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Reconnaissance and Security Training

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BG John Kolasheski
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Reconnaissance and Security Proficiency

Armor and Cavalry troopers thrive on conditions of ambiguity, uncertainty and complexity. We are comfortable away from the main body, operating in front or on the flanks, and decisive when leading it. We are known for our ability to combine the superior capabilities of our equipment with the ingenuity of our troopers to find, fix, close with and destroy any enemies through the combination of mobility; precise, lethal and overwhelming firepower; and devastating shock effect. To fight and win under these conditions, Armor and Cavalry Soldiers, leaders and formations must be competent and grounded in the fundamentals of their craft. Commanders and leaders at each echelon have the responsibility to drive rigorous, realistic, mission-essential task list-focused, multi-echelon training that not only builds readiness but ensures that we are training the way we intend to fight. This is a collective responsibility and an area that requires our utmost attention and focus.

To close gaps in current knowledge and improve reconnaissance and security (R&S) proficiency, the Armor School is focused on four areas: 1) educating leaders, requiring attendance at critical R&S and functional-training courses prior to officers (lieutenants through majors) departing professional military education for follow-on assignments; 2) reaching out to our "dirt" combat training centers and the operating force to assist with R&S education and training and to ensure our programs of instruction (PoI) stay current; 3) recruiting the highest-quality talent with the right operational experience to come back to Fort Benning as instructors and cadre; and 4) publishing documents intended to aid brigade combat teams, battalion and company/troop commanders in the development and execution of home-station training. Two of these documents are ***A Commander's R&S Handbook*** and the Armor Branch Leader Development and Training Strategy. We are also working with U.S. Army Training and Doctrine Command to assess R&S requirements at echelon and are submitting force-design updates to codify personal and positional additional skill identifiers for critical positions.

This year's Gainey Cup offers the opportunity to see how we are doing as we test the mettle of scouts from across the Army, Marine Corps and our allies, and crown the "best scout squad." The Gainey Cup will take place May 1-4 at Fort Benning, GA. On the afternoon/evening of May 1, we will conduct a "Scouts in Action" demonstration and no-host social; May 2 and 3 will be the principal competition days; and then May 4 we will host the award ceremony and have a cookout over in Harmony Church. We plan on holding the Saint George dinner the night of May 4 at the River Mill in downtown Columbus. We truly hope you can make it. For more information on the Gainey Cup, please go to http://www.benning.army.mil/armor/gainey-cup/.

In closing, CSM Alan Hummel and I are immensely proud of our branch, the "combat arm of decision," and each and every one of you, but we can't rest on our laurels. Please let us know what works, what does not, where we can help, and where we need to adjust fire. Thanks and see you in May.

Forge the Thunderbolt!

GUNNER'S SEAT

CSM Alan K. Hummel
Command Sergeant Major
U.S. Army Armor School

Reconnaissance and Security, the Gainey Cup

In this edition of ***ARMOR***, I will focus on the upcoming Gainey Cup. I would like to address who the competition is named after, what the competition represents and, finally, the importance of the scout squad.

The Gainey Cup is named in honor of retired CSM William Gainey. CSM Gainey started his tenure in the Army in 1974 when he enlisted as a 19D, and he served in every position from driver to command sergeant major. CSM Gainey served as the command sergeant major for more than eight units and organizations. He holds the distinguished honor of being selected in 2005 to serve as the first senior-enlisted adviser to the Chairman of the Joint Chiefs of Staff.

This year's Gainey Cup competition takes place the first week of May. The competition brings cavalrymen together in a healthy and competitive environment while building *esprit de corps* and developing reconnaissance and security (R&S) proficiency. The event includes teams from the U.S. Army, the U.S. Marine Corps and select international partners. The competition will be physically and mentally challenging for all troopers by rigorously testing their knowledge, tactical competence and fortitude in the fundamentals of R&S operations. At the end of the two-day competition, the winning unit will be declared the "best scout squad."

The competition focuses on the performance of the scout squad and the ability of the junior noncommissioned officer (NCO) to train, plan and execute tasks with his Soldiers. The training these junior NCOs provide is the key factor in determining who succeeds during the Gainey Cup. The sole purpose of these NCOs is to increase the effectiveness and knowledge base of their Soldiers. Competitions such as this are great demonstrations of the ability of the Army's junior NCOs to train and motivate their Soldiers to expect and achieve excellence.

Senior NCOs must continue to provide the supervision and expertise that allows our junior NCOs to be so successful in their endeavors. Please continue to train and motivate your NCOs and Soldiers to come and compete at such events as the Gainey Cup.

Save the dates May 1-4 to join us at the 2017 Gainey Cup. We look forward to seeing you.

In Memoriam: LTG Harold G. "Hal" Moore

"There is no such thing as closure for soldiers who have survived a war. They have an obligation, a sacred duty, to remember those who fell in battle beside them all their days and to bear witness to the insanity that is war."
— Harold G. Moore, ***We Are Soldiers Still: A Journey Back to the Battlefields of Vietnam***

Retired LTG Harold G. "Hal" Moore, the leader known for saving most of his men in the first major battle between the U.S. and North Vietnamese armies, died Feb. 10. He was 94, two days short of his 95th birthday.

Moore died in his sleep at his home in Auburn, AL. He was preceded in death by his wife, Julia B. Compton Moore, whom he married in 1949 and who died in 2004.

Then a lieutenant colonel, Moore commanded 1st Battalion, 7th Cavalry Regiment, at the Battle of Ia Drang in November 1965 during the Vietnam War. In 1992 Moore co-authored a book on this battle with Joseph L. Galloway, a former United Press International reporter, titled ***We Were Soldiers Once ... and Young***. The book was adapted into the 2002 film ***We Were Soldiers***, which was filmed at Forts Benning, GA, and Hunter Liggett, CA, depicting Moore's command of 1st Battalion, 7th Cavalry, at Fort Benning and in the Battle of Ia Drang. Moore was played by actor Mel Gibson.

Moore and Galloway wrote another book together, a follow-up to their first collaboration. ***We Are Soldiers Still; A Journey Back to the Battlefields of Vietnam***, published in 2008.

Figure 1. Pictured here as a colonel, LTC Hal Moore was the on-scene battalion commander during American forces' initial large-scale encounter with regular enemy forces in the la Drang Valley in 1965. *(U.S. Army photo)*

Moore's leadership in 'battle that changed everything'

The Battle of the Ia Drang Valley has been touted as "the battle that changed everything." For Americans, it was the beginning of a new kind of warfare using helicopters. The battle was also a historical turning point because it changed American involvement from advisers and materiel support to full-scale combat. Veterans from 1st Battalion, 7th Cavalry, and the newly created 2nd Battalion, 7th Cavalry, were in fierce firefights with the North Vietnamese Army (NVA) for the first time in the Vietnam War.

The initial NVA assault against 1/7 Cav's landing at Landing Zone (LZ) X-Ray was repulsed after two days and nights of heavy fighting Nov. 14-16, 1965. There the Americans inflicted major losses on NVA and Viet Cong guerrillas. Encircled by enemy soldiers with no clear LZ that would allow the Americans to leave, Moore managed to persevere despite being significantly outnumbered by NVA forces that would go on to defeat the marching column of 2/7 Cav only 2½ miles away the next day in the most successful ambush of U.S. forces of the Vietnam War. Moore's dictum that "there's always one more thing you can do to influence any situation in your favor" and the courage of his entire command are credited with this outcome.

When former leaders from 1/7 Cav and 2/7 Cav participated in leadership professional-development sessions at Fort Benning Nov. 24, 2015, to help the Maneuver Center of Excellence commemorate the 50th anniversary of the Battle of Ia Drang, the guest speakers' overall theme was that training saved the day for U.S. Soldiers. However, retired COL Ramon "Tony" Nadal of 1/7 Cav thought there was one other factor: "The role of the leader in a battle of this intensity [1/7 Cav at LZ X-Ray] is essential," he said. He credited Moore with the unit's survival.

Nadal linked Moore's training philosophy for SFC Clyde "Ernie" Savage's ability to command the "Lost Platoon" (2nd Platoon, Company B, 1/7 Cav). "Moore's philosophy was to train two levels down," Nadal recalled, "so when Savage lost his platoon leader and platoon sergeant, he – as an assistant platoon sergeant – was able to assume command."

J.L. "Bud" Alley Jr. of 2/7 Cav

commented that his unit was the opposite of the well-trained 1/7 – 2/7 was the "oh shucks battalion." The antithesis of Moore's philosophy of command, 2/7 Cav was "a green, green unit; we had not trained together; we didn't know each other," Alley said.

As much as 2/7 Cav had a leadership vacuum, Alley saw a strong leader at 1/7 Cav. He said that after the battle for LZ X-Ray, reporters came to see Moore. "This stern, stoic man, a man of men, teared up when talking about the heroism of his Soldiers," Alley said. "This taught me that you can love your men."

Summation of service

Moore was the recipient of the Distinguished Service Cross, which is the U.S. military's second-highest decoration for valor, for extraordinary heroism at Ia Drang. He was the first of his West Point class to be promoted to brigadier general, major general and lieutenant general. (See sidebar for other awards and honors.)

Moore received an appointment to the U.S. Military Academy shortly after the United States entered World War II. He graduated West Point June 5, 1945, and was commissioned as a second lieutenant in the Infantry Branch. After graduating Infantry Officer Basic Course at Fort Benning and jump school at 11th Airborne Division in Tokyo, Japan, he was assigned to 187th Glider Infantry Regiment at Camp Crawford near Sapporo, Japan. He then commanded a company for seven months, with a follow-on assignment as Camp Crawford's construction officer, in which he was responsible for all construction improvements being made at the camp.

In June 1948 he was reassigned to 82nd Airborne Division at Fort Bragg, NC. He volunteered to join the Airborne Test Section, a special unit testing experimental parachutes, and he made some 150 jumps with the section during the next two years. Over the course of his career, he became a master parachutist with more than 300 jumps.

In 1951, he attended Infantry Officer's Advanced Course at Fort Benning, then in June 1952, he was assigned to 17th Infantry Regiment, 7th Infantry Division, where he commanded a heavy-mortar company in Korean War combat. He next served as regimental assistant chief of staff, operations and plans. Since the 7th Division commanding general's policy was that no promotion to major was possible without command of an *infantry* company in combat, the division commander personally assigned Moore to an infantry company so that Moore could be promoted to major and thus become division assistant chief of staff for operations.

Moore returned to West Point in 1954 and served three years as an instructor in infantry tactics. While serving as an instructor, Moore taught then-Cadet Norman Schwarzkopf, who called Moore one of his "heroes" and cites Moore as the reason he chose the Infantry Branch upon graduation.

After attending Command and General Staff College at Fort Leavenworth, KS, in 1956, Moore then reported to the Office Chief of Research and Development at the Pentagon, where his initiative and insights were key to the development of new airborne equipment

Harold G. Moore quotes on leadership

"In the American Civil War, it was a matter of principle that a good officer rode his horse as little as possible. There were sound reasons for this. If you are riding and your soldiers are marching, how can you judge how tired they are, how thirsty, how heavy their packs weigh on their shoulders? I applied the same philosophy in Vietnam, where every battalion commander had his own command-and-control helicopter. Some commanders used their helicopter as their personal mount. I never believed in that. You had to get on the ground with your troops to see and hear what was happening. You have to soak up firsthand information for your instincts to operate accurately. Besides, it's too easy to be crisp, cool and detached at 1, 500 feet; too easy to demand the impossible of your troops; too easy to make mistakes that are fatal only to those souls far below in the mud, the blood and the confusion." —from ***We Were Soldiers Once … and Young***

"There's always one more thing you can do to influence any situation in your favor – and after that one more thing, and after that. … The more you do, the more opportunities arise." —from ***We Are Soldiers Still: A Journey Back to the Battlefields of Vietnam***

"A commander in battle has three means of influencing the action: Fire support; his personal presence on the battlefield; and the use of his reserve." —from ***We Were Soldiers Once … and Young***

"May God bless and keep all soldiers, young and old, and may that same God open the eyes of all political leaders to the truth that most wars are a confession of failure – the failure of diplomacy and negotiation and common sense and, in most cases, of leadership." —from ***We Are Soldiers Still: A Journey Back to the Battlefields of Vietnam***

"Only first-place trophies will be displayed, accepted or presented in this battalion. Second place in our line of work is defeat of the unit on the battlefield and death for the individual in combat. No fat troops or officers. Decision-making will be decentralized: Push the power down. It pays off in wartime. Loyalty flows down as well. I check up on everything. I am available day or night to talk with any officer of this battalion. Finally, the sergeant major works only for me and takes orders only from me. He is my right-hand man." —from ***We Were Soldiers Once … and Young***

"These times, indeed all times, demand national political leaders who know not only our history but the history of the world and its nations and peoples. We need leaders of principle, courage, character, wisdom and discipline." —from ***We Are Soldiers Still: A Journey Back to the Battlefields of Vietnam***

and airborne/air-assault tactics. Following graduation from the Armed Forces Staff College at Norfolk, VA, in 1960, Moore served a three-year tour as North Atlantic Treaty Organization plans officer with Headquarters Allied Forces Northern Europe in Oslo, Norway.

In 1964, now a lieutenant colonel, Moore studied at the Naval War College while earning a master's degree in international relations from George Washington University. He was then transferred to Fort Benning to command 2nd Battalion, 23rd Infantry – later to become part of 11th Air Assault Division, which was undergoing air-assault and air-mobility training and tests.

On July 28, 1965, President Lyndon Johnson announced that he was sending "the airmobile division to Vietnam." That same month, 11th Air Assault was re-designated 1st Cavalry Division (Airmobile) and alerted for deployment to Vietnam. Moore's battalion was redesignated as 1st Battalion, 7th Cavalry Regiment, 1st Cavalry Division (Airmobile), the same regiment that was LTC George Armstrong Custer's command when the Irish song ***Garry Owen*** was adopted as a marching tune. (In fact, blond-haired Moore was known as "Yellow Hair" to his troops at the Battle at Ia Drang as a tongue-in-cheek homage to Custer, who was commanding the same 7th Cavalry Regiment at the Battle of the Little Bighorn just under a century before.)

The Garry Owen Brigade left Fort Benning Aug. 14, 1965, and deployed to South Vietnam by way of the Panama Canal, arriving at the division's An Khê Base Camp a month later. Beginning Nov. 14, 1965, Moore led 1/7 Cav in the Battle of Ia Drang. After this battle, Moore was promoted to colonel and commanded Garry Owen Brigade (3rd Brigade, 1st Cavalry Division).

After his service in the Vietnam War, Moore served at the Pentagon as the military liaison to the assistant secretary for international affairs in the Office of Undersecretary of Defense. In his next assignment, the Army sent him to Harvard University, where he completed his master's of arts degree in international relations in 1968. Moore then reported to the Pentagon again to work with the deputy chief of staff for operations, where he helped draft the Army plan for the withdrawal of two brigades of 9th Infantry Division to the United States as a part of the Vietnamization-of-the-war effort.

Moore was promoted to brigadier general Aug. 31, 1968, and, in July 1969, he was assigned as assistant chief of staff for operations and plans of Eighth Army in South Korea, where tensions were high from incidents along the demilitarized zone, and drug use and racism among Eighth Army troops were at an all-time high. Moore became commanding general of 7th Infantry Division and was promoted to major general – both in 1970 – and was charged by the commanding general of U.S. Forces Korea with cleaning up the drug-abuse and racial-strife problems that were prevalent at the time in 7th Division.

His plan established officer leadership schools for company-grade officers and a noncommissioned-officer leadership school for staff sergeants and below. Moore also issued equal-opportunity policy and backed up the policy with the promise to punish leaders who discriminated based on race, ethnicity or creed. As a part of the reformation of division morale, he established several athletic programs, including football, basketball and boxing.

Next, as commanding general of the Army Training Center, Fort Ord, CA, from 1971-1973, he oversaw the experimentation in adapting basic and advanced individual training under Project VOLAR to prepare for the end of conscription and the institution of the modern Volunteer Army. In 1975, the Army's Center of Military History published ***Building a Volunteer Army: The Fort Ord Contribution***, by Moore and LTC Jeff M. Tuten; the 139-page paperback is a monograph concerning the Project VOLAR experiments during Moore's tenure in command of Fort Ord.

In August 1973, Moore was assigned as commanding general, U.S. Army Military Personnel Center, and in 1974 he was appointed the Army's deputy chief of staff for personnel. In this last assignment before leaving the Army, he dealt with Army recruiting issues after termination of the draft as well as the orderly drawdown of forces after the Vietnam War's close.

Moore was next slated to become the commanding general of U.S. Army Japan, but he elected to retire instead. He retired from the Army Aug. 1, 1977, after completing 32 years' active service.

Awards and honors

Distinguished Service Cross, Army Distinguished Service Medal, Legion of Merit with two bronze oak-leaf clusters (OLCs), Bronze Star Medal with "V" Device and three bronze OLCs, Air Medal with one silver and three bronze OLCs, Joint Service Commendation Medal, Army Commendation Medal with two OLCs, American Campaign Medal, Asiatic-Pacific Campaign Medal, World War II Victory Medal, Army of Occupation Medal, National Defense Service Medal with one bronze star, Korean Service Medal three bronze stars, Armed Forces Expeditionary Medal, Vietnam Service Medal with three bronze stars, Republic of Vietnam Gallantry Cross with three palms and bronze star, United Nations Service Medal for Korea, Republic of Vietnam Campaign Medal w/ 1960- device, Republic of Korea War Service Medal.

Combat Infantryman Badge w/ star, Republic of Vietnam Parachutist Badge, 1st Cavalry Division Combat Service Identification Badge, Master Parachutist Badge, Basic Army Aviator Badge, Air Assault Badge, Army Staff Identification Badge, Office of the Secretary of Defense Identification Badge.

Acronym Quick-Scan

LZ – landing zone
NVA – North Vietnamese Army
OLC – oak-leaf cluster

Making Reconnaissance Guidance Say What You Think

by CPT Luke C. Bowers

Reconnaissance-troop commanders must be highly proficient and adaptable in combined-arms maneuver because cavalry units often operate in environments of uncertainty and with a disadvantage: they lack intelligence-planning products for enemy disposition and terrain effects during the operation's initial phases.

Despite the shortcomings in intelligence preparation, troops must deploy into the area of operation (AO) and answer the brigade combat team (BCT) and squadron commanders' priority information requirements (PIR) while exercising maneuver fundamentals.

Troops must employ movement techniques and formations suited to the facets of the mission variables: mission; enemy; terrain and weather; troops and support available; time available; and civil considerations (METT-TC).[1] However, recent observations from the combat-training centers (CTCs) reveal that troops lack proficiency when employing maneuver fundamentals and synchronizing warfighter functions during platoon- to squadron-level operations.[2] The absence of maneuver, as different from movement, may be symptomatic of current commanders' and leaders' poor habits learned and practiced during the war on terrorism; in counterinsurgency-centric tactics, techniques and procedures; or from inexperience in how to apply troop-leading procedures (TLPs) to reconnaissance planning.

Cause for concern

Regardless of the phenomenon's cause, an observable deficiency across multiple CTCs and BCT/squadron configurations should generate concern for the Armor Branch (as the proponent of reconnaissance) and reconnaissance organizations.

With that in mind, reconnaissance practitioners can derive reconnaissance guidance from the intelligence preparation of the battlefield (IPB) process and use it to develop a commander's intent that will accomplish the reconnaissance mission. An improved understanding of that process and application to the framework will likely increase the reconnaissance commander's ability to answer PIR as well as enhance unit survivability in an uncertain operating environment.

IPB

The IPB is a highly important step in developing a troop's course of action (CoA) and ultimately its scheme of maneuver during TLP Step 3 (*make a tentative plan*). Moreover, IPB is the systematic process of analyzing METT-TC's mission variables in an AO and area of interest to determine their effect on operations.[3] In other words, the IPB process allows the commander to understand the operational environment (OE) and begin visualizing how to solve the tactical problem.

Many commanders, especially in time-constrained environments, will rapidly develop a CoA by simply applying a doctrinal template and graphic-control measures to their map and graphics. The enemy icons are templated in a manner that supports the friendly plan. Commanders become hesitant to change the generic situational template because doing so would require them to adjust the plan they have already decided to implement. However, adhering to the complete IPB process to gain understanding will likely prevent the phenomenon (and planning fallacy) of placing the blue marker on the map before the red.

The first step, *define the OE*, identifies (for further analysis) the OE's significant characteristics that may influence friendly CoAs and command decisions[4] that help the commander see the bigger picture. This step should facilitate understanding of the OE two levels up. There is potential to expend a great deal of time analyzing and assessing extraneous data here. Therefore commanders should parallel-plan with the squadron staff as early as possible, ideally during the first two steps of the squadron-level military decision-making process (MDMP). Parallel-planning at this point is most ideal because the squadron staff likely hasn't generated specific tasks or briefings that will require the troop commander's full attention. The troop commander can be efficient with his time by working with the squadron S-2 (intelligence officer) and S-3 (operations officer) early and sharing their analysis.

The second step, *describe the environmental effects on operations*, is immensely important in the planning process. Troop commanders should not maintain the onus for this exclusively or rely on squadron staff for analysis of the terrain where they will fight alone. Troops should identify and train personnel as part of an orders working group to assist the commander with development of modified combined obstacle overlays (MCOOs) and/or graphical terrain-analysis overlays (GTAOs). Detailed map reconnaissance and terrain-model construction aid the entire troop team in gaining a shared understanding of the battlefield effects. This also frees the commander for parallel and collaborative planning with the squadron staff.

Analyze route for time

Ideally, the troop's senior scouts or the leading platoon will conduct analysis of route/axis distances for time considerations in later planning. The resulting analysis helps the commander understand the rate of movement necessary to be at reconnaissance objectives and answer PIR in conjunction with the information-collection (IC) plan. Also, this can alert the commander to a conflict of realistic timing for maneuver compared to the higher headquarters' recon guidance (for example, "rapid" or "deliberate"). Those leaders can then present analysis during TLPs and brief the situation paragraph of the troop operations-order brief.

A highly detailed terrain analysis will further enable the efficient

development of terrain-based named areas of interest (NAIs) when the recon mission is terrain-focused. Commanders can use the assistance of the squadron and BCT staff products and estimates, including products from the BCT's geological terrain team; however, there will likely be competition for these resources, and the prudent commander should not wait or suspend planning for them.

During Steps 1 and 2, the commander should have developed a number of analytical tools that can used for planning and operation execution such as the GTAO, MCCO and light data chart.

The third step, *evaluate the threat/adversary*, drives the commander to assess how the enemy will influence friendly operations.[5] The commander evaluates the enemy through doctrine (if available) and/or historic examples under comparable factors; he/she uses U.S. doctrine as a final resort. The commander analyzes the enemy's strengths and weaknesses according to warfighter functions. The outcome of the analysis for strength predicts the high-value targets (HVT) for the enemy (potential high-payoff targets for the friendly). The resulting analysis should identify what strengths the enemy will employ during IPB Step 4 and what weaknesses the friendly commander will exploit with his strengths in CoA development.

For example, analysis that highlights an enemy's overmatch of strength in artillery may indicate that he will attempt to achieve decision through fires before exercising movement of infantry. The commander depicts this model of fighting graphically, without effects of weather and terrain, on a doctrinal template.

The fourth step, *determine threat/adversary CoA*, is where the commander places the red marker on the map and visualizes how the enemy will fight by integrating the effects of terrain and weather from IPB Step 2 and the strengths and doctemp of IPB Step 3. If the commander is disciplined and followed the steps sequentially, he/she will develop enemy CoAs that make sense for the enemy commander's task and purpose – respecting terrain's effects – and not an enemy plan that fits the CoA the friendly commander would prefer to support the blue plan.

Threat-based recon

When conducting threat-based reconnaissance, if the enemy is in the AO, the troop commander must depict enemy CoAs (and/or key weapon systems) with composition and disposition one level below the force opposing him. Detailed analysis of the threat's composition, disposition and tactical tasks, identified as PIR when applicable, will enable the sections and scouts to distinguish the most-likely CoA from the most-dangerous CoA or to invalidate incorrect assessments when maneuvering and conducting

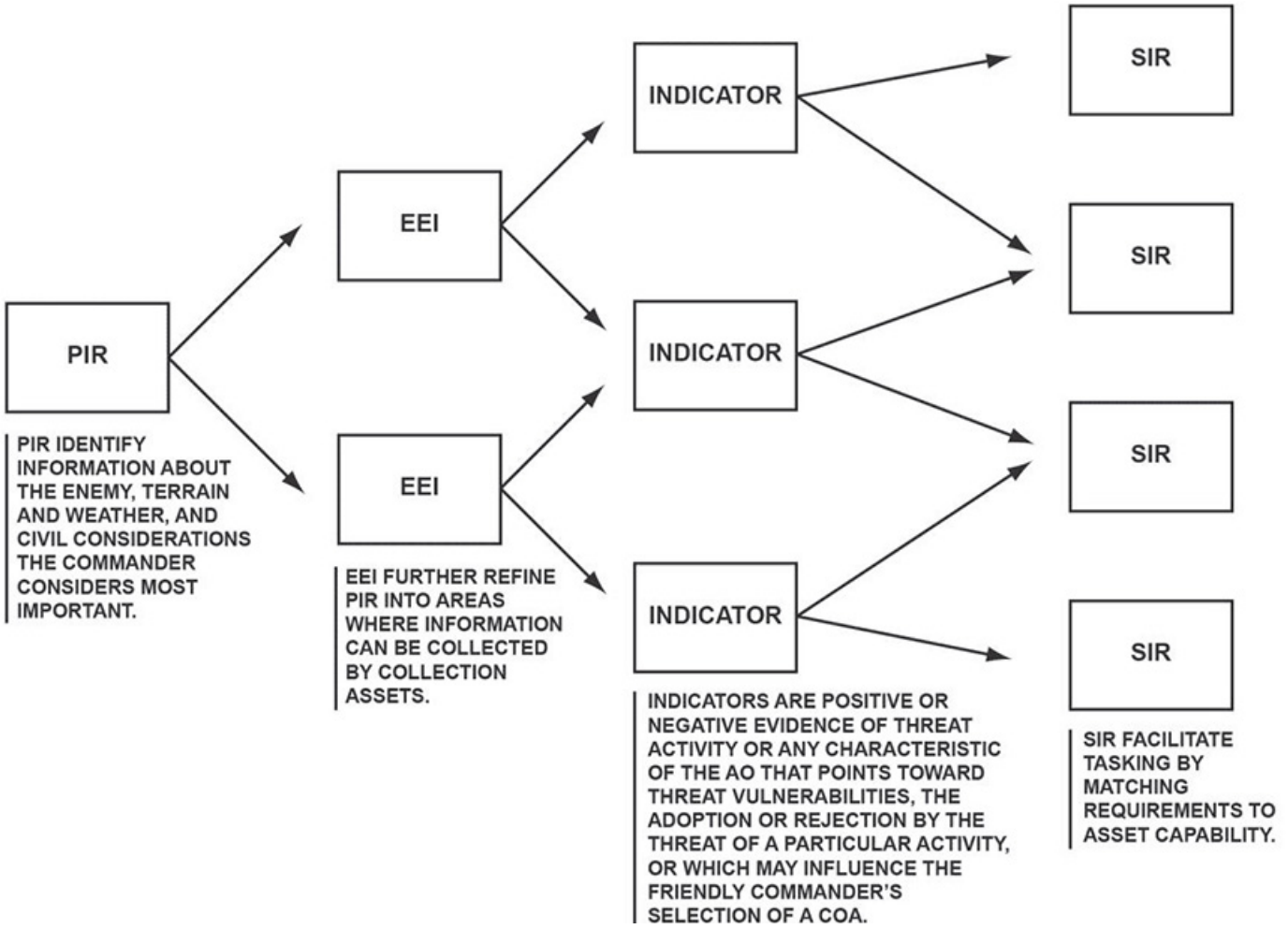

Figure 1. PIR refined. *(From Figure 4-5 in FM 3-98)*.

reconnaissance. The ultimate goal of this effort is to reduce or eliminate the chance of surprise for the friendly commander.[6] After Steps 3 and 4, the commander should have developed sittemps, threat CoA sketches/statements, the HVT list and event templates and matrix. He/she should have also updated information requirements relevant to the operation.[7]

The analysis generated from a complete IPB process allows the commander to develop reconnaissance guidance in a logical manner supporting his/her visualization of the operation. The application of IPB to reconnaissance guidance, consisting of *focus*, *tempo*, *engagement/disengagement* and *displacement* criteria, is discussed following.[8]

Focus on NAI recon objective

Once the commander has concluded IPB, he/she can see the terrain and the enemy. Then, it's time to see himself/herself and array forces according to recon tasks.

The squadron's and BCT's PIRs are arrayed as the NAI, the geographical area where information that will satisfy a specific information requirement can be collected, and it is depicted on the operations graphics.[9] The NAI location will drive the movement and maneuver of the troop.

The NAI is the troop's reconnaissance objective and the equivalent of the armor/infantry company-team's traditional objective. The recon troop's NAI 0001 is the ubiquitous Objective Dog for any other company-team, and the troop must maneuver to those recon objectives with formations and movement techniques, supported by fires, to achieve a position of advantage and answer the PIR. This is where the reconnaissance professional applies his combat power (destructive, constructive and IC) with overwhelming force, synchronization and redundancy to answer the question (PIR) at the objective.[10]

When the reconnaissance objective is terrain-focused, the commander compares his terrain analysis from IPB Step 2 and commits enough forces to answer in the time required. For example, if it would take a single platoon one hour to reconnoiter an area, but only half an hour is available, then the commander may commit two recon platoons to the task and divide the area into two sub-objectives. This is a simplistic example; however, the key point is that analysis is conducted first, and then forces are arrayed to support the IPB outputs.

Similarly, if the recon focus is threat-based, or even if threat forces are assessed in an AO with a terrain focus, the commander builds the subordinate team with a task-organization that can defeat the force *en route* to the object or can survive initial contact according to engagement and disengagement criteria.

Tempo

There's a time for everything, but not enough time for everything.

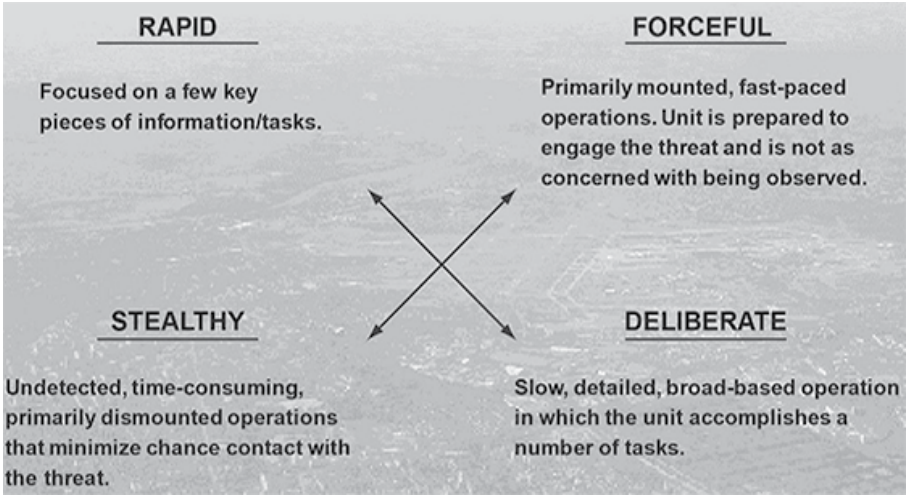

Figure 2. Recon tempo. (*From Figure 4-2, FM 3-98***)**

Cavalry units conduct reconnaissance to answer the PIRs that shape the commander's decisions for CoA analysis or selection. Naturally, units will not have an unlimited amount of time to conduct the reconnaissance that BCTs and battalions rely on to improve the quality of their MDMP and finalize concepts. Rather, they will be given an operational constraint in the form of the latest time information is of value (LTIOV),[11] the time suspense for information requirements that support the use of information collected for planning and CoA selection.

Analyze PIR

Troop commanders will conduct the analysis of their PIR and develop reconnaissance objectives, considering LTIOVs, against their mission variable to establish the tempo at which their organization must operate to accomplish the mission. Reconnaissance tempo should be directed from the commander or supported headquarters, nested with the information's utility in relation to operations synchronized in time; unfortunately, tempo can often be incorrectly communicated. Thus, commanders describe tempo in relation to the desired level of force protection and survivability of the reconnaissance element instead of the visualized pace of the operation. This is why troop commanders must ensure they fully understand the senior commander's vision of the operation and what conditions define an acceptable endstate.

For example, commanders should direct stealthy reconnaissance when maintaining surprise. The commander's desired force protection for this situation is communicated in terms of the engagement and disengagement criteria. Field Manual (FM) 3-98 provides the definitions of the terms used to describe the continuum of reconnaissance tempo.

Engage or disengage?

Fight or live to fight another day? Reconnaissance units, regardless of echelon, are assets that enable supported unit commanders to make the best tactical decision possible by reducing as much uncertainty in a situation as possible. In addition to reconnaissance enabling tasks, cavalry units will often

transition directly from reconnaissance tasks into security tasks as the unit transitions to new phases of an operation. Commanders use the elements of engagement and disengagement criteria from the reconnaissance guidance to describe (for subordinates) how they visualize the reconnaissance unit doing this or to define how much risk the higher commander assesses as prudent.

The engagement criteria may use permissive or restrictive measures such as level/type of threat to fight or not fight, the bypass criteria, weapons-control status, etc. The subordinate commander or platoon leader should clearly understand the level of engagement he/she can commit to and the intent of the higher headquarters. The troop commander's IPB analysis enables him/her to determine how to develop control measures and coordinating instructions to nest with the higher headquarters' intent.

For example, assume a commander wants to defeat enemy reconnaissance forces equipped with *Boyevaya Razvedyvatelnaya Dozornaya Mashina* (BRDMs) – so the enemy must fight with little situational awareness in the main battle area (defending with mechanized infantry and armor) – then retain security on the flanks of the axis of attack. The supporting reconnaissance commander's analysis will determine the enemy force's recon elements disposition and the enemy disruption zone's defining areas.

The troop commander will then direct, through his/her engagement and disengagement criteria, that his/her forces may destroy BRDM and lesser recon forces, but disengage contact or hand over mechanized and armor forces to another force throughout the disruption zone.

Also, the commander can add greater complexity or enhance capability by directing the method of engagement (for example, destroy BRDM with an air-weapon team via 30mm).

Displacement

The final element of reconnaissance is *displacement criteria*. It is often mistakenly confused for, or misspoken of as, *disengagement criteria*, but disengagement criteria are related to an enemy force and displacement criteria are related to the conditions of satisfying the PIR at the recon objective.

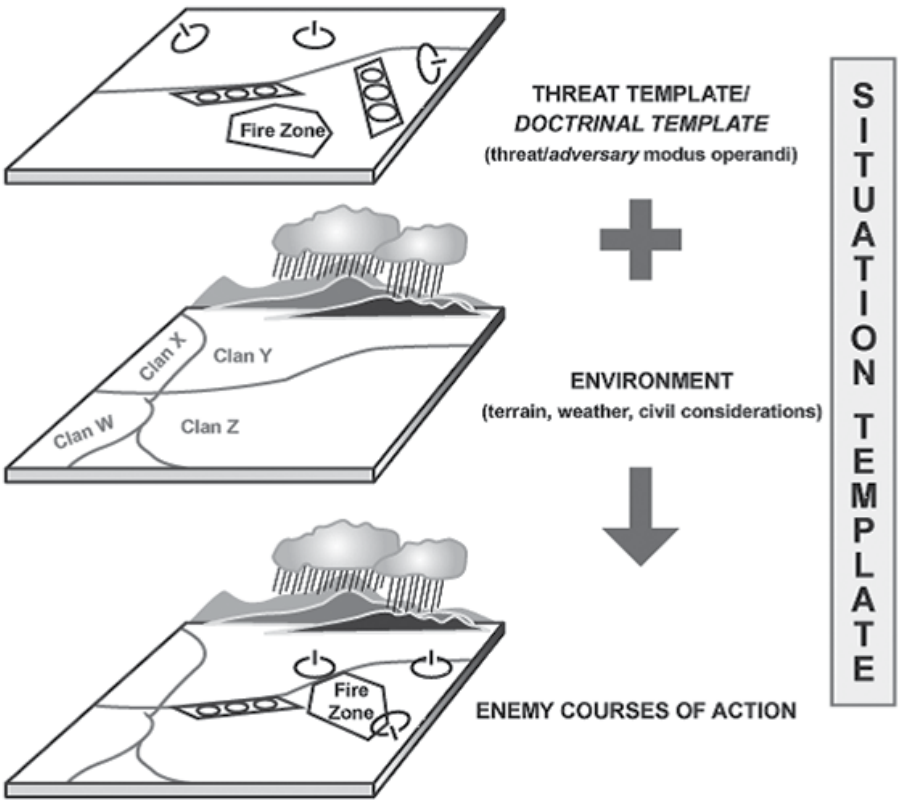

Figure 3. Determining CoAs (IPB Step 4). Commanders rely on outputs from this step to develop logical displacement criteria.

