than I had initially anticipated. Fuel constraints also limited our use of the D7 Dozer to constructing 300 meters of AT ditch, and the previous night's preparations for our 3rd Platoon's defense deadlined one of our two excavators.

For heavy equipment employment, I initially prioritized protection on the exposed high ground for my 2nd Platoon, but

Map 1 — Baker Company's Disposition at the Completion of Engagement Area Development



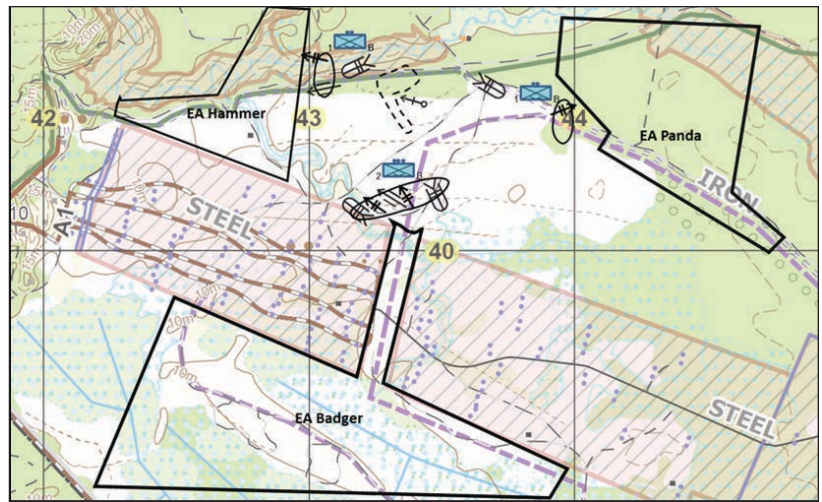
once we started digging in, I found that this was not the most efficient use of the equipment. We quickly realized that Soldiers could dig in much faster in open ground without hacking through innumerable roots and rocks and that the heavy equipment was slow to move between points. With an intentionally dispersed platoon battle position planned for 2nd Platoon and relatively slow progress from the platoon in the wood line after two hours of preparations, I moved the dig assets to the tree line with 1st Platoon to assist in preparing their positions.

An additional benefit to moving the heavy equipment was that it would be virtually impossible to detect by UAS under the concealment of the trees. With the engineer platoon and Baker Soldiers all gainfully employed preparing tactical and protective obstacles, improving their defensive positions, and maintaining security, I then directed a smaller-scale rehearsal to validate a common understanding of our engagement criteria, disengagement criteria, and the triggers that would promote a controlled movement to our subsequent positions.

In previous days' iterations, we found that a full-dress rehearsal with a mounted "enemy" served as the most effective method to identify gaps in our engagement areas, recognize shortcomings in information dissemination, and evaluate the concealment of our battle positions. Simply walking along an avenue of approach produces a different viewpoint than having a gunner in a turret on an 1151. For our company defense, however, the Delta Company platoon we previously used was unavailable. The rehearsal we executed instead focused on a synchronized initiation of our fires plan and our disengagement triggers and movements. On both days, our deliberate full-dress rehearsals provided opportunities to refine our plan and validate what would work on that day's specific terrain.

During our rehearsal, our Soldier Borne Sensor (SBS) operator observed dust clouds along the major east/west main supply route that runs through the training area. Upon a recheck of the map, the boundary allowed one lane's worth of passage to our northwest. I had failed to identify this enemy avenue of approach, and the entire battle group was poised to attack us from that direction. Given the pace of employment, we knew we had about one hour to prepare for an attack from this direction, and we quickly gathered at the CP to formulate a plan.

Already in a good position to observe the enemy's movement towards our flank within their primary engagement area, 2nd Platoon Soldiers began improving their primary positions for an attack from the west. The defilade which would have screened their movement from primary to subsequent positions against an enemy attack from the south stayed functionally the same against an enemy attack from the northwest and still provided the same advantage. To maintain security along the eastern avenue of approach, I directed 1st Platoon to split after a quick mounted recon-



Map 2 — Baker Company's Disposition Oriented Towards EA Hammer

naissance showed a single tracked vehicle lane adjacent the national forest and tank range. The two 1st Platoon squads then quickly improved preexisting positions that were scattered throughout the woods, and we notified 2nd Platoon of their positions. We planned to kill the enemy's lead tracked vehicle in the lane with a carefully positioned Javelin and then bound back to allow both platoons to mass their fires onto the concentration of enemy personnel and vehicles that followed.

Much like the previous three days of execution, the actual fight left a little to be desired. Our 2nd Platoon claimed multiple Javelin kills on a convoy of PT91 tanks and multiple Italian IFVs before it broke contact down the defile to subsequent positions. Our 1st Platoon forced the Italian infantry company to dismount at the identified chokepoint in an attempt to flank from the north, but 1st Platoon initiated contact and successfully bounded back to subsequent positions. This allowed 2nd Platoon to mass its fires on the dismounts and IFVs as 1st Platoon Soldiers broke contact into their prepared positions. The fight ended with the entire company meeting our disengagement criteria to move to at least one subsequent position. Despite the frustrations of not witnessing the effects of our efforts, Baker Company Soldiers were clearly proud of our execution of a company defense.

Lessons Learned

During engagement area development, we prioritized rehearsals from every battle position. I found this vital to getting displacement under a time constraint and achieving concealment. Dug-in infantry must know their next position given the limited time we have to displace, but the standoff and firepower advantage of mechanized infantry makes defenders' initiation a priority. Aided by rampant UAS observation and armed with 120mm main guns, 25 and 30mm cannons, and AT/anti-personnel guided missiles, this mechanized force had the potential to make quick work of our positions from a distance. Concealment of our positions, and the validation of this concealment from multiple angles, is a significant priority.