Conditions such as compromise of position or covertness, inability to collect on the indicator as planned from the NAI, or that PIR are answered are event-based triggers that direct when a force should no longer focus on the objective. If displacement is not specified from a warning order, opord or in the plan's Annex L, the commander relies on the outputs from IPB Step 4 to develop logical displacement criteria.

The analysis of the enemy's CoA on a situational template, or multiple CoAs on an event template, will allow the commander to assess which triggers and conditions answer PIR and end the collection effort on the recon objective. Also, the troop commander must have a strong understanding of the commander's intent and concept of the operation one and two levels up. This understanding is essential because the reconnaissance troop will deploy early during the BCT planning process.

As the staff analysis and estimates improve understanding, new requirements will likely impact the displacement criteria. Quality IPB analysis enables more efficient changes to the displacement criteria from a forward and/or austere position by units using frequency-modulation or digital-communication systems.

Strengthen commander's intent

In summary, planning for reconnaissance tasks is no different than planning for the maneuver of a combined-arms company-team's offensive or defensive tasks. Each formation must apply the fundamentals of maneuver and integrate all warfighter functions planned through the TLP process.

Reconnaissance planning does not exclude any facet of the TLP process; rather, it integrates reconnaissance guidance to help commanders better communicate their vision of the force as it operates, which normally occurs under conditions of uncertainty. This is done most effectively when the commander develops the recon guidance from analysis during IPB.

The IPB process and outputs provide the cognitive and contextual meaning to the guidance issued. It is the language and construct that reconnaissance professionals use to drive operations in uncertain environments to gain understanding and certainty for others.

Collectively study down to squad level

Other organizations as well as BCTs down to section/squad levels must collectively study the doctrine of IPB and how reconnaissance guidance is derived from that analysis, including a discussion of the terms and definitions.

The collective professional study will ensure common understanding across the units performing reconnaissance and those receiving the fruits of it.

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Notes

[1] ADRP 1-02, ***Operational Terms and Military Symbols***, Washington, DC: Government Printing Office (GPO), Dec. 7, 2015.

[2] Author's observations from decisive-action training environment rotations at the Joint Readiness Training Center, Fort Polk, LA, from June 2015 to January 2016; at the Joint Multinational Readiness Center in Germany; and from trends reported by the Reconnaissance/Cavalry Council Jan. 28, 2016.

[3] Army Technical Publication (ATP) 2-01.3, ***Intelligence Preparation of the Battlefield***, and Marine Corps Reference Publication (MCRP) 2-3A 3-1, ***Intelligence Preparation of the Battlefield and Battlespace***, Nov. 10, 2014.

[4] Ibid.

[5] Ibid.

[6] Ibid.

[7] Ibid, Figure 2-1.

[8] FM 3-98, ***Reconnaissance and Security Operations***, Washington, DC: GPO, July 2015.

[9] ADRP 1-02.

[10] Ibid.

[11] ATP 2-01.3 and MCRP 2-3A 3-1.

Acronym Quick-Scan

ADRP – Army doctrinal reference publication
AO – area of operation
ATP – Army technical publication
BCT – brigade combat team
BRDM – *Boyevaya Razvedyvatelnaya Dozornaya Mashina* (Russian scout vehicle)
CoA – course of action
CTC – combat-training center
EEI – essential element of information
FM – field manual
GPO – Government Printing Office
GTAO – graphical terrain-analysis overlay
HVT – high-value target
IC – information collection
IPB – intelligence preparation of the battlefield
LTIOV – latest time information is of value
MCCC – Maneuver Captain's Career Course
MCRP – Marine Corps reference publication
MCOO – modified combined obstacle overlay
MDMP – military decision-making process
METT-TC – mission, enemy, terrain and weather, troops and support available, time available, civil considerations
NAI – named area of interest
OE – operating environment
PIR – priority information requirement
SIR – specific information requirement
TLP – troop-leading procedure

The Role of Reconnaissance Forces in the Counterattack

by LTC Scott Pence

Following an enemy attack, reconnaissance forces must quickly acquire the information needed to define the new operational environment (OE). They may use satellite imagery and unmanned aerial systems (UASs) under ideal conditions to provide adequate situational awareness. Against a committed adversary, however, modern commanders must anticipate UAS feeds to drop; cellular reception to be inconsistent, exploited or absent; satellite communications to be lost; and radio communication to be degraded. In this environment, tactical reconnaissance provides the operational commander the information required to execute the counterattack at the right time, place and purpose.

Fighting from a position of relative disadvantage is foreign to our generation of officers and leaders. Without personal experience, leaders require doctrine and training. By understanding the risks and opportunities of the counterattack, military professionals become resilient amid the worst conditions.

Therefore this article uses two case studies – U.S. MG William B. Kean's 25th Infantry Division in the Korean War (1950) and Israeli MG Ariel Sharon's 143rd Armored Division in the Yom Kippur War (1973) – to demonstrate how ground-reconnaissance forces (or lack thereof) contributed to the success or failure of the counterattack in austere environments. The article concludes with three recommendations for future publications of Field Manual (FM) 3-90-1, ***Offense and Defense,*** and FM 3-98, ***Reconnaissance and Security Operations***.

We'll start with a possible scenario from today and return to it at the article's end. We'll also examine the concept of counterattack in some detail and how reconnaissance forces benefit it.

Current possible scenario

A fictional MG Morris sits alone in his makeshift headquarters, set in an occupied savings bank in a remote Eastern European village. Days prior, enemy forces launched a vicious attack that decimated his sister division to the east. Deployed forward for a multi-lateral partnership exercise, MG Morris never expected the surprise assault. In his sector, everything electronic failed. Unmanned aerial vehicles (UAVs) dropped out of the sky. Enemy cyberhackers exploited the few electronics that survived what Soldiers termed "the blackout." MG Morris's own secure iPhone now buzzed with an incoming message, obviously from enemy hackers, offering generous terms of surrender for individuals or unit commanders. With his forces arrayed in a hasty defense, Morris considered his options.[1] He gripped his secure phone, replied "Nuts" and crushed the phone under his feet.[2]

'Counterattack' examined

Few operations are as precarious as the counterattack. The defense has enough trouble surviving the enemy attack; when placed in the defense against his will, a successful commander must orient available forces to the critical time and place to wrest initiative from the enemy. Commanders who counterattack too soon risk meeting the enemy at his strongest. Acting too late risks the loss of surprise and finds a reinforced enemy.

How large is the force? What is the purpose – to destroy the enemy or disrupt the enemy's momentum? The commander must answer these questions quickly within the fog of war with intuition, creativity and precision. The cost of failure is loss of life and enemy advantage. To increase the probability of success, the commander needs timely and accurate information. Without it, he risks dangerously misunderstanding the situation.

Enter reconnaissance forces, which must quickly acquire the information required to define the new OE. Avenues of approach, once open, might now be closed due to enemy presence. Enemy forces might occupy flanks once secured by friendly units. Obstacles, once impermeable, might suddenly have crossings that provide enemy forces freedom of maneuver. The mission variables of enemy, terrain, time and civilian considerations all require reassessment due to the enemy's deliberately audacious actions. After a surprise attack, all previous facts become assumptions that require confirmation or denial.

Satellite imagery and UASs provide adequate situational awareness only under ideal conditions. FM 3-55, ***Information Collection*** (2013), provides guidance for operational commands to capitalize on the diverse capabilities provided by tactical, operational, joint and national assets. Technologically advanced sensors serve an integral role in understanding the OE. Tactical-reconnaissance forces such as those organic to brigade combat teams (BCTs) add the human dynamic. Collection managers plan redundant coverage over critical targets and enable sensors to cue others to maintain contact throughout the depth of a sector.[3]

To complicate this effort, modern adversaries integrate their most sophisticated cyber and signals-jamming technology. For example, "Russia maintains an ability to destroy command-and-control networks by jamming radio communications, radars and Global Positioning Satellite signals," noted Laurie Buckhout, former chief of the U.S. Army's electronic-warfare division.[4] Against a committed adversary, modern commanders must anticipate UAS feeds to drop; cellular reception to be inconsistent, exploited or absent; satellite communications to be lost; and radio communication to be degraded. To assume otherwise would be irresponsible.[5]

Tactical reconnaissance provides the operational commander the information required to execute the counterattack at the right time, place and purpose. Only after regaining situational awareness can the commander make responsible decisions on the execution of the counterattack; no amount of audacity or élan can compensate for a poorly timed or insufficiently powerful counterattack. On the contrary, a failed counterattack can expedite defeat of the entire force. Therefore it is imperative that reconnaissance forces provide the commander with an accurate understanding of the OE to enable the most effective counterattack.

An example of why this is important comes from the Boer War (1899), when British Field Marshal Paul S. Methuen counterattacked with a 3,000-man force against what appeared to be 2,500 lightly armed Boers. He did so without reconnaissance. "Since he could not see the enemy, he wrongly assumed that no enemy was there," wrote Norman Dixon. "All went well until they were within easy range of the Boers, who had concealed themselves with what was subsequently described as 'fiendish cunning' below the deep banks of a river."[6] There were in actuality 8,000 Boers awaiting Methuen's advance.

Methuen would certainly have benefitted from tactical-reconnaissance forces, which are uniquely capable of discovering critical information to confirm or deny assumptions. The philosophy of mission command, coupled with robust communications and field-craft, allow scouts to provide all-weather information required for an accurate situational understanding of the new OE.

An understanding of the counterattack is only possible through study of the defense. Carl von Clausewitz, in ***On War***, described three distinct phases of the defense. Phase 1 is the preparation of the defense in which "the defender waits for the attack in position, having chosen a suitable area and prepared it, which means he has carefully reconnoitered it." Phase 2 is the defensive battle. Phase 3 is the counterattack. As Clausewitz explained, "When the enemy has revealed his whole plan and spent the major part of his forces, the defender intends to fling his body against a part of the enemy forces, thus opening a minor offensive battle of his own … to produce a total reversal." To Clausewitz, the counterattack reversed the momentum and seized the initiative from the attacker.[7]

Mao Tse-Tung wrote extensively about the value of the active defense in his 1936 memoirs on the Chinese civil war. He noted that immature revolutionaries were reluctant to go on the defense because they equated the defense with defeat or retreat, "thus mentally disarming themselves in the matter of defense." Mao argued that the adverse political effects of the defense are strictly a problem for capitalist countries. He noted that the opposite effect occurs when revolutionary movements adopt the defense. He wrote, "The only real defense is the active defense, defense for the purpose of counterattacking and taking the offensive."[8]

The need for information collection and the presence of counterattacks has existed throughout military history. The role of tactical-reconnaissance forces, on the other hand, evolved with varying levels of technology and enemy capabilities. As theory, history and doctrine are all interrelated, the analysis in this article transitions to a review of the counterattack's doctrinal framework.

'Counterattack' in Army doctrine

Current U.S. Army doctrine provides sparse and conflicting guidance to assist commanders and staffs who find themselves involuntarily transitioned to the defense. Definitions for *counterattack* and *counteroffensive* do not exist in the Department of Defense's dictionary (Joint Publication (JP) 1-02). *Counterattack* appears there only as part of the definition for *active defense*: "The employment of limited offensive action and counterattacks to deny a contested area or position to the enemy."

JP 1-02's definition is insufficient and misleading because it unnecessarily scales the counterattack as a limited offensive action and needlessly restricts the focus of the counterattack on terrain (an area or position) when the purpose could be the enemy force itself.[9]

The Army's definition is more descriptive. Army Doctrinal Reference Publication (ADRP) 1-02, ***Terms and Military Symbols*** (2013), lists counterattack as "[a]ttack by part or all of a defending force against an enemy attacking force for such specific purposes as regaining ground lost, or cutting off or destroying enemy advance units, and with the general objective of denying to the enemy the attainment of the enemy's purpose in attacking. In sustained defensive operations, it is undertaken to restore the battle position and is directed at limited objectives."[10]

Case Study 1: Task Force Kean's counterattack, 1950

Situation: North Korean attack

Following World War II, the Union of Soviet Socialist Republics and the United States divided Korea into north and south occupation zones. The Soviets invested in a strong North Korea, while the United States focused elsewhere, withdrawing all but a small number of military advisers from Korea in 1949. On June 25, 1950, with full Soviet direction and backing, the North Korean People's Army (NKPA) attacked south against an unprepared and underequipped Republic of Korea Army (RoKA). By June 28, the NKPA captured the South Korean capital of Seoul. The action surprised the U.S. government, and President Harry S. Truman authorized GEN Douglas MacArthur to commit ground forces to prevent the South Korean government's overthrow.[11]

Among his four divisions in Japan, MacArthur, then General of the Army,[12] chose 24th Infantry Division for the mission due to its location in southwest Japan and its capacity for rapid deployment. On July 1, 24th Infantry deployed Task Force (TF) Smith, a reinforced two-company team (406 riflemen) named after LTC Charles "Brad" Smith to defend about 25 kilometers south of Seoul, near Osan.

Unfortunately, the lethality and pace of the North Korean advance surprised the TF Smith defenders. Their anti-tank weapons failed to destroy the enemy's T-34 tanks, and their defensive position failed to stop the North Korean force. TF Smith withdrew south after a few hours of fighting. Throughout July

1950, 24th Infantry Division attempted a series of counterattacks against the advancing NKPA to no avail. Their experience was so chaotic that Soldiers popularized the term "bug-out" for the first time.[13]

By August 1950, the remaining RoKA and U.S. Army contingent resided in what came to be known as the Pusan Perimeter. Then in late July, the Eighth (U.S.) Army arrived, and with it 25th Infantry Division. From Washington, DC, the Army G-3 Planning Section devised a 25th Infantry Division counterattack directly west toward Chinju between Aug. 5 and 10. This southwest part of the perimeter, between the Naktong River and the sea, was significant because there were no major obstacles separating the North Koreans from the critical port of Pusan. TF Kean, named after 25th Infantry Division commander MG William B. Kean, was ordered to counterattack to relieve pressure on other parts of the perimeter.[14]

In 1950, each U.S. Army division had an organic reconnaissance company. The 25th Reconnaissance Company was Kean's organic reconnaissance element. Like many U.S. Army forces garrisoned in Japan, the company was not manned to full strength and found little time for reconnaissance training. A July 17, 1950, log report states that 25th Infantry Division immediately committed 25th Reconnaissance Company to defenses along the Pusan Perimeter.[15]

Opposing TF Kean was the NKPA's 6th Infantry Division. Composed of mostly veterans of the Chinese civil war, the NKPA 6th Infantry Division was among the units that skillfully advanced to the southern end of the Korean peninsula. The unit had fought pitched battles in and around the Chinju region in July. Also, unknown to Kean or his staff, the NKPA 6th Infantry Division maintained a salient of forces on the rugged slopes of Sobuk-san Mountain within TF Kean's defenses. Even though forward elements traded small-arms fire with the enemy forces on Sobuk-san, the information never reached TF Kean's headquarters.[16]

Counterattack

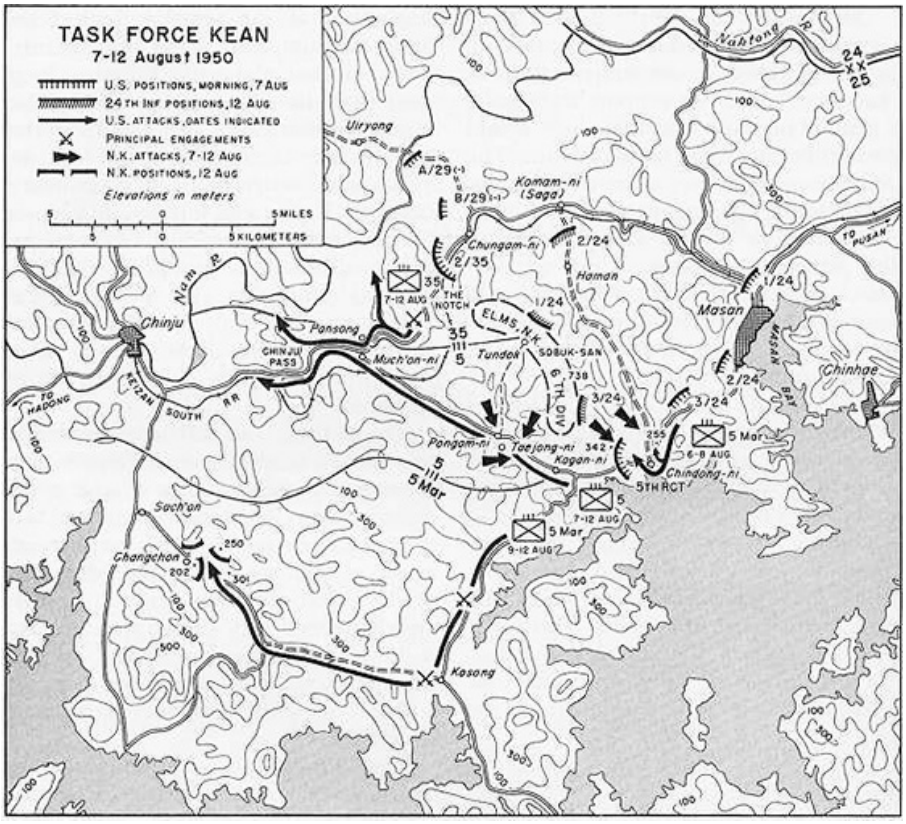
TF Kean was comprised of 20,000 men: two U.S. Army infantry regiments, one U.S. Marine regiment and various artillery elements. It seemed more than adequate to face the NKPA 6th Infantry Division that had an estimated strength of 7,500 men. TF Kean began the counterattack Aug. 6 with three brigade-size elements. The division attacked along two main axes with 35th Infantry Regiment to the north and 5th Regimental Combat Team in the center. The 5th Marine Regiment, with Marine aviation assets in direct support, advanced along the coast in the south. Each of the three axes of advance converged on the town of Chinju.[17] After 10 days of fierce fighting marked by capturing, losing and recapturing key hills, the division returned to its initial defensive positions.

In a battle that would come to be known as the Battle of the Bloody Gulch, without situational awareness of the enemy force, TF Kean inadvertently bypassed the lethal enemy salient on Sobuk-san Mountain. As TF Kean's lead elements attacked west, NKPA forces descended from Sobuk-san and destroyed 555th Field Artillery Battalion (FAB) and Battery A of 90th FAB. The howitzers were destroyed, and the North Koreans later massacred field artillerymen who survived the attack.

Eighth Army commander GEN Walton W. Walker dissolved TF Kean Aug. 16 and apportioned the units to other areas along the perimeter. The loss of 555th FAB as a combat-effective artillery battalion and the destruction of Battery A, 90th FAB, negated any combat successes of the effort.[18]

Pertinent facts from this case study are:

- The reconnaissance company, fighting as regular infantry, failed to provide early warning. On Aug. 6, 1950, the same day as TF Kean's counterattack, the NKPA 6th Infantry Division began its own attack on the Pusan Perimeter.
- FM 100-5, ***Operations*** (1949), advises commanders to consider the enemy's intentions carefully before launching a counterattack. Had TF Kean's reconnaissance company screened forward of the main body, it could have detected the NKPA 6th Infantry Division lead elements as they advanced directly toward the lead brigade's apex.
- In ***On War***, Clausewitz advised



Map 1. Map of the TF Kean counteroffensive, Korean War, 1950, along the Pusan Perimeter.

defenders to wait and absorb the blow of the initial attacks until the defender's strength is at its zenith relative to the attacker. To ascertain when this level of relative strength is optimum for the counterattack, the commander depends upon accurate intelligence collected by his reconnaissance forces.[19]

- In 1954, MG James Gavin, the first commander of 82nd Airborne Division, wrote a scathing report on the lack of reconnaissance in the Korean War. "The situation begged for cavalry, but we lacked the contemporary kind of cavalry to do the job," he said.[20] Gavin argued that cavalry forces were too wedded to the roads due to their heavy-tank force structure and called for what would later become known as airmobile cavalry in the Vietnam War.
- Gavin's observations coincide with the shortcomings observed in this article. During TF Kean's counterattack, the operational commander treated his division reconnaissance company as another maneuver force, yielding any advantage that tactical-reconnaissance forces could provide. TF Kean's experience demonstrates the need for tactical-reconnaissance forces to provide early warning while gaining and maintaining contact with enemy forces ahead of the main body.

Fundamentals of reconnaissance

TF Kean failed to observe the first fundamental of reconnaissance: *ensure continuous reconnaissance*. FM 3-98 explains that reconnaissance units perform continuous reconnaissance to "identify and seize key terrain, confirm or deny enemy composition, disposition, strength and courses of action." Instead, TF Kean advanced without reconnaissance forces capable of providing intelligence on enemy positions. An account of 2nd Battalion, 5th Marines, summarized the situation: "They ran head-on into the North Koreans, who had come around to the front of the spur during the night."[21]

TF Kean observed the second fundamental, *never keep reconnaissance assets in the reserve*, but failed to employ the scouts as information collectors. With reconnaissance employed as infantry, MG Kean failed to observe the third fundamental, *orient reconnaissance on the reconnaissance objective*. The objective was enemy-focused, but Kean did not task his reconnaissance forces to identify the NPKA 6th Infantry Division either ahead of the U.S. 35th Infantry or on the hills of Sobuk-san.

The fourth fundamental, *report timely and accurately*, did not occur. The fifth fundamental, *retain freedom of maneuver*, was not observed, but casualty records suggest 25th Reconnaissance Company was not decisively engaged – casualty records show that 25th Reconnaissance Company only sustained two casualties during the period of TF Kean's counterattack.

TF Kean neglected the sixth fundamental, *gain and maintain contact with the threat*. The enemy's routine ability to appear at unexpected locations with unanticipated strength indicates poor basic operational reconnaissance and security discipline throughout the task force. Finally, TF Kean failed to observe the seventh fundamental, *develop the situation rapidly*. Without committed reconnaissance forces to develop the situation, TF Kean moved forward blindly with its infantry brigades.[22]

Table 1 provides an overview of TF Kean's employment of reconnaissance fundamentals.

My research found that TF Kean's experience might have been representative of the U.S. Army during this period of the Korean War. An inspection of the indexes of three of the most popular books on the Korean War resulted in zero references to reconnaissance forces.[23]

Case Study 2: Sharon's counterattack, 1973

Situation: Egyptian and Syrian attack

By the time of the 1967 Arab-Israeli War, the Israeli army assigned a battalion-size reconnaissance element per division and witnessed success. This next case study occurs six years later as Israel sustained a debilitating surprise attack. The study is relevant as it highlights the ability of tactical-reconnaissance forces to collect information in an austere environment and provide accurate information on the post-attack OE. In this study, the reconnaissance force identified one of the best battlefield opportunities in history.[24]

Clausewitz asserted that war is an instrument of policy: "The conduct of war … is therefore policy itself, which takes up the sword in place of the pen." Egyptian President Anwar Sadat proved this maxim through his execution of a limited war to achieve what other forms of policy could not. After the Israelis dealt their Arab neighbors

U.S. 25th Infantry Division (TF Kean) 1950 Korean War			
	Fundamental of reconnaissance	Observed	Not observed
1	Ensure continuous reconnaissance		X
2	Do not keep reconnaissance forces in the reserve	X	
3	Orient on the reconnaissance objective		X
4	Report all information rapidly and accurately		X
5	Retain freedom of maneuver		X
6	Gain and maintain contact with the threat		X
7	Develop the situation rapidly		X

Table 1. Observed fundamentals of reconnaissance in TF Kean's counterattack.

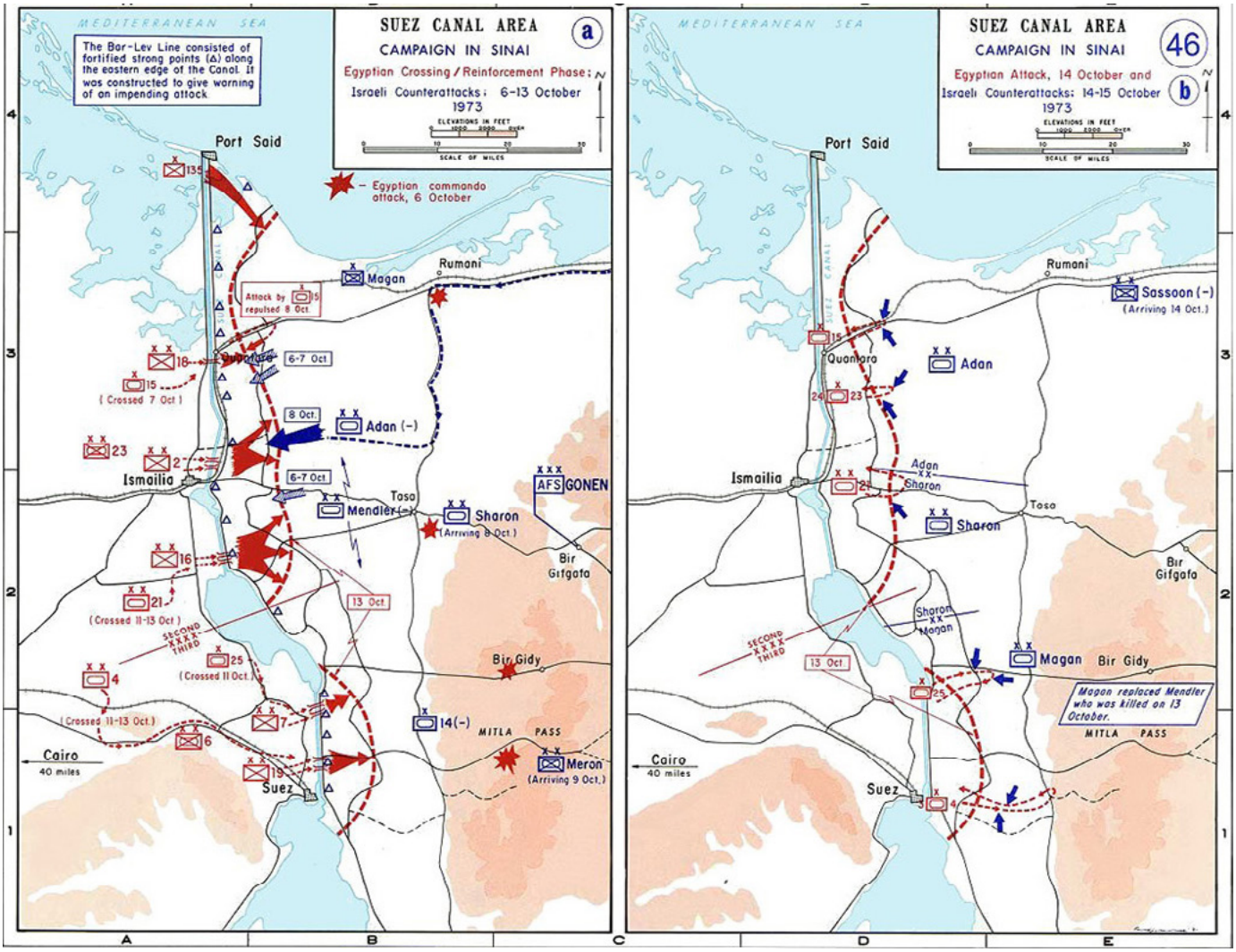
an embarrassing defeat in the 1967 Arab-Israeli War, the Israeli leadership refused to return its occupied territories. Sadat conspired with Syria, who also lost territory in the 1967 war, to compel the Israelis to negotiate the return of the Golan Plateau and the Sinai Peninsula. To do so, the Arab attack needed to "inflict the highest losses possible on the enemy in men, arms and equipment."[25] Sadat also sought to increase the prestige of Egypt and himself by leading an Arab coalition against Israel. Arab strategy called for limited offensives to secure terrain within the occupied territories to enable the Arabs to exploit wartime gains in international negotiations.

On Oct. 6, 1973, during the Jewish holiday of Yom Kippur, Egypt and Syria launched a surprise attack on the Sinai Peninsula and the Golan Plateau.[26] The Egyptians defeated the local defenders, bypassed Israeli strongholds and occupied positions just three miles on the east side of the Suez Canal. Historian John J. McGrath postulated that the Egyptian crossing of the Suez was possibly the "most successful river-crossing operation in military history."[27]

Nothing in Israeli doctrine or strategy prepared them for an attack of this magnitude. The shock of the attack took a psychological as well as physical toll. One senior officer described the moment as "the most shattering experience in the history of Israel." The success of the 1967 Arab-Israeli War was a benchmark that had established an internal narrative of battlefield superiority for the Israeli Defense Force (IDF) vs. their Arab neighbors. In addition, Israelis generally had a poor view of Arab capabilities as strategists and believed neither Egypt nor Syria capable of coordinating a major offensive.[28]

Counterattacks

Conditioned to seize the initiative and emboldened by the success of the 1967 Arab-Israeli War, on Oct. 8, 1973, two IDF divisions mounted a hasty counterattack to restore control of the Suez Canal and rescue the trapped defenders. The Israeli 143rd Armored Division under MG Ariel Sharon and the Israeli 162nd Armored Division under MG Avraham Adan launched the initial counterattack in the Battle of El Firdan. The result was horrific. Soviet-supplied surface-to-air missiles destroyed the Israeli air force's first sorties, denying air interdiction as well as air reconnaissance. Moreover, Israeli maneuver units failed to lead with reconnaissance forces forward of their main bodies.



Map 2. Suez Canal action: Egyptian attack and Israeli counterattack, Oct. 6-13, 1973. *(Department of History, U.S. Military Academy)*

The result was a series of piecemeal attacks on unknown enemy dispositions. Knowing the Israelis' offensive psychology, the Egyptians lured the IDF's tanks into their Sager anti-tank guided-missile engagement areas along avenues of approach to the Israeli strongpoints. The initial IDF counterattack rapidly lost 70 veteran tank crews on the first day and another 49 tanks on the next day with nothing to show for it.[29]

The failed counterattacks at El Firdan further shattered pre-existing mindsets and led to an operational pause by the Israelis. During the respite, LTG Haim Bar Lev came out of retirement to lead the IDF response and quickly decided to end the piecemeal counterattacks. Bar Lev adjusted the defensive perimeter, reorganized forces and adjusted tactics to survive the lethal Egyptian anti-armor capabilities. The pause also allowed the Israelis to integrate a mass of reserve units arriving in the Sinai, one of which was 87th Armored Reconnaissance Battalion.[30]

On Oct. 8, MAJ Yoav Brom assumed command of the unit, which was equipped with 24 M-60A1 tanks, 36 M-113 armored personnel carriers and about 20 jeeps.[31] Brom was exactly the leader the Israeli army sought to develop. Israeli army doctrine, even before 1967, introduced a command-and-control philosophy called "operational control." Adopted from Helmut von Moltke's system of *weisungen* (directives),[32] higher commands avoided detailed orders and only interfered to change a major axis of advance or prevent unacceptable risk. Operational control allowed subordinate commanders maximum independence. This command system, similar to the U.S. Army's current philosophy of mission command, required "highly intelligent junior commanders, mutual trust and shared understanding."

Social prestige and culture blessed the IDF with highly intelligent and talented officers. The challenge in October 1973 was how to create a shared understanding out of the chaos of the Arab attacks.[33]

Sharon directs recon advance

On Oct. 9, 1973, Sharon directed 87th Armored Reconnaissance Battalion to advance and report the disposition of Egyptian forces. Brom's two companies spent hours observing the Egyptian positions north of the Great Bitter Lake. While observing, however, they noticed a curious lack of activity between the two Egyptian armies. The Egyptian Second Army was clearly dug in and alert, evident by Egyptian direct fire on any IDF movement in that sector. Brom's company commanders, however, could not detect any reaction from the Egyptian Third Army, which was templated on the north shore of the Great Bitter Lake. Brom hypothesized there was a seam between the two Egyptian forces.

To confirm or deny his hypothesis, Brom asked permission to advance farther west. Yitzhak Agam, Brom's company commander, recalled: "We moved toward the canal, keeping up a constant shooting match with the Egyptian positions to our north. This way we pinpointed their southernmost positions. We advanced over dunes to the Great Bitter Lake without any serious difficulty. It was by this route that we, a week later, guided the forces that established our bridgehead across the canal."[34]

In this manner, 87th Armored Reconnaissance Battalion balanced the responsibility for reconnaissance forces to gain and maintain contact with the enemy while simultaneously maintaining their freedom of maneuver. After reaching the canal, Agam's scouts concealed their tanks in an abandoned Israeli strongpoint. Adan, to the north, recalled in his memoirs: "The unit discovered the open seam between the Egyptian Second and Third armies."

With this information, Sharon's division planners designed a counterattack to exploit the gap and envelop the Egyptian line. The next day, Sharon argued for an immediate counterattack to exploit the seam. Cooler heads prevailed, however, and the IDF decided to launch the counterattack once enough canal-crossing resources were on hand for exploitation. While deliberate planning began, Sharon recalled the scouts from the canal.[35]

On Oct. 15, 1973, in a literal interpretation of "reconnaissance pull," Brom led the lead elements of Sharon's division along the same path that he and his scouts had discovered six days prior. The lead brigade encountered no opposition and reached the Suez at dark. Later elements then made contact with surprised Egyptians and battle ensued. In the early morning hours of Oct. 16, Israeli paratroopers bypassed the firefight and linked up with Brom's scouts at the crossing site. They unpacked their inflatable rafts and began crossing the Suez into Egypt. By daylight, 750 infantrymen were on the west bank, along with 10 tanks ferried by Gilowa rafts.[36]

The Israeli breakthrough wrested the initiative from the Egyptian attackers. At the time of the U.N. ceasefire Oct. 24, 1973, Israeli forces west of the canal threatened the Egyptian flank. However, Sadat had succeeded in his limited aims of bringing Israel to the negotiating table, using war as an extension of policy that succeeded where other initiatives could not – but at great risk. Without the intervention of the United States and the Soviet Union, the Israeli counterattack might have pushed even deeper into Egyptian territory.

Fundamentals of reconnaissance

The actions of its tactical-reconnaissance battalion directly enabled the IDF division's operational counterattack and exemplified several fundamentals of reconnaissance as written in FM 3-98.

First, the division employed the battalion in a manner that allowed for continuous reconnaissance. By doing so, 87th Armored Reconnaissance Battalion discovered the gap in the Egyptian lines.

Second, reconnaissance assets were not kept in the reserve. Sharon directly tasked 87th Armored Reconnaissance Battalion for area and route reconnaissance.

Third, the battalion oriented on the reconnaissance objective. In this case, the objective was enemy-focused on the Egyptian Second and Third Armies and prompted 87th Armored Reconnaissance Battalion to investigate when lead elements failed to gain contact with the Egyptian Third Army.

Fourth, the battalion reported all information rapidly and accurately. The 87th

Israeli 143rd Armored Division (MG Ariel Sharon) 1973 Arab-Israeli War			
	Fundamental of reconnaissance	Observed	Not observed
1	Ensure continuous reconnaissance	X	
2	Do not keep reconnaissance forces in the reserve	X	
3	Orient on the reconnaissance objective	X	
4	Report all information rapidly and accurately	X	
5	Retain freedom of maneuver	X	
6	Gain and maintain contact with the threat		X
7	Develop the situation rapidly	X	

Table 2. Observed fundamentals of reconnaissance in Sharon's counterattack.

Armored Reconnaissance Battalion allowed Sharon's division staff to make timely recommendations based on accurate conditions on the ground.

The 87th Armored Reconnaissance Battalion observed the fifth fundamental, *retain freedom of maneuver*, as it traded directed fire with the Egyptian Second Army without becoming decisively engaged.

The 87th Armored Reconnaissance Battalion failed to observe the sixth fundamental, *gain and maintain threat contact*. Even though Brom persistently advanced in search of the Egyptian Third Army, Sharon deliberately decided to extract 87th Armored Reconnaissance Battalion scouts from the area to prevent detection. This lapse of physical presence retained the element of surprise, but it left Egyptian forces unobserved. During the lapse in threat contact, the enemy repositioned forces that later harassed Israeli forces as they moved to the crossing site.

Sharon observed the last fundamental of reconnaissance, *develop the situation rapidly*. Once 87th Armored Reconnaissance Battalion identified the gap in enemy forces and the route to the crossing site, Sharon's staff immediately began planning a counterattack to gain and exploit the initiative.[37]

Table 2 provides an overview.

Comparing case studies

By comparison, Kean observed one of the seven fundamentals of reconnaissance, while Sharon demonstrated six of the seven fundamentals of reconnaissance. The checklist is inconclusive by itself, but the number of reconnaissance fundamentals observed by the successful counterattack gives credence to the value and timeless nature of modern doctrine.

Both divisions faced a cunning enemy with a record of success. Kean's reconnaissance company, used as infantrymen, failed to provide information on the OE that his headquarters required. Twenty-three years later, Sharon's reconnaissance battalion proactively discovered a vulnerable point in the enemy's defenses. The observation of modern reconnaissance fundamentals, combined with a leadership philosophy that rewarded subordinate initiative, contributed to the success of Sharon's counterattack.

Table 3 compares the observations from each counterattack.

Recon enables decision

Understanding the OE, enhanced by the reconnaissance force, enables the decision to transition to the offense. When conditions allow for information dominance, commanders optimize all resources to allow for cognitive dominance. When the adversary lacks the ability or fails to degrade the U.S. Army's superior technological advantages, the tactical-ground-reconnaissance commander, in coordination with the senior intelligence officer, proactively optimizes information collection.

The principles of cueing and redundancy, both of which appear in more detail in Chapter 1 of FM 3-55 provide guidelines for maximizing reconnaissance assets.[38]

The analysis in this article doesn't prove good reconnaissance is a direct cause of successful counterattacks. Rather, the research highlights how operational commanders who employ (and allow their reconnaissance subordinates to employ) the fundamentals of reconnaissance achieve advantages in information collection that can enhance the likelihood of success.

Meanwhile, operational commanders must also integrate other warfighting functions and branches. Engineers must plan for and execute timely breaches of enemy obstacles. Signal professionals support the counterattack through planning for redundant communication throughout the course of the defense. Aviation units, when available, provide direct-fire lethality and sustainment opportunities.

All these warfighting functions and branches require integration and synchronization to maximize effectiveness. To do so, the U.S. Army needs to provide a common framework for the counterattack.

Recommendations

Insights into counterattacks exist in history, theory and U.S. Army doctrine. However, no doctrinal publication organizes them in a method conducive to a smooth cognitive recall. A doctrinal review of the counterattack should review the definition of the counterattack, overlay the roles of warfighting functions along the stages of the defense and identify distinct forms of counterattacks. Each of the following recommendations is a product of the historical, doctrinal and theoretical research conducted for the purposes of this analysis.

Recommendation 1. A future

Comparison, U.S. 25th Infantry Division (Kean) and Israeli 143rd Armored Division (Sharon)			
	Fundamental of reconnaissance	Kean, 1950	Sharon, 1973
1	Ensure continuous reconnaissance		X
2	Do not keep reconnaissance forces in the reserve	X	X
3	Orient on the reconnaissance objective		X
4	Report all information rapidly and accurately		X
5	Retain freedom of maneuver		X
6	Gain and maintain contact with the threat		
7	Develop the situation rapidly		X

Table 3. Comparison of observed fundamentals of reconnaissance.

publication of ADRP 1-02 should simplify the definition of the counterattack. A possible definition is "the transition from defense to offense by part or all of a defending force against an enemy attacking force." This definition is much shorter than the current U.S. Army definition and avoids elaboration, which unnecessarily limits the counterattack.

Another section in the next release of FM 3-90-1 should elaborate on the diverse range of the counterattack's purposes, guidance based on historical events and considerations of whether to launch the counterattack. The "employment of the reserve" section of the 1949 version of FM 100-5 provides many of these topics but not in a cohesive organization. In the modern body of U.S. Army doctrine, this guidance should appear in each warfighting function's applicable field manuals.

Recommendation 2. A future publication of FM 3-98 should overlay the roles of reconnaissance onto the five stages of the defense in FM 3-90-1. The dual nature of reconnaissance forces – their responsibility to reconnoiter at some times and provide security at others – provides an opportunity for illustration.

Research has clarified a general cycle of reconnaissance roles during stages of the defense. The role of reconnaissance forces fluctuates from detecting opportunities through more information (reconnaissance), providing early warning and protecting the main body during the execution of the counterattack (security).

Figure 1 displays a visualization of the transition between reconnaissance and security roles during the steps of the area defense.[39]

Historical review

A review of historical counterattacks and comments of major military theorists yields the following insights on the role of ground-reconnaissance forces during each of the defense's five stages.

Step 1, *gain and maintain contact with the enemy*, is when reconnaissance forces detect the enemy's composition and disposition to anticipate future actions. Reconnaissance forces use advanced optics and patrols to detect enemy reconnaissance elements. The reconnaissance commander relays this information to maneuver commanders to enhance the disruptive effects of their limited counterattacks. It also assists the operational-intelligence section as it consolidates reports from enemy contact to ascertain the OE. During this step, the focus is on neutralizing enemy reconnaissance and protecting the main body, so security roles are high and reconnaissance roles are lower.

Step 2, *disrupt the enemy*, is when the operational commander uses indirect fires, aviation assets and obstacles to reduce the enemy's combat power and stymie the enemy's momentum. Reconnaissance forces employ fires and destroy enemy elements within their capability. During this step, timely and accurate reports define the new OE. Therefore, reconnaissance roles are higher relative to security roles.

Step 3, *fix the enemy*, constrains the enemy from his most dangerous courses of action. Obstacle planning and emplacement is used to fix, turn or block the enemy into preplanned defenses. Reconnaissance forces – often tasked to overwatch obstacles – employ indirect fires on attackers as they attempt to bypass or breach prepared obstacles. Reconnaissance forces confirm or deny assumptions. During Step 3, security roles begin to take precedence over reconnaissance roles.

Step 4, *maneuver*, is when reconnaissance forces protect the striking force from detection and engagement. On the other front of the 1973 Arab-Israeli War (at the Golan Heights), one counterattack was tragic when an Israeli captain began his immediate movement. Unfortunately, in the interest of speed, he failed to employ scouts or flank protection. The result was one of the worst disasters ever inflicted on Israel's armored corps. The captain's tank was the first to be destroyed; his company never regained control of the situation; and all 10 of the company's Centurion tanks were destroyed in less than two minutes.[40]

The lack of reconnaissance forces

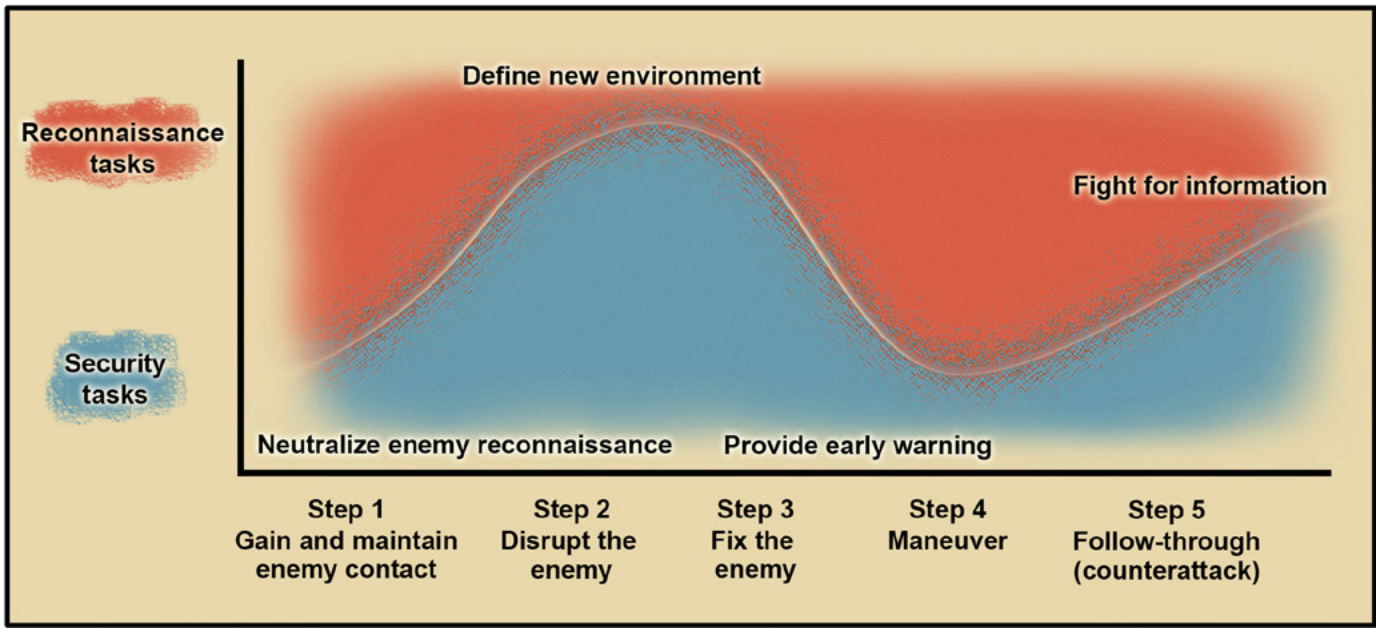


Figure 1. Reconnaissance and security roles during the defense's five stages. *(Based on steps of the defense from FM 3-90-1)*

prevented early warning and situational awareness. During Step 4, missions require security roles more often than reconnaissance roles because protecting the striking force is tantamount.

Step 5 is the *follow-through (counterattack)*. The most mobile reconnaissance elements accompany the striking force through the point of penetration. At times, as in the case of 87th Armored Reconnaissance Battalion in the Yom Kippur War, the reconnaissance force both discovers and pulls the striking force through the axis of advance. Reconnaissance forces identify post-counterattack reconnaissance objectives, which provides early warning to the main body and identifies opportunities for exploitation.

Units must plan for success. As Moltke notes, "It is the cavalry's duty, after a successful battle, to take up pursuit immediately, without further orders, and to maintain contact with the fleeing enemy." After the striking force breaks through, reconnaissance forces must ascertain the position and disposition of threat forces beyond the initial counterattack objectives. The consequences of neglect are onerous. During this final step, reconnaissance roles rise relative to security roles.

Recommendation 3. The final recommendation in editing Army doctrine is to identify three forms of the counterattack. As described earlier, the terms "local" and "major" are insufficient. More descriptive identification allows warfighting functions to identify their responsibilities within each of the three forms. Research suggests that three distinct forms of the counterattack exist: hasty, deliberate and a new term, baited.[41]

The *hasty counterattack* resembles what FM 3-90-1 describes as a "local counterattack." A defender chooses to execute a hasty counterattack when the defender lacks time or terrain favorable to the defense. In this situation, Clausewitz's maxim, "the defense allows greater attrition and intelligence of the enemy," does not necessarily apply. Reconnaissance forces in the hasty counterattack need foremost to retain freedom of maneuver. When the commander lacks the ability to disrupt enemy forces through the static defense, offensive action in the form of a hasty counterattack could be the solution.

During the hasty counterattack, the operational commander assigns follow-on reconnaissance objectives for the reconnaissance force. The reconnaissance element must maneuver ahead or nearby the main body to prevent surprise. It also needs to identify fleeting opportunities for the commander to exploit. The hasty counterattack is less lethal than a deliberate or baited counterattack because of the lack of pre-planned indirect fire targets, unrehearsed avenues of approach and time to prepare. Despite its relative lack of lethality, under many circumstances, the hasty counterattack is an appropriate option for the commander.[42]

The *deliberate counterattack* resembles what FM 3-90-1 describes as a "major counterattack," although in other sections, it appears as a "decisive counterattack."[43] The deliberate counterattack represents Clausewitz's ideal defense: the defender destroys lead enemy elements from prepared positions and, once the attacker's effort has culminated or his combat power has sufficiently dropped relative to the defender, the defender commits the striking force to defeat the enemy. The reconnaissance force supporting this type of counterattack selects the best possible ground for the defense, sets in observation points with advanced optics to employ fires and attaches mobile reconnaissance forces with the striking force to follow the lead maneuver force.

Mobile reconnaissance continues along diverse avenues of approach to confirm or deny their suitability for follow-on attacks. The deliberate counterattack allows greater lethality through

pre-planned fires, greater synchronization and mutual support.

Research for this article identified a third type of counterattack observed in historical events but not in doctrine. A *baited counterattack* is one in which the defender entices the attacker into a salient or inopportune position and then commits a striking force to destroy the attackers. This type of counterattack exploits the attacker's momentum into a preplanned area ideal for the striking force.

FM 100-5 (1949) hints at it in an introductory paragraph on the defensive: "He may take up a position and invite attack as part of a deliberate plan to win the battle by a counteroffensive."[44] Napoleon used this method at Austerlitz in 1805 when, feigning weakness, French forces defended until the Allies were enticed to overstretch their right flank onto the deceptively weak French left. Napoleon's deception lured the Allies into a salient so his forces could counterattack a vulnerable flank.[45]

Another example of a baited counterattack occurred during the American Revolutionary War Battle of Cowpens in 1781. At Cowpens, American BG Daniel Morgan led two distinct forces: Continental regulars and militiamen. The militiamen had a reputation of fleeing prematurely in battle. To exploit this perception, Morgan ordered his militia Soldiers to fire only two volleys and then withdraw. When this occurred in battle, British COL Banastre Tarleton took this as a sign of panic and pursued the militiamen. Unknown to the British, Morgan's finest Continental Soldiers awaited them with disciplined musket fire at close range. Meanwhile, as planned, the militiamen returned and mounted a decisive bayonet charge on the flank of the surprised British.

The reconnaissance force supporting this type of counterattack establishes observation points to gain and maintain contact with the attacking enemy and integrates redundant observation over the trigger line for the striking force's commitment. This form of the counterattack provides maximum lethality as the operation deliberately lures the adversary into pre-planned direct, indirect and joint fires.[46]

In each of the three forms of the counterattack, reconnaissance forces integrate with the striking force. Scouts relay known enemy positions, which remain under visual contact, and describe all the patterns of life, unique signatures and habits observed of the enemy. Mobile reconnaissance forces move forward of the defenses, avoiding decisive engagement and identifying routes for the striking force. They discover gaps and bypasses and identify crossing points.

The Israeli 87th Armored Reconnaissance Battalion exemplified this role in the 1973 Arab-Israeli War. Following the Egyptian surprise attack, the unit provided opportunities for the operational commander when they discovered a functional enemy-emplaced bridge site and a weak point in the Egyptian line. They subsequently led the mechanized force along reconnoitered routes to enable operational surprise in the Israeli counterattack.

Return to current possible scenario

Returning to the fictional MG Morris in the introduction, the enemy attack made it difficult for him and his staff to know even the positions of his own forces. His military education prepared him for integrating and synchronizing the vast capabilities of U.S. joint forces but prepared him little for information management at the speed of courier. Fortunately, he had trained his force relentlessly on operations without digital enablers. A philosophy of mission command also allowed his junior leaders to take prudent risks within a culture of mutual trust. Each of his maneuver commanders transitioned from his primary to alternate and contingency communication networks after the communications blackout to arrange their forces in the defense. Tactical staffs had supplies on hand for analog planning and soon were able to establish a general awareness of the situation.

Morris soon heard from his lead brigade commander. Due to a culture of disciplined initiative, one of the reconnaissance squadrons arrayed his forces in concealed forward positions within visual contact of the enemy. Their reports, sent by courier, revealed enemy forces within the division's defense and relayed the information to the division artillery for suppression and to an attached armored force for engagement.

The scouts' initiative prevented the disastrous rear-guard attacks that TF Kean sustained in 1950. Another proactive squadron sent scouts forward undetected to discover a gap in the enemy's line. As Brom's scouts achieved in the 1973 Yom Kippur War, they discovered a viable axis of approach for a counterattack force. A third squadron of Morris's, advancing in another direction, discovered that bridges across a major waterway had been destroyed by the U.S. Air Force, temporarily cutting off lead enemy forces from their main body.

More reports allowed an understanding of the post-attack OE. Through tactics honed by austere training and initiative sanctioned by mission-command principles, tactical-reconnaissance forces influenced the timing, locations and purpose of the operational counterattack.

Conclusion

This fictional situation is within the realm of realism. The 2015 Russian National Security Strategy included this passage: "The buildup of the military potential of the North Atlantic Treaty Organization (NATO) … the further expansion of the alliance and the location of its military infrastructure closer to Russian borders are creating a threat to national security."[47] Meanwhile, NATO and U.S. Army Europe continue to increase the size and scope of multinational exercises in Eastern European states. In addition, the 2015 U.S. National Military Strategy noted, "Attacks on our communications and sensing systems could occur with little to no warning, impacting our ability to assess, coordinate, communicate and respond."

A surprise attack on forward U.S. units would be reckless and would garner international retribution. However, history shows that reckless attacks are part of the human experience.[48]

A focus on the counterattack admits a degree of vulnerability and prevents operational hubris. Whether the subject is the U.S. forces in the Korean

War or the Israelis in the Yom Kippur War, great militaries suffered due to their enemy's cleverness and persistence. The Tet Offensive of 1968 is the last time U.S. Army commanders faced a conventional attack that surprised and disoriented U.S. Army forces. In 2015, after 12 years of counterinsurgency experience, no determined attacker has stripped a U.S. force from its technological enablers. And none since the Korean War has forced an operational force into an involuntary defense. To prepare for this uncommon yet catastrophic event, training, doctrine and professional education must compensate for the dearth of personal experience.

If military professionals never study counterattacks, their ability to execute one in the fog and friction of warfare will be limited. Daniel Kahneman, winner of the Nobel Prize in economics, differentiated between what mental frameworks are best for conditions of urgency (thinking fast) vs. those that require deliberation (thinking slow). The reaction to a violent surprise attack calls for thinking fast. Kahneman would argue that, in such a situation, commanders are susceptible to the concept of availability bias. Availability biases are "short-cuts" the brain subconsciously makes based on the information most readily recalled from memory. To mitigate this cognitive phenomenon, military professionals must build a readily accessible memory through study and forethought.[49]

Although counterinsurgency operations are complex problems, U.S. Army leaders from 2001 to 2014 executed them from positions of technological, equipment and firepower advantage. As I said in the introduction, fighting from a position of relative disadvantage is foreign to our generation of officers and leaders. Without personal experience, leaders require doctrine and training. Leaders possess a cognitive advantage when they exploit opportunities to outwit and frustrate enemy attackers.

Clausewitz, in a chapter called "Critical Analysis," introduced the concept of "tyranny of fashion." He noted that Napoleon ended his siege of Mantua in 1796 because an army of 50,000 Austrians was coming to relieve the town. Clausewitz noted, however, that Napoleon did not think to defend his siege lines (a tactic known as resisting a relieving army behind lines of circumvallation). "And yet in the days of Louis XIV, it had so often been successfully employed that one can call it a whim of fashion that 100 years later it never occurred to anyone ***at least to weigh*** its merits," Clausewitz wrote.[50]

Clausewitz's reasoning complements Kahneman's: when certain practices are not in fashion, commanders unnecessarily restrict their creativity to practices that are. By studying the defense and its culmination, the counterattack, leaders increase their capacity to act creatively and effectively against a determined enemy.

The study of counterattacks waged in the 1950 Korean War and the 1973 Arab-Israeli War highlight the role modern reconnaissance forces play in setting conditions for the counterattack. Through a review of the theory and doctrine available, it is clear the current U.S. Army body of doctrine has value, but it lacks a single source for guidance on counterattacks.[51]

U.S. Army combat-training centers (CTCs) already recognize the modern OE and integrate degraded cyber- and electronic warfare into training scenarios. Going further, the broader scenario should replicate a successful enemy attack that leaves the brigade command in a communications blackout. This would force the commander and staff to balance their time between defending against a persistent enemy and planning for a decisive counterattack. Scenario writers at the CTCs already create a crucible experience for leaders and Soldiers alike. The centers integrate more cyber- and electronic-warfare variables in each rotation.[52]

The 2014 Army Operating Concept noted that "Army forces will have to support joint operations through reconnaissance, offensive operations or raids to destroy land-based enemy space and cyberspace capabilities." Implied is a responsibility for defending units to possess the knowledge and maturity to be able to transition from the defense to the offense. The U.S. Army has all the tools necessary to bolster its body of doctrine on the counterattack and, within it, the role of reconnaissance.[53]

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Notes

[1] What Soldiers referred to as "the blackout" would be a high-altitude nuclear detonation, which would propel an electromagnetic pulse (EMP) hundreds of kilometers from the blast. A 2004 report to Congress explains the capabilities of a militarized EMP. Source: U.S. House of Representatives' Committee on Armed Services, "The Report of the Commission to Assess the Threat to the United States from [EMP] Attack," 108th Congress, 2nd Session, 2004, HR Rep. 108-37. The instance of UAVs "dropping from the sky" occurred in 2014 to Ukrainian UAVs as a result of Russian jamming platforms and targeting of ground-control stations. Source: Patrick Tucker, "In Ukraine, Tomorrow's Drone War is Alive Today," ***Defense One***, March 9, 2015; accessed Jan. 3, 2016, http://www.defenseone.com/technology/2015/03/ukraine-tomorrows-drone-war-alive-today/107085/. The hacked secure iPhone is imagined by the author to represent an unprecedented level of cyberwarfare.

[2] Surrounded by German forces Dec. 22, 1944, BG Anthony C. McAuliffe, acting commander of 101st Airborne Division, responded to the German forces with one word: "Nuts!"! In S.L.A. Marshall, ***Bastogne: The First Eight Days***, Washington, DC: Infantry Journal Press, 1946.

[3] FM 3-55, ***Information Collection***,

Washington, DC: Government Printing Press, 2013.

[4] Joe Gould, "Electronic Warfare: What the U.S. Army Can Learn from Ukraine," ***Defense News***, Aug. 4, 2015; accessed Nov. 25, 2015, http://www.defensenews.com/story/defense/policy-budget/warfare/2015/08/02/us-army-ukraine-russia-electronic-warfare/30913397/.

[5] For more information on unclassified threat capabilities, see U.S. Joint Irregular Warfare Center, ***Irregular Adversaries and Hybrid Threats: An Assessment – 2011***, Washington, DC: Government Printing Press, 2011, and Paul McLeary, "Russia's Winning the Electronic War," ***Foreign Policy***, Oct. 21, 2015; accessed Nov. 19, 2015, http://foreignpolicy.com/2015/10/21/russia-winning-the-electronic-war/.

[6] Norman Dixon, ***On the Psychology of Military Incompetence***, London: Pimlico Books, 1994.

[7] Carl von Clausewitz, ***On War***, translated and edited by Michael Howard and Peter Paret, Princeton, NJ: Princeton University Press, 1984.

[8] Mao Tse-Tung, "Problems of Strategy in China's Revolutionary War," ***Selected Military Writings of Mao Tse-Tung***, Bejing, China: Foreign Language Press, 1967.

[9] JP 1-02, ***Department of Defense Dictionary of Military and Associated Terms***, Washington, DC: Government Printing Press, 2015.

[10] ADRP 1-02, ***Terms and Military Symbols***, Washington, DC: Government Printing Press, 2015.

[11] There were about 500 U.S. advisers remaining at the time of the attack, per William Robertson, published in ***Leavenworth Papers, No. 13: Counterattack on the Naktong, 1950***, Fort Leavenworth, KS: Combat Studies Institute, 1985. The circumstances of the surprise appeared in Roy Appleman, ***South to the Naktong, North to the Yalu*** (June-November 1950), Washington, DC: U.S. Army Center of Military History, 1992.

[12] GEN of the Army Douglas MacArthur was the five-star U.S. general who commanded the United Nations Command during the early part of the Korean War.

[13] In Appleman. Dean's story as told to William L Worden, New York: Viking Press, 1954.

[14] Arrival timelines appear in T.R. Fehrenbach, ***This Kind of War: The Classic Korean War History – Fiftieth Anniversary Edition***, Washington, DC: Potomac Books Inc., 2001, and Uzal W. Ent***, Fighting on the Brink: Defense of the Pusan Perimeter***, Nashville: Turner Publishing Company, 1998. These references recount the inclusion of 2nd Infantry Division in the plan.

[15] 25th Infantry Division Association editorial review, ***25th Infantry Division, Tropic Lightning, Korea 1950-1954***, Paducah: Turner Publishing Company, 2002.

[16] Appleman.

[17] Ent.

[18] Ent and Appleman.

[19] Clausewitz.

[20] MG James Gavin, "Cavalry, And I Don't Mean Horses," ***Harper's Magazine***, April 1954.

[21] Appleman.

[22] Doctrinal quotations appear in FM 3-98, ***Reconnaissance and Security***, Washington, DC: Government Printing Press, 2015.

[23] The author's research searched the indexes of the following three authorities on the Korean War: ***The Coldest War: A Memoir of Korea*** by James Brady (New York: Thomas Dunne Books, 1990), Fehrenbach's ***This Kind of War*** and Appleman's ***South to the Naktong, North to the Yalu*** for the following terms: "recon," "scout," "cavalry" or "reconnaissance." None of them contained any of the four words. A digital search resulted in more hits, but each led to passages about "commander's reconnaissance," a different type of mission. "Cavalry" appeared only as a unit descriptor for 1st Cavalry Division and other units of cavalry heraldry.

[24] COL Harry Summers, ***Korean War Almanac***, New York: Facts on File, 1990.

[25] Anwar al-Sadat, ***al-Bahth 'an al-dhat: qissat hayati***, Cairo: al-Maktab al-Misri al-Hadith, 1985.

[26] Mohamed Abdel Gahni El-Gamasy, ***The October War***, Cairo: American University in Cairo Press, 1993.

[27] John J. McGrath, ***Sinai, 1973: Israeli Maneuver Warfare Organization and the Battle of the Chinese Farm***, Fort Leavenworth: Combat Studies Institute Press, 2005.

[28] Avraham Tamir, ***A Soldier in Search of Peace***, edited by Joan Comay, New York: Harper & Row, 1988.

[29] Avraham Adan, ***On the Banks of the Suez: an Israeli General's Personal Account of the Yom Kippur War***, London: Arms and Armour Press, 1980; McGrath; El-Gamasy.

[30] McGrath; El-Gamasy.

[31] McGrath, ***Scouts Out!***, Fort Leavenworth: CSI Press, 2008.

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[42] Ibid.

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Acronym Quick-Scan

ADRP – Army doctrinal reference publication
BCT – brigade combat team
CTC – combat-training center
EMP – electromagnetic pulse
FAB – field-artillery battalion
FM – field manual
IDF – Israeli Defense Forces
JP – joint publication
NATO – North Atlantic Treaty Organization
NKPA – North Korean People's Army
OE – operational environment
RoKA – Republic of Korea Army (South Korea)
TF – task force
UAS – unmanned aerial system
UAV – unmanned aerial vehicle

Recommended Reading for Professional Development

Listed by general subject rather than command echelon

Profession of arms

• Don Higginbotham, ***George Washington and the American Military Tradition*** [commercial publication]

• Suzanne C. Nielsen and Don M. Snider, ***American Civil-Military Relations: The Soldiers and the State in the New Era*** [commercial publication]
American Civil-Military Relations offers the first comprehensive assessment of the subject since the publication of Samuel P. Huntington's field-defining book, ***The Soldier and the State***.

Institutional development

• Bruce Godmundsson, ***On Armor*** [commercial publication]
Overview of evolution of combined arms organizations from World War I through Cold War; analyzes combined arms teams from a multi-national perspective, including the United States.

• George Hofmann and Donn Starry (eds), ***Camp Colt to Desert Storm*** [commercial publication]
Anthology that includes set of articles devoted to principal eras in Armor Branch history; includes chapter on U.S. Marine Corps armor development.

• Robert S. Cameron, ***To Fight or Not to Fight?*** [CSI publication]
Overview of doctrinal and organizational trends related to reconnaissance organizations and related issues; provides context for understanding current state of cavalry/recon.

• John J. McGrath, ***Scouts Out!*** [CSI publication]
Overview of reconnaissance organizations in modern armies; multinational perspective.

• Robert S. Cameron, ***Mobility,* Shock, and Firepower** [CMH publication]
Provides context for understanding the early development of the Armor Branch and its evolution from a platform-centric orientation into a set of unique capabilities amid the constraints of organizational precedents, budgetary limitations and uncertainty RE the capabilities of new technology.

• Martin L. Van Creveld, ***Supplying War: Logistics from Wallenstein to Patton***; 2nd Edition [commercial publication]
A second edition of this classic work, commenting on the role of logistics in warfare.

• John Stone, ***The Tank Debate: Armour and the Anglo-American Military Tradition*** [commercial publication]
Analysis of tank development from World War II to 2000 with focus upon shaping factors and technology limitations; multinational perspective.

• National Training Center Operations Group, ***Training for Decisive Action: Stories of Mission Command*** [CSI publication]

• Scott C. Farquhar (ed), ***Back to Basics: A Study of the Second Lebanon War and Operation Cast Lead*** [CSI publication]
Chronicles the Israeli Defense Force's efforts to identify and apply lessons learned from 2006 to operations in Gaza; and transition from counterinsurgency-centric orientation toward a more traditional combined-arms approach, not unlike current shifts in U.S. Army in the last few years.

Platform development

• David E. Johnson, ***Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917-1945*** [commercial publication]
Johnson examines the U.S. Army's innovations for both armor and aviation between the world wars, arguing that the tank became a captive of the conservative Infantry and Cavalry Branches, while the airplane's development was channeled by airpower insurgents bent on creating an independent air force.

Continued on Page 32

Looking Toward the Future: the U.S. Cavalry's Role in Multi-Domain Battle

by MAJ Amos C. Fox

As the U.S. Army moves to formally incorporate the concept of multi-domain battle into doctrine, the role of the U.S. Cavalry must evolve. The concept seeks to operate in a synchronized and symbiotic manner across all domains of war[1] while presenting the enemy with multiple dilemmas to develop positions of relative advantage for U.S. land forces in contested operational environments (OE). In musing on warfare, British military theorist B.H. Liddell Hart wrote, "As in war, the aim is to weaken resistance before attempting to overcome it, and the effect is best attained by drawing the other party of his defenses."[2] Liddell Hart's thought can easily be transferred to the evolving role of the cavalry within the multi-domain battle construct.

This article argues that the role of the U.S. Cavalry in multi-domain battle is to link multi-domain and combined-arms capabilities with tactical action through the execution of advanced-force action – dislocating an adversary's formation, reconnaissance and security (R&S) operations and pursuit – to create zones of proximal dominance the supported commander can exploit to accomplish his mission.[3] To explain these ideas, this article will discuss the ideas of battlefield dominance and multi-domain battle, then explain advanced-force actions.[4]

Operational doctrine for 21st Century

Although not formally captured in U.S. Army doctrine, multi-domain battle is an operational theory of warfare that will serve as the Army's operational doctrine once formally adopted. The multi-domain battle theory acknowledges that contemporary warfare is a struggle between opposed systems in which each participants' system is open, dynamic and adaptive.

To be sure, GEN David Perkins, U.S. Army Training and Doctrine Command commander, said the same: that multi-domain battle "advances the proven idea of combined arms into the 21st Century [OE] by describing how future ground-combat forces working as part of joint, interorganizational and multinational teams will provide commanders the multiple options across all domains that are required to deter and defeat highly capable peer enemies."[5] Also, GEN Perkins posits that multi-domain battle will require U.S. ground forces to fight for contested terrain against ensconced enemies who are seeking to retain a position of relative dominance.

For Armor and Cavalry leaders, multi-domain battle is warfare in which interconnected teams work together in pursuit of a common purpose – which is to say, the ethos of warfare for the Armor and Cavalry leader has not changed under the multi-domain battlefield construct; the only thing that has changed are the capabilities available and the character of the fight. Furthermore, GEN Perkins' statement clearly articulates that ground forces are critical in multi-domain battle – ground forces are required to conduct combined-arms action, which underpins all other action in multi-domain battle.

U.S. Army doctrine is less descriptive than GEN Perkins in outlining the concept of multi-domain battle. Army Doctrinal Reference Publication (ADRP) 3-0 describes the concept in stating that "Army forces conduct multi-domain battle as part of a joint force to seize, retain and exploit control over enemy forces."[6] To do this, Army forces are to deter threats and deny an opponent's ability to freely operate on the battlefield – all the while maintaining freedom of movement and maneuver in all domains.[7] As the reader can see, the Army's operations manual casts a wide net around the concept while providing insufficient depth or detail to make the concept tangible for tactical leaders.

In either case, the role of the U.S. Army's cavalry force is not discussed.

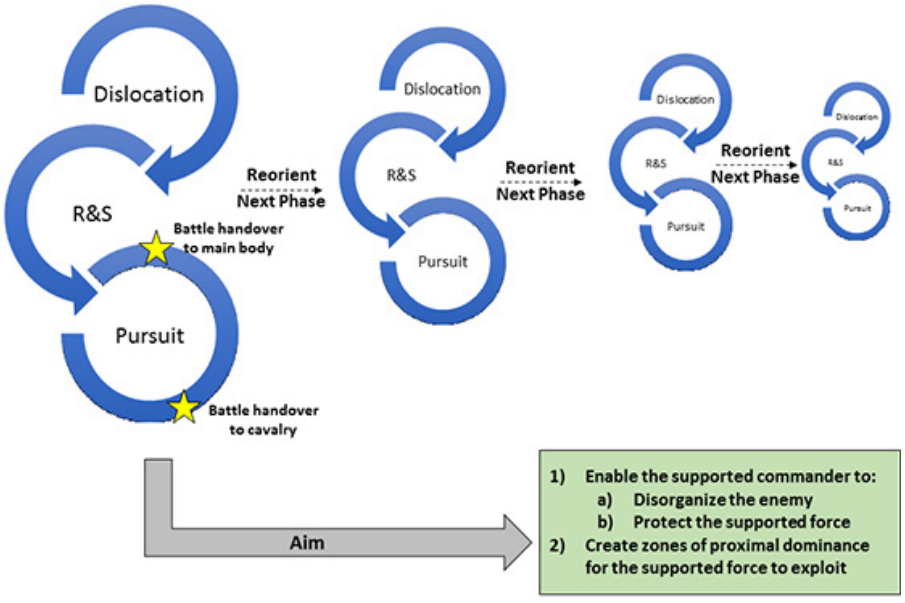

Figure 1. Advanced-force action.

However, in assessing the current literature available, one can foresee a critical role for the cavalry within this doctrine – a role that moves the cavalry beyond that of just R&S operations. In multi-domain battle, the cavalry should serve as the link between operational doctrine and tactical action. The cavalry should link joint-task-force objectives to tactical action through advanced force action. Advanced-force action, as stated previously, is focused on dislocating the enemy, conducting traditional R&S operations and exploiting success through pursuit operations to enable the supported commander to accomplish his mission. (See Figure 1.)

The rest of this article will analyze these concepts in more detail while proposing related innovations to support them.

Defining battlefield dominance

Before analyzing the role of the cavalry on the multi-domain battlefield, it is instructive to understand the character of dominance. In doing so, one can better understand the proposed role of the cavalry in a multi-domain OE. The questions one should ask about dominance are: 1) what is the character of dominance?; 2) how is it measured?; and 3) what are its defining features? Understanding the answers to those questions will allow the commander and his staff to develop stratagems to positively manipulate dominance.

First, dominance is conditional. The primary conditions that govern the conditional character of dominance are resource requirements and time. Also, dominance requires resource stabilization and resource overmatch in relation to the enemy, time and self-sustainment considerations. The higher the cost in resources, the less likely a force will be able to gain or preserve dominance.

Next, because dominance is resource-dependent, it is fleeting, fragile and prone to surprise. Last, and again tied to resources and time, dominance can be measured in zones, degrees and duration. Since resources are finite, a force cannot maintain dominance everywhere all the time; therefore, anything an adversary can do to negatively impact its opponent's resources will influence its ability to maintain dominance at a specific point in time and space. (See Figure 2.)

U.S. Cavalry formations, therefore, are ideally suited to deny or disrupt an enemy's ability to dominate the multi-domain battlefield through the negative manipulation of enemy resources. Moreover, the cavalry is the fountainhead for attaining zones of proximal dominance – or, to use GEN Perkins' words, the cavalry will enable U.S. ground forces to "capitalize on the temporary windows of localized control to seize, retain and exploit the initiative."

Zones of proximal dominance, or localized control, should be thought of as an orb of power that radiates from a central position. Power radiation is proportional to the strength of resistance in the environment. Power radiation can also be concentric or directional, depending on the character in which the formation is engaged; however, it is likely that in most cases power radiates directionally – toward an adversarial force. Figures 3, 4 and 5 illustrate the idea of zones of proximal dominance.