While conducting troop leading procedures, I failed to identify an enemy avenue of approach and created a most dangerous course of action (MDCOA) where it previously did not exist. Our focus on the identified axes with substantial obstacle emplacement and improvement of our advantageous positions turned an unforeseen MDCOA into the most likely course of action (MLCOA). The tanks and IFVs of our adversaries are highly capable machines that can move through seemingly impassible terrain, if given the opportunity to do so.

When employing engineer assets to construct fighting positions on a constrained timeline, their dig rate may exceed the rate of concealment by a significant margin. The amount of spoil produced by excavators required a concerted effort to camouflage, especially when considering our enemy's liberal use of UAS. With our task organization requiring Soldiers to place tactical and protective wire obstacles and provide security, we were quickly outworked by the engineers. Moving them into the woods provided some reprieve due to the overhead cover. Rampant use of UAS-observed fires made concealment a top priority. Stay in the woods!

During the execution of our defense, Baker's quick adjustment to our alternate battle positions served as a major sustain. Our rehearsals did not allow the direct placement of individuals into the subsequent positions that they ultimately occupied, but the exercise itself allowed direct-line leaders to focus on the "where" and not the "how" once it came time to execute. Liberal usage of our SBS Hornet permitted us to detect the movement of the large armored formation well in advance of auditory cues, which gave leaders time to quickly develop a plan using our existing battle positions. This time allowed us to create a plan that made sense, did not compromise security, and prevented fratricide.

Armed with an understanding of the enemy's general order of battle after the previous two days of the exercise, our battle positions were still lacking in protection — specifically against the indirect fire assets they had at their disposal. During engagement area development, it was difficult to dig positions that sufficiently protected against three batteries of 155s. Their dismounted reconnaissance, use of UAS, and probing force all identified our 2nd Platoon's primary battle positions to devastating effect on the final defense. Dispersion at the platoon level made control of each subordinate element more difficult. Given the lack of overhead cover, it increased survivability but did not reduce the threat of UAS observa-

tion. In hindsight, I would have placed a single observation post on the ridge and requested a boundary extension to push the entire company into the national forest.

The pace of displacement from primary to subsequent fighting positions versus the pace of mechanized infantry requires shorter, deliberate, and rehearsed movements to subsequent battle positions. Previously advantageous positions prioritizing fields of fire quickly lose their value when mechanized infantry begins their assault. Transitions to subsequent battle positions must effectively shrink subsequent engagement areas with the use of a reverse slope to maintain survivability. Our 2nd Platoon began the fight from less-concealed positions and was objectively worse off at the onset of the fight, due to the enemy's prolific use of UAS and indirect fire. Upon the EFP's commencement of their assault, however, the advantages of the reverse slope allowed the platoon to slow the assault much more effectively than 1st Platoon, whose concealed primary battle positions were more effective on first contact but slowly overrun by advancing dismounted infantry with the support of their IFVs.

Despite standing alone against tremendous odds, Baker Company achieved success in an excellent repetition at conducting a defense at the squad, platoon, and company levels. Our lessons learned will remain a part of our institutional memory and will guide our actions at the next major training exercise, Silver Arrow. We gained a greater understanding of an organization that looks far different from a typical OPFOR opponent and are more prepared to execute defensive operations at the company level against a numerically superior and mounted adversary.

CPT Robert Barger currently commands Baker Company, 1st Battalion, 506th Infantry Regiment (Red Currahee), 1st Brigade Combat Team, 101st Airborne Division, Fort Campbell, KY. He previously served as commander of Alpha Company, 2nd Battalion, 58th Infantry Regiment (One Station Unit Training) at Fort Moore, GA, and as a rifle, tank, and mortar platoon leader in 1st Battalion, 16th Infantry Regiment at Fort Riley, KS. He graduated in 2015 from the U.S. Military Academy at West Point, NY, with a Bachelor of Science in history.

Soldiers in 1st Battalion, 506th Infantry Regiment, 101st Airborne Division, conduct operations during an exercise in Adazi, Latvia, on 23 September 2023. (Photo by CPT H. Howey)



Trust (Amended)

CHAPLAIN (LTC) JARED L. VINEYARD

Editor's Note: This article is an update to a previous piece the author wrote titled "Trust: A New Formulation of a Fundamental Principle." View the original article at https://www.moore.army.mil/infantry/magazine/issues/2022/Fall/PDF/10_Vineyard.pdf.

It is not an overstatement to say that trust is the foundation of the U.S. Army. Doctrinally, the Army profession defines itself as "a trusted vocation of Soldiers and Army civilians whose collective expertise is the ethical design, generation, support, and application of land power; serving under civilian authority; and entrusted to defend the Constitution and the rights and interests of the American people."¹ Based on our definition, we are a "trusted vocation" who is "entrusted to defend." Therefore, trust is foundational to be an Army professional.

While most Army Soldiers and leaders recognize the importance of trust, many struggle with the practical application of building trust. In my last article on this topic, I suggested a formula to build trust in our formations which consisted of these components: character, competence, commitment, and consistency.² Since successfully fielding and training this formula to Soldiers and leaders across Fort Moore, GA, an important suggestion was given in order to better convey the components of the formula and more importantly the principles related to trust.³ This change substitutes the addition signs for multiplication signs in the formula. Thus, the new formula is:

**(Character x Competence x
Commitment) Consistency =
Trusted Relationship**

While the major components of the equation remain the same, the different mathematical symbol conveys a new and purposeful meaning. First and obvious, the multiplication principle greatly expands the range and possibilities from mere addition. Simply put, trusted leadership expands exponentially with men and women who consistently have character, are competent, and are committed to the mission and organization. In addition to depicting this expanded potential, the possibility of portraying a decrease in trust is now possible. For instance, a leader with great skills, talents, and abilities (competence), who is committed to the mission but is morally bankrupt, may destroy the trust of the organization.⁴ Another example might be someone who has high morals and standards and yet is completely inept in his or her warrior tasks; this also would completely erode the trust of that person and potentially the entire organization. A zero in any one of the

components immediately makes the resulting answer zero, producing a non-trust relationship. Thus, with the new formulation, trust can be greatly increased and expanded as well as drastically cut depending on the scenario.

One final addition was adding the term "trusted relationship" from simply "trust." The reason for this change is a reminder that organizations are made up of people. And high-trust organizations are filled with high-trust people who have healthy and trusted relationships with one another.⁵ In other words, the people of the organization are the organization, and their level of trust with each other is therefore representative of the organization's ultimate level of trust.

While I still believe that there is no ultimate formula for trust, I do believe that this current formulation is helpful for Soldiers and leaders. It not only gives categories to think about when attempting to build trust with others but also helps us personally to look within and ask, "Am I a trusted agent?" Additionally, this formula can be used when looking both up and down the chain of command to strengthen gaps or increase weak areas within our formations. As Army doctrine reminds us, "trust is the foundation of the Army's relationship with the American people."⁶ It is absolutely that and more; trust is the bedrock that underpins everything that we think, do, and say both professionally at a strategic level and tactically at a personal level with one another. Therefore, let's strive today to build trusted relationships actively and intentionally within our formations by being men and women who consistently demonstrate character, competence, and commitment.

Notes

¹ Army Doctrinal Publication (ADP) 6-22, *Army Leadership and the Profession*, July 2019, 1-2.

² Chaplain (MAJ) Jared L. Vineyard, "Trust: A New Formulation of a Fundamental Principle," *Infantry* 111/3 (Fall 2022): 20-23.

³ This change was suggested over a conference call with Mr. Jeffrey Peterson at the U.S. Military Academy in relation to a One Station Unit Training Character Development pilot project on 7 December 2023.

⁴ The number for character in this case would be zero, which in a multiplication formula would result in a zero for the solution, or in our case trusted relationship.

⁵ This idea can clearly expand to other areas within units such as equipment. Soldiers must be able to trust the equipment that they are issued.

⁶ ADP 6-22, 1-2.

Chaplain (LTC) Jared L. Vineyard currently serves as the 197th Infantry Brigade Chaplain at Fort Moore, GA. He previously served as the ethics instructor at the Maneuver Center of Excellence for three years and has been a chaplain for nearly 15 years. Additionally, Chaplain Vineyard served as a Field Artillery (FA) officer. He has been deployed as both a FA officer (Iraq, 2003-2004) and as a chaplain (Afghanistan, 2010-2011). He graduated from the U.S. Military Academy at West Point, NY, in 2002 and has earned two graduate degrees, a Master of Divinity from Southwestern Baptist Theological Seminary in 2008 and a Master of Sacred Theology from Yale Divinity School in 2019.

Information as a Mission Variable

MAJ CHRISTOPHER M. SALERNO

The publication of Field Manual (FM) 3-0, *Operations*, introduced information as the newest mission variable alongside mission, enemy, time, terrain, troops available, and civil considerations. FM 3-0, though, makes it clear that information is not a stand-alone mission variable but one that must be included in the analysis of other mission variables.¹ Information advantage is a new term, but the definition aligns well with combined arms maneuver. Information advantage is “when a force holds the initiative in terms of situational understanding, decision-making, and relevant actor behavior.”² Electronic warfare (EW) platoons, military intelligence companies, cavalry squadrons, and battalion scout platoons across a brigade combat team seek to give their commanders an information advantage by protecting or enabling situational understanding. Defensive tactical mission tasks like disrupt or turn are about influencing the enemy by attacking their situational understanding and interrupting their decision-making, forcing them to react prematurely to their disadvantage. Smokescreens and EW jamming are just two examples of attacking an enemy’s ability to command and control at the tactical level. Tactical-level leaders conduct information operations throughout large-scale combat operations (LSCO); however, tactical-level doctrine currently struggles to deliberately incorporate information as a mission variable throughout the planning process.

This article argues that the Army should update Appendix B in Army Techniques Publication (ATP) 3-21.10, *Infantry Rifle Company*, and ATP 3-90.1, *Armor and Mechanized Infantry Company Team*, to better incorporate information as a mission variable within the troop leading procedures. The new FM 5-0, *Planning and Orders Production*, highlights that information must be analyzed by all commanders and staffs constantly throughout the operations process.³ This reality is seen on the battlefields within Ukraine, as General Valerii Zaluzhnyi listed EW as the second most important priority for Ukrainian success.⁴ First, information must be deliberately emphasized throughout mission analysis. Secondly, the principles of information advantage should supplement how tactical leaders approach course-of-action (COA) development. Finally, information considerations should inform how leaders understand their tactical risk. As currently written, doctrine emphasizes the warfighting functions, but including information ultimately changes the emphasis on the unit’s combat power.

Mission Analysis

Appendix B, Planning and Preparation, of ATPs 3-21.10 and 3-90.1 should be updated to emphasize information, which can be accomplished by providing weight to the communication portion of shoot, move, and communicate.

A Soldier assigned to the 2nd Armored Brigade Combat Team, 3rd Infantry Division prepares to move during a live-fire exercise at the National Training Center, Fort Irwin, CA, on 8 March 2023. (Photo by SPC Duke Edwards)

ATP 3-90.1 states, “To assist in understanding the OE [operational environment], leaders in the company team use two tools, operational and mission variables.”⁵ Still, the same doctrine does not stress information during the planning process. Information connects the disparate actions of shooting, moving, and communicating. In ATPs 3-21.10 and 3-90.1, terrain and weather analysis currently focus on movement and weapons effects analysis, but both publications should equally include communications analysis. As explained in these ATPs, intelligence preparation on the battlefield emphasizes how the enemy will fire and maneuver. Still, the People’s Liberation Army (PLA) and Russian military prioritize information warfare with deliberate tactical-level implications.⁶ ATPs 3-90.1 and 3-21.10 both list reasonable assets an enemy higher headquarters may employ to support their ground maneuver, neither of which include EW assets. The failure to properly emphasize information during the troop leading procedures in current doctrine undermines tactical-level leaders and should be changed.