Against peer competitors, in multi-domain environments, battlefield dominance is the farthest thing from absolute. Viewing the battlefield in terms of localized control, or zones of proximal dominance, can assist planners and commanders in developing plans that account for dominance of a given battlespace in all domains.

Cavalry's role

British military theorist J.F.C. Fuller wrote, "Tactical success in war is generally gained by pitting an organized force against a disorganized one."[8] Fuller's thought is a good starting point when assessing the role of the U.S. Cavalry in multi-domain battle because it succinctly captures the sequential layers of tactical operations. Specifically, his point speaks to presenting the enemy with multiple dilemmas to increase chaos in the enemy's formation, yet it also implies protecting one's own formation. Also, Fuller's thought intrinsically addresses striking at the enemy with advanced forces to shape the enemy in ways that enable the main body to achieve a relative position of advantage when making contact.

As such, the cavalry's mission should transition from that of purely R&S operations. The cavalry's goal should be to disorganize an adversary's force so that when the supported force makes contact, victory is all but secured. To accomplish this goal, the cavalry must serve as the link among the joint task force, multi-domain operations, combined-arms operations and tactical formations. Next, the cavalry must operate as a dislocation force to disorganize the enemy while allowing the supported force to remain organized and position itself to exploit the supporting-cavalry formation's action. R&S operations fall within this area. Last, the

Dominance is inherently tied to: • Resources • Time/duration • Enemy action • Self-sustainment activities	**One way to reduce dominance:** Dominance = $\frac{\text{Resources + time}}{\text{Enemy action + self-sustainment}}$

Dominance is measured in:
• Zones:
  ○ Close to far
  ○ Multiple domains
• Degree (high, medium, low)
• Duration (short to long)
	Dominance is:
	• Fleeting
	• Fragile
	• Prone to surprise

Figure 2. Quantifying dominance.

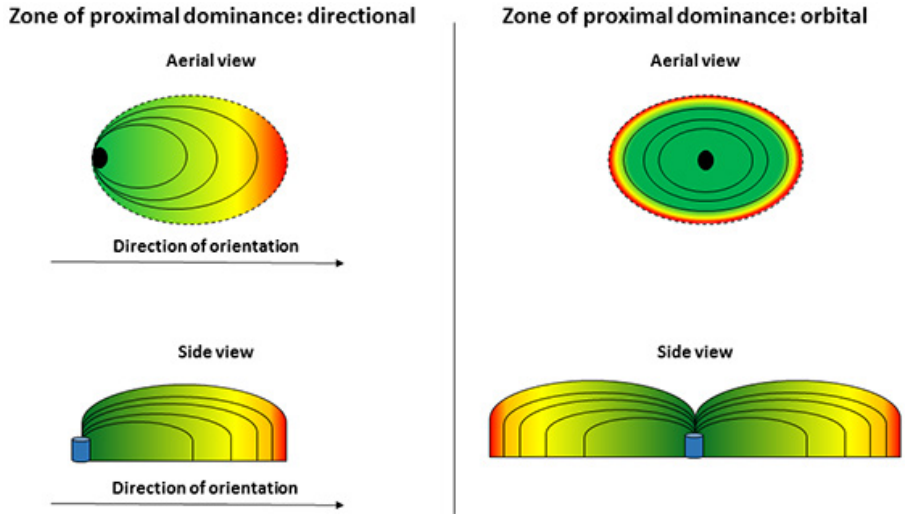

Figure 3. Zones of proximal dominance.

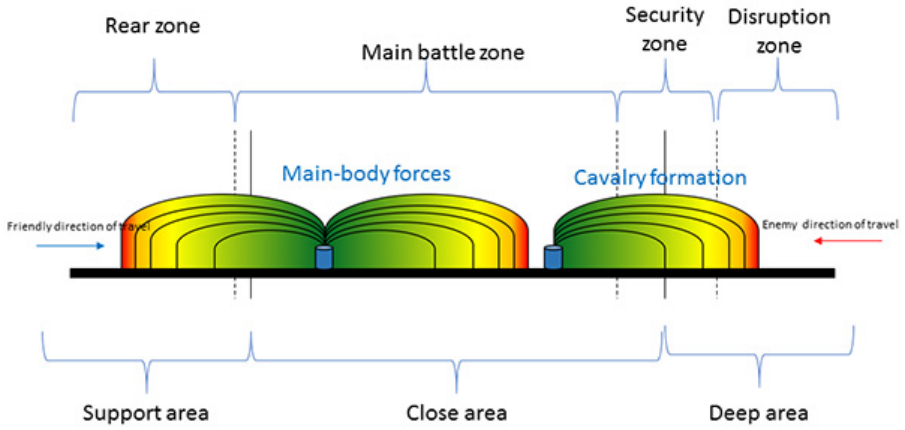

Figure 4. Zones of proximal dominance and operational framework.

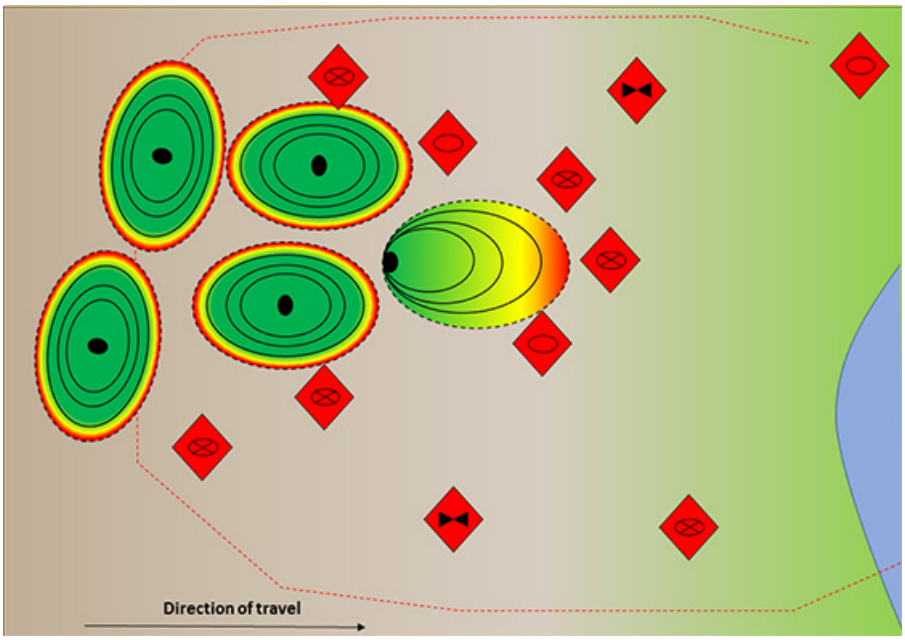

Figure 5. Zones of proximal dominance and battlefield.

cavalry should return to its historical role as the Army's pursuit force – the cavalry should be unleashed on fleeing enemies to destroy the remnants of a demoralized enemy to extend or solidify U.S. ground-force zones of proximal dominance.

Imagine a U.S. Cavalry formation – whether an R&S brigade combat team (BCT), armored cavalry regiment (ACR), reconnaissance-security strike group, division cavalry squadron or BCT cavalry squadron – conducting action far forward of its assigned main body. The cavalry formation on the multi-domain battlefield is charged with linking joint fires; offensive and defensive cyber capabilities; and electronic attack while simultaneously conducting reconnaissance, security or counter-reconnaissance to cleave away the enemy's multi-domain and combined-arms capabilities.[9] The purpose of the cavalry's action is to divest an adversary of its ability to fight in multiple domains or with combined arms so the supported force meets the enemy at a position of relative advantage.[10] (See Figure 6.)

To put it another way, the cavalry's goal within a multi-domain battlefield environment is to force the enemy to fight by methods it doesn't wish to fight in by rendering its strength irrelevant, which is achieved through dislocating the enemy's force.

Dislocation

As mentioned previously, the cavalry's job, in conjunction with multi-domain and combined-arms capabilities, is to positively shape the enemy for contact with the supported force. On the multi-domain battlefield, where enemy formations have access to a panoply of interconnected enablers, denying them access to those tools is paramount. Dislocation is a critical component of defeating an enemy with multi-domain capabilities because it denies the enemy access to its tools: multi-domain and combined-arms capabilities.

Writing on dislocation, Liddell Hart said, "In most campaigns, the dislocation of the enemy's psychological and physical balance has been the vital prelude to a successful attempt at his overthrow." Army doctrine, recently incorporating the concept, states that dislocation is the use of forces to gain a position of advantage in relation to the enemy, nullifying its force's value.[11]

However, the Army's thoughts on dislocation are simplistic and do not fully

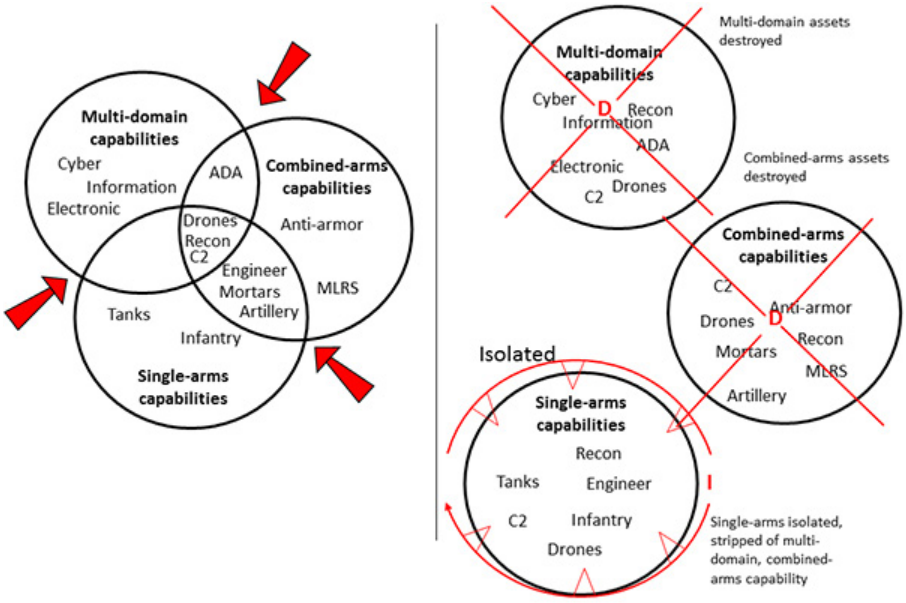

Figure 6. Purpose of cavalry operations: dislocating enemy forces.

explore the possibilities of the concept. A far more developed concept on dislocation can be found in the work of American military theorist Robert Leonhard. Leonhard defines dislocation as "the art of rendering the enemy's strength irrelevant";[12] however, in articulating the process associated with the art is where Leonhard's use of the term bears fruit, making it applicable for U.S. Cavalry forces on multi-domain battlefields.

Leonhard's interpretation contends that dislocation is at the core of achieving advantages in combat. He posits that dislocation can be functional, positional, temporal and moral. *Functional dislocation* is forcing an enemy to fight via a method for which it is not designed or for which it is ill-suited. *Positional dislocation* is forcing an enemy to fight in a place in which it is ill-suited, such as luring tanks into urban areas or other restricted terrain. *Temporal dislocation* is fighting at a tempo the enemy is unable to maintain – or conversely, forcing an enemy that seeks to fight at a high tempo to fight at a much slower rate. Lastly, *moral dislocation* is the idea of breaking the enemy's will.[13] The motivating idea is that in dislocating an enemy, a friendly force will be able to avoid the enemy's strength, creating a position of relative advantage in which the enemy's defeat will come at a far cheaper expense.

Leonhard takes the discussion further, providing more depth and breadth to understanding dislocation. Leonhard states, "An enemy force, in any situation, has strengths and weaknesses."[14] He contends that an enemy's strength contains two elements: a component and a condition.[15] In the open, adaptive systems that dominate the multi-domain battlefields of today, one could view the components of an enemy's strength as its *multi-domain capabilities*, its *combined-arms capabilities* and its *single-arms capabilities*.[16] Together, they achieve synergistic effects that compensate for the weakness of the other capabilities, but individually, or in the wrong environment, the components lose much of their power and utility. Understanding how enemy capabilities lose power, or the conditional nature of strength, is critical to effective planning.[17]

Moreover, if one understands the conditional nature of an enemy's strength, he will in turn understand that the two methods to defeat it are through the destruction of those components and through altering the conditions in which the components derive their strength.[18] This is exactly where the cavalry fits into multi-domain battle – cavalry's goal, operating at the advanced edge of tactical and operational formations, leveraging multi-domain and combined-arms capabilities, able to rely on joint and ground-based cross-domain fires – is to dislocate peer-competitor capabilities. The aim is to degrade the enemy to the point that by the time its meets the supported force, it has been so degraded that it is but a simple problem.

While dislocation is critical, the cavalry will continue to conduct R&S operations for the formation in which they are employed. However, to succeed on a multi-domain battlefield, cavalry formations must be augmented with capabilities that enable R&S operations to push beyond the land and air and into cyber and electronic environments. Thus, in multi-domain battle, R&S is not just ground and aerial action but also cyber and electronic – cavalry formations must be afforded those capabilities to be effective on the multi-domain battlefield.

Multi-domain warfare is focused on technology, but as a RAND report reminds the reader, "Technology matters, yes, but so does the form of organization that is adopted or developed to embrace it."[19] As such, cavalry formations should be provided with capabilities that enable them to simultaneously conduct dislocating action while conducting R&S operations. Anti-armor capabilities permanently assigned to cavalry formations would greatly enhance their ability to conduct advanced-force action while adding a wrinkle an adversary must prepare for – or to put it another way, to increase the number of potential dilemmas an enemy must be ready to address.

The 11th ACR regularly experiments with this idea through the use of its anti-armor troop during National Training Center exercises each month.[20] Perhaps experimentation beyond 11th ACR would yield tangible results for the cavalry.

The addition of similar capabilities within cavalry formations would provide serious benefits to those formations, including the ability to increase their operational reach and enhance their organic firepower – both of which further enable them to dislocate the synergistic effects of enemy capabilities. The cavalry formation would possess the ability to conduct mobile or static echeloned stripping of assets on the enemy formation as the two

formations converged on one another. Furthermore, the addition would increase the stand-off between enemy multiple-launch rocket systems (MLRS) and the supported force, and mission command or sustainment nodes, thus increasing the supported forces' battlefield survivability.

More capabilities such as cyber, electronic and MLRS (or the high-mobility artillery rocket system) should also be added to cavalry formations to achieve similar effects to that discussed in relation to anti-armor additions. The goal of all infused capabilities is to make the U.S. Cavalry able to kick in the door to hostile OEs; tip the balance of power in favor of U.S. forces; and project power to create windows of opportunity, or zones of proximal dominance, for the supported commander.

The previous point begins to address the "why" behind the pre-eminence of dislocation on the multi-domain battlefield. When opponents meet on the battlefield, there is often a disparity in the range of their weapon systems, whether this be kinetic firepower or intangible "firepower" such as cyber, electronic or information capabilities. The weapon that can range the furthest is a "protective weapon," while the weapon of shorter range is the true fighting instrument.

One can see this concept in the use of long-range fires, cyber and electronic attack to set the conditions for a combined-arms assault of a given objective. A great contemporary example of this can be found during the Russo-Ukrainian War's Second Battle of Donetsk Airport, which was fought September 2014 to January 2015 outside the city of Donetsk, Ukraine. During the battle, Russian forces used long-range fires to siege the airport until a given set of conditions were met, then their tanks and infantry assaulted the remaining Ukrainian forces, sealing the battle as a Russian victory.[21] Russia used its long-ranges fires much like a shield to allow it to get into position for the killing blow with its gladius – its tanks and infantry.

In analyzing the previous point from another perspective, one can further deduce that the true fighting power of a formation is not in the items on the periphery but in its inner core. The outer layers of a formation serve two purposes: to protect the inner core and to shape the enemy to set the conditions for the inner core's success. (See Figure 7.) Taking this concept to its conclusion, one must understand that to destroy the enemy's strength, or its inner core, one must first strip away or dislocate the things that protect the core.[22] Therefore, the more of the enemy's outer protective shell the cavalry can dislocate from the inner core, the more success the supported force will have in defeating the enemy's main fighting force. Dislocating the outer layers and destroying the inner core will in essence defeat the enemy.

Operational framework

The next logical step is to determine where the cavalry fits on the battlefield, or to examine the operational frameworks in relation to the cavalry's mission on the multi-domain battlefield. ADRP 3-0 describes "operational framework" as a hierarchy, with the area of operations being at the top of the hierarchy, followed by the deep-close-security area construct to define forces in time and space, then the decisive-shaping-sustaining construct to identify priority by purpose, and finally, the main effort-supporting effort construct to identify priority by resource.

However, the cavalry's evolving role, in which they conduct advanced-force action in support of multi-domain battle, suggests that the deep-close-support area construct is insufficient. ADRP 3-0 defines the *deep area* as "The portion of the commander's area of operations that is not assigned to subordinate units." ADRP 3-0 continues that the deep area extends beyond subordinate-unit boundaries to the farthest reaches of a unit's area of operations; commanders conduct operations within the deep area to influence future events in time, space and purpose. Yet this view of the deep area is passive, reactive and cedes initiative to aggressive opponents. On the multi-domain battlefield – where adversaries will use a variety of tools to assist them in weakening U.S. forces before making contact with the main body – dominating the area between the main body and enemy force is critical to the supported force's survival. Therefore, a more descriptive operational framework is required.

The Army's opposing-force tactics manual, Training Circular (TC) 7-100.2,[23] provides a good starting point in describing the concept of battlefield zones: disruption zone,[24] battle zone[25] and support zone.[26] Battlefield zones hold true whether the battlefield is linear or non-linear. Zones are defined by purpose or the desired effect to be achieved within each zone.

The benefit of this concept is that it enhances planning by providing structure to the battlefield, better allowing staffs to arrange formations in time, space and purpose on the battlefield. It is also a more assertive battlefield framework – a commander instructing his staff to win the disruption-zone fight

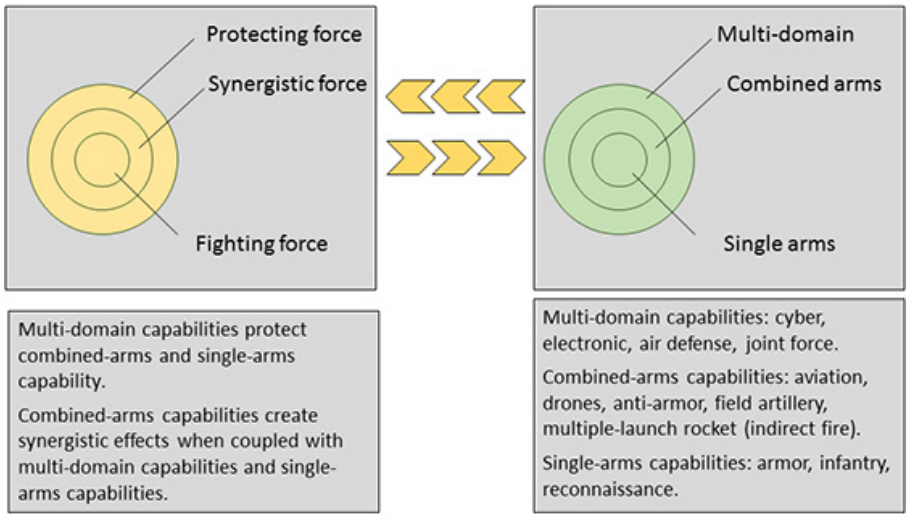

Figure 7. Layers of a combat formation.

makes more tangible sense to a staff or subordinate commanders than does a nebulous statement such as, "We've got to win the deep fight." The proposed construct provides inherent guidance, whereas the deep-close-support framework does not.

Again, restructuring the operational framework to align zones by purpose will likely enhance planning and execution on the multi-domain battlefield by allowing planners and commanders to align formations by purpose. The forward edge of this proposed framework should be the disruption zone. However, a more nuanced description of a battlefield's zones would be beneficial. In addition to the disruption zone, a *security zone* should be added to provide the cavalry more depth in which to conduct dislocative action and to counteract enemy multi-domain and combined-arms capabilities. The security zone would be the buffer area between the disruption zone and engagement by the main body; the security zone would act as a siphon through which the enemy would pass, where cavalry formations would conduct reconnaissance and/or security operations to accurately determine the post-disruption-zone assessments of enemy formations while conducting battle handover with main-body forces. The goal is to protect the supported force while disorganizing the adversary.

Depending on the character of the situation, the disruption zone and security zone could also be inverted, having the security zone at the far end of a friendly formation, followed by the disruption zone, battle zone and support zone. Leading with the security zone might be beneficial when the enemy's location is less certain – perhaps in situations where the support formation is conducting a movement-to-contact or is operating in areas where certainty is reduced – or when violence of action must be applied in a more judicious manner.

Under the proposed battlefield framework, main-body forces, charged with accomplishing the mission of the higher headquarters, would operate in the main battle zone. The main body's actions would be no different than those defined for close-area operations in ADRP 3-0 or the battle zone in TC 100-2. Similarly, to stay with the use of the term "zone," ADRP 3-0's term "support area" would require adjusting to "support zone," but the zone's purpose would remain the same as it is defined in ADRP 3-0. Figure 8 provides an illustration of this framework.

Minor adjustments to the deep-close-support area operational framework would facilitate the cavalry's ability to serve both as a disruption force seeking to debride the enemy of multi-domain and combined-arms capabilities for the main body while also providing the zone in which to conduct traditional R&S operations supporting the main body. The battlefield, broken down into zones, facilitates better-developed plans and action through clearly assigning battlespace (battlefield zones) with purpose and a force allocated to accomplish that purpose.

Finding future in past

One must assume that enemy formations will not fight to the last man, but rather possess disengagement criteria that, when met, will trigger the enemy to break contact. With this thought in mind, one can deduce that successful main-body action will cause the enemy, at some unknown point, to retrograde from the battlefield, opening another window of opportunity.

From time immemorial, the cavalry served as a combat arm, and pursuit was the primary realm in which it operated. Cavalry was traditionally used to exploit the success of infantry and artillery on a fleeing enemy by ruthlessly pursuing the enemy and cutting them down as they fled the battlefield. Within the U.S. Army, the idea of the pursuit has rusted and has certainly become disassociated from the cavalry. Since the advent and adoption of mechanized scout cars, the U.S. Cavalry has slowly distanced itself from the tactics of penetration and pursuit as those actions transitioned to the armored force, leaving the cavalry almost exclusively an R&S formation; the only question has been whether its formations should possess the ability to fight for information or conduct stealthy action.[27]

However, the multi-domain battlefield demands powerful ground-based forces capable of pursuit to extend zones of proximal dominance, enabling U.S. ground forces to shift the balance of power on the battlefield. This does not imply that cavalry formations should be kept in reserve, which is an obvious violation of the principles of reconnaissance. Instead, cavalry formations should actively hand off the dislocated and disorganized enemy to main-body forces once the enemy has run the gamut from the disruption and security zones. At that point, cavalry formations, still working in conjunction with multi-domain and combined-arms capabilities, reorganize to pursue the enemy. Once the enemy breaks contact, the cavalry rapaciously runs down the fleeing opponent while employing multi-domain, combined-arms and organic capabilities to destroy the demoralized foe.

Conclusion

To conclude, the U.S. Army finds itself

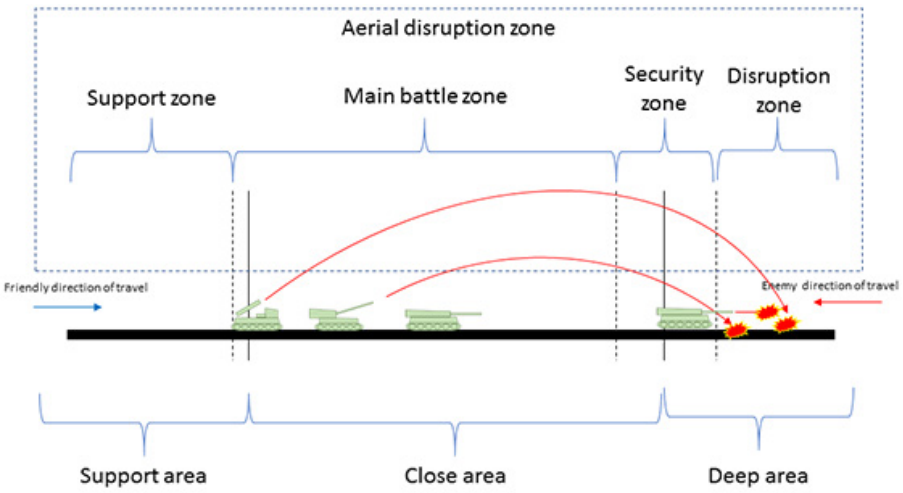

Figure 8. Proposed operational framework.

at yet another shift in the conduct of warfare. Fuller's words offer great insight into how to think about evolutions in warfare: "If mentally we cannot keep pace with the changes in the physical elements of war – the changes in weapons, movement and protection – then our strategy and our tactics will remain obsolete: that is to say, they will not enable us to express the principles of war when once again we are called upon to apply them."

As the Army's understanding of multi-domain battle evolves, the U.S. Cavalry must evolve its strategy and tactics to remain relevant on the 21st Century battlefield. The evolution to multi-domain battlefields mandates that the cavalry is no longer just a formation for R&S operations. The cavalry must re-orient itself to serve as the primary tactical conduit and integrator of multi-domain capabilities on the battlefield, seeking to disorganize and pursue enemy formations to create, extend or maintain zones of proximal dominance that enable the supported commander to accomplish his mission. Otherwise, U.S. Army forces will find themselves unable to project power in hostile environments that peer competitors seek to dominate.

Lastly, in adapting the U.S. Cavalry as the linchpin among multi-domain, joint and combined-arms capabilities and tactical action, the Army will achieve progress on the Army Capabilities Integration Center's warfighting challenges. Specifically, advancement will be made on the following challenges: Army Warfighting Challenge (AWC) 11, conducting air-ground R&S operations; AWC 12, conducting joint expeditionary maneuver and entry operations; AWC 15, conducting joint combined-arms maneuver; and AWC 17/18, employing cross-domain fires.[28] As the cavalry evolves to better support the Army, the Army will continue to improve in addressing its first-order problems.

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Notes

[1] Domains of war: land, air, maritime, space, cyber. Information, while not formally categorized as a domain of war, must be included in the MDB paradigm.

[2] B.H. Liddell Hart, ***Strategy***, New York: Meridian Books, 1991.

[3] For this article's purpose, *multi-domain capabilities* include joint-force partners and Army capabilities that include cyber, electronic, information and air-defense systems. *Combined-arms capabilities* include Army assets ranging from aviation, drones, close-range air defense, anti-armor and long-range fires (MLRS and long-range howitzers).

[4] This article is intentionally non-descript on the echelon of formation in discussing U.S. Cavalry formations. This is because the article is conceptual and its purpose is to start the discussion on the role the U.S. Cavalry will play on MDBs against potential peer competitors.

[5] GEN David G. Perkins, "Multi-Domain Battle: Joint Combined-Arms Concept for the 21st Century," ***Army*** 66, No. 12 (December 2016).

[6] ADRP 3-0, ***Operations,*** Washington, DC: Government Printing Office, 2016.

[7] Ibid.

[8] J.F.C. Fuller, ***The Foundations of the Science of War***, Fort Leavenworth, KS: Command and General Staff College Press, 1993.

[9] Enemy multi-domain capabilities can include its cyber, electronic, aviation/drone and information-warfare capabilities, plus anti-air/area-denial capabilities. Enemy combined-arms capabilities can include MLRS, field artillery and anti-armor capabilities.

[10] It is important to remember that the U.S. Army has reduced the diversity in its inventory of artillery and rocket munitions, while other nations such as Russia have continued to develop more lethal artillery and rocket munitions. Throughout the Russo-Ukrainian War, Russia has leaned heavily on top-attack, bomblet munitions similar to the U.S. dual-purpose improved conventional munition and thermobaric warheads, which use over-pressure and pure heat and fire to destroy whatever is on the receiving end. The U.S. artillery and rocket arsenal possesses no similar munitions.

[11] ADRP 3-0.

[12] Robert R. Leonhard, ***The Art of Maneuver: Maneuver Warfare Theory and AirLand Battle***, New York: Ballantine Books, 1991.

[3] Robert R. Leonhard, ***The Principles of War for the Information Age***, Novato, CA: Presidio Press, 1994.

[4] Ibid.

[5] Ibid.

[6] The term *multi-domain capabilities* refers to cyber, electronic, information, anti-air/aerial denial, special reconnaissance and joint-force capabilities. *Combined-arms capabilities* refer to indirect fires – including MLRS and field artillery – rotary-wing aircraft, anti-armor and man-portable air-defense systems. *Single-arms capabilities* refer to armor, infantry and local R&S capabilities.

[7] Leonhard, ***The Principles of War for the Information Age***.

[18] Ibid.

[19] John Arquilla and David Ronfeldt, ***Swarming and the Future of Conflict***, Santa Monica, CA: RAND Corporation, 2000.

[20] 2nd Squadron's Troop K is 11th ACR's anti-armor troop. It is a humvee-based formation that possesses tube-launched, optically tracked, wire-guided anti-tank missiles and Improved Target Acquisition System-equipped platforms to conduct anti-armor action for the regiment.

[21] Timothy L. Thomas, ***Russia Military Strategy: Impacting 21st-Century Reform and Geopolitics***, Fort Leavenworth, KS: Foreign Military Studies Office, 2015.

[22] Fuller.

[23] TC 7-100.2, ***Opposing-Force Tactics***, Washington DC, Government Printing Office: 2011.

[24] The *disruption zone* is defined as "the geographical area and airspace in which a force will conduct disruptive action and [will] conduct action within [it] to attack specific components of the opposing force to break apart their system [and] to create windows of opportunity for the main body force to exploit." The disruption zone is where forces conduct actions to shape the adversary through fixing actions, attritive long-range fires and actions seeking to break apart the cohesiveness of opposing formations, creating zones of proximal dominance, or windows of opportunity, which can be exploited by main-body forces.

[25] The *battle zone* is the sector of the battlefield in which main-body forces seek to destroy disorganized enemy formations.

[26] The *support zone* is the sector of the battlefield that is relatively free from enemy forces and houses the logistics and sustainment infrastructure.

[27] Matthew D. Morton, ***Men on Iron Ponies: The Death and Rebirth of the Modern U.S. Cavalry***, DeKalb, IL: Northern Illinois University Press, 2009.

[28] AWC identified in December 2016, http://www.arcic.army.mil/Initiatives/ArmyWarfightingChallenges.

Acronym Quick-Scan

ACR – armored cavalry regiment
ADA – air-defense artillery
ADRP – Army doctrinal reference publication
AWC – Army warfighting challenge
BCT – brigade combat team
C2 – command and control
MLRS – multiple-launch rocket system
OE – operational environment
R&S – reconnaissance and security
TC – training circular

Continued from Page 24

• Orr Kelley, ***King of the Killing Zone*** [commercial publication]
Highly readable overview of the development and fielding of the Abrams tank.

• Blair W. Haworth, ***The Bradley and How it Got That Way*** [commercial publication]
Overview of the Bradley Fighting Vehicle and the factors influencing its development; also provides contextual understanding of mechanized infantry evolution.

• Mark J. Reardon and Jeffery A. Charlston, ***From Transformation to Combat: The First Stryker Brigade at War*** [CMH publication]
Overview of Stryker Brigade Combat Team development and initial entrance into combat.

Combat operations

• Center for Army Lessons Learned (CALL), 17-01, ***Scouts in Contact, Tactical Vignettes for Cavalry Leaders Handbook,*** 8 December 2016 [CAC]
Full of vignettes developed by subject-matter experts at the National Training Center to help lead teams through a variety of scenarios that will help challenge young reconnaissance leaders' decision-making skills. Facilitator instructions guarantee you have the information needed to make leaders and teams successful.

• James R. McDonough, ***The Defense of Hill 781: An Allegory of Modern Mechanized Combat***
Follows the fictional exploits of a lieutenant colonel who has died and found himself in purgatory (which happens to be the National Training Center). He must atone for his sins as an officer through the successful completion of six missions. A modern version of ***The Defence of Duffer's Drift***, it provides a light-hearted tactical primer for making serious command decisions and learning lessons about tactics, people and what it takes to win a battle.

Recommended Reading for Professional Development

Listed by general subject rather than command echelon

• Dale Wilson, ***Treat 'Em Rough!*** [commercial publication]
Narrative of American tank experience in World War I.

• Harry Yeide, ***Steeds of Steel: A History of American Mechanized Cavalry in World War II*** [commercial publication]
Readable overview of the varied experiences of mechanized cavalry in all theaters of operations, including the Pacific.

• Gene E. Salecker, ***Rolling Thunder Against the Rising Sun*** [commercial publication]
Details operations of Army tank units in the Pacific during World War II – good illustration of the use of armor to support forcible-entry operations.

• Donn Starry, ***Mounted Combat in Vietnam*** [CMH publication]
Readable text detailing the role of armor/cavalry in counterinsurgency; highlights versatility and adaptive qualities at a time when mounted counterinsurgency doctrine was largely nonexistent.

• Robert S. Cameron, ***Armor in Battle*** [CMH/APD publication]
Collection of tactical engagements spanning experience of American armor from the interwar years through Operation Iraqi Freedom/Operation Enduring Freedom.

• Jon T. Hoffman (ed), ***Tip of the Spear: U.S. Army Small Unit Action in Iraq, 2004-2007*** [CMH publication]

• John J. McGrath (ed), ***Between the Rivers: Combat Action Iraq 2003-2005*** [CSI publication]

• William G. Robertson (ed), ***In Contact! Case Studies from the Long War,*** Vol. 1 [CSI publication]

• Donald P. Wright (ed), ***Vanguard of Valor: Small Unit Actions in Afghanistan***, Vol 1 [CSI publication]

• Donald P. Wright (ed), ***Vanguard of Valor: Small Unit Actions in Afghanistan***, Vol. 2 [CSI publication]

• David Zucchino, ***Thunder Run*** [commercial publication]
Detailed description of the planning, preparation and execution of the April 2003 armored operations into Baghdad.

• Kendall Gott, ***Breaking the Mold: Tanks in the Cities*** [CSI publication]
Collection of urban operations in which armor played a significant role.

Continued on Page 59

by COL Esli T. Pitts

Dragon 6 was frustrated. It sounded like the enemy's Boyeva Mashina Pekhoty (BMP) *vehicles were bypassing his company to the south.*

His executive officer reported to Hammer Main that the company's battle position (BP) had been bypassed and the battalion's defense had been penetrated. Dragon 6 pounded the cupola in frustration; it had taken nearly 48 hours to build the engagement area (EA). Why hadn't the enemy come? How did they get around the obstacles? Why couldn't the crews see the enemy?

Hammer 6 monitored Dragon's report to the tactical-operations center (TOC) on battalion command and called Hammer 3. "We need some combat power to our rear, time now. Those guys are on their way to the brigade-support area (BSA). What are our options?"

The 3 had none. It was at that moment that Dragon 6 and both Hammer 3 and 6 realized the fundamental problems in their defense: it was stretched too thin and it lacked depth, synchronization and flexibility.

This was driven home in the after-action review (AAR) 12 hours later as the leaders watched the instrumented playback. The advancing enemy had identified the obstacles and paused there for 20 minutes before deciding to bypass rather than breach. Unobserved, the opposing-force battalion continued movement on another covered route and eventually penetrated the seam between defending companies.

With two opfor companies inside Hammer's defensive positions and a third on the way, the observer/coach/trainer (O/C/T) played a commo cut: "Hammer Main, this is Dragon 5. Slant 10 and 4, continuing to defend. Audio contact with a possible enemy force to our south. Believe that we have been penetrated."

The O/C/T played another commo cut: "Hammer 5, this is 6. What's on the [decision-support matrix]?" There was a long pause before the executive officer replied that they had not finished developing the decision-support products. With an edge to his voice, the commander acknowledged the answer.

As the instrumented playback continued to play, the leaders thought back to the fight and how slow they had been to react to the penetration while the enemy had continued to advance. Finally, Hammer 6 had pulled Axe Company out of position and launched them to attack the enemy to their rear. By then, it was a losing footrace against an enemy force that nobody had really identified or tracked until way too late. An attack by Red air had not helped.

As the playback finished, the O/C/T asked one question: "What happened?"

Training units at the Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany, generally get two shots at the defense: once during maneuver training at company level and again during force-on-force training. Typically, most leaders within the training unit

are new in their positions; across the board, they lack experience in traditional combined-arms maneuver. If they do have experience, it was acquired at the National Training Center (NTC) or the Joint Readiness Training Center, but they are unfamiliar with the unique terrain found in Germany. Either way, the learning curve is steep.