Terrain analysis, within tactical-level doctrine, currently focuses on drawing movement and weapons effects deductions for both friendly and enemy forces, but it should be expanded to consider the mission variable of information deliberately. Table A-3 in Appendix A of FM 5-0 provides a list of information-centric questions to add depth to the other mission variables, with the questions under terrain and weather focused on emission control and communication (see Figure 1).⁷ Army Doctrine Publication (ADP) 3-13, *Information*, defines information as “data in context to which a receiver (human or automated system) assigns meaning.”⁸ Terrain affects the connection between the data and the receiver, potentially undermining assured communication for both blue and red forces while providing opportunities to protect communication. Company-level leadership should analyze the effects of terrain on communications under obstacles and within observation/fields of fire. Neither ATP 3-21.10 nor ATP 3-90.1 lists a single question under either category about how that terrain will affect communication. Terrain can hinder line-of-sight radio communication and protect a force from detection if properly accounted for and utilized. Leaders can estimate the location of likely enemy command and control nodes and then use those deductions to pre-plan fire missions to target enemy command and control. Terrain analysis within these doctrinal publications currently emphasizes movement and weapons analysis. It should include communications analysis because shooting and moving are only part of

Mission Variables	Informational Questions
Mission	What are we told to do and for what purpose? What strategic messaging is occurring that our mission supports? Does it include shaping enemy perception, decision making, and behavior? Does it include military deception? What OPSEC measures are implied?
Enemy	What are the enemy’s capabilities to disrupt our C2 (including cyber, EW and space)? What are their collection capabilities and can we counter them with good OPSEC measures? How susceptible are their troops to our messaging (MISO)? Are they vulnerable to deception (including MILDEC, TAC-D, and DISO)? What OPSEC measure can we implement to protect our information?
Terrain and weather	What are the terrain and weather impacts on the transmission of friendly communications, especially ground-based, line-of-sight communications? Can terrain mask friendly EMS signatures? What is the space weather impact on satellite-enabled communications (including C2, EW, cyber, and space)?
Troops and support available	What information capabilities do we have available, either organic, assigned, or attached? Do we have PSYOPS, civil affairs, cyber support elements, or information operations field support teams? What support can headquarters provide?
Time available	Do we have time for shaping operations, which may include appeals to surrender (MISO), jamming (EW), or offensive cyberspace operations? Do we have sufficient time to devise and execute a deception plan, or at least deception in support of OPSEC (DISO)? Is there sufficient time available for the information-related capabilities to affect behavior towards a favorable action? MISO usually does not change people’s minds overnight, or on just one broadcast or leaflet drop. Likewise, it takes time to develop a deception plan. What OPSEC measure can we implement to protect our critical information? For support we need from headquarters, when is it available?
Civil considerations	Is the local population hostile, neutral, or friendly? Who are the relevant actors that can influence specific audiences? What conduits are available to deliver messages to the populace? Are they susceptible to MISO? What can civil affairs do to help?
C2 DISO EMS EW MILDEC MISO OPSEC PSYOPS TAC-D	command and control deception in support of operations security electromagnetic spectrum electronic warfare military deception military information support operations operations security psychological operations (forces) tactical deception

Figure 1 — Example Mission Variables Informational Questions (FM 5-0)

the equation and are insufficient without properly planned communication.

Weather can affect beyond line-of-sight communication, such as high frequency (HF) radios, which a reconnaissance unit may depend on as its primary communication with higher headquarters. HF is less pervious to the effects of terrain, but it is vulnerable to certain weather conditions.⁹ Leaders should be reading the weather data to make deductions about both the friendly’s and enemy’s ability to communicate, as this directly affects command and control. The modern battlefield is littered with unmanned aerial systems, which can hinder a unit’s ability to mass the forces necessary for success.¹⁰ The proliferation of drones, though, is limited by weather, especially the smaller and more inexpensive variants. An enemy defense built on many drones capable of providing a real-time common operating picture to the higher headquarters is vulnerable to units capable of exploiting weather opportunities to seize an advantage. The weather may mask friendly units in the same way low-hanging fog can mask the movement of small dismounted teams through otherwise observable terrain. ATP 3-21.10 does not refer to how weather affects communication in Appendix B, and ATP 3-90.1 references how high-speed winds and precipitation may affect communication. They do not refer to the weather’s effects on intelligence, surveillance, and reconnaissance (ISR) platforms. Information advantage hinges on which

side has a better situational understanding. The terrain and weather affect both friendly forces and adversary forces, and it is incumbent on leaders to understand and analyze these effects before developing an enemy’s situation template and friendly course of action.

China and Russia emphasize information warfare with implications at all three levels of warfare. Yet, the current doctrine for company-level maneuver leaders generally categorizes those assets as “other” within capabilities. ADP 3-13 states, “Reflexive control is a concept that targets geopolitical opponents at the strategic level down to enemies on the battlefield at the tactical level.”¹¹ This can be seen on the battlefield through Russia’s extensive use of EW assets at each level of war, including the tactical, with electronic warfare units knocking drones out of the sky through non-kinetic means.¹² Dr. Lester Grau and Charles Bartles’ book *The Russian Way of War* describes how a Russian EW company synergizes differing warfighting functions like protection, fires, and intelligence towards a common end.¹³ The PLA similarly emphasizes EW as a key trend on the modern battlefield and is resourcing accordingly at all levels of war.¹⁴ Russia and China incorporate EW in ground maneuvers to provide an edge in situational understanding, decision-making, and relevant actor behavior. ATPs 3-21.10 and 3-90.1 correctly state that leaders need to analyze how the enemy wants to fight doctrinally and how it will fight given the specifics of the environment, but neither document refers to EW capabilities despite their importance in how the Russians want to fight.

With the transition of focus to LSCO, leaders often emphasize that ground forces cannot assume that friendly forces will have constant air superiority. This is correct, but it is just one side of how LSCO changes the dynamic because leaders will not have an assured information advantage. U.S. Air Force or Army attack aviation may not be available for a company-level fight. Still, the company commander may not know fully what the enemy is doing and may be unable to call on the reserve via frequency modulation (FM) radio to counter an enemy attack. The purpose of including information within the analysis of the other mission variables is to get leaders thinking about how the technology one relies upon can be attacked and manipulated to affect decision-making or limit options, and it may take on many different forms. Tactical-level doctrine fails to adequately explain how the battlefield is “informationized” and how the enemy will use the terrain and weather to leverage their strengths, protect their weaknesses, exploit U.S. advantages, and mitigate U.S. strengths. ATPs 3-21.10 and 3-90.1 should include these considerations during mission analysis. Leaders who better understand how information affects operations are better suited to incorporate the imperatives of operations from FM 3-0 and have laid the groundwork for approaching how information can aid in developing friendly COAs.¹⁵

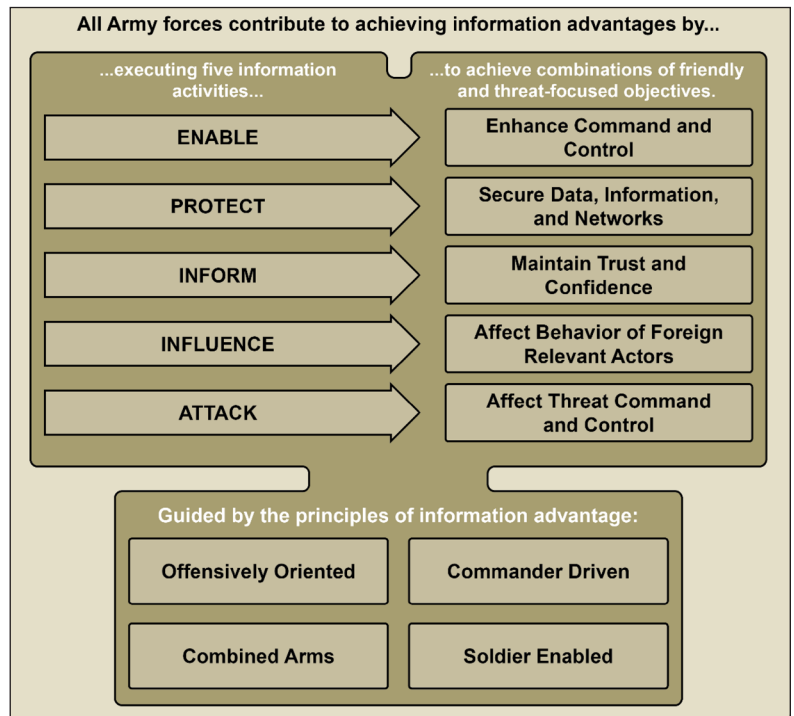
COA Development

The principles of information advantage should supplement how tactical leaders approach COA development. ATPs 3-21.10 and 3-90.1 state, “A COA describes how the unit might generate the effects of overwhelming combat power against the enemy at the decisive point with the least friendly casualties.”¹⁶ Both ATPs make a single reference to information during COA development. Yet, as FM 3-0 states about information, “It is also a key component of combat power necessary for seizing, retaining, and exploiting the initiative and consolidating gains.”¹⁷

There are two ways to incorporate information in COA development. First, instead of analyzing relative combat power solely through the lens of the warfighting functions, it could be through the lens of combat power to include the warfighting functions, information, and leadership. The other option is framing the deductions of the warfighting function in terms of leadership and information. The first option better aligns with FM 5-0, which lists information to be compared against the adversary’s capabilities.¹⁸ The second option better aligns with how information should be integrated with mission analysis; information tends to appear within each warfighting function as the connective tissue instead of as a standalone category. This then provides an opportunity for ATPs 3-21.10 and 3-90.1 to introduce the principles of information advantage: offensively oriented, combined arms, commander driven, and soldier enabled.¹⁹ Framing deductions from analyzing relative combat power through different lenses gives commanders a better tool for developing a COA than currently provided in doctrine.

The deductions from analyzing relative combat power form company-grade leaders’ key decisions when develop-

Figure 2 — Information Advantage Framework (ADP 3-13)





Soldiers from 2nd Battalion, 22nd Infantry Regiment, 1st Brigade Combat Team, 10th Mountain Division, conduct a combined arms live-fire exercise at Fort Drum, NY, on 6 February 2024. (Photo by SPC Kaylan T. Joseph)

ing a COA. It is the basis under which a leader takes what is available and successfully employs it against the adversary, outlining in the doctrine that those deductions should provide an information advantage whenever possible. FM 3-0 recognizes that maneuver and attrition are valid options for approaching a situation.²⁰ Whether conducting maneuver warfare or attrition, having an information advantage can be decisive. Understanding how to leverage persistent ISR to enable targeting and ground maneuver can provide opportunities to defeat the enemy. Still, our tactical-level doctrine does not specify those deductions beyond that one should seek an advantage. Information advantage is not the only thing a leader should seek when analyzing relative combat power, but it is one area they should consider. It should be clearly articulated in doctrine. This will help frame how leaders approach analyzing relative combat power and how they can use those deductions to bridge into generating options, arraying forces, and developing a concept of the option.

Currently, doctrine does not include much in-depth information during COA development, which again does not serve company-grade leaders well. Leveraging the warfighting functions towards achieving an information advantage is employing a combined arms approach. Doctrine should clarify this to leaders attempting to understand how to

develop a plan. Ultimately, commanders have to make decisions through planning and execution based on their understanding of the situation. ADP 6-0, *Mission Command*, clearly states how information relates to commanders' activities: "In the context of decision making, information is data that has been organized and processed in order to provide context for further analysis."²¹

Brand new platoon leaders should first master fire and maneuver and then, with experience, how the other warfighting functions are equally as vital to success. As leaders grow in a unit, they articulate concerns beyond fire and maneuver. This is a positive development, as leveraging the whole spectrum of assets available to achieve that edge in decision-making will serve the unit well. Again, information advantage is not the only way to frame what type of deductions leaders should search for while analyzing relative combat power. Still, it should be a key one and given consideration in doctrine. Leaders who understand how information provides opportunities for success will also better understand their framing of tactical risk.