This article will help flatten that curve by highlighting common trends in defensive planning and preparation.

Mission command

The commander drives the operations process using the elements of *understand, visualize, describe, direct, lead* and *assess*. Commanders at JMRC will often skip an early leader's recon in an effort to get the staff working on the order. This lack of reconnaissance, combined with a rushed order from brigade and incomplete mission analysis by an inexperienced staff, results in the commander lacking *understanding* of the mission. Lacking understanding, the commander's *visualization* is incomplete, and his/her ability to *describe* the mission is minimal. Subsequently, the staff then builds an incomplete course of action (CoA) that does not address the commander's key points. Too often commanders say, "I knew the opfor was going to do that!" However, they fail to *describe* that to their staff as an element of planning guidance.

Commanders generally *understand* the terrain in the Hohenfels Training Area as compartmentalized and therefore as disparate platoon and company fights. With that in mind, they fail to *visualize, describe* or *direct* a coherent battalion defense. Commanders have two key opportunities to *describe* their *vision* of the defense: first, in the planning guidance they issue to their staff; and, second, during their personal reconnaissance of the battlefield.

The leader's recon is the essential element that enables the commander to *understand*, *visualize* and *describe* the defense. It should occur as early as possible after mission analysis and before development of the CoA. At minimum, the subordinate commanders and the intelligence officer (S-2), operations officer (S-3), fire-support officer (FSO) and task-force engineer should participate; they all should walk away with a common understanding of the commander's intent for obstacles and both direct and indirect fires.

At NTC, units with large multi-company EAs learn that the commander should drive a target-reference point in the ground and announce, "We will kill the enemy here!" At JMRC, with compartmentalized terrain and many avenues of approach, that sounds more like, "We will kill the enemy here. And here. And here." Any route is a potential platoon, company or even battalion mobility corridor for vehicles in column. Therefore, the commander's reconnaissance at all echelons must enable this understanding of the terrain and must also clearly establish how units will tie in at their flanks. However, the reality is that, because of the compartmentalized terrain, commanders often "power down" defensive preparations and skip reconnaissance to "get the order out." The fact is that good reconnaissance helps build the order and serves as a detailed warning order to subordinates that allows them to begin

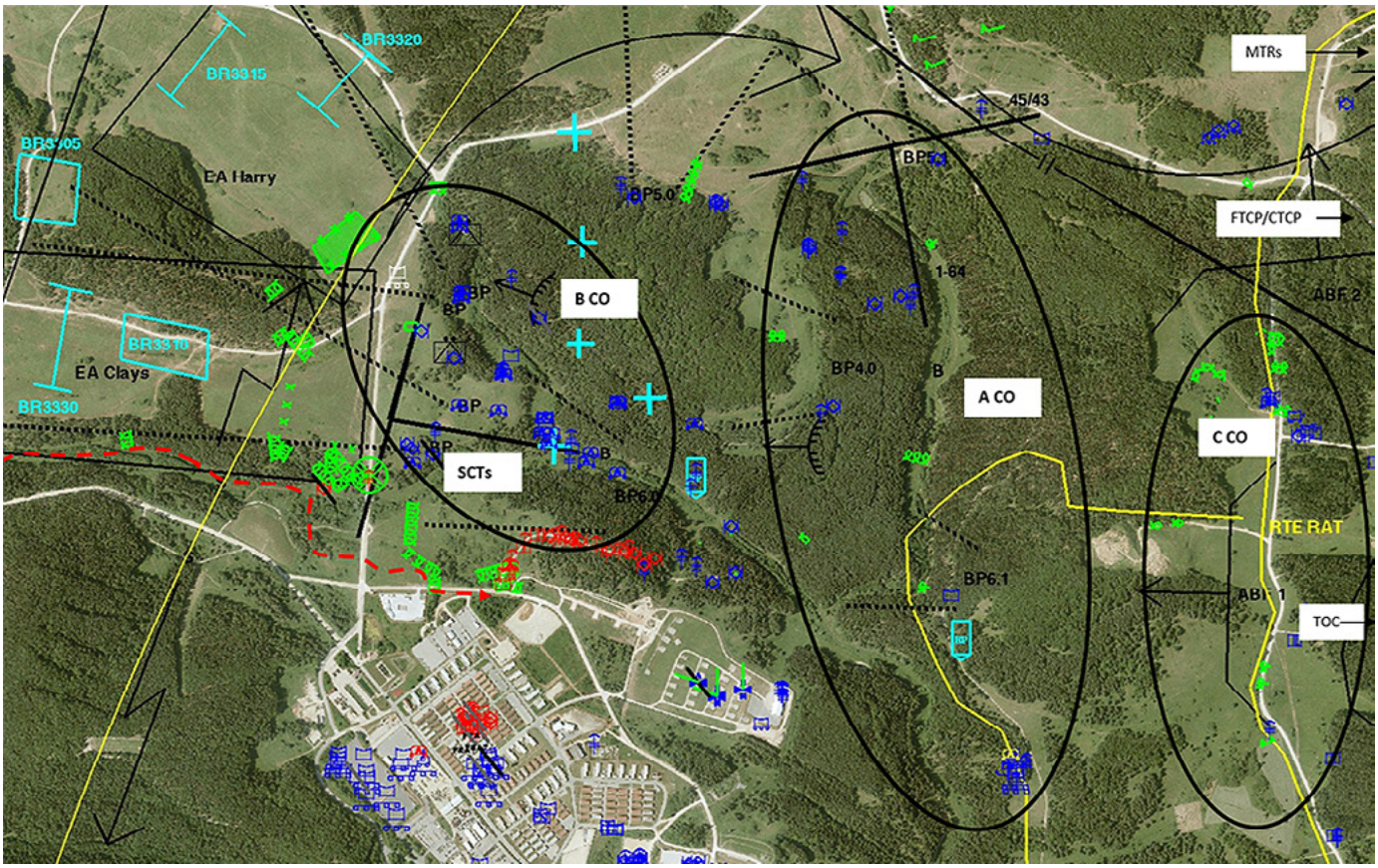

Figure 1. The opord is planned upon a framework of graphics. *(Graphic generated by instrumentation system)*

defensive preparations with their own companies, including obstacle planning and battle position.

Operational framework

Battalions generally fail to build an operational framework within which to plan. Conceptually, we have a variety of operational frameworks from which to choose: decisive, shaping and sustaining operations; main effort and supporting efforts; and the deep, close and security framework. Equally important is the literal framework of graphics upon which the operations order should be planned.

Most units generally apply a scant mix of intent and operational graphics on a PowerPoint image of the terrain and call it sufficient. At minimum, the framework must establish whether you are directing battalion EAs with associated assigned BPs, or if you are allocating defensive sectors to subordinate companies to defend. Subordinate units then establish their own BPs and EAs. Either way requires direct fire-control measures (DFCM) and company boundaries. Over and above this basic framework, we should establish passage lanes, contact points and alternate / supplementary / subsequent BPs as necessary. Then we build a level of detail for each warfighting function.

Critical to the operational framework is flexibility. It is a safe bet that at JMRC, your unit will be tasked with more frontage than it can successfully defend. Excessive frontage means limited depth and requires flexibility to react to unforeseen enemy actions such as a penetration. Flexibility or depth primarily comes from supplementary or subsequent BPs or else from attack-by-fire positions, which allow forces to reposition to the rear to react to penetration.

There are six questions that will help to assess whether we have enough operational framework:

- First, did we use one of the conceptual frameworks?
- Second, do we have operational graphics associated with most of our tasks to subordinates, or only intent graphics, or nothing at all?
- Third, does it look like a battalion plan, even if that plan is primarily synchronizing multiple company fights? Or is it really just a CoA sketch on PowerPoint?
- Fourth, do our graphics enable flexibility?
- Fifth, does our plan generate gaps between adjacent units, or does it fix responsibility for all terrain between defensive positions?
- Lastly, and perhaps most importantly, can we "stack overlays" and see that the plan is integrated?

EA development

Most armor leaders have studied the steps to EA development, but it is consistently difficult for units at JMRC because they don't do effective intelligence preparation of the battlefield and don't understand the nature of the enemy or how they will maneuver. Simply put, the map of JMRC is like a chessboard with green and white squares on it. The green squares represent rolling, heavily wooded terrain, while the white ones indicate wide-open spaces, generally in the low ground. Invariably, the training unit will assess the white squares as mobility corridors and the green as no-go or slow-go terrain. Given a choice, the opfor will always maneuver in, and fight from, the green squares and will not voluntarily move from the green squares into the white ones where we habitually build our EAs. An associated consideration is that the enemy is focused on penetrating the defense to attack the BSA and will generally not attack along a broad frontage.

In my opinion, there is a step missing from EA development. As written, Steps 1 and 2 identify the enemy's avenue(s) of approach and scheme of maneuver (which is to move through the green squares). Step 3 is to determine where to kill the enemy (which will likely be in the white areas on the map). In non-doctrinal Step 3.5, we must ask, and answer, the question of how we will get the enemy to move from his preferred scheme of maneuver into our preferred EAs. If we skip this step and go straight to positioning obstacles, indirect and direct fires in the white squares, then we will get penetrated or bypassed (the opfor's preferred CoAs) every time by an enemy force that will not shift from his preferred scheme of maneuver into where we have determined to kill him.

We must first understand and plan for how we will get the enemy from where he wants to go into where we want to kill him before we plan targets, dig holes, run wire and pound pickets in support of an EA. If the enemy is moving in the green areas, then some portion of our obstacle effort should actually be in the woods rather than the open areas to deny the enemy freedom of movement through the green squares. Ideally this forces him to move into white squares where we can continue to disrupt, fix, turn or block him with more obstacles and kill with direct or indirect fires.

Bear in mind that this obstacle effort in the woods must all be overwatched by, at minimum, a guy with a radio and a planned target, and ideally with an anti-armor ambush or a combat vehicle.

There are a variety of trends that all contribute to lack of effectiveness in our EAs:

- **The plan is not integrated.** The output of the leader's recon and the operational framework should be a plan that roughly stacks the overlays on obstacles, indirect and direct fires. This recon and these outputs must occur at both battalion and company levels. And then, as it gets refined from the bottom up, those refinements must be updated at battalion and reviewed by the staff to ensure the plan remains synchronized. This occurs through pushing up company graphics and updating the battalion's consolidated graphics. Not a PowerPoint product, but operational graphics, preferably built in Blue Force Tracker or Joint Capabilities Release.
- **The plan lacks DFCMs.** Even if the battalion's plan consists of compartmentalized company defenses, it should be clear from the DFCMs where the battalion expects companies to engage enemy forces with direct fires. DFCMs should also indicate where adjacent units are responsible for planning fires relative to each other. Critically, but neglected in the Multiple Integrated Laser-Engagement System battlefield, is

that DFCMs also serve to deconflict surface-danger zones for various weapons. Ultimately, the battalion requires companies to submit their DFCMs to build a common operating picture. Too often, neither echelon develops DFCMs. Our DFCMs should allow us to focus, distribute and shift direct fires. If we don't have them, we are making them up in contact.

- **The obstacle plan is not integrated into the overall plan and is ultimately ineffective in shaping the EA.** This occurs for a variety of reasons:
  - *Obstacles are not achieving the assigned effect.* While the task-force engineer will plan the details, the battalion owes the companies planned obstacle groups, which appear on the graphics as a green outline with an obstacle effect (turn, block, fix, disrupt). The order should also specify ***target*** (what enemy is being targeted) and ***relative location***. The maneuver companies are then responsible to plan and build obstacles that achieve this. Also associated with planning is a ***resource factor*** that assists with allocating barrier materials. As an expression of the width of an avenue of approach, ***disrupt*** is .5, ***fix*** is 1.0, ***turn*** is 1.5 and ***block*** is 2.0. This allocates enough Class IV to achieve the effect but does not mean one long obstacle. In reality, regardless of assigned effect, units will generally emplace a single row of concertina with no depth.

For example, one row of wire 300 meters in front of the BP does not create a turning effect. To turn, we may plan five or six points or linear obstacles layered in depth that gradually create that "turn" effect by tying into natural obstacles and forcing the enemy to actually keep turning. Likewise, one strand of wire pulled as tight as we can get it does not create a block effect, but an 11-row obstacle in a defile might.

  - *Obstacles are not integrated with direct-fire systems.* Obstacles are not generally well-positioned. Not only must we be able to see the obstacles, but we must be able to see and fire into the terrain the enemy will use as a result of coming into contact with our obstacles. The obstacles must be "sighted in" by our direct-fire crews so we can kill vehicles that go where we planned on making them go. A way to sight in obstacles is for the engineers at the templated obstacle to talk with the vehicle crews over the radio and drop cones or pickets with engineer tape along the proposed trace of the obstacle while the vehicle crews confirm observation at and beyond the trace.
  - *Obstacles are not integrated with indirect-fire plans.* I recently watched an opfor battalion make contact with an obstacle while attacking in column along a narrow axis. The obstacle was effective, and the opfor halted for 20 minutes while they debated breaching it or bypassing it. Eventually they used covered terrain to bypass the obstacle and penetrate the defense for a win. Unfortunately there was no observer plan or indirect-fire targets planned in conjunction with this obstacle. Had there been, a responsive firing battery could have saved the day. As with direct-fire planning, the planned target doesn't go right on the wire but is refined to be at the place where we think the enemy will go as a result of contact with the obstacle. (See Figure 1.)

- **Poor obstacle positioning is usually the result of a lack of practical experience in obstacle planning by the company leadership.** The biggest killer, though, is that battalions invariably work to build and issue the operations order and so, because company commanders don't participate in an early leader's recon, they spend daylight hours waiting for the plan and then do not have enough daylight available to begin to build obstacles. As such, they build what they can finish, not what they should build.
- **There is insufficient obstacle effort.** Typically we see a battalion with 48 or more available hours emplace between 1,000-2000 meters of wire. When we are building a defense, obstacle construction should be an all-out effort with even the cooks running some wire. Doctrinally, a platoon with 30 Soldiers should be able to emplace 300 meters of triple-strand wire per hour. Factoring in small tank platoons, if we task each

Figure 2. Soldiers from Regimental Engineer Squadron, 2nd Cavalry Regiment, set up a concertina-wire obstacle while constructing defensive obstacles during Exercise Saber Junction 2015 at JMRC in Hohenfels, Germany. Saber Junction prepares NATO and partner-nation forces for offensive, defensive and stability operations and promotes interoperability among participants. Saber Junction 2015 had more than 4,700 participants from 17 countries. *(Photo by SPC Tyler Kingsbury)*

company in the battalion to have at least one platoon at a time emplacing obstacles for at least 25 percent of the available time, we can assume that six organic companies plus the engineer company should be able to emplace 10,800 meters of wire every 24 hours.

Battalions should, but generally do not, plan battalion-directed obstacles that can be emplaced immediately upon completion of reconnaissance. This addresses the commander's priority as well as getting the engineers working immediately.

When we talk about stacking overlays, we should be able to look at our plans for obstacles, direct and indirect fires, and it should be apparent whether they represent an integrated plan or are the results of "stovepipes of excellence." The battalion should "stack overlays" at two points: first, in building the plan; and, second, when they consolidate the results of bottom-up refinement.

So why don't we achieve this? Several factors combine to result in limited obstacle effort: We are too busy with other things; we don't task out and track obstacle effort to completion; we fail to deliver Class IV materials early enough; we aren't experienced in building obstacles; and we wait too long to start them. Principally, however, we are too reliant on the engineers. We should view the engineers as subject-matter experts to whom we provide additional cooks, loaders or riflemen to build obstacles.

Fire support

There are realistically only three to four opportunities to employ fires effectively in the defense. Beginning with the commander's recon, fire supporters must be tied into planning and rehearsals. Commanders shape the fight with fires by planning targets that are integrated with the obstacle and direct-fire plans. These targets have an effective and redundant observer plan and both technical and tactical triggers that are understood and rehearsed. Only then are remaining assets allocated to subordinates for their use.

The battalion's mortar platoon is both the most responsive and most overlooked indirect-fire system available. Once artillery units work out early friction, it generally takes five to six minutes to enter fire-for-effect (FFE), though it is not unusual to take nearly 20 minutes. Depending on their level of training, mortar crews can consistently fire faster and get to FFE in three to five minutes. Despite this edge, the trend is that mortar platoons account for less than 10 percent of missions fired during a rotation. Battalions often plan to manage the movement of the mortar platoons but then neglect them in execution; this leaves them out of position to fire. Another shortfall happens when the FSO habitually sends all missions to the field artillery rather than to the mortars. If we train at home station to provide high volumes of fires, establish digital connectivity and give platoon leaders clear guidance and autonomy, they will get into the fight.

Management of mortar ammunition is critical. By JMRC exercise procedures, it takes 90 rounds of 120mm high explosive to destroy one BMP. Units usually fire insufficient rounds and then get frustrated when the target drives away with no effects. Given the relatively small basic loads on an M1064 mortar track or Stryker Mortar Carrier, units must pre-stock ammunition to be able to achieve tangible effects. Giving them a cargo truck with trailer is a way to solve this problem.

Units are also challenged to build an observer plan that enables forward observers to be in the right place at the right time. Even when they get that right, they struggle with the additional problems of redundant observers, establishing digital communications and identifying triggers. Despite modern devices, the observers often default to binoculars and a radio, with resultant target-location errors ranging up to 400-600 meters in light units. All these factors combine to make timely and accurate fires consistently difficult to achieve.

Units' effects with fires are also limited by inadequate trigger development. Consider this notional example of a poorly developed trigger: "Fire AG 1040 when the enemy lead echelon crosses Phase Line [PL] Red." In execution, the observer sees the enemy's lead tanks cross PL Red and calls for the planned target. Unfortunately, the firing unit was unaware that AG 1040 was imminent and was already firing a different mission (AG 1035). When "Fire AG 1040" came across the net, they first finished AG 1035 and then shifted to AG 1040. Meanwhile, the tanks continued to advance and by the time the mission was fired, it missed. If this planned mission was important to the commander, developing a *technical trigger* that laid the guns on AG 1040 prior to PL Red and then fired when the tanks crossed the *tactical trigger* of PL Red, they could have killed tanks.

Like everything else in the defense, the fire-support plan should be subject to bottom-up refinement. A simple way for leaders to check is to review the target numbers they are allocated. Each time the battalion or company FSO refines a target, it is assigned a new target number. If AG 1040 remains AG 1040, nobody ever refined it.

Figure 1 is an overview of an actual battalion defense conducted at JMRC. In addition to the previously mentioned vignette on observers and fires, this graphic illustrates the lack of integration of obstacles with direct or indirect fires as well as the opfor's tendency to move through the woods. Note the lack of boundaries between companies, with the resultant lack of understanding of who was responsible for what battlespace. Note also the use of intent graphics rather than operational graphics.

Rehearsals

Training units generally neglect rehearsals during the defense with the result that they don't know routes or understand how long it takes to remount Soldiers and displace from primary to subsequent or supplementary BPs. This means that when triggers to move from primary to alternate, supplementary or subsequent positions are met, they are usually executed too slowly.

Quality rehearsals usually don't happen for two reasons. First, there is little time available by the time orders are briefed and defensive prep has begun. Second, because the battalion has probably decentralized the defense

into company fights, it seems as if there is little for the battalion to rehearse. Even if this is the case, the battalion must rehearse fires, including employment of the reserve and planned movements from hide positions to primary, subsequent and supplementary positions. It's also important to rehearse movement to all contingency positions in the rear.

The primary fix is time management. If we can get a leader's recon done early on, then subordinates can begin rehearsals immediately while the battalion is working the order. If we can extricate our company commanders from the brigade rehearsal, and we don't bring platoon leaders to the battalion's rehearsal, we also free up more time with their platoons and companies for rehearsals.

Sustainment and fires rehearsals are essential but also neglected. Unfortunately, they generally turn into a briefing of the finalized plan to the companies rather than a rehearsal of the battalion's plan.

Decision points

Decision points (DPs) are overlooked in planning. Two likely areas that require a commander's decision are commitment of the reserve and the repositioning of significant forces into supplementary, subsequent or contingency positions to react to an enemy penetration. The battalion's information-collection (IC) plan should be primarily focused on providing information that allows the commander to recognize these conditions emerging and then make the decision early enough for it to be implemented.

The main problem in this area is generally a lack of depth, such that the defending unit recognizes conditions too late. Consider that the opfor achieves penetration and is moving two to three kilometers in 15 minutes. By the time the defender recognizes and reports penetration, and then analyzes and recommends a reaction to it, the defending unit is already in a losing footrace to reposition forces quickly enough to impact the enemy's scheme of maneuver. If that reaction does not include executing a rehearsed movement to known graphics, it will be even slower.

Identification of DPs is an operational responsibility, and the S-3 officer and/or the executive officer have a responsibility to be involved in the development of decision-support products as well as to ensure the IC plan supports the DPs.

Seeing ourselves

Battalion commanders are always surprised in the AAR when they see how little obstacle effort they achieve. Battalions (and companies) rarely have a system in place that allows them to see themselves. Call it a "daily dozen" or any number of options; the norm is that battalions task a lot of things out but do not effectively track them to completion, leaving subordinates to decide for themselves what they can achieve.

Figure 3. A photo taken by a UAS camera of a unit's field trains highlights the lack of camouflage and ease of detection from the UAS. *(Photo by 1-4 Infantry opfor)*

It's obvious-but-routine things like subordinate opords, rehearsals and even boresight – these are frequently skipped by subordinates in a seemingly time-constrained environment. Building the trackers in the TOC and requiring subordinates to report completion highlights, shortcomings and trends is crucial to success. It allows the battle captain/noncommissioned officer to identify emerging issues. It also allows senior leaders to focus on fixing them. Similar tracking at company command posts enables the battalion executive officer or gunners to track completion and frees the command group to focus on issues.

Two specific examples of defensive tasks that are neglected are the tracking of obstacle construction and the employment of blade assets. The start point for tracking is mission analysis and CoA development, during which the battalion's expectations are generated and then tasked in the battalion's opord. For obstacles, this analysis should include how much wire subordinates should expect to emplace, the general obstacles they are tasked to build and the priority for each of them. We can then expect our subordinates to report the percent complete for each obstacle and should see the obstacle effort appearing on tracking charts in the TOC as each obstacle is emplaced. As the battalion tracks, it should then be able to anticipate and react to problems, such as realizing that a company has insufficient Class IV.

With blade assets, the battalion staff should understand available assets and available time, and then allocate assets to subordinates for a specific amount of time to achieve a specific amount of work. The battalion should require subordinates to report completion of fighting positions and/or anti-tank ditches and then monitor results for deviation from the plan. The blade assets are moved from company to company in accordance with the plan by a senior leader designated as "commander-in-chief of dozers" to ensure that no unit keeps the assets longer

than authorized without approval from higher.

Counter-reconnaissance

It is a statistical truth that whoever wins the counter-reconnaissance fight will likely win the subsequent battle. Battalions frequently task their scout platoon, which is probably undermanned and unable to screen the battalion's frontage or unable to screen for the duration required. The battalion is then over-reliant on this screen, unaware that they are under surveillance by enemy reconnaissance. Then, the battalion's leaders get caught by surprise when the enemy launches a spoiling attack.

How is this fixed?

First, designate a counter-recon force built on the scouts but augmented by the mortar platoon and a tank platoon, or one of the line companies can also be assigned to augment the scouts. Either option ensures the counter-recon force has enough combat power to both identify and destroy enemy reconnaissance assets. This force must be prepared to displace prior to the main fight.

Second, the battalion should establish a security area forward of defensive preparations and ensure it has adequate depth to deploy the counter-recon force into it. This area should be clearly delineated on unit graphics. This security area must have enough depth to enable the counter-recon force to find and kill enemy reconnaissance assets before they enter the main battle area without compromising themselves to following echelons (see Figure 1). In the picture displayed in Figure 1, note that the scouts are essentially co-located with Company B. They had been out more to the front but were driven back by enemy contact. Ultimately, they were not in a position to provide depth or early warning to the battalion.

Third, companies must understand they are responsible for providing local security in and around their defensive positions and as far forward as the rear of the security area within established company boundaries. They must deny the enemy the ability to infiltrate along gaps and seams and establish their own observation points in close proximity to friendly defensive positions. The best deterrent to opfor reconnaissance is active patrolling to deny terrain to the enemy.

Figure 4. A Soldier from Company A, 5th Battalion, 7th Cavalry Regiment, scans his sector of fire from an M2 Bradley Fighting Vehicle while conducting defensive operations during Exercise Combined Resolve VI at JMRC in May 2016. Exercise Combined Resolve VI was designed to exercise the U.S. Army's regionally allocated force to the U.S. European Command area of responsibility with multinational training at all echelons. About 570 participants from five NATO and European partner nations participated in training designed to allow participants to function together in a joint, multinational and integrated environment and to train U.S. rotational forces to be more flexible, agile and better able to operate alongside their NATO allies. *(Photo by PFC Michael Bradley)*

Fourth, understand that it's a live operational environment with civilian elements who may be hostile and who may be collecting intelligence and passing it to enemy forces. This requires friendly forces to deny freedom of movement to hostile local nationals or special-purpose forces ***without*** adversely impacting local nationals' daily lives.

Fifth, noise and light discipline, concealment and effective camouflage are essential. The opfor is adept at employing unmanned aerial systems (UAS), aviation, special-purpose forces and ground reconnaissance to find and target us. The better we hide, the less we are targeted for artillery attacks at the most inopportune time. In particular, this requires reducing the TOC footprint and getting it off the main routes and tucked away in the woods. Our North Atlantic Treaty Organization (NATO) allies and partners are particularly effective at camouflage.

The bottom line is that everyone has a responsibility for both active and passive measures to defeat enemy reconnaissance.

In summary, many units tend to take defense for granted. It is not as exciting as the attack and maybe not as fun to execute. However, it is perhaps the most difficult operation to plan, synchronize and execute successfully. This article only discusses some of the most common trends. To fight and win, units should begin a program of home-station professional-development training to build the necessary skills.

COL Esli Pitts is a student at the U.S. Army War College, Carlisle Barracks, PA. His previous assignments include senior task force maneuver O/C/T at JMRC, Hohenfels, Germany; commander, 3rd Battalion, 8th Cavalry Regiment, Fort Hood, TX; instructor, Department of Tactics, Command and General Staff College, Fort Leavenworth, KS; executive officer, 1st Brigade, 3rd Infantry Division, Fort Stewart, GA; operations officer, 1st Brigade, 3rd Infantry Division, Fort Stewart; S-3 (operations) and

executive officer, 5th Squadron, 1st Brigade, 3rd Infantry Division, Fort Stewart. His military education includes infantry one-station unit training, Airborne and Air Assault schools, Armor Officer Basic Course, Infantry Mortar Leader's Course, Armor Officer Advanced Course, Combined Arms Service Staff School, Command and General Staff College and the NATO Staff Orientation Course, Hohenfels. COL Pitts holds a bachelor's of arts degree in history from Washington State University and a master's of science degree in international relations from Troy University.

Acronym Quick-Scan

AAR – after-action review
BMP – *Boyeva Mashina Pekhoty*
BP – battle position
BSA – brigade-support area
CoA – course of action
DFCM – direct fire-control measure
DP – decision point
EA – engagement area
FFE – fire-for-effect
FSO – fire-support officer
IC – information collection
JMRC – Joint Multinational Readiness Center
NATO – North Atlantic Treaty Organization
NTC – National Training Center
O/C/T – observer/coach/trainer
PL – phase line
TOC – tactical-operations center
UAS – unmanned aerial system

Armor School Call for Data/Personal Accounts of Tank Gunnery Competitions

Traditionally tank gunnery competitions have demonstrated readiness, influenced training and built team spirit among armored organizations.

The Sullivan Cup continues this tradition, and in preparation for the 2018 competition, the Armor School has undertaken an historical study of several major gunnery events.

The principal competitions addressed include the Canadian Army Trophy, the Canadian-American Cup, the Worthington Trophy/Challenge, Nordic Tank Challenge, Strong Europe Tank Challenge and the Russian Tank Biathlon.

However, your assistance is sought in obtaining information related to the rules, tasks evaluated and scoring criterion for these events. Similarly, the personal experiences of participants, including non-American nationalities, is also being sought.

If you have such information or would like to share a personal experience, please make your submissions to Dr. Robert S. Cameron, the Armor School's point of contact for this action. All material provided must be unclassified and non-For Official Use Only.

2018

Email: Robert.s.cameron.civ@mail.mil. Mailing address: ***ARMOR*** magazine, ATTN: Tank Gunnery, McGinnis-Wickam Hall, Suite W-142, 1 Karker Street, Fort Benning, GA 31905.

Tough Vehicles Require Tougher Crews

Why We Must Re-establish a 'Gunnery Culture' ... and How to Do It

by SSG David D. Lunebach and SSG Sean M. Leytham

During most of the last 15 years, gunnery training has been largely neglected in favor of other priorities within our armored brigade combat teams (ABCTs). While many "back in the day" stories continued to circulate among our senior noncommissioned officers (NCOs) and field-grade officers, gunnery took a backseat to other training tasks more closely associated with stability operations and counterinsurgency. Therefore an entire generation of 19-series Soldiers and junior- to mid-level NCOs grew up without gaining the high level of technical and tactical expertise on armored combat vehicles their predecessors possessed in the 1980s and 1990s.

Important skills atrophy

While this new generation of individuals became very good at mounted patrolling on mine-resistant, ambush-protected vehicles and at conducting engagements with local tribal leaders, an alarming number know very little about the M1A2 Abrams Main Battle Tank or the M2A3 Bradley Fighting Vehicle. Even more damaging is the fact that, during the years following the launch of extended campaigns in Afghanistan and Iraq, a culture developed within our ABCTs that to a great extent discarded the importance of gunnery. A large portion of our 19-series NCOs came to believe they did not need to master the maintenance and operation of their mechanized platforms. In the process, the technical and tactical expertise once widely resident in the Armored Force withered away to the dangerously low levels we see today.

The current global-security environment demands that our armored-vehicle crews be able to maneuver to a position of advantage and rapidly acquire, engage and destroy enemy forces at extended ranges from the turret of their armored vehicles. Therefore, the Army should return stabilized gunnery to its rightful place at the forefront of training within our ABCTs. Although much work has been done in this area, the Army still has much left to do. Army leaders, especially our NCOs, must re-establish a "gunnery culture" that values technical expertise on our armored vehicles, demands excellence in the area of maintenance and focuses on gunnery as the building block of training readiness for the ABCT. To establish such a culture, we must effectively manage our crews, incentivize high levels of performance on the gunnery range and develop leaders so our "bench" of expertise – our master gunners, in particular – is sufficient to sustain readiness into the future. Without the re-establishment of a true gunnery culture, all gains will only be temporary.

Figure 1. 4-10 Cavalry scouts engage in gunnery training.

Building (and sustaining) crews

The first step in re-establishing a gunnery culture is the effective management of our most valuable asset: our people. The armored-vehicle crew is the basic unit of combat power within an ABCT. Crews must be built into cohesive, lethal teams that work together seamlessly to bring mobile, precision firepower to bear on the enemy. This cannot be done on a "plug and play" basis. As with any other organization, it is important to put the right individual at the right place at the right time. There are three key elements to building the types of armored-vehicle crews our ABCTs need: identification of talent, certification and training, and longevity.

Not all are ready

Not every private fresh out of advanced individual training is ready to be a gunner on an Abrams or Bradley. Not every sergeant is ready to serve as a vehicle commander. While some individuals possess a unique aptitude, most need further development to build the technical and tactical knowledge that will someday manifest itself as expertise. In any case, it is up to our NCO leaders to teach the next generation everything there is to know about the maintenance and operation of our armored vehicles.

Along the way certain individuals will

stand out as they demonstrate an ability to assume increased responsibility. Platoon sergeants and first sergeants should identify these Soldiers and NCOs and then place them into the pool of candidates from which they will select the next group of gunners and vehicle commanders.

An order-of-merit list based on a personal assessment of the candidates is necessary so that the moment a vacancy opens for one of the key crew positions, the troop/company leadership already knows who is going to step up.

Account for normal personnel turbulence

Along with identification of talent, leadership up to the squadron/battalion level should account for the normal personnel turbulence associated with the Army's permanent-change-of-station (PCS) assignment cycles. This is the great challenge of sustainable readiness.

Ensuring the maximum longevity of gunners and vehicle commanders is critical. Stabilizing a crew for 18 months or longer is ideal so the crew can stay together throughout gunnery, maneuver training and a deployment. However, this is often not possible. First sergeants, squadron/battalion command sergeants major and the unit S-1 must regularly review crew rosters to project personnel losses and gains. Those who lack an acceptable period of longevity should be replaced with an individual who will be remaining longer with the unit.

Units should follow this practice even if it means elevating a more junior Soldier into a gunner or vehicle-commander position. As long as doing so does not professionally disadvantage the individual being displaced, this approach helps posture the unit for the maximum level of readiness over a longer time period.

Also, first sergeants and command sergeants major should look to develop their Soldiers and NCOs for the long term. Upon arrival in an ABCT, many cavalry scouts and infantrymen who come from light units and have no previous experience in an armored brigade are intimidated by the transition. Some bring with them a desire to stay in their comfort zone on the ground all the time. They often complain about the challenges and time-consuming nature of maintenance – which is, of course, the lifeblood of mechanized formations. What these attitudes show is a lack of understanding of their roles as NCOs: they are expected to be experts in their craft, including the platforms on which they are going to maneuver. These individuals, and the leaders in charge of them, should see the new assignment as an opportunity.

For example, if a young 19D sergeant arrives in a combined-arms battalion or cavalry squadron with his only previous experience being in a light reconnaissance unit, leaders must avoid the temptation to place him back into a position that closely resembles his last duty assignment. Since this junior NCO already has a significant amount of dismounted experience, he now requires time as a Bradley gunner to provide him with the well-rounded cavalry-scout skills necessary for promotion and professional advancement. More importantly, if the unit fails to get this NCO armored-vehicle experience, the next PCS to another ABCT could possibly find that individual being more of a liability than an asset due to his lack of knowledge.

By following a practice of developing for the long term, leaders at the troop/company level will help correct an Army-wide problem.

Once the hard work is done to get the right people into the right place within the crew roster, keeping them in place until it is the right time to make a change is critical. "Breaking" a crew must be a deliberate decision because it is not simply a matter of moving a Soldier to a new job – it directly impacts the formation's overall readiness.

Squadron/battalion commanders decide

Squadron or battalion commanders, advised by the command sergeant major, are the decision-makers when it comes to breaking a crew once they are qualified on Gunnery Table VI. In fact, once a crew reaches the "gate to live-fire" in the Bradley Advanced Training System (BATS) or Advanced Gunnery Training System (AGTS), it is likely advisable to make moving any personnel out of that crew at least reportable to the squadron/battalion command team (if not already reserved for approval at that level). While the normal cycle of PCS and end-term-of-service will continue, it's important that the team does everything it can to mitigate turbulence.

Prioritizing, incentivizing performance

If the Army is going to re-establish and maintain a gunnery culture, leaders have to send a clear signal that gunnery is a priority. They must help get their subordinate leaders and Soldiers excited about shooting the "big bullets." Friendly competition is a traditional characteristic of gunnery, but many Soldiers today see qualification on Table VI as a formality.

In a previous time, gunnery inspired a healthy stress among crews, platoons and companies as each competed to earn recognition as the "Top Gun." Providing incentives for crews who distinguish themselves as the best within the formation is a great way to nurture a healthy sense of competitiveness and bring back the right mindset.

Just handing out squadron/battalion coins, although a good start, should not be the only gesture. When a crew distinguishes itself as the best within the ranks, emblazoning their names on a plaque prominently displayed in the unit headquarters is a great way to demonstrate that accomplishment's importance. Gunnery streamers for guidons provide another highly visible symbol to celebrate the team's achievements. Also, commanders can award Army Achievement Medals for those who score "superior" (800 to 899 points, with eight or more engagements qualified) and Army Commendation Medals for those who score "distinguished" (900 to 1,000 points and nine or more engagements qualified) – both of which not only recognize performance but also help with promotion points for junior Soldiers.

Other incentives such as four-day passes can serve as valuable tools to recognize and reward outstanding performance on the gunnery range.