Tactical Risk

An improved appreciation of information within ATPs 3-21.10 and 3-90.1 would better inform the understanding of tactical risk and how a commander can mitigate that

tactical risk. Tactical risk falls into two general categories: Deliberate choices the commander makes in friendly actions or allowing an enemy action, and this understanding is informed by mission analysis.²² Improving how maneuver company-grade leaders incorporate information into mission analysis yields a better understanding of tactical risk. The adversary will properly integrate information into mission planning, and maneuver leaders must understand this to account for it.

A commander's chosen action to assume risk in information may provide a temporary advantage, but it must be mitigated. A commander may mitigate risk by using operations in the information environment. A unit may use EW to cue the redeployment of forces from one avenue of approach in the defense to another. A commander may employ deception to lure the enemy into an engagement area. EW jammers may reinforce a smaller force to induce confusion in an engagement area synchronized with direct and indirect fires. A commander has multiple options available, but he or she must appreciate that operations in the information environment exist and account for them during the troop leading procedures.

Conclusions and Recommendations

Information is relevant to company-grade maneuver leaders, and our doctrine should reflect information as a mission variable. Information does not belong solely to a public affairs team; it is not only relevant to civilian considerations or solely confined to messaging. Information is the connective tissue between all the warfighting functions, enabling leadership and decision-making. Terrain, weather, and the adversary can challenge assured communication to create an effect supporting an objective. Friendly forces can do the same thing. Cyber and space capabilities bring a lot to bear on operations in the information environment, many of which are beyond the ability of a rifle company commander to influence, but they are not the only areas. Camouflage, deception operations, EW, and smoke screens are capabilities internal to a brigade combat team that fall within the umbrella of information. ADP 3-13 defines information as "data in context to which a receiver (human or automated system) assigns meaning."²³ A maneuver company commander can manipulate the data, challenge how it is received, and even take advantage of the context.

The Army must update ATPs 3-21.10 and 3-90.1 to better incorporate information as a mission variable. FM 5-0 provides a good starting point, but it should not just be copied and pasted. Current conflicts reveal that the information environment is contested, and those at the tip of the spear need doctrine that reflects this reality and provides

Information is relevant to company-grade maneuver leaders, and our doctrine should reflect information as a mission variable... Information is the connective tissue between all the warfighting functions, enabling leadership and decision-making.

the necessary tools to operate successfully in this contested environment.

Notes

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⁸ ADP 3-13, 1-1.

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¹⁰ Franz-Stefan Gady, "How an Army of Drones Changed the Battlefield in Ukraine," *Foreign Policy*, 18 December 2023, <https://foreignpolicy.com/2023/12/06/ukraine-russia-war-drones-stalemate-frontline-counteroffensive-strategy/>.

¹¹ ADP 3-13, 1-12.

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¹³ Dr. Lester W. Grau and Charles K. Bartles, *The Russian Way of War* (Fort Leavenworth, KS: Foreign Military Studies Office, 2016), 290, <https://permanent.fdlp.gov/gpo106676/2017-07-The-Russian-Way-of-War-Grau-Bartles.pdf>.

¹⁴ ATP 7-100.3, *Chinese Tactics*, August 2021, 7-2, https://armypubs.army.mil/epubs/DR_pubs/DR_a/ARN34236-ATP_7-100.3-001-WEB-3.pdf.

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¹⁶ ATP 3-21.10, *Infantry Rifle Company*, May 2018, B-24, https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/ARN8519_ATP%203-21x10%20Final%20Web.pdf; ATP 3-90.1, B-24.

¹⁷ FM 3-0, 1-22.

¹⁸ FM 5-0, 7-6.

¹⁹ ADP 3-13, 2-14.

²⁰ FM 3-0, 1-3.

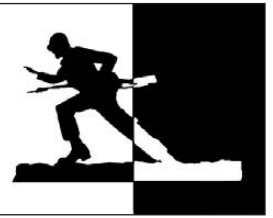
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²² ATP 3-90.1, B-9.

²³ ADP 3-13, 1-1.

MAJ Chris Salerno is currently a student at the Naval War College. He previously served as a Maneuver Captain's Career Course small group leader at Fort Moore, GA. His other assignments include serving as an observer-coach-trainer (OCT) on the Cobra Team at the National Training Center at Fort Irwin, CA; headquarters and headquarters company commander in 1st Squadron, 5th Cavalry Regiment and a troop commander in 4th Squadron, 9th Cavalry Regiment, both in 2nd Armored Brigade Combat Team, 1st Cavalry Division; and as a lieutenant in the 2nd Infantry Brigade Combat Team, 10th Mountain Division.

Book Reviews



Brutal War: Jungle Fighting in Papua New Guinea, 1942

By James Jay Carafano

Boulder, CO: Lynne Rienner Publishers, Inc., 283 pages, 2021

Reviewed by
MAJ James Villanueva



Discussions of ground combat in World War II often highlight the fighting in North Africa, the Western Allies' liberation of France, or the titanic struggle on the Eastern Front. When ground combat in the Pacific Theater is discussed, the focus is typically on the Marine Corps' epic assaults on islands like Tarawa and Iwo Jima or the liberation of the Philippines under the towering, although controversial, General Douglas MacArthur. Although some books about early struggles of the U.S. Army in the Pacific exist, like Eric Bergerud's *Touched with Fire: The Land War in the South Pacific*, the topic still has not been explored as thoroughly as the aforementioned campaigns. With his recent book *Brutal War: Jungle Fighting in Papua New Guinea, 1942*, author James Jay Carafano brings the 1942 campaign in Papua New Guinea front and center. Carafano, a national security expert and former U.S. Army officer who earned a Ph.D. and master's degree from Georgetown University, brings together the American, Australian, indigenous, and Japanese viewpoints in this interesting and well-written book.