Before any recognition can take place, the commander has to establish a

standardized (and easy-to-understand) scoring system so every Soldier in the unit knows what must be done to prove that his crew or troop/company is the best in the formation. In determining the "Top Gun" crew, a unit should begin with the actual score on Gunnery Table VI, but if time allows, commanders can also use other metrics to add a more comprehensive focus to the gunnery competition such as average Army Physical Fitness Test scores or personal-weapons qualification. To the greatest extent possible, the system should be objective. This removes ambiguity and any room for different interpretations of standards.

Reward what's most important

Whatever scoring system one uses, it should reward the things most important to the command. These include achieving first-time qualification (Q1) and scoring distinguished or superior. In any event, the system should go beyond the calculation of an average score on the qualification table.

How the chain of command requires Soldiers and leaders to spend their time at work also sends a clear message about what is really important to the unit's leadership. Mandating that crews spend a minimum amount of hours conducting sustainment training in the BATS/AGTS per month even after completing crew qualification communicates that the importance of gunnery does not end with the last round fired on Table VI. Also, if a commander requires that all NCOs in the unit be trained and certified as vehicle crew evaluators, the unit will be better prepared to meet the challenging standards of gunnery because the members of the team will better understand the importance of every task contained in the gunnery-training program.

Certify leaders

As part of preparation for the gunnery-skills test (GST), the squadron-level master gunners should identify and certify specific leaders within the formation to evaluate during GST. This will ensure that the standards and expectations for this vital testing gate in the gunnery-training progression are uniform across the formation. With a cadre highly proficient and certified evaluators in place, the master gunners can focus on spot-checking stations to ensure testing is being done properly. Because they will then be able to take a step back and observe GST rather than being decisively engaged in the actual testing itself, master gunners will be better able to identify those who excel and show the type of aptitude and proficiency that mark future gunners, vehicle commanders and master-gunner candidates. Ideally, being selected to serve as a member of the GST cadre should become a sought-after recognition of a Soldier's skill.

These techniques also apply to the selection and certification instructor-operators (IOs) for BATS and AGTS. These individuals have to fully understand the gunnery standards and be disciplined enough to refrain from taking shortcuts when no one of higher rank is watching. The right NCOs acting as IOs will be able to coach struggling crews through their problems. Identifying these crews ahead of time helps decrease even greater difficulties later in the gunnery-training cycle. Perhaps most importantly, if these leaders enforce high standards in BATS and AGTS, those same high standards will be evident on the gunnery range later. Good habits are built early!

Building 'bench'

While cohesive and lethal armored vehicle crews are the building blocks of readiness in an ABCT, almost everything related to building those teams starts with the unit master gunner. These school-trained subject-matter experts should be involved in the daily training and development of crews. A master gunner should not just be the person crews go to when things break – which is often what happens in some units – but he should be an expert trainer, pulling crewmembers aside at every opportunity to provide that additional level of technical insight only he can provide.

A unit can never have too many master gunners, but availability of resources and qualified personnel constrain the number of NCOs who can attend the school. Therefore, when an opportunity arises, units should be ready to take advantage of it. This requires early identification of young NCOs who possess the talent, work ethic and desire to become a master gunner. Since there is no one better suited to identify a promising candidate than one who has already completed the school, the unit master gunner should constantly be on the lookout for suitable individuals. This can be done during daily gunnery-skills training, command maintenance or in the BATS/AGTS.

Order-of-merit list

Once the master gunner identifies a list of candidates, he should work closely with the troop/company first sergeant and the command sergeant major to establish an order-of-merit list based on a holistic assessment of individuals that includes physical fitness, attitude, leadership ability, discipline and aptitude for the job.

The unit should be looking for leaders who are willing and able to perform above their pay grade, put in the effort to understand their combat platform in the finest detail, and then teach others what they learn.

Identification of candidates is only the first step. Following that, the unit must do everything it can to prepare individuals for the rigors of master-gunner school. The course is one of the most challenging the Army has to offer. Since opportunities to attend the school are usually limited, it is vital to ensure that those who attend are postured to meet the high standards and graduate.

Once students for the master-gunner school are identified, master gunners should establish a Master Gunner Candidacy Course (MGCC) to further train them to succeed in school. The program of instruction can include practice evaluations and, if there is opportunity, follow the actual master gunner through some key aspects of his duties at the troop and squadron levels.

To maximize resources across the formation and ensure visibility from the commander and command sergeant major, the MGCC should be run at the squadron/battalion, but the troop/company master gunners should be intimately involved in the instruction and mentorship of candidates.

Passing the course will allow the commander to have confidence that these

leaders will pass the actual master-gunner course, bringing credit, expertise and lethality to the unit as a whole.

Conclusion

A gunnery culture starts at the top with commanders prioritizing these vital combat skills in their training plans, but it will not take root without our NCOs' personal investment. Success depends on mutually supporting efforts up and down the chain of command.

Few of the recommendations outlined previously are new. In fact, many of these were fairly common among mechanized units before the beginning of our campaigns in Iraq and Afghanistan. However, years of neglect have left our Army with a deficit in the tactical and technical skills necessary for highly lethal ABCTs. Lots of work has been done already to correct this, but much more work is needed to bring back a gunnery culture.

Security challenges demand change

The ever-changing security challenges throughout the world now demand a return to combined-arms maneuver. Getting back to decisive-action training will ensure our ability to assure our allies and deter possible adversaries. Gunnery skills are the key to building lethal crews and effective, combat-ready units.

Restoring a gunnery culture is not about merely returning to the "good old days." On the contrary, this effort is a matter of the gravest strategic importance to our national security. The culture is beginning to shift, but it is up to us to keep the momentum!

Figure 2. A tank from 4-10 Cavalry fires during training.

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Acronym Quick-Scan

ABCT – armored brigade combat team
AGTS – Advanced Gunnery Training System
BATS – Bradley Advanced Training System
GST – gunnery-skills training
IO – instructor-operator
MGCC – Master Gunner Candidacy Course
NCO – noncommissioned officer
PCS – permanent change of station
Q1 – first-time qualification

Battle of Debal'tseve: the Conventional Line of Effort in Russia's Hybrid War in Ukraine

by MAJ Amos C. Fox

While some in the military say that Russia provides no direct threat to the United States, our political and military alliances necessitate an understanding and appreciation for the manner in which Russia is applying force in its vicinity. U.S. Army Europe's Strong Europe campaign, the Atlantic Resolve mission and partnered training exercises like Anakonda 16 – which featured collaboration between the U.S. Army and Eastern European nations – clearly indicate the necessity for clear understanding and visualization of how Russia conducts contemporary operations. Lastly, the study of emerging threats is fundamental to any professional army or learning organization, and therefore a study of contemporary Russian military actions is warranted.

Russian military operations in Eastern Europe since 2008 illuminate an innovative approach to war that incorporates Information-Age technology in exploiting vulnerabilities in modern war. Whether one calls this approach to war hybrid warfare, new-generation warfare, ambiguous war or any of the other number of terms being thrown around, Russia has shifted the paradigm in contemporary war, creating new dilemmas and problems for the U.S. Army to solve.

The Russo-Ukrainian War's battlefields are not just home to the latest in cyber and electronic warfare, nor are they exclusively the realm of trailblazing information operations geared to manipulate the media and society. Just below the surface of the dazzling veneer of sophisticated cyber, electronic and information operations resides a conventional campaign that is no less unique than the overriding Russia hybrid approach. Far from the eye of the casual observer or mainstream-media outlets are battlefields more reminiscent to those of World War I than what one would expect to find in the 21st Century.[1]

Russo-Ukrainian battlefields are littered with trenches, razed cities, the corpses of destroyed armored vehicles and the graves of thousands of Ukrainian soldiers and citizens. Russo-Ukrainian battlefields are characterized by the indiscriminate employment of rockets and artillery, in which civilian casualties are simply a byproduct of war. Russo-Ukrainian battlefields are characterized by armored warfare in open and urban terrain. Lastly, Russo-Ukrainian battlefields are home to modern-day siege warfare.

Many of the battles that embody these characteristics are unheard of in the U.S. Army. Battles such as Ilovaisk, Donetsk Airport, Luhansk Airport, Mariupol, Sloviansk, Debal'tseve and others absorbed conventional combat unseen in quite some time. This article examines the Battle of Debal'tseve to glean an understanding of the Russian way of war lurking just beneath the surface of hybrid warfare. Furthermore, this article seeks to identify patterns or emergent trends in Russian operations and to examine those patterns or trends in more detail.

The Battle of Debal'tseve was selected for study because:

- It is the most recent major battle of the Russo-Ukrainian War, where the significance is that the battle reflects the collective conventional lessons-learned by the Russian army throughout the conflict.
- Similarly, the battle reflects the reciprocal nature of Russian reaction to Ukrainian action through the 18-months-plus months of combat operations in Ukraine.
- The Battle of Debal'tseve's salient features are the tight coupling of Russian reconnaissance with assigned indirect-fire capabilities, creating a near-instantaneous sensor-to-shooter system.
- Also, the battle demonstrates a lack of jointness in relation to Russian operations, which serves to further expedite their sensor-to-shooter system by removing the middle layer of clearance and approval for fires.
- The battle also demonstrates that adjustments in force structure allow formations to operate at the tactical and operational levels of war.
- Lastly, the Battle of Debal'tseve illustrates a re-emergence of siege warfare.

Analysis of the Battle of Debal'tseve may suggest that "old" forms and methods of warfare are being employed by Russia and, because of this, there is little to learn from the battle (or a study of any of the conventional battles of the Russo-Ukrainian War). However, this position – suggesting an irrelevance or unimportance to Russia's conventional way of war because aspects might be received as "old" – is superfluous and counterproductive to learning organizations such as the U.S. Army. The contemporary, conventional Russian approach to warfare is important to understand because so few within the U.S. Army, especially at the brigade-combat-team level and below, are familiar with such forms and methods of combat.

Russo-Ukrainian War: strategic and operational context

Historian Lawrence Freedman, in analyzing German Field Marshal Helmuth von Molkte's position that political leaders must stay out of military action, states, "The idea of a military strategy separate from a political strategy was not only misleading but also dangerous."[2] Lawrence's position, correctly rebutting that of Moltke's, is no less applicable today than it was during the wars of German unification. Therefore, it is instructive to briefly examine Russian policy, strategy and operational context to help frame the

battle in relation to the Russo-Ukrainian War.

Historian Sarah Paine, writing about Russian policy, states, "Russian strategy had long been to surround itself with weak neighbors and to destabilize those who threatened to become strong. This was a logical strategy for a large continental empire."[3] Russian policy in regard to the Russo-Ukrainian War is debatable, but it appears that Russian policy borrows heavily from Paine's position, seeking to weaken Ukraine while building a buffer between Russia and Western Europe. Russian action indicates this buffer is territorial and weapons-capability based.[4] Moreover, Russian policy supports separatist action in the Donbass to create breakaway governments, embodied in the Donetsk People's Republic (DPR) and the Luhansk People's Republic (LPR).[5]

Russian strategy in the Russo-Ukrainian War focuses on retaining the DPR and LPR and defeating Ukrainian forces that threaten the territorial integrity and/or continued existence of either the DPR or LPR. Russia accomplishes these aims through the application of a limited hybrid war conducted by a combination of Russian armed forces and proxies.[6] Russia is reported to have committed upward of 9,000 conventional and unconventional troops toward the accomplishment of its strategic objectives.[7] This number does not include the cooperation of separatists, partisans and other proxy forces.

Russia's primary operational objective is the territorial integrity of the people's republics in Donetsk and Luhansk. The retention of critical transportation nodes and lines of communication – including highways and railroad lines that link DPR, LPR and Russia – are subordinate operational objectives. More operational objectives include areas within the Donbass that possess infrastructure (power generation, hydroelectric, water treatment) that enables the people's republics to operate entirely independent from Ukraine.[8] These operational objectives have resulted in major combat operations at locations throughout the Donbass.

Russia's operational approach vacillates between a strategy of attrition and exhaustion. Russian battles focus on trapping Ukrainian ground forces and slowly bludgeoning them through the repetitious employment of indirect fire and armored thrusts. The goal of protracting the destruction of Ukrainian forces – instead of quickly annihilating them – is that it 1) forces a desperate Ukrainian government to come to the bargaining table to broker a deal to end the slaughter while 2) it exhausts Ukrainian resources as they continue to commit forces to protracted battles.

The battles of Ilovaisk (Aug. 7-Sept. 2, 2014) and Debal'tseve demonstrate the effectiveness of this approach as they resulted in the Minsk Protocol and the Minsk II agreement, respectively.[9] Operational reach and culmination are moot points due to the proximity of Russian forces to their logistics base in Russia and because of the retention of lines of communication to the Southern Military District (SMD), which conducts resupply missions to forward Russian units as required.[10]

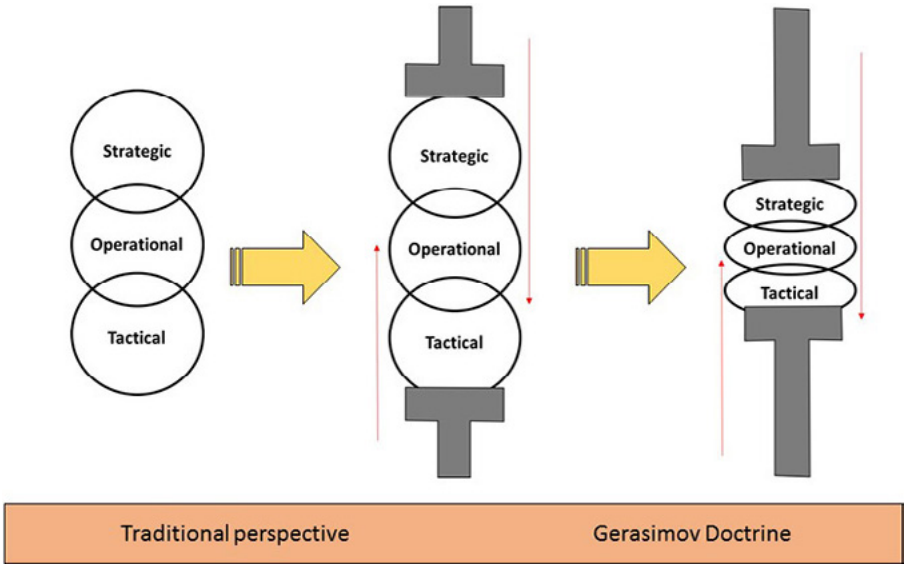

Figure 1. Gerasimov's evolution of the levels of war.

Russia's hybrid warfare is deftly articulated in what is known as the Gerasimov Doctrine. Pundits argue whether Gerasimov's ideas encompass a new mental model of warfare or a new approach to warfare, but Russian action indicates the efficacy of the Gerasimov Doctrine in driving Russian operational art, planning and tactical action.

One of the salient points of the Gerasimov Doctrine is that levels of war have been compressed by contemporary and emerging technology. Therefore, there is little distance (physical or temporal) between the strategic, operational and tactical levels of war (Figure 1).[11] As such, overlap exists between the levels of war and their associated actions on the battlefield. The overlap can be observed in Russia's actions in the Russo-Ukrainian War as operational art and tactical actions are so intertwined that it is often difficult to find the seams or distinctions between the two.

The Russian army, like many armies in recent years, eliminated divisions and aligned its expeditionary capability in its brigades and regiments.[12] SMD serves as the field-army headquarters in Russia's current force structure, of which Russian brigades are directly aligned. The field-army headquarters in Russia's SMD is the primary practitioner of operational art in this model. Yet the field army is not alone in the exercise of operational art.

Russia altered its force structure to operate within this paradigm, and the battalion tactical group (BTG) is the physical embodiment of this adjustment (Figure 2). The BTG is a tactical formation that possesses operational indirect fires and air-defense capability, allowing it to have one foot in the tactical level of war, while the other foot is able to operate in and influence the operational level of war.[13] The operational indirect fires most often found in the Russian BTG are the BM-21 Grad and the 9A52-4 Tornado, both

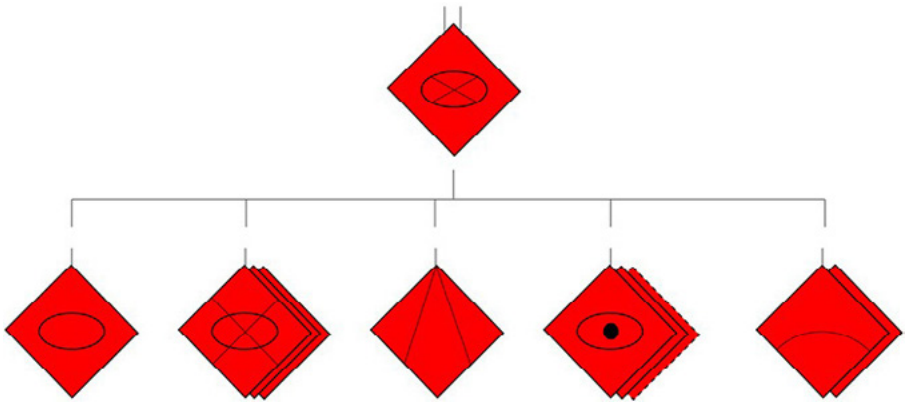

Figure 2. BTG organization.

of which are multiple-launch rocket systems (MLRSs) that fire 122mm rockets with ranges of more than 20,000 meters and 90,000 meters, respectively.[14]

The BTG commander, as a result, is not only a tactician but also a practitioner of operational art. While this idea is at odds with U.S. Army doctrine, which states, "A corps headquarters is the Army's primary operational-level headquarters," the BTG's ability to achieve operational effects and accomplish operational objectives pull it into the operational level of war.[15]

The significance of the BTG cannot be overlooked. The BTG has demonstrated its versatility, durability and overall utility in the Russo-Ukrainian War and, as a result, it has become the exclusive warfighting formation employed by Russia in Ukraine. In light of the BTG's effectiveness in the Russo-Ukrainian War, Russia is doubling down on its investment in the formation, looking to grow the number of BTGs in the Russian army from 66 to 125 by 2018 and exclusively equip BTGs with professional soldiers.[16]

The BTG, a phenomenon of the Russo-Ukrainian War, clearly shows its utility at Debal'tseve.[17]

Battle of Debal'tseve

The Battle of Debal'tseve began in the blowing snow of a frigid Ukrainian winter Jan. 14, 2015. Ukrainian forces, both professional soldiers and volunteer battalions, set out to retake control of Debal'tseve. The city, home to 25,000 inhabitants, sits on the nexus of multiple highway and railroad lines that are critically important to both sides of the conflict (Figure 3). Debal'tseve's importance lies in it being the nail that holds both halves of the Donbass together while linking DPR and LPR with Russia (Figure 4).

Reciprocally, the city is vitally important to Ukraine because its possession denies Russia and their allies in the Donbass a key line of communication. Also, possession of the city allows the Ukrainian forces freedom of movement into the separatist-held Donbass. Lastly, Debal'tseve is a critical line of communication between soldiers on the front lines of the conflict with the Ukrainian forces' forward tactical headquarters in Artemivs'k.[18]

Russian forces and pro-Russian separatists took control of the city during the initial phase of Russian's hybrid campaign in April 2014, but their hold on the city was tenuous. Ukrainian forces retook the city in July 2014 and maintained control of the city until January 2015, when Russia launched a concerted effort to retake the city, destroy the Ukrainian army therein and send a message to the locals that the Ukrainian government was unable to protect them.

Debal'tseve presented a salient into separatist-controlled territory while under Ukrainian control (Figure 5). Russian BTGs, equipped with the latest T-80 and T-90 tanks, BMP-2s and BM-21 Grads, set out with separatist mechanized brigades on the morning of Jan. 14, 2015. They attacked to pinch off the salient and destroy Ukrainian forces defending Debal'tseve.[19] The attack quickly took the form of a siege as Russian and separatist forces sought to inflict a high cost on the Ukrainian army and the civilian population of Debal'tseve in pursuit of the city.

Ukrainian forces, numbering about 8,000, drawn largely from 128th Mechanized Brigade and the volunteer Donbass Battalion, were located in trenches and battle positions around the city while controlling critical infrastructure within Debal'tseve.[20] In the early hours of Jan. 14, Ukrainian soldiers heard the ominous buzzing of Russian reconnaissance drones overhead just before artillery and rocket fire impacted their positions. Russian armored attacks followed on the heels of the artillery and rocket strikes. Ukrainian forces sought refuge in their trenches while seeking to make sense of the situation.

The Russian and separatist attacks persisted in a similar fashion for a week – the siege was characterized by indiscriminant shelling of the city by BM-21 and 9A52-4 rocket fires, mixed with artillery fire and armored attacks on Ukrainian positions. Russian drones patrolled overhead, looking for targets, while Spetsnaz, *Glavnoye Razvedyvatel'noye Upravleniye* (GRU) operators and plain-clothed troops assisted in target acquisition and local reconnaissance.

Keenly aware of the Ukrainian predicament outside the city, and the impact on civilians within the city, Russian forces began relentlessly shelling Debal'tseve while further constricting their grip on the city. Looking to further exacerbate the situation, Russian and separatist forces cut access to electricity, heat and water in and around Debal'tseve Jan. 22, resulting in a rapid decline in living conditions for the city's civilian population.[21] Within a few days, 8,000 civilians fled the city, and another 6,000 civilians were killed during the fighting for Debal'tseve.[22]

Russian and separatist forces controlled both shoulders of the Debal'tseve salient and were on the verge of pinching off the bulge by Feb. 1, 2015. The 128th Mechanized Brigade, the Donbass Battalion and other Ukrainian forces still had access to their higher headquarters and logistics base in Artemivs'k, northwest of Debal'tseve along Highway M03. Low-level fighting persisted from the start of the month

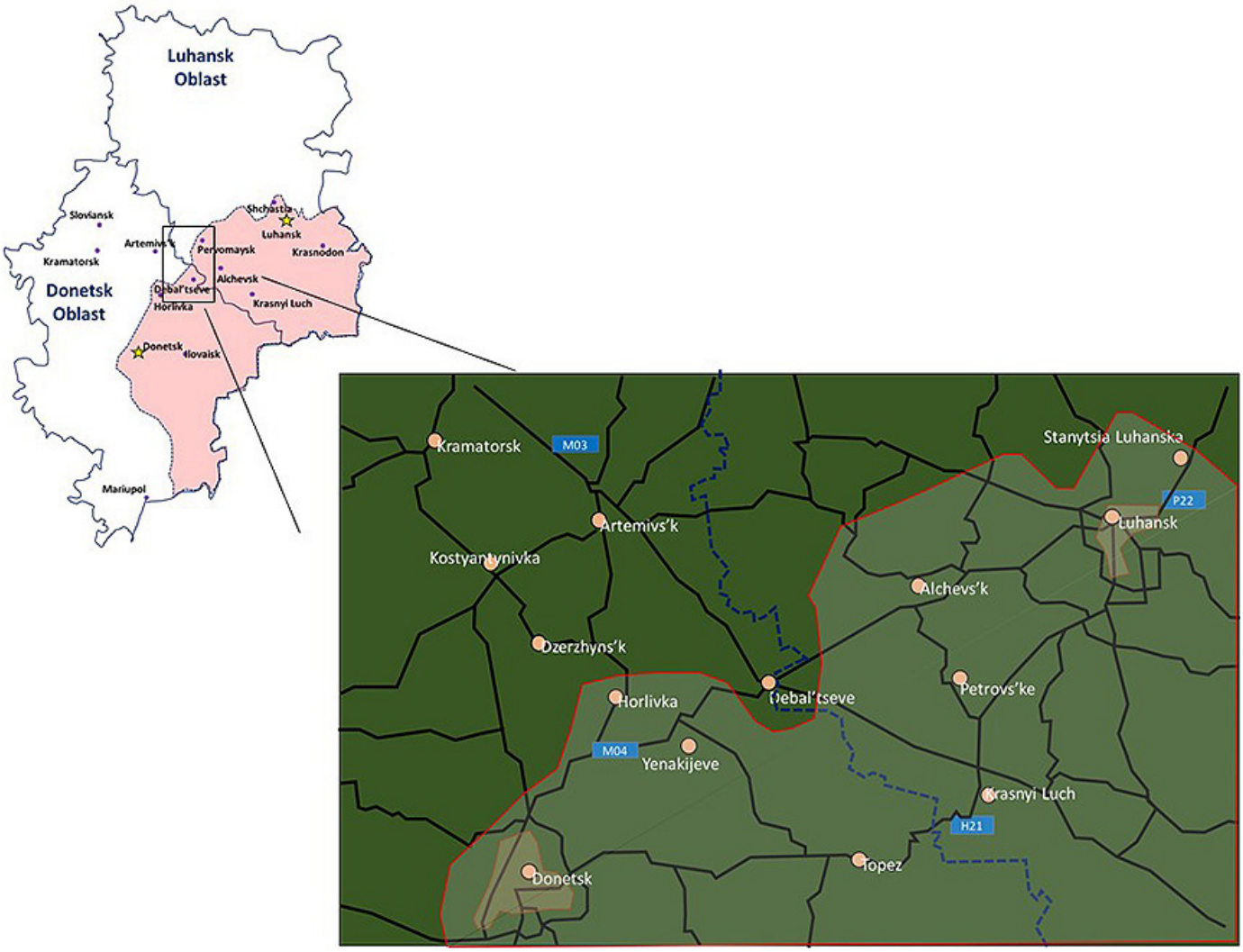

Figure 3. Debal'tseve, shown in context to the Donbass region.

until Feb. 9, when the opposition seized Lohvyne, the last remaining supply route for Ukrainian forces in Debal'tseve.[23]

The battle for Debal'tseve intensified between Feb. 10 and the end of the battle Feb. 20. On Feb. 10, Russian forces launched two concentrated attacks around the city, seeking to close the circle around the Ukrainian forces, which resulted in 19 Ukrainian troops killed in action and 78 wounded in action. Ukrainian forces were isolated at Debal'tseve.[24]

Russian forces then denied access to Highway M03, the artery from Debal'tseve to government-controlled territory and the operational headquarters in Artemivs'k. Russians launched rocket attacks from Debal'tseve on government and army headquarters buildings in Kramatorsk Feb. 11. Russian forces dedicated multiple-launch rockets and artillery to deny Ukrainian forces movement into or out of the city. At this point in the battle, Ukrainian forces found themselves truly isolated and physically unable to escape their encirclement.

Russia, seeking to exploit the success of their recent offensive actions, deployed two more BTGs from SMD consisting of more than 100 tanks, *Boyeva Mashina Pekhoty* (BMPs) and MLRS on the same day. The Minsk II Agreement, which was supposed to curtail combat operations in Debal'tseve, was reached Feb. 12. Nonetheless, Russia ignored the agreement, and its forces continued to ruthlessly attack Ukrainian forces holding their defensive positions around Debal'tseve.[25]

On Feb. 13, Russian forces launched rocket attacks from Debal'tseve on Ukrainian positions in Artemivs'k. While conducting indirect-fire attacks outside the city, Russian BTGs and separatist mechanized brigades and battalions continued to pound away on Ukrainian defensive positions. Furthermore, Russian BTGs launched salvo after salvo of rocket fire into Debal'tseve, wrecking the city. Between Feb. 13-17, Ukrainian forces attempted small-scale breakouts from their encirclement but were unable to muster a strong-enough thrust to punch through Russian positions. What is more, Russian control of Highway M03, which linked the Ukrainian forward tactical headquarters in Artemivs'k to Debal'tseve, denied the Ukrainian government's ability to relieve its encircled forces at Debal'tseve.

Russia, sensing the futility of the Ukrainian situation, initiated their *coup de grâce*. Russian forces and their separatist allies launched a full-scale assault into the city Feb. 17, 2015.

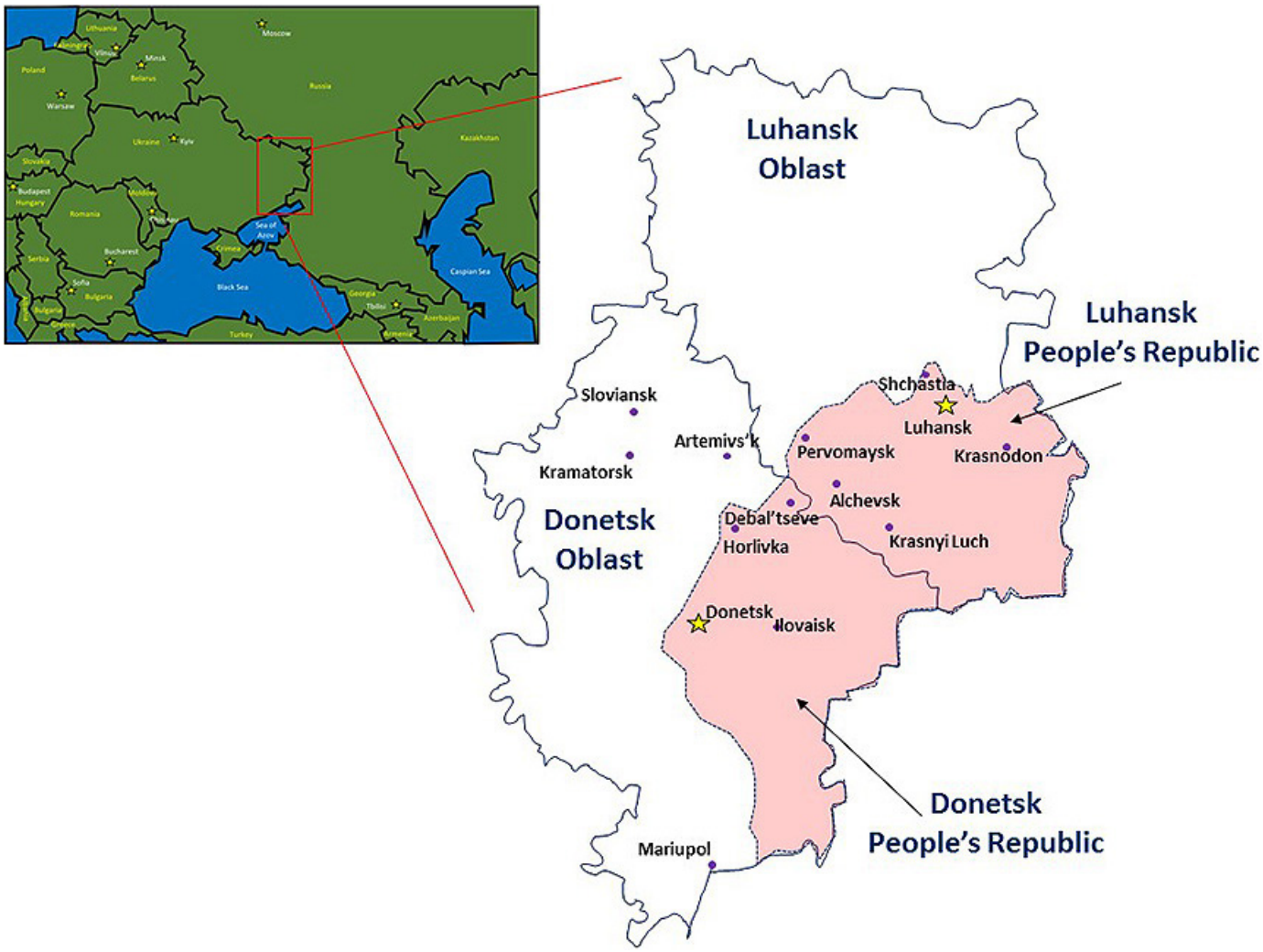

Figure 4. The Donbass.

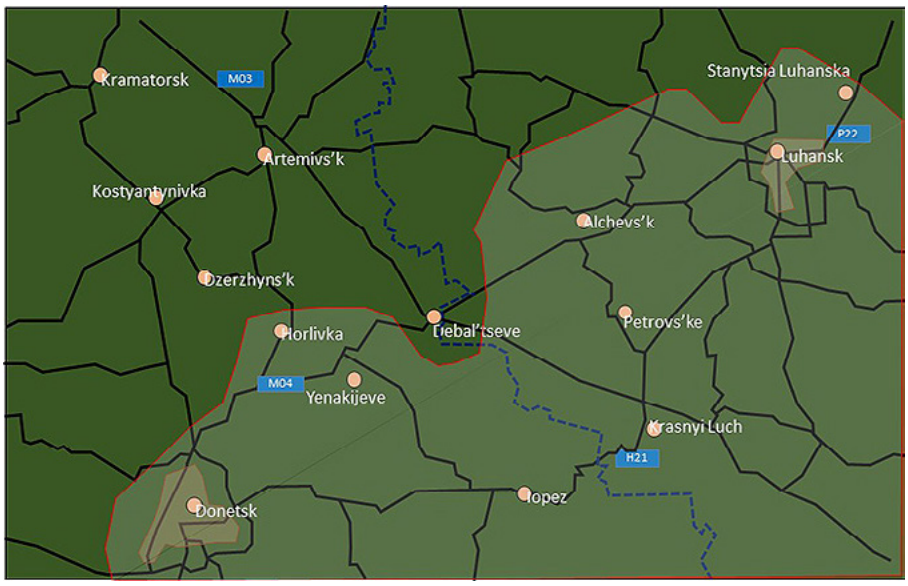

Figure 5. Debal'tseve salient.

Ukrainian forces, weakened by a month of perpetual attack in harsh winter conditions, had reached culmination and were no longer able to maintain their hold on the city. With the approval of the Ukrainian government, Ukrainian forces began a fighting withdrawal from the city. By the night of Feb. 18, about 2,500 Ukrainian troops had withdrawn from Debal'tseve, leaving about 4,500 soldiers still in and around the city. By the night of Feb. 19, 90 percent of Ukrainian forces had withdrawn, and by mid-day Feb. 20, 2015, Debal'tseve officially fell to Russia and DPR/LPR.[26]

The fighting withdrawal from Debal'tseve was not supposed to be a fighting withdrawal but rather a peaceful withdrawal along a prearranged corridor. In similar fashion to Russian action at the Battle of Ilovaisk, Russian forces failed to honor the agreement for peaceful withdrawal. They instead attacked Ukrainian forces along the corridor. Ukrainian forces were forced to flee from the roads, abandon their vehicles and make for safety on foot. In the process, Russian forces destroyed innumerable Ukrainian combat

vehicles and captured close to 100 Ukrainian soldiers.

The battle for control of Debal'tseve destroyed 128th Mechanized Brigade and the Donbass Battalion as fighting formations. Ukrainian losses totaled 300 dead and 700 wounded in combat. The Russian and separatist losses are far more difficult to define as Russia continues to deny any involvement in the battle.[27]

Ruminations on battle

The Russian victory at Debal'tseve is important because of what it does for Russia. Military analyst Hugo Spaulding writes, "The collapse of the Ukrainian defense at Debal'tseve will leave Russia in a stronger position to coordinate future offensive operations, the basis of its military strategy in Ukraine."[28] Also, the victory solidifies the link between the DPR and LPR, ensuring further cooperation between the two polities within the Donbass.

Russian reconnaissance

Russian operations at the Battle of Debal'tseve, and throughout the entirety of the war, illustrate the Russian predilection for employing drones, Spetsnaz, GRU and partisan forces in conjunction with one another for reconnaissance to support the BTG and army headquarters at SMD.[29] In speaking on the efficacy of Russian reconnaissance, military analyst Phillip Karber states, "The Russians have broken the code on reconnaissance-strike complex, at least at the tactical and operational level."[30]

Once a target has been identified, that information is transmitted to the firing unit. The unit then delivers the requested ordnance. This sensor-to-shooter cycle, unencumbered by joint air-power considerations, is highly responsive and extremely effective. The Battle of Debal'tseve clearly demonstrates the Russians' proclivity for the use of rocket and artillery fire; the best example is the July 11, 2014, rocket strike at Zelenopillya. The strike featured Russian forces' blending of reconnaissance drones and cyber capabilities to identify Ukrainian formations, disrupt their ability to communicate and then attack with BM-21 Grad and 9A52-4 Tornado fire launched from SMD.[31] The strike, perhaps the apogee of Russian rocket and artillery doctrine, resulted in 30 Ukrainian soldiers killed, more than 100 injured and two battalions' worth of combat power destroyed.[32]

Figure 6. The Organization for Security and Cooperation in Europe's Special Monitoring Mission to Ukraine monitors the movement of Ukrainian armor in eastern Ukraine in March 2015.

The Russian model of reconnaissance is foreign to that of the U.S. Army. The Russian army does not possess reconnaissance formations similar to U.S. cavalry formations, which conduct reconnaissance for its ground forces. The Russian model amalgamates drones, special forces and partisan forces to conduct deep, operational reconnaissance. BTGs employ their organic assets for local, tactical reconnaissance. The purpose of this organizational structure is to expedite the flow of information to the formation to which it reports.[33]

Also, it is critical to understand that Russian special forces, primarily Spetsnaz and GRU, do not operate, nor are organized, in the same manner as that of U.S. special-operations forces. Russia's special forces are aligned within conventional Russian army formations and answer directly to the commander of that organization. They do not operate in a parallel command structure to conventional forces like that of the U.S. Army Special Operations Command. Thus, the conventional-force commander directs the action of Spetsnaz and GRU, achieving a high level of synergy within the Russian ground forces.[34]

Russian indirect fires

The use of rockets and artillery dominates Russia's approach to ground warfare. The offensive use of artillery and rockets is not new to the Russian military mind; it's deeply rooted in the Russian way of war. The doctrine of the Soviet Army in World War II was built around the idea of the "artillery offensive," in which ground combat formations such as tank and infantry units supported the artillery and rocket offensive by exploiting the success achieved through massive salvos. As historian John McGrath writes, "The artillery fires were designed to destroy or suppress enemy defenses, with the maneuver forces maneuvering in the wake of the fires to occupy the ground or otherwise take advantages of the effects of the fires."[35]

What is new about the Russian approach to rocket and artillery fire is the way they identify targets and how they flatten the cycle between sensor and shooter. The Russian forces' capability to find and fix an opponent beyond the range of their adversaries' ability to do

the same cannot be brushed aside, especially when considering the associated ability to deliver massive quantities of rocket and artillery fire almost instantaneously.

Absence of joint warfare

A critical point to remember about Russian operations in Ukraine is that they are not joint – there is no Russian air force or army aircraft in the air, negating a clearance of airspace. This means fire-support requests are more timely than they would otherwise be. While the U.S. military prides itself on its jointness, this is of little concern to the Russians, at least in relation to combat operations in Ukraine.

In the Russo-Ukrainian War, the lack of joint operations is a benefit to Russian ground forces, as their sensor-to-shooter system is almost instantaneous due to the absence of aircraft in the sky to interfere with indirect fires. Also, most firing units are organic to the BTG.[36] This situation is compounded by the fact that Russian forces are not concerned with precision application of strike capability, nor are they concerned with collateral damage.

Siege warfare revisited

Russian forces appear to practice positional warfare, using tactical action to trigger desired responses based on anticipated Ukrainian reactions to stimulus. Many instances during the Russo-Ukrainian War illustrate this idea; one was the Battle of Debal'tseve, but it also includes the Battle of Luhansk Airport, plus the first and second battles of Donetsk Airport and the Battle of Ilovaisk. Siege warfare plays into Russia's proclivity for offensive indirect fires to slowly erode Ukrainian combat power and political will, allowing Russia to obtain its associated operational objectives.

The Russian siege also plays into the Ukrainian tendency to "seize the initiative" by rapidly committing forces to Russian provocation before adequately assessing the situation to determine the best course of action. Ukraine's rapid commitment of forces in response to Russian offensive action at the Luhansk and Donetsk airports, and at Ilovaisk, are examples where Russia lured the Ukrainians into inadvertently isolating themselves, which Russia then exploited through the siege. While the conditions that led to the Battle of Debal'tseve are somewhat different to those at Luhansk, Donetsk or Ilovaisk, each battle essentially unfolded in a similar manner.

The bottom line is that hastily committing forces in the name of seizing the initiative can quickly backfire against an adroit enemy looking to capitalize on opportunity, which often presents itself through an opponent's missteps or through their patterns of action.

Likewise, Russian siege warfare appears to be tied to its blended operational approach, focused on attrition and exhaustion. In each of the major battles in Ukraine, Russian forces possessed the capability to annihilate Ukrainian forces, yet they chose not to. Russian forces are not seeking quick, decisive victory in Ukraine. Instead, they are looking to bleed the Ukrainian army white, both in terms of personnel and in combat vehicles like tanks, infantry fighting vehicles and artillery. The purpose of the siege, coupled with the ubiquitous use of indirect fire, is to slowly destroy Ukrainian equipment and personnel. To take it a step further, the slow attrition of soldiers likely has a psychological impact on the Ukrainian people, making them less likely to willingly participate or support the Ukrainian armed forces or volunteer battalions, which have shouldered a large amount of the combat in Ukraine.

The Russian siege erodes the public's faith in the government and military's ability to coherently direct a war. Both these conditions, when coupled with one another, can create national apathy within the Ukrainian populace. This strategically weakens the Ukrainian government's ability to influence a positive outcome.

Conclusion

The Russian army of today is not the same caliber of the Cold War Soviet army. However, it is vital to remember the Russian army is also not the force the U.S. Army met in the deserts of Kuwait, Saudi Arabia and Iraq in 1991, or in Iraq in 2003. The Russia army is a formidable land army that has proven its mettle in modern conventional warfare. That in itself warrants respect and analysis. The Russo-Ukrainian War provides insight into current Russian army doctrine. The hybrid war in Ukraine, with its cyber, electronic and information-operations-laden overtones, overshadows a very conventional campaign being fought just below the surface.

The Battle of Debal'tseve represents the cumulative experience of the Russian army through the Russo-Ukrainian War. The battle's salient features, as they relate to the Russian army, include the tight coupling of Russian reconnaissance with indirect-fire capabilities, creating a highly responsive senor-to-shooter system. Also, the battle demonstrates a lack of jointness in relation to Russian operations in the Russo-Ukrainian War, which paradoxically makes the Russian army more lethal than they might otherwise be.

The battle is another instance of the Russian siege, which is used not only to erode forces at the tactical and operational level, but to strategically exhaust the Ukrainian military and government while scoring major information-operations victories in respect to the Ukrainian government's relationship with its people. Lastly, the battle demonstrates the BTG's utility, which is the byproduct of thoughtful innovation to find the best mix of capabilities at each echelon of command to match the type of war being fought.

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Notes

[1] Thomas Gibbons-Neff, interviewed by Ryan Evans, ***War on the Rocks***, Aug. 26, 2015; accessed Sept. 29, 2015, http://warontherocks.com/2015/08/podcast-infantry-combat-from-modern-ukraine-back-to-world-war-i/.

[2] Lawrence Freedman, ***Strategy: A History,*** New York: Oxford University Press, 2013.

[3] S.C.M. Paine, ***The Sino-Japanese War of 1894-1895: Perceptions, Power and Primacy***, New York: Cambridge University Press, 2003.

[4] Russian anti-air/area-denial (A2/AD) existed in Kaliningrad before the Russo-Ukrainian War began in 2014. Russia has extended this umbrella with its incremental territorial acquisitions in Eurasia. Routine reports from the Institute for the Study of War provide the most up-to-date unclassified status of Russian A2/AD positioning in the region.

[5] Timothy Thomas, ***Russia: Military Strategy, Impacting 21st Century Reform and Geopolitics***, Fort Leavenworth, KS: Foreign Military Studies Office Press, 2016.

[6] Russian proxies in Ukraine cover a wide variety of forces used to augment the Russian army. Proxy forces include, but are not limited to, ethnic Russian sympathizers in the Donbass, "volunteers" from Russia, "volunteer" battalions from Chechnya (i.e., the "Vostok Battalion") and Cossack formations loyal to Russia.

[7] Thomas, ***Russia: Military Strategy, Impacting 21st Century Reform and Geopolitics***.

[8] Ibid.

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[10] Phillip Karber, "The Russian Military Forum, Russia's Hybrid Warfare Campaign: Implications for Ukraine and Beyond," lecture, Center for Strategic and International Studies, Washington, DC, March 10, 2015.

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[25] Ibid.

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[35] John J. McGrath, ***Crossing the Line of Departure: Battle Command on the Move, A Historical Perspective***, Fort Leavenworth: Combat Studies Institute Press, 2006.

[36] This includes self-propelled artillery, BM-21 Grads and 9A52-4 Tornados.

Acronym Quick-Scan

A2/AD – anti-air/area-denial
ACR – armored cavalry regiment
BMP – *Boyeva Mashina Pekhoty* (Russian armored fighting vehicle)
BTG – battalion tactical group
DPR – Donetsk People's Republic
GRU – *Glavnoye Razvedyvatel'noye Upravleniye* (main Russian military foreign-intelligence service)
LPR – Luhansk People's Republic
MLRS – multiple-launch rocket system
SMD – Southern Military District

Crusader and Gazala: Why a Cohesive Hierarchy Matters

by MAJ Thomas A. Rebuck

Reorganization efforts since the 1930s – in particular the pentomic restructuring of the 1950s, Reorganization Objective Army Division in the early 1960s and Modularity's current "brigade-centric" force structure – have completed the U.S. Army's rejection of proven organizational concepts. The first two initiatives were based on dubious theories regarding the need for building "organizational flexibility" into our force structure and modified tables of organization and equipment (MTOEs). The third sought to create self-contained "plug-and-play" units that were capable of rapid deployment without extensive task-organization and could operate across the full-spectrum of military operations.

Many applaud and promote such reforms as operationally, logistically and administratively logical. History, however, indicates that the resulting force structures encourage the incremental employment of units rather than the decisive application of force. In addition, by designing the brigade combat team (BCT) to handle every conceivable contingency outside of its core function as a fighting organization, Modularity has created unsustainable organizations at every echelon from battalion to division. This is exemplified by the expansion of the division headquarters into a battalion-sized element and the inclusion of an engineer battalion, field-artillery battalion and cavalry reconnaissance squadron into the "organic" composition of the BCT.

The psychological and mental paradigms conditioned by organization cannot be underestimated. The Army's current configuration is not optimized for waging mounted combined-arms warfare, nor for that matter, any other level, intensity or type of operation. Presupposing the need to organically organize according to "how we fight," these initiatives ignore the less conspicuous, but nevertheless critical, fact that units also fight the way they are organized. By adopting force structures and MTOEs that conform to scientific management methods (for example, organizational flexibility) rather than human psychology (cohesion and unity of effort), it has opted for a system proven deficient under the conditions of fast-paced, mounted, combined-arms warfare.

Reorganization since '30s

In the late 1930s, the Field Artillery Branch developed new concepts in fire support that resulted in the creation of a division-artillery command (DIVARTY), the adoption of separate battalions and the elimination of the regiment as an operational entity. This structure was adopted by other branches as well. The cavalry transitioned to separate squadrons operating under cavalry groups. Armored infantry and armor regiments were broken up, formed into separate battalions and fought task-organized under combat commands. The exception to

this trend was the Infantry Branch, which retained the regiment and used it as the basis for building combined-arms task forces, referring to them as regimental combat teams.

This force structure lasted until the late 1950s, when the Army reorganized under the pentomic concept. Underlying the premise of this reorganization was the theory that the atomic battlefield required units to be organized under a system of fives rather than threes. It was innovative-sounding and seriously flawed: "[GEN] Taylor and the President came up with the idea that, in nuclear warfare, the troops must be dispersed … more widely than, in their view, [was] possible with the triangular concept," LTC Anthony Herbert reflected. "It was ridiculous. There would be no difference in a nuclear battle if troops were dispersed [20] yards or [1,000]. But it was a good-sounding name.

"What the pentomic concept produced was one of the chief evils in the U.S. Army," Herbert wrote. "It isolated the links in the command chain by enlarging the spaces between them. By eliminating the regiment as a unit, the Army ended up with very junior and very senior officers commanding at extremely close levels; the lines of communication [i.e., from company to battalion to regiment] were broken and the concept of 'cover your ass' was nourished."[1]

Although it retained the armored cavalry regiment as a corps-level reconnaissance-and-security asset, the pentomic reorganization spelled the end of the regiment as a maneuver entity in the U.S. Army. When leaders decided to abandon the pentomic structure, instead of returning to the regiment, the Army chose to adopt the separate battalion/brigade structure of the armored division's combat commands.

In theory, the purpose of the separate battalion/brigade structure was to facilitate task-organization by loosening the administrative and logistical ties that existed within the regiment. Under this system, the brigade should function as a tactical headquarters only, with no administrative or logistical responsibilities outside those required to support the headquarters. Not only has this scheme been invalidated by the fact that brigades have assumed the same level of administrative and logistical responsibilities as the regiment, it ignores practical wartime experience. As Armor Branch historian Dr. Robert S. Cameron said, "For most leaders, combat operations failed to validate the advantage of the extreme organizational flexibility embedded in the combat-command structure."[2]

Modularity failed to fix these mistakes. Not only did it retain the brigade, it exacerbated the situation by transitioning the Army to a brigade-centric force structure. In essence, it dumped assets into brigade MTOEs simply because they existed at division level – not because they directly supported the core function of the organization or justified the expense of making them organic to every brigade. One of the best examples of this was the replication of the DIVARTY at brigade level despite the fact that maneuver brigades would never control the number of fire-support assets available to pre-Modularity divisions. That this element has since been removed underscores its conceptual absurdity.

The only substantive effect of these reorganizations, in whole or in part, has been to fragment the Army's force structure and undermine the purpose of an echeloned hierarchy: cohesion and unity of effort.

Regiment vs. brigade

Our current brigade structure bears similarities to the British Army. Although known as a "regimental system"[3] under the British system, the regiment operates as an administrative entity with no operational function. Its operational elements are comprised of affiliated but separate battalions brought together and task-organized under brigade headquarters. While this force structure produces resilient units at the battalion level and below, when maneuvering in larger formations against a peer or near-peer opponent, it has proven deficient. This is the result of a mental paradigm that views battalions, brigades and divisions as all-but-isolated links in the command chain and commits them to combat accordingly. Even though affiliated battalions are sometimes brigaded together, the lack of an organically cohesive relationship (as opposed to an administratively and titled association) encourages the incremental and piecemeal deployment of these formations into battle.

In contrast to this loose and "flexible" force structure, the Germans used the regiment as an operational echelon. Although based on a regional system of depots/home stations much like the British, the German regiment was both an administrative ***and*** operational unit. The Germans recognized the human dimensions of force structure and organization. Not only were cohesive teams built on the foundation of regimental identity, leaders were conditioned to conceptualize the maneuver of its various echelons as an integrated whole, not just as affiliated but separate entities.

In addition, the Germans retained their panzer and panzer-grenadier units as pure regiments, which had significant advantages for both training and maintenance: "You have to keep one thing in mind, which is repair and maintenance of modern weapons systems, and that can only be done in 'pure units.' The maintenance of the materiel is of paramount importance, and it is not possible to maintain the materiel in one unit where you have a conglomeration of different types of materiel."[4]

Yet these apparently rigid structures never inhibited the formation or operation of mounted, combined-arms task forces or decentralized operations. Why? Because the adaptability and proficiency of an army's leaders are far more important to task-force operations than the perceived advantages of organizational flexibility: "That is the art of leadership – that you can control the various forces but you still maintain the pureness of the unit."[5]

It is significant to note in the context of this article that Sir John Hackett, who commanded a British tank squadron (company) in North Africa and experienced firsthand the effects of German cohesion and operational philosophy, hinted at his belief in the superiority of their system. "I do not think we have ever made enough use in the British Army of the regiment as an operational entity," he wrote.[6]

While the U.S. Army displayed its own predilection for the piecemeal employment of its armored divisions and subordinate combat commands in Africa and Northwest Europe, nowhere was the disparity between German and Allied organizational and operational philosophy more evident than during the North African Campaign of 1941-42. Throughout this period, the Germans established tactical superiority over British and Commonwealth forces in the execution of mounted combined-arms warfare. Although a measure of this superiority was attributable to superior equipment, the decisive factor was the concentration of cohesive formations at the decisive point.

Operation Crusader

Operation Crusader was launched by the British Eighth Army Nov. 18, 1941. It had two objectives: "1) to trap and destroy the enemy forces in Eastern Cyrenaica, and 2) to occupy Tripolitania and drive the enemy out of Africa. This would also ensure the relief of Tobruk."[7] The XIII Corps would hold and outflank Axis positions along the Halfaya Pass-Sidi Omar Line, while XXX Corps would pass to the south and advance into the Axis rear "either to destroy Rommel's armor or prevent it from interfering with the XIII Corps."[8]

Although they outnumbered the British by three divisions, the bulk of the Axis units were non-motorized Italian divisions which, as German Field Marshal Erwin Rommel pointed out, "were as good as useless in the open desert."[9] In addition, "such figures give a false impression. … The British had five brigades of armor, while Rommel had the equivalent of two German and one Italian. In number of tanks, the British total was 724, with some 200 in reserve. … Rommel's strength at the start was 414 (including 154 Italian). He had some [50] under repair but had no reserve of new tanks."[10]

Figure 2. Field Marshal Erwin Rommel confers with an aide during the North Africa desert campaign, 1942.

Thus, 7th Armoured Division alone fielded more tanks than 15th and 21st Panzer Divisions combined, while the individual British armored brigades equaled or surpassed the number of tanks in each German division (4th Armoured Brigade: 166; 7th Armoured Brigade, 129; 22nd Armoured Brigade, 158).[11] In addition, this material overmatch was exacerbated by tactical surprise.[12]

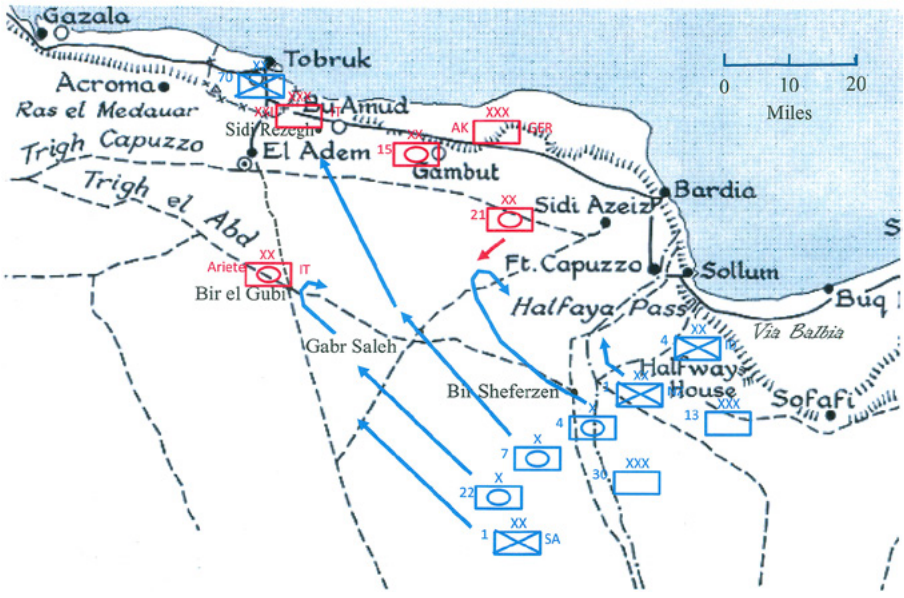


Figure 1. Operation Crusader opening Nov. 18-19, 1941. *(Map by U.S. Marine Corps LTC Robert Lamont)*

Yet these advantages were wasted. Rather than concentrating 7th Armoured Division, its brigades were scattered across the desert against three widely separated objectives. The 22nd Armoured Brigade moved against the Ariete Armored Division at El Gubi. The 7th Armoured Brigade and 7th Support Group advanced to capture the airfield at Sidi Rezegh. The 4th Armoured Brigade remained in the Gabr El Selah area to maintain contact with XIII Corps during its attacks against the Sollum-Sidi Omar Line. This plan "broke up the armored concentration at a decisive time and split it into three separate parts, each part inferior to the opposing tank force and unable to give quick assistance to each other."[13]

As Rommel later reflected, "What is the use of having overall superiority if one allows one's formations to be smashed piece by piece by an enemy who, in each separate action, is able to

concentrate superior strength at the decisive point?"[14]

Such dispersion was perpetuated at the brigade level as well. Battalions were committed piecemeal into the attack at El Gubi and by 7th Armoured Brigade in opposing the initial advance of the 15th and 21st Panzer Divisions against Sidi Rezegh. This diffusion of combat power was replicated by 4th Armoured Brigade, which sent its battalions in divergent directions to locate the German armor. In one case, 3rd Royal Tank Regiment (RTR) attacked a motorized column and pursued it across the Trigh Capuzzo 30-40 miles north of the brigade main body. In the ensuing fight, 3 RTR itself became so dispersed that its subordinate squadrons (companies) and troops (platoons) were still dribbling into the brigade laager the following day.[15]

Retribution for such dispersion came swiftly. The 15th and 21st Panzer Divisions formed task forces built around their panzer regiments and struck the fragmented units with massed formations. "I could see the panzers clearly, coming down a broad depression in line abreast, 40 to 60 of them," MAJ Robert Crisp wrote in ***Brazen Chariots***.[16] This was a common theme throughout the battle: "1,200 yards ahead of me stretched the array of dark brown shapes, 60 or 70 monsters in a solid line abreast. "[17] These cohesive, massed attacks hammered British and Commonwealth units in succession.

First came the mauling of 7th Armoured Brigade and 7th Support Group at Sidi Rezegh. Next in line was 1st South African Infantry and its 5th Brigade, which by Nov. 24 had ceased to exist.[18] After delivering more blows against XXX Corps, the Germans turned their attention to 6th New Zealand Brigade, which had advanced toward Sidi Rezegh; the 24th and 26th Battalions were overrun and the remnants of 25th Battalion were forced to withdraw. These running battles had also decimated British tank strength. By Dec. 4, 4th Armoured Brigade fielded 35 Stuarts and 22nd Armoured Brigade about 21 Cruisers. The 7th Armoured Brigade could only account for four tanks altogether.[19]

The turning point of the battle came when Rommel decided to make his ill-fated "dash to the wire." Presuming that an attack into Eighth Army's rear areas would cause the British to break and withdraw into Egypt, he launched a sweep with his panzer divisions toward the frontier. It almost succeeded.

Figure 3. A British Crusader tank passes a burning German Panzer IV tank during Operation Crusader Nov. 27, 1941. *(Photo by Australian armed forces; Photograph E 6751 from collections of Imperial War Museums (Collection No. 4700-32)*

"When a similar course was followed by panzer forces a year before against the Allied armies … **under more precarious circumstances** [emphasis added], it had produced the greatest victory of modern times," Rommel recalled. "Its miscarriage, this time in Africa, was due partly to … human factors. … [GEN Claude] Auchinleck [British commander in chief, Middle East] above all – but it was also a demonstration of the big part that chance plays in the issues of war."[20]

Auchinleck's refusal to authorize a retreat, coupled with the release of pressure on 7th Armoured Division's shattered brigades, allowed the British to reconstitute their forces and continue the fight. Eventually Rommel was forced to lift the siege of Tobruk and withdraw to the area of Agedabia. Nevertheless, with inferior numbers, the Germans had not only fought Eighth Army to a standstill but brought it to the brink of a decisive defeat, pummeling one British and Commonwealth formation after another and inflicting heavy casualties.

Gazala

Rommel spent little time licking his wounds after Crusader; on Jan. 21, 1942, after consolidating and reorganizing, he launched a counter-offensive against the British. Taken by surprise, the British withdrew and began fortifying the Gazala Line. This position was comprised of a string of fortified "boxes," each manned by a brigade and surrounded by belts of wire and mines. Although these belts were continuous, the "boxes" themselves were too far apart to be mutually supporting, and patrols were required to maintain observation over the obstacles between the positions.

Once again the Axis forces were outnumbered in men and material, with seven tank battalions (three of them Italian) facing off against 14 British battalions.[21] The disparity in hitting power between the two sides was also increased by the presence of American M3 medium tanks. The M3 was equipped with a more powerful gun (75mm) than the British two-pounder or the 37mm weapon found on the M3 Stuart Light Tank.

The German attack began May 27, 1942, swinging south of Bir Hakeim. Although the advance had been observed and continuously tracked, it was so rapid that it rolled over 8th Hussars of 4th Armoured Brigade and overran the 7th Armoured Division headquarters by 8:30 a.m., dispersing 7th Motor Brigade in the process. The juggernaut rolled on: "By mid-afternoon on the 27th, the Germans had scattered 7th Armoured and were in position to

assault the 201st Guards Brigade in the Knightsbridge Box," wrote Robin Neillands.[22] One report described the German armor as "[a] black mass of tanks, beginning in the region of the Knightsbridge Box and stretching south, as far as the eye could see."[23]

Despite its initial impetus, the attack failed to reach the coast road or Tobruk on May 27, and in the running fight, contact with 90th Light Division was lost. With his supply route around the southern end of the Gazala Line rendered impractical, Rommel drew his forces into a defensive position and began clearing paths through the British minefields.[24] It was in this area, subsequently known as "the Cauldron," that Axis forces consolidated, reorganized and resupplied. Once he had replenished his formations, Rommel began reducing the British boxes.

While the Axis were expanding their position, Eighth Army was launching its own attacks. On June 2, it launched a major operation which "was marked by all the usual errors – it was too slow and too obvious, with … **units attacking piecemeal and being repulsed in turn."** [emphasis added][25] As Rommel pointed out, "the Eighth Army commander had thrown his armor into the battle piecemeal and had thus given us the chance of engaging them on each separate occasion. … **This dispersal of the British armored brigades was incomprehensible** [emphasis added]. … The sacrifice of 7th Armoured Division south of Bir Harmat served no tactical purpose whatsoever, for it was all the same to the British whether my armor was engaged there or on the Trigh Capuzzo, where the rest of the British armor (1st Armoured Division) entered the battle."[26]

On June 12, the Axis began a breakout, which led to the fall of Tobruk and forced the retreat of Eighth Army to the Alamein position.

While Eighth Army managed to eke out a victory with Operation Crusader, Gazala ended in disaster. Once again the margin of victory at Gazala was the German use of cohesive formations. Their success was facilitated by the British preference for fighting brigades and battalions as separate entities and not as cohesive teams, resulting in their piecemeal and incremental employment into battle.

Conclusion

Reorganization efforts in the U.S. Army

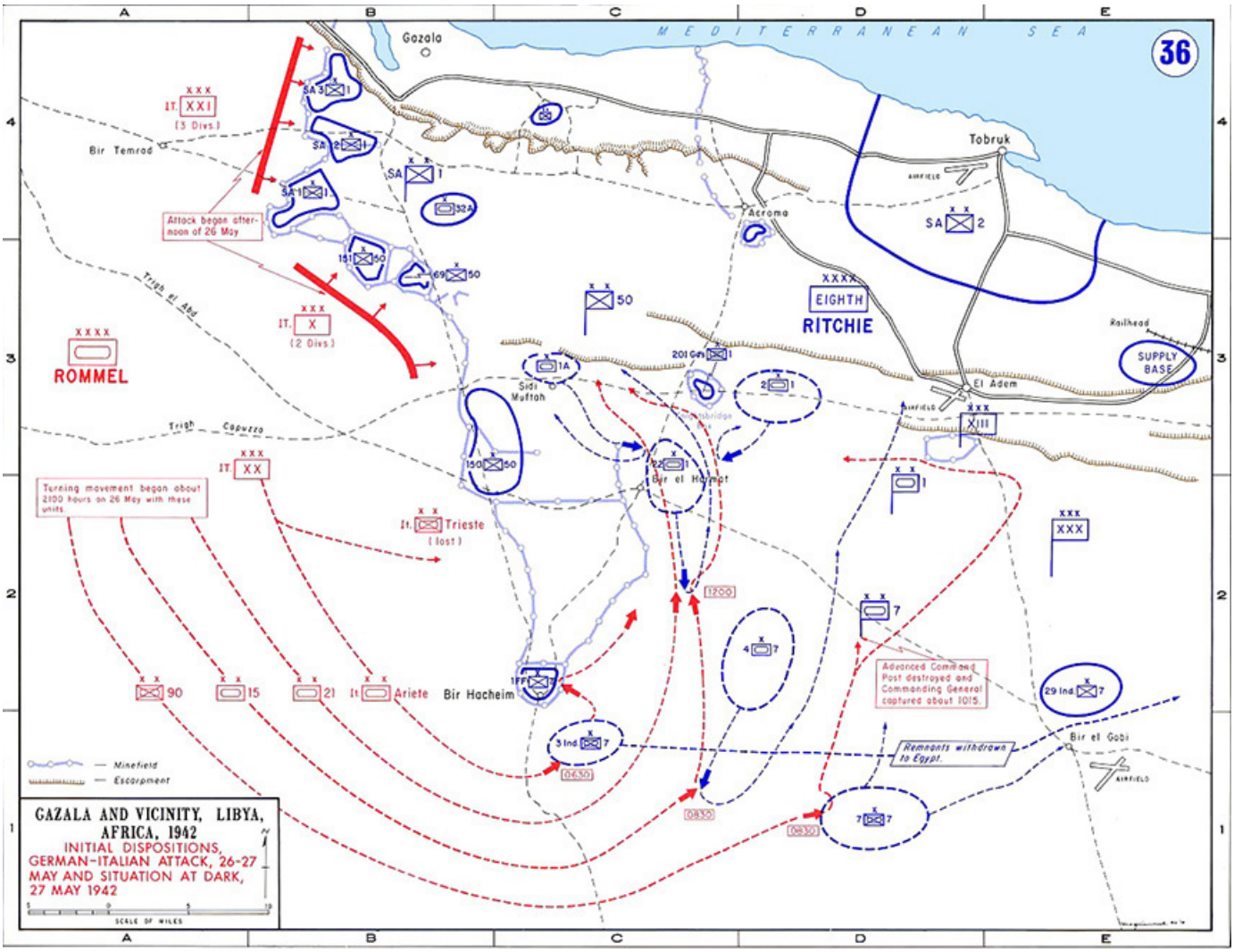


Figure 4. Situation in "the Cauldron," May 27, 1942. (*Map by U.S. Military Academy's Department of History, http://www.dean.usma.edu/history/web03/atlases/ww2%20europe/WWIIEuropeIndex.html (Map 36). Libya, initial dispositions, German-Italian Attack, May 26-27, 1942***)**

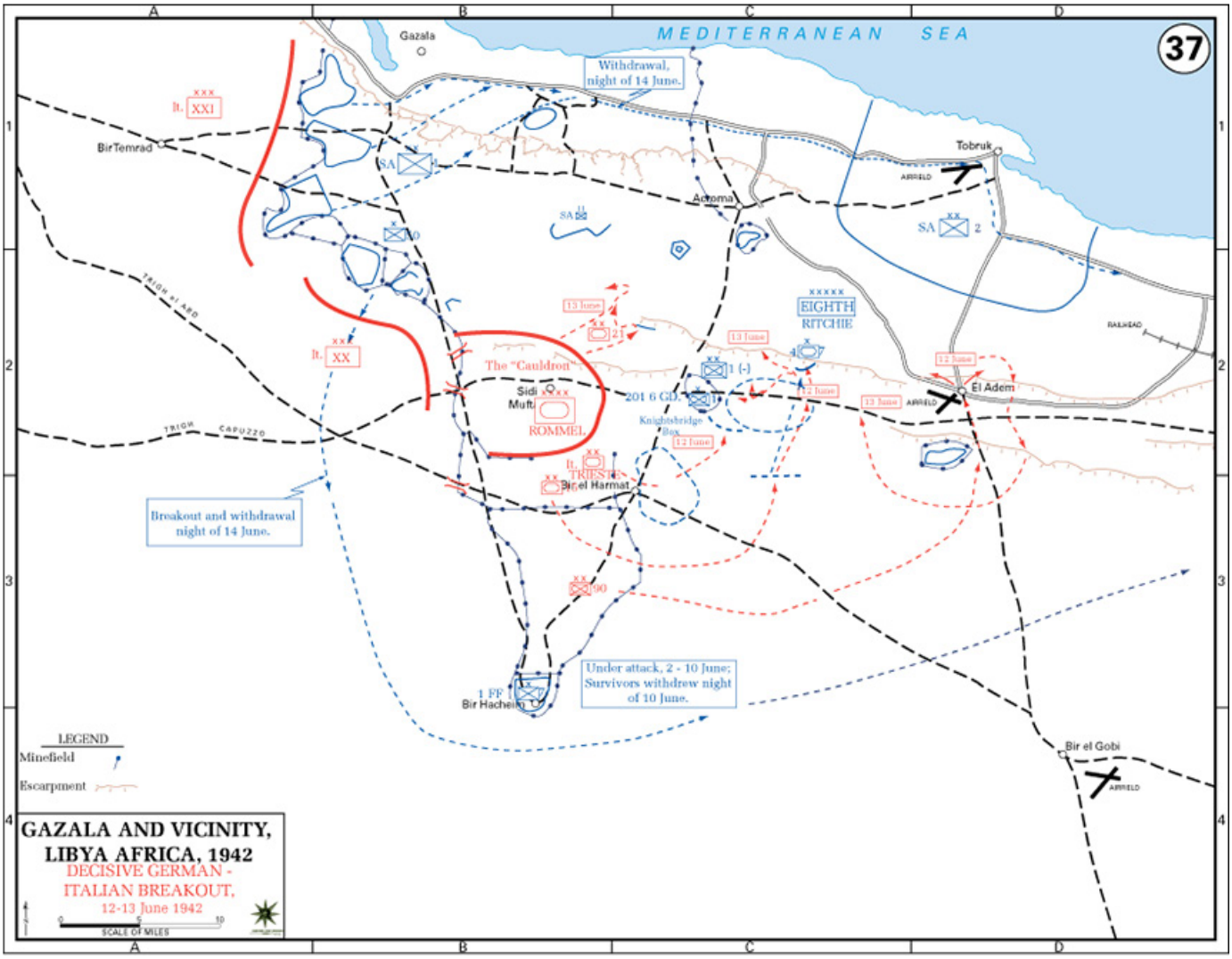


Figure 5. Rommel's breakthrough after the Battle of Gazala June 12-13, 1942. *(Map by U.S. Military Academy's Department of History, http://www.dean.usma.edu/history/web03/atlases/ww2%20europe/EuropeanTheaterGIF/WWIIEurope37.gif.)*

since the 1930s have continually rejected proven organizational concepts. Rather than retaining the regiment, our system makes separate battalions and brigades the foundation of its force structure. The superiority of a true regimental organization fighting within a division structure was demonstrated during World War II, where panzer divisions operated as cohesive, integrated entities. The Allies, on the other hand, continually broke up their mounted formations and committed units incrementally. Subsequent post-war success of brigade-oriented armies has usually, if not universally, been against similar force structures (i.e., brigades vs. brigades). Significantly, the North Vietnamese and Viet Cong used regiments effectively as part of their insurgent and conventional campaigns against South Vietnam.

This article does not endorse the Army's past or current divisional organization, which replicates the worst features of bureaucracy and inefficiency. Some people advocate flattening out echelons of command (in the form of a brigade/battlegroup-centric Army) and eliminating the division to improve rapid decision-making and responsiveness. However, the problem is not an echeloned hierarchy incorporating the division but overstaffed headquarters and bloated MTOEs. This approach to force structure runs counter to combat experience, which indicates that although one should mass forces at the decisive point, "you should avoid big units. It does not matter if it is a company or an army corps or a division, it is easier to have small formations."[27] Modularity and other proposed force-structure initiatives, however, continue to promote big and expansive organizations like the BCT.

Fragmentation of force structure for the purpose of facilitating organizational flexibility or creating organic, self-contained "plug-and-play" units is counter-productive. Not only does it undermine unit cohesion, it encourages the incremental employment of formations rather than the decisive application of force. In addition, effective employment of task forces rests more on the art of leadership than scientifically-engineered "flexible" MTOEs. This was demonstrated throughout the campaign for North Africa. The subsequent German defeat was not the result of inferior organization or operational concepts but the relegation of the theater to a subsidiary status by

the high command, which allowed the British to outstrip the Axis in the build-up of forces and supplies.

MAJ Thomas Rebuck serves as executive officer of 3rd Battalion, 103rd Armored Regiment. Previous assignments include S-3, 3rd Battalion, 103rd Armored Regiment; plans officer, 55th Armored Brigade Combat Team, 28th Infantry Division; commander, Camp Virginia, Kuwait; commander, Company C, 3rd Battalion, 103rd Armored Regiment, Wellsboro, PA; S-4, 3rd Battalion, 103rd Armored Regiment, Lewisburg, PA; Armor liaison officer, 55th Heavy Brigade Combat Team, 28th Infantry Division, Scranton, PA; executive officer, Company A, 3rd Battalion, 103rd Armor Regiment, Ar-Ramadi, Iraq; and Armor platoon leader, Company B, 3rd Battalion, 103rd Armor Regiment, Sunbury, PA. His military education includes the Intermediate Leader Education Course, Combined-Arms Exercise (formerly Captain's Career Course), Fort Dix, NJ; Armor Officer Advanced Course-Reserve Component; Armor Officer Basic Course and Reserve Component Accelerated Officer Candidate School. MAJ Rebuck holds a bachelor's of arts degree in communications from Arcadia University.

Notes

[1] LTC Anthony Herbert, ***Soldier***, New York: Holt, Rinehart and Winston, 1975.