Carafano begins with a chapter outlining the strategic setting for the Papuan Campaign, starting with the Allied agreement on a strategy of defeating Germany "first" while also resourcing campaigns to repel Japanese advances and then proceed through the Pacific against Japan itself. He considers the competing goals of the Australians, British, Japanese, and Americans at the strategic, operational, and tactical levels of war and concludes that none of the warring powers were prepared for the combat they would face on Papua. None of the armies sufficiently trained their forces for the rough topographic and extreme environmental conditions found there, nor did they plan how to effectively sustain their forces under those conditions. The forces of each nation would have to try to fight in the midst of solving these problems.

At the strategic and operational levels, Carafano gives a good summary of the goals and issues facing each side. The Japanese viewed control of Papua, especially the seizure of Port Moresby on the island's southern shore, as crucial to maintaining pressure on Allied lines of communication with Australia. The island was also a key position for a perimeter defense of Japanese gains made thus far in the war. Meanwhile, the Allies sought to retake Papua to reduce

the threat to Australia, lay the ground for future offensives, and gain crucial positions to isolate and/or reduce the large Japanese base at Rabaul.

After setting the strategic stage for the fighting on Papua, Carafano discusses the specific conditions which made the fighting there so brutal. While the jungle flora, steep topography, and wet conditions created problems in merely moving troops and supplies, the numerous diseases present — from scrub typhus to malaria — served to rapidly reduce the fighting strength of the Australian, American, and Japanese armies alike. The need for manual labor to move supplies, equipment, and casualties in places where there were no roads brought many of the indigenous peoples into the story of the campaign as porters and stretcher bearers. With potential great power conflict in tropical regions, current Soldiers would do well to understand the challenges of operating in severely restrictive jungle terrain as outlined in *Brutal War*.

The next five chapters delineate the struggles of the fighting forces on both sides to maintain their fighting strength at the end of overstretched lines of communication on jungle paths with numerous non-battle injuries. Commanders faced dilemmas when deciding whether to attack to achieve their objectives while running the risk that further advances risked culmination due to lack of supplies. While the Australians found themselves conducting a fighting retreat at the beginning of the campaign, the Japanese, woefully short on supplies, were forced to abandon the advance towards Port Moresby. The direct leadership of officers such as Australia's William T. Owen and Arthur Key and U.S. I Corps Commander LTG Robert Eichelberger inspired their men to overcome numerous hardships in turning the tide of the campaign in the Allies' favor. Carafano does an excellent job explaining the decisions facing commanders at the time and offering balanced assessments of their, and their units', performance. Crucially, he argues against traditional narratives that the Japanese were suffering from "victory disease," instead noting that Japanese commanders in several instances took honest appraisals of their limitations but often had little choice other than to keep fighting under suboptimal conditions.

Carafano's book would be useful to military professionals because it highlights the importance of understanding specific aspects of the terrain on which one is going to fight while also pointing out the pivotal role logistics has in driving the nature and even success or failure of a campaign. The lack of preparation for the campaign by all belligerents — whether it be in training, terrain analysis, logistics, or command and control — provides a cautionary tale to leaders at all levels of command. Additionally, the different perspectives of the belligerents and civilians in the war are also important. Besides a few typos, the book could benefit from a few more maps with the narratives on the actual fighting. But these are minor

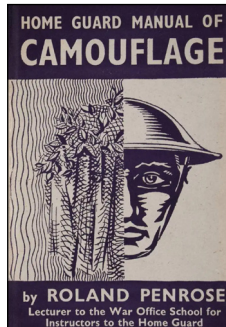
critiques. Ultimately, *Brutal War* offers a concise account that reflects good scholarship and brings greater attention to a campaign that is too often forgotten in the United States.

Home Guard Manual of Camouflage

By Roland Penrose

East Sussex, England: Lee Miller Archives Publishing, 102 pages, 2022

Reviewed by SFC (Retired)
John C. Simpson



"I could not help laughing at the ease with which he explained his process of deduction. 'When I hear you give your reasons,' I remarked, 'the thing always appears to me to be so ridiculously simple that I could easily do it myself, though at each successive instance of your reasoning I am baffled until you explain your process. And yet I believe that my eyes are as good as yours.'"

"'Quite so,' he answered, lighting a cigarette, and throwing himself down into an armchair. 'You see, but you do not observe.'"

— **"A Scandal in Bohemia," *The Adventures of Sherlock Holmes* by Arthur Conan Doyle**

Thanks to Lee Miller Archives Publishing, *The Home Guard Manual of Camouflage* by Roland Penrose (one of the best camouflage manuals ever written) is now back in print — and that's good news!

Yeah, I know... who is this Roland Penrose person and why do I care what he has to say about camouflage? Penrose (1900-1984) was an artist associated with the Surrealist Movement. He was also a photographer as well as a friend and biographer of Pablo Picasso. What concerns us, however, is the impact he had on camouflage training in England during World War 2.

During World Wars I and II, numerous artists working in paint, sculpture, and the like were recruited into military service with an eye towards using their insights into vision, color, and texture to develop means and methods to conceal men, buildings, and equipment.

Although a Quaker and a pacifist, British artist Penrose contributed to the war effort by training the British Home Guard in camouflage techniques. The Home Guard was a volunteer uniformed defense militia eventually consisting of 1.5 million volunteers who were unavailable for military service due to being too young or old. Membership also included men in protected occupations who were ineligible to serve in the military.