[2] Dr. Robert S. Cameron, ***Mobility, Shock and Firepower: The Emergence of the U.S. Army's Armor Branch, 1917-1945***, Washington, DC: U.S. Army Center of Military History, 2008.

[3] http://www.army.mod.uk/structure/structure.aspx.

[4] www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA097704.

[5] Ibid.

[6] Sir John Hackett, introduction to ***Rommel's War in Africa*** by Wolf Heckmann, Garden City, NY: Doubleday, 1981.

[7] Robin Neillands, ***The Desert Rats: 7th Armoured Division, 1940-1945***, London: Orion Books, Ltd., 1991.

[8] G.L. Verney, ***The Desert Rats: The History of the 7th Armoured Division***, London: Hutchinson & Company Ltd., 1954.

[9] Erwin Rommel, ***The Rommel Papers*** (Basil Liddell-Hart, editor), New York: Da Capo, 1953.

[10] Ibid.

[11] Verney.

Acronym Quick-Scan

BCT – brigade combat team
DIVARTY – division artillery
MTOE – modified table of organization and equipment
RTR – royal tank regiment

[12] Rommel.

[13] MAJ Robert Crisp, ***Brazen Chariots***, New York: W.W. Norton & Company, Inc., 1959.

[14] Rommel.

[15] Crisp.

[16] Ibid.

[17] Ibid.

[18] Verney.

[19] Ibid.

[20] Rommel.

[21] Ibid.

[22] Neillands.

[23] Ibid.

[24] Ibid.

[25] Ibid.

[26] Rommel.

[27] www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA097704.

Continued from Page 32

• Asymmetric Warfare Group, ***The Defense of Battle Position Duffer*** National Training Center narrative covering electromagnetic warfare, spectrum management, operational security, social media, information operations and others. Focused on brigade and below.

• William Haponski, ***Danger's Dragoons: The Armored Cavalry of the Big Red One in Vietnam***, 1969 Cantigny Park: First Division Museum, 2014

Recommended Reading for Professional Development

Listed by general subject rather than command echelon

Discussion of an armored-cavalry task force conducting multi-national combat operations in restrictive terrain.

• James Sawicki, ***Cavalry Regiments of the U.S. Army***, Dumfries, VA: Wyvern Publications, 1985

• Stephan Bourque and John Burdan, ***The Road to Safwan: The 1st Squadron, 4th Cavalry in the 1991 Persian Gulf War***, Denton: University of North Texas Press, 2007
Describes an armored-cavalry squadron conducting forced entry.

Training and Doctrine Command's Big 6+1 Capabilities

by LTC Corey B. Chassé

Over the last 15 years of combat operations, and still today, the U.S. Army focused on winning against irregular adversaries and challenges in Iraq and Afghanistan, which has limited the Army's capability to focus on modernizing for future fights. Meanwhile, threats, enemies and adversaries continued to modernize rapidly and become increasingly capable. These conditions point to an emerging future security environment in which U.S. ground forces are increasingly likely to face tactical overmatch (meaning to be more than a match for; surpass; defeat) in some operations.

In addition, decreases to the Army's overall budget during the past years have compounded the challenges of modernization. Compared to the last two drawdowns of the Army (post-Vietnam and post-Cold War) not only has the Army taken a larger percentage cut than previously, but those two previous drawdowns came after the Army had already modernized much of the force.[1]

As a result of increasing enemy capabilities and the reduction in resources available for modernization, Soldiers and mission are at unacceptable risk that may continue to increase.

Figure 1. Artist's concept of the Active Protection System (APS).

Capabilities overview

To effectively meet the operational challenges and emerging threats in 2030, the Army must develop and focus on future capabilities to ensure overmatch in a multi-domain battlefield.[2] This must include the ability to operate freely in the electromagnetic spectrum, maintaining secure, reliable communications and accurate position, navigation and timing capabilities. The Army must develop advanced protection systems to protect and defend ground platforms. Conversely, to defeat progressively more technologically advanced-threat protective systems, the Army must be prepared to advance the capabilities and employment of directed energy weapons along with enhanced conventional capabilities. Future Army forces will project power by applying cross-domain capabilities from land to create synergy across all domains, ensuring joint-force freedom of movement and action.

In addition to working throughout multiple domains, the Army will have to develop effective capabilities to protect friendly forces, information and systems; detect adversary threats; react to indications and warnings; and restore capabilities when challenged by adversary systems or tactics.

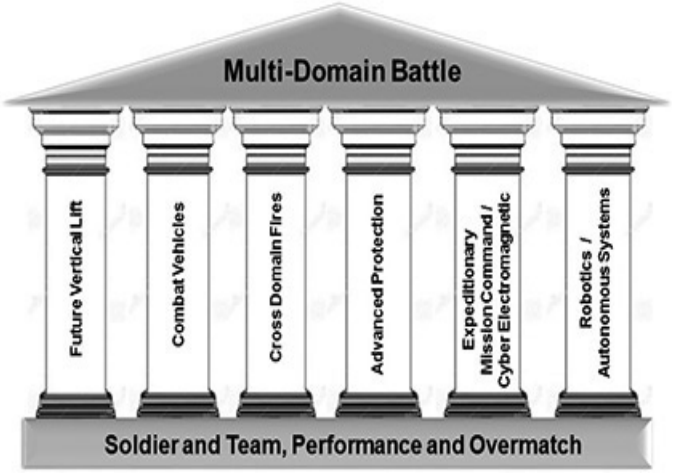


Figure 2. TRADOC's Big 6+1. *(Graphic by LTC Corey B. Chasse')*

Senior-leader oversight needed

The Army has identified key capabilities and systems that require senior-leader oversight to increase the chances of successful delivery of capabilities. The U.S. Army Training and Doctrine Command (TRADOC) Big 6+1 Capabilities identified do not represent all the capabilities required for our Army but

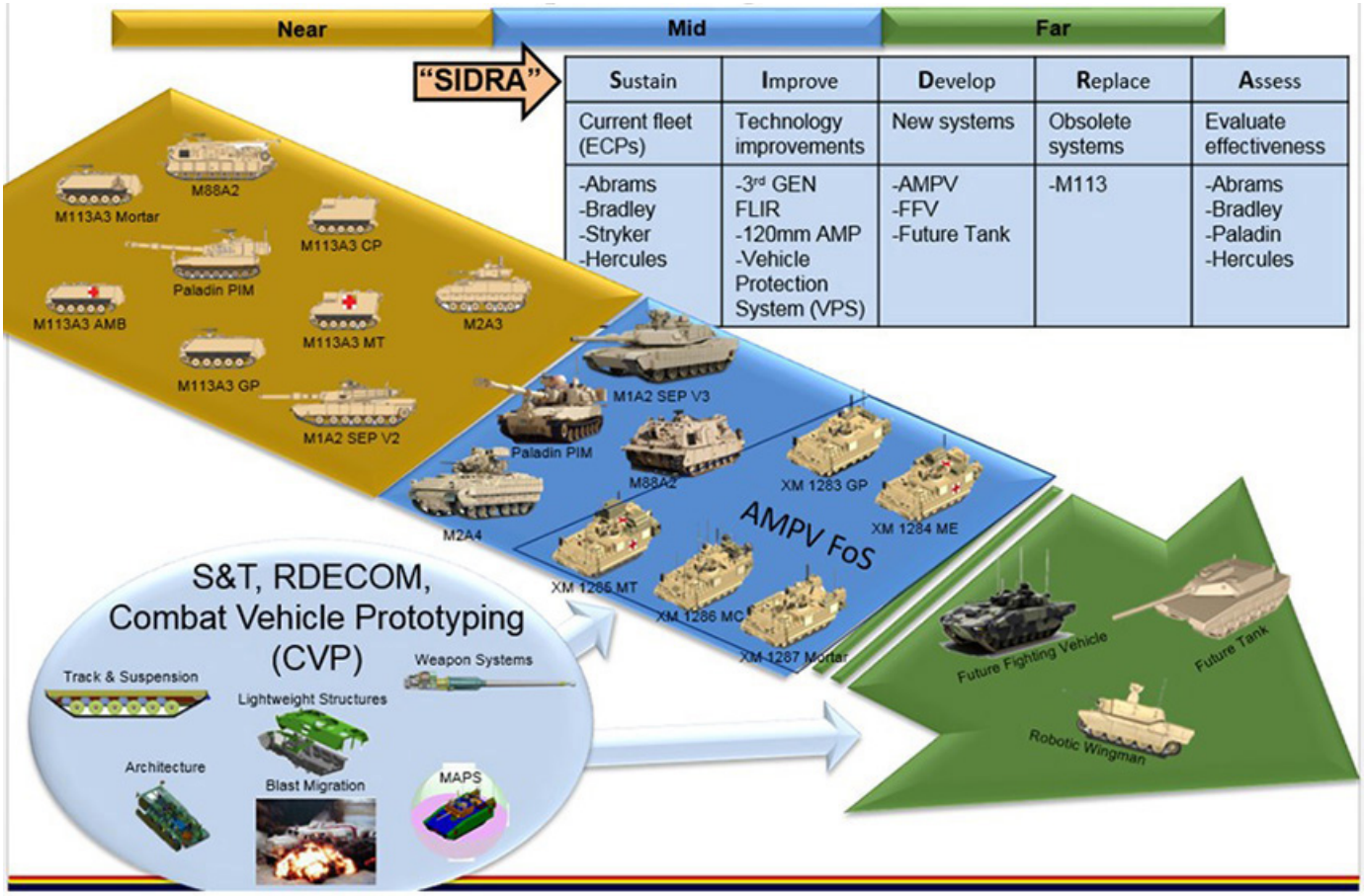


Figure 3. Armored brigade combat team capability transition.

focus on those that allow the Army to close critical capability gaps and fight in the context of the Army Operating Concept (AOC) dated Oct. 31, 2014.[3] In addition, these capabilities provide a framework to enable the Army to focus future force development and prioritize research, development and acquisition activities.

TRADOC Big 6+1 Capabilities are:

- Future vertical lift;
- Combat vehicles;
- Cross-domain fires;
- Advanced protection;
- Expeditionary mission command/ cyber-electromagnetic;
- Robotics and autonomous systems (RAS).

With a cross-cutting capability of Plus 1:

- Soldier and team performance and overmatch.

The Army recognizes there are no "silver bullet" technological solutions. The Army retains overmatch through combining technologies and integrating them into changes in organizations, doctrine, leader development, training and personnel policies. The Plus 1 or cross-cutting capability of "Soldier and team performance and overmatch" requires that focus be placed on fundamental capabilities that empower the Soldier. The Army must fit machines to Soldiers rather than the other way around. The Army will pursue advances in human sciences for cognitive, social and physical development and emphasize engineering psychology and human-factors engineering in the design of weapons and equipment as well as training and leader-development activities.

Way ahead

TRADOC will continue to refine these capabilities using the think-learn-analyze-implement paradigm. Army leaders must ***think*** clearly about future armed conflict by considering threats, enemies and adversaries; anticipated missions; emerging technologies; historical observations and lessons-learned; and opportunities to use existing capabilities in new ways. Army leaders then ***learn*** about the future through Force 2025 maneuvers – the physical and intellectual activities to develop interim solutions to Army warfighting challenges (AWfC) first codified in the AOC. The Army then ***analyzes*** these solutions to establish risk-based priorities and identifies opportunities to ensure Army formations have the capability and capacity to accomplish assigned missions.

This analysis supports senior-leader decisions for the ***implement*** step to deliver AWfC interim solutions that improve the combat effectiveness of the current and future force.

You may find the AOC at http://tradoc.army.mil/tpubs/pams/TP525-3-1.pdf.

Conclusion

To ensure these capabilities are delivered to support the Army's future force, TRADOC Big 6+1 Capabilities will require intense Army senior-leader visibility and oversight. TRADOC will work with Headquarters Department of the Army in developing the specific management practices for the TRADOC Big 6+1 Capabilities identified systems.

Visit https://www.us.army.mil/suite/doc/47289745 to see the "Multi-Domain Battle, Ensuring Joint Force Freedom of Action" video, including TRADOC Big 6+1 Capabilities.

LTC Corey Chassé is a force-management officer (Functional Area (FA) 50) and TRADOC Big 6+1 capabilities chief at TRADOC headquarters' Army Capabilities Integration Center, Fort Eustis, VA. LTC Chassé is a prior enlisted Marine now serving as an active-duty Army Soldier with more than 36 years' service, including tours in Afghanistan (Operation Enduring Freedom) and Kuwait (Operation Spartan Shield). Previous assignments include Paladin integration management and Excalibur action officer for TRADOC Systems Manager-Cannon in 1st Battalion, 30th Field Artillery, Fort Sill, OK; operations officer, Headquarters and Headquarters Battery (HHB), 3-112 Field Artillery, New Jersey Army National Guard; commander, Battery B, 3-112 Field Artillery; and battalion fire-support officer for Detachment 1, HHB, 3-112 Field Artillery. His military education includes Officer Candidate School, Field Artillery Officer Basic Course, Field Artillery Officer Advanced Course, Capabilities and Capabilities Development Course, U.S. Army Command and General Staff College and FA 50 Force-Management School. LTC Chasse' holds a bachelor's of science degree in psychology from Liberty University and a master's of arts degree in psychology statistics from Fairleigh Dickinson University. His awards and honors include four Meritorious Service Medals.

Notes

[1] Edwin F. Williamson, "A Comparison of the Post-Cold War Defense Budget Reduction to Prior Post-Conflict Reductions after World War II, Korea and Vietnam," Sept. 23, 1993, http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA273230.

[2] Definition of multi-domain battlefield: Cross-domain operations in context of joint combined-arms maneuver that create temporary windows of superiority across multiple domains and allow joint forces to seize, retain and exploit the initiative.

[3] http://www.tradoc.army.mil/tpubs/pams/tp525-3-1.pdf.

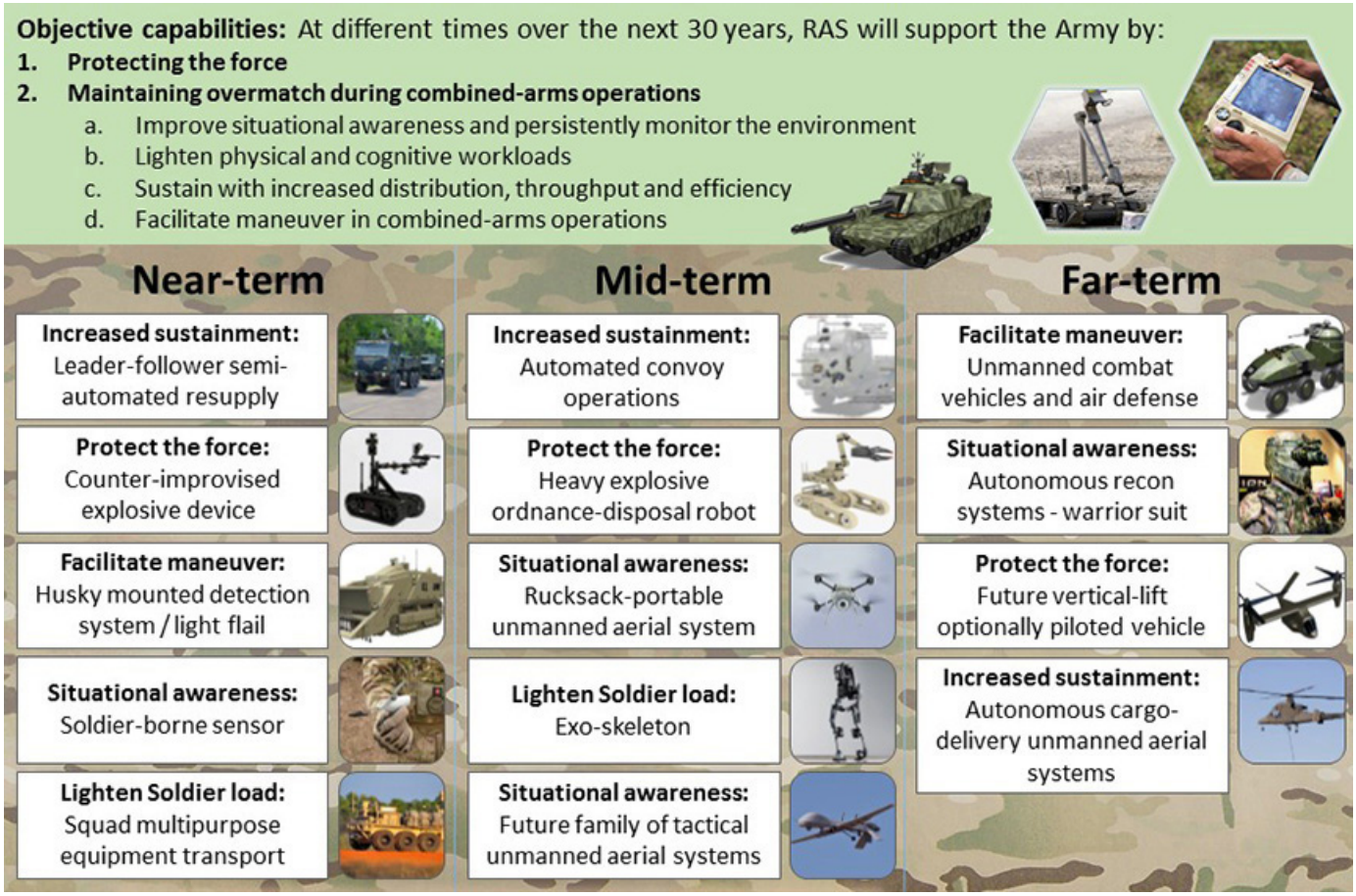
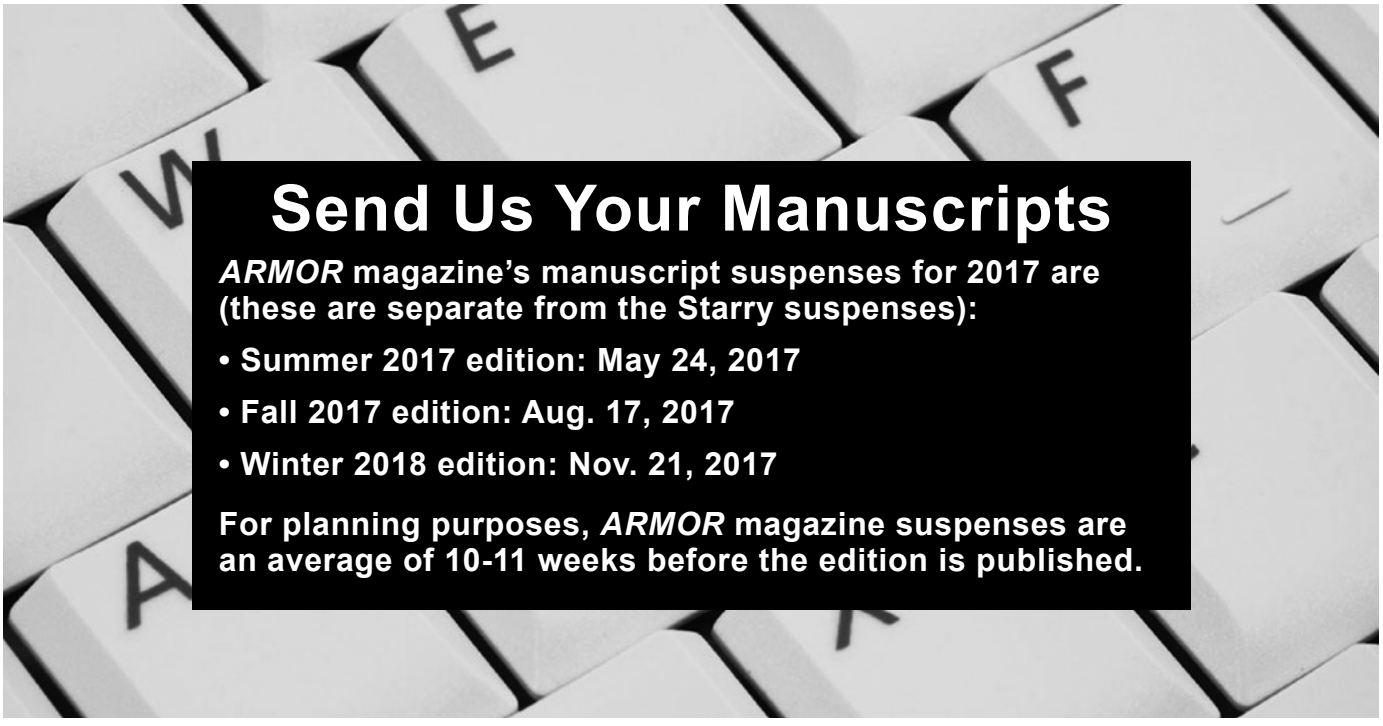


Figure 4. RAS strategy.

Acronym Quick-Scan

AMB – ambulance
AMP – advanced multi-purpose (120mm)
AMPV – Armored Multi-Purpose Vehicle
AOC – Army Operating Concept
APS – Active Protection System
AWfC – Army warfighting capabilities
CP – command post
ECP – engineering change proposal
FA – functional area
FFV – Future Fighting Vehicle
FLIR – forward-looking infrared
FoS – family of systems
GP – general purpose (vehicle)
HHB – headquarters and headquarters battery
MAPS – Modular Active Protection Systems
MC – mission command
ME – medical equipped
MT – medical transport
PIM – Paladin integrated management
RAS – robotics and autonomous systems
RDECOM – (U.S. Army) Research, Development and Engineering Command
S&T – science and technology
SEP – system-enhancement program
SIDRA – sustain, improve, develop, replace, assess
TRADOC – (U.S. Army) Training and Doctrine Command

Figure 5. 196th Infantry Brigade Stryker with APS. (*U.S. Army photo by Rodney Jackson***)**



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Enhancing Shared Understanding within the Brigade's Operations Process

by MAJ Richard Z. Groen

All too often we have experienced the moment when a combined-arms rehearsal (CAR) transitions to a "combined-arms wargame." Amid a terrain model, battalion commanders and S-3s pause the CAR to discuss a friction point or introduce a new perspective not identified during the operations process. The brigade planner frantically takes notes, the plan morphs and a fragmentary order is published while units are crossing the line of departure (LD). Shared understanding is not present.

Some see this action as the "good-idea fairy," but it is not. The CAR transitioning to a combined-arms wargame is an indicator that subordinate commanders and units do not have shared understanding of their higher-headquarters commander's intent, nor an understanding of key events needed for synchronization.[1] Nor did they have the opportunity to provide input during the operations process.

Trickle-down effect

Though battalion commanders and the brigade staff walked away from the CAR with a better understanding, the drastic change to the plan had a trickle-down effect in everyone's planning timeline. For example, companies and below suffered the consequences of losing their promised two-thirds[2] timeline, conducting troop-leading procedures (TLPs) hours before beginning operations. The result was a brigade frago published as units crossed the LD, unavailable to commanders and S-3s as they began movement toward accomplishing their tactical tasks.

The commander drives from the center of the operations process,[3] but where can the battalion commander and staffs (subordinate unit commanders and staffs) fit within the process and realistically possess enhanced shared understanding using the current practices of doctrine?

The purpose of this article is twofold:

- First, to discuss the application of doctrine at brigade level and below;
- Then, to propose methods to possibly enhance shared understanding while preserving the planning timeline and conducting an effective CAR.

Doctrine vs. practices

Our operations process does a phenomenal job in allowing commanders and staffs to dissect a problem set and develop appropriate actions. Most importantly, it assists the organization as a whole in enhancing overall situational understanding. However, tailoring is needed at the brigade level and below. Within our organization, the brigade and battalions used the military decision-making process and companies/troops/batteries used TLPs. Just as doctrine lays out, commanders drove the operations process, and liaisons and liaison officers (LNOs) ensured subordinate units understood the situation. Shared understanding is lost if liaisons are not properly resourced or mentored, and battalions do not have the means to interject viewpoints throughout the operations process.

Within Field Manual (FM) 6-0, ***Commander and Staff Organization and Operations***, a dedicated chapter focuses on the liaisons and their importance within the operations process. Our Army's doctrine discusses the roles and responsibilities of liaisons and LNOs[4] and their expectations when incorporated into another organization.[5] It also defines the rank requirements for liaisons.[6] For example, battalions provide a lieutenant as a liaison to their brigade.

Though the use of a liaison is a great instrument to increase shared understanding throughout the organization, battalions may not receive the level of shared understanding that doctrine intends because their liaison may not possess the proper accreditations.

Liaisons must:

- Understand how their commander thinks and interpret verbal and written guidance;
- Convey their commander's intent, planning guidance, mission and concept of operations;
- Represent their commander's position;
- Know the unit's mission; tactics, techniques and procedures; organization; capabilities; and communications equipment;
- Observe the established channels of command and staff functions;
- Be trained in their functional responsibilities;
- Be tactful; and
- Possess the necessary language expertise."[7]

The question is then raised for most battalions: does a lieutenant have the professional maturity, expertise and experience to represent his or her organization as an effective liaison? Limited experience with only a few years of military service may prove difficult for LNOs when it comes to knowing the intricacies of their organization. Therefore, it can be difficult for them to articulate the vision of their battalion commander. It may not be fair to charge a junior officer with the level of responsibility that we typically ask from a field-grade officer, especially when operating during decisive-action operations in austere conditions.

In a decisive-action environment, liaisons may have connectivity, but their battalions may also be on the move or maneuvering while using communication systems that stretch beyond their given email or Secure Voice Over Internet Protocol (SVOIP). Frequently, we see the line of liaisons in the rear of the brigade's main command post (CP) behind their computers, trying their best to answer the battle captain's questions. However, by no fault of their own, they cannot clearly convey an answer because they do not possess a shared understanding, or they do not have the appropriate information. For example, their unit quickly adjusted their plan using acetate, and the liaison does not have a copy.

Shared understanding can also be limited during the operations process if battalions are not incorporated early and often. Our doctrine defines the

role of the commander and staff during the operations process, but it does not explain where subordinate commanders and S-3s fit.[8] Despite undefined roles, subordinate units lean forward in parallel planning by attempting to use liaisons, interacting with their higher unit's staff and attending briefings during the operations process to add their input.

For example, during the planning of our first battle period at the National Training Center (NTC), battalion commanders and S-3s had the opportunity to attend the mission-analysis brief, course of action (CoA) development brief, operation-order brief and CAR. They also had the luxury of personally interacting with the brigade commander and staff. During the second battle period, battalions were spread throughout the area of operations (AO), fighting to maintain an AO while establishing connectivity. As a result, interaction between battalions and the brigade declined dramatically as the battlefield stretched. Battalion commanders and S-3s were now responsible for the local security of their AO, driving their own operations process while trying to interact with their liaisons to understand expectations as the brigade prepared for transitions. As a result, battalion commander and S-3 participation in the brigade's operations process declined during the opord brief and CAR.

Overall, shared understanding decreases if liaisons, though energetic, are not properly resourced or mentored. Also, declining levels of shared understanding mirrored the downward ability of battalion commanders and S-3s to interact with the brigade staff during the operations process as the battalion and brigade headquarters staffs grew further apart in geographical distance.

Two possible solutions

Looking back at our NTC experience, two possible solutions come to mind to improve the overall shared understanding for battalions: 1) Develop a deliberate plan to empower liaisons with information and 2) develop systems to allow battalion commanders and S-3s to be part of the brigade's operations process. Doctrine defines the responsibilities, information requirements and necessary equipment for the liaisons to send and receive units.[9] However, some of this is a bit overwhelming for an LNO who is a lieutenant representing his or her battalion. Units try to send the "right" officer to represent their unit, but due to the battalion's modified table of organization and equipment (MTOE), the unit may not be able to afford to send someone higher in rank than a lieutenant, who lacks expertise.

Solution 1. Develop a liaison training program within the gated training strategy. Furthermore, in the case of a battalion LNO, the brigade executive officer, brigade chief of operations (CHoPs) or brigade battle captain is responsible for establishing and resourcing a primary, alternate, contingency and emergency (PACE) communications redundancy plan so all liaisons can communicate with their battalions.

Figure 1. U.S. Army Soldiers with 1st Stryker Brigade Combat Team, 25th Infantry Division, conduct a combined-arms rehearsal at NTC. (*U.S. Army Combined Arms Center photo***)**

As stated earlier, LNOs at the battalion level, with limited expertise, may not be well versed in all the warfighting functions or understand all aspects of their organization. Adding a liaison training program (or academy) into a unit's gated training strategy would facilitate a baseline in expectations and shared understanding. It could be an opportunity for liaisons to meet with members of the brigade staff and their peers to discuss concerns and friction points. Information learned from liaison training could allow liaisons to develop a clear vision of what is required and how the brigade operates before beginning any operations. Also, this is a venue for brigade and battalion commanders to voice their expectations and intents to liaisons before major operations.

One aspect of the liaison training should focus on a PACE plan: for example, primary (SVOIP, telephone), alternate (email), contingency (frequency modulation (FM) and high frequency (HF)[10]) and emergency (ground or air transport). Under the current MTOE, liaison connectivity is usually easy for SVOIP and email, but it proves to be tricky when it comes to FM/HF and transport. However, FM/HF and transport can be the most important means of communication when battalions don't have established Upper Tactical Internet (TI) or when they are moving CPs.

Every two liaisons should have at least one radio mount and two sets of radios, antennas and power amplifiers in the brigade CP's designated liaison area. This allows liaisons to monitor and communicate with their parent battalions without disrupting the brigade CP's current operations or activity during key moments. Since battalion CPs usually operate within FM/HF range from the brigade's main CP, liaisons would have the ability to send and receive information quickly.

Liaisons need transportation

In addition to providing communication systems, liaisons should have access to transportation so they can send and receive information. This is especially needed if battalions predominately produce orders using acetate and printouts. Furthermore, providing transportation allows liaisons to attend critical battalion-planning events and rehearsals. Though providing radios and transportation may seem costly in time and resources, the benefit is enhanced shared understanding and planning timeline preservation for both battalions and the brigade. Since unit MTOEs may not support additional ground transportation for liaisons, battalions and brigade staffs may need to be creative when requesting air support to transport liaisons.

Increasing liaison connectivity and mobility to aid shared understanding is useless if a liaison does not also have a mentor to provide advice or direction for mission success. Although the battalion provides the liaison, most of a liaison's interactions are with the brigade staff, particularly the brigade's CHoPs.[11] Doctrine mandates that all receiving units provide their liaisons information such as battle rhythms and standard-operating procedures (SOPs),[12] but it does not stipulate who assumes responsibility for the liaisons and essentially takes them under their wing. Though this may not be necessary for the brigade and higher liaison, battalion liaisons, who are typically lieutenants, require mentorship to assist them in mission success.

Since battalion liaisons have more interaction with the brigade on a daily basis, the CHoPs should mentor battalion liaisons. Battalions maintain their liaisons, but the CHoPs should counsel them and provide oversight to ensure liaisons have a shared understanding of their unit's operations and how they fit within the brigade's overall operations. Furthermore, as a mentor, the CHoPs should monitor liaison activities to ensure they have connectivity with their battalions, have access to their unit's products and have the ability to attend critical planning activities and rehearsals.

Enabling interaction with battalion liaisons is just as important as facilitating shared understanding between the brigade staff and battalion leadership. As cited earlier, a co-located battalion and brigade headquarters facilitated the interaction of commanders and S-3s with the brigade staff during the operations process and allowed for interjections before the CAR. With this in mind, access to information should not decrease as the geographic distance grows between the brigade and its battalions.

Include battalions early, often

Solution 2. To create a better shared understanding of the entire operations process, I recommend incorporating battalions within the systems early and often by facilitating multiple means of communication, staff coordination and parallel planning. Although battalions only need to send representatives to attend the opord, their presence at other planning events could prove to be essential to the staff's productivity. Ultimately, having a battalion commander or S-3 attend a mission analysis or CoA brief is optimal, but often it is not feasible. Battalions must juggle maintaining an AO and preparing for their next operation while regenerating forces. The only acceptable solution is conducting these briefings via other means.

I recommend that brigades develop a PACE plan to deliver operations-process briefs thusly: primary (Command Post of the Future), alternative (SVOIP), contingency (FM/HF) and emergency (physically present). Units need to become creative in distributing products if digital systems are down when conducting these briefings. Brigades need an element to distribute products or use established systems such as an aerial ring route or logistics package. Despite the extra effort, input from the battalions during these critical planning events/briefs will increase overall shared understanding while preventing the "good idea fairy" at the CAR and possibly derailing a plan.

Conclusion

Increasing shared understating within an organization is no easy task. Providing the means to enable liaisons and facilitate battalion participation of the brigade's operations process, while mentoring liaisons, can prove to be taxing for a brigade. However, these changes could eventually lead to effective planning timelines and preserving the preparation time of subordinate units. These practices would require a brigade to relook its planning/CP SOPs and allocate equipment toward the liaison PACE plan. Also, repetitions during a brigade's gated training strategy would make these taxing tasks nothing more than a step within the unit's planning SOP.

In resourcing these two possible solutions, the brigade and battalions need to remain flexible. While prepared to action each of these solutions, time, resources and external circumstances can sometimes prevent their implementation. Of these two recommended solutions, units may only be able to accomplish one or a hybrid of both, depending on the situation. For example, providing transportation for all battalion LNOs to attend their individual unit's CAR would come at a high expense, so a battalion could rely more on its commander being able to provide input during a critical planning event. In the end, creative solutions to enhance what doctrine prescribes will ensure enforced planning timelines so CARs do not transform into wargaming.

Remember, the indicator a unit needs to improve shared understanding is the emergence of the "combined-arms wargame" instead of the much-needed CAR. Hopefully, the preceding recommendations provide insight for increasing and enhancing overall organizational shared understanding.

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officer and tank-platoon leader, 2nd Battalion, 12th Cavalry Regiment, 2nd ABCT, 1st Cavalry Division, Fort Hood. MAJ Groen's military schools include the British Advanced Command and Staff College at Shrivenham, United Kingdom, Infantry Captain's Career Course and Armor Officer Basic Course. He holds a bachelor's of science degree in civil engineering from Virginia Military Institute, a master's of science degree in occupational and adult education from Kansas State University and a master's of arts degree in defense and strategic studies from King's College London.

Notes

[1] FM 6-0: ***Commander and Staff Organization and Operations***, Fort Leavenworth, KS: U.S. Army Training and Doctrine Command (TRADOC), 2014.

[2] Ibid.

[3] Army Doctrine Reference Publication (ADRP) 5-0, ***The Operations Process***, Fort Leavenworth, KS: TRADOC, 2014.

[4] FM 6-0.

[5] Ibid.

[6] Ibid.

[7] Ibid.

[8] Ibid.

[9] Ibid.

[10] FM is a frequency for Single-Channel Ground and Airborne Radio Systems. HF is typically seen in Harris radio systems.

[11] Usually a major on the brigade staff who manages current operations.

[12] FM 6-0.

Acronym Quick-Scan

ABCT – armored brigade combat team
AO – area of operation
CAR – combined-arms rehearsal
CHoPs – brigade chief of operations
CoA – course of action
CP – command post
FM – frequency modulation
HF – high frequency
LD – line of departure
LNO – liaison officer
MTOE – modified table of organization and equipment
NTC – National Training Center
PACE – primary, alternate, contingency and emergency (communications redundancy)
SOP – standard-operating procedure
SVOIP – Secure Voice Over Internet Protocol
TI – Tactical Internet.
TLP – troop-leading procedure
TRADOC – (U.S. Army) Training and Doctrine Command

Armor and Cavalry Leadership Award Winners

Congratulations to the winners of the Armor and Cavalry Leadership Awards (ACLA), formerly the Draper Award, for Fiscal Year 2016:

1st Infantry Division
From Company D, 2-70 Armor: CPT Zachary Bailey, CPT Jared Kassulke and 1SG Zachary Balancier.

1st Armor Division
From Company B, 1-67 Armor: CPT Jacob Donaldson and 1SG Michael Aguirre.

3rd Infantry Division
From Company D, 2-7 Infantry: CPT Christopher J. Garlick and 1SG Gary J. Kurtzhals.

From Troop C, 5-7 Cavalry: CPT Derrick D. Jerke and 1SG Thomas L. Mentes.

4th Infantry Division
From Company B, 1-68 Armor: CPT Joshua Causie and 1SG William Staun.

From Troop B, 2-1 Cavalry: CPT David Devine, CPT Geoffrey Edmonds and 1SG Michael Anderson.

10th Mountain Division
From Troop C, 3-71 Cavalry: CPT Austin Forsythe and 1SG Joseph Larson.

82nd Airborne Division
From Troop B, 