It's important to understand in the context of this manual that the Home Guard was mainly intended to serve as an anti-

invasion force, so they were trained in tactics, small arms, demolitions, hand-to-hand combat, and of course, camouflage. They also did this on basically no budget, being last in priority for military weapons, equipment, and other resources.

This also leads into why this book is relevant today: Once upon a time, people and things had to be camouflaged from overhead observation. Training exercises were conducted where Army engineers in training would camouflage a building, an artillery battery, or vehicles and then an airplane would fly overhead to provide feedback. More on this later.

Penrose became a lecturer at the War Office School for Instructors, and fortunately, those lectures are what have been captured in this book. What I found fascinating was his approach of the subject. Similar to how a doctor may not look for an individual germ but rather the symptoms being displayed to diagnose a disease, someone looking for you with ill intent isn't necessarily hoping to see you but rather the symptoms of your presence.

The book has two chapters that I consider timeless: "Nature As A Guide" and "Applications of Lessons Learned From Nature." The budding camouflage expert is encouraged to note not only the color but the texture of surrounding objects, among other things. Or, as I would present it to a modern audience: Step outside, put away the phone, and see what nature looks like for yourself!

He provides a thorough and enjoyable section on his general principles related to how things are seen (I loved how this artist pointed out that most green paint has too much blue in it to blend into nature). From general principles, he moves into specific applications and then concludes with individual camouflage. And as I suspected, although instructions for preparing various sniper suits are included with diagrams, there's no mention whatsoever of ghillie suits.

The text is amplified by numerous black-and-white graphics that range from rough sketches to detailed drawings to crisp aerial photographs. I emphasize the aerial photos because I've been a firm believer that in order to be a good "hider" in this life you have to strive to be a good "finder" and vice versa. This is why I chose to start this review by quoting the great Sherlock Holmes. No doubt you'll come across something in the text concerning shadow and think to yourself, "Well, that's obvious!" In my experience though, it only becomes obvious once someone else has pointed things out you.

Like a lot of wartime texts, there are references made to other British Army training manuals that are themselves now collector's items, specifically Military Training Pamphlets 46 Parts 1 and 2 as well as "Training Posters" Penrose disseminated at the Camouflage School. The good news for the serious student is that both of these manuals are available as hi-res scans at the Internet Archive and made available through the Vickers Machine Gun Collector's Society. I'm still trying to get a handle on the posters as I write this, however.

Also, since this was written in 1941, there's no consideration given to either near infra-red (reflectance) or far infra-

red (thermal), nor to image intensifiers at night.

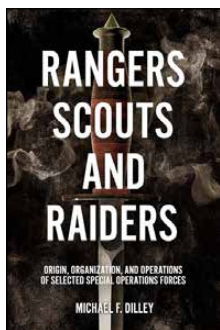
Regardless of those two caveats, this is a very useful book to keep handy in that section of your library devoted to camouflage. If nothing else (and that's a big "if" given the current existence of drones for sale on the civilian market), this book gets your head back in the game regarding camouflage against overhead observation. So, I say keep it handy because it bears re-reading numerous times while you either underline, highlight, or otherwise call out passages that you particularly need to practice. And I'll finish by repeating my earlier suggestion: Go outside, put away the phone, and start noticing things. You'll be glad that you did.

Rangers, Scouts, and Raiders: Origin, Organization, and Operations of Selected Special Operations Forces

By Michael F. Dilley

Havertown, PA: Casemate Publishers, 188 pages, 2023

Reviewed by LTC (Retired)
Jesse McIntyre III



Special operations forces and their missions have long captured the imagination. These units until recently were ad hoc formations created for an intended purpose and disbanded after the conflict or mission. Military historian and author Michael Dilley examines the rich and extensive history of American special operations forces from the French and Indian War to Vietnam in *Rangers, Scouts, and Raiders: Origin, Organization, and Operations of Selected Special Operations Forces*.

Dilley opens with the return of Rogers' Rangers. Most remember the military exploits of Major Robert Rogers and his Rangers during the French and Indian War and his storied association with today's Army Rangers. Few know that Rogers offered his services to both sides during the American Revolution. Even fewer know of Rogers' role in capturing American spy Captain Nathan Hale.

Dilley informs us that General Billy Mitchell's vision for air power went beyond strategic bombing. Mitchell envisioned a concept where Infantrymen could be dropped by parachute into an enemy's rear to disrupt operations. He describes Mitchell's plans to drop the Army's 1st Infantry Division behind German lines in the spring of 1919 when there would be a sufficient number of parachutes and bombers for the operation. Mitchell's interest in developing airborne capabilities did not end with World War I; he conducted two demonstrations in 1928 utilizing parachuting Soldiers. While Army observers did not take the demonstrations seriously, observers from Germany and Russia were impressed which led to both coun-

tries developing their own airborne capabilities.

Readers will find Chapter 6 "The Alamo Scouts – LRRPS of World War II" especially interesting. LTG Walter Krueger, commander of the U.S. Sixth Army, created a special reconnaissance unit to be at his disposal for scouting and raiding missions. Alamo Scouts operated behind Japanese lines during the two years they existed. Their missions included capturing Japanese prisoners, liberating Allied prisoners, recovering down crewmen and/or equipment, conducting reconnaissance, and gathering intelligence. During more than 110 missions conducted by Alamo Scouts, not one was killed or captured. The scouts would serve as a model for long-range reconnaissance patrols of Vietnam and for 75th Ranger companies.

Dilley excels in describing the Son Tay Raid along with its positive consequences despite failing in its intent to rescue American prisoners of war. A disappointment is the fact that Desert One was not included in this work. It would have been interesting to learn Dilley's perspective on the mission, lessons learned, and consequences following the rescue attempt.

The strength of *Rangers, Scouts, and Raiders: Origin, Organization, and Operations of Selected Special Operations Forces* is its exceptional prose and style; it is simply hard to put down. Each chapter contains a list of sources for further research. The work is highly readable and would be an excellent addition to the library of any historian or student with an interest on the subject.

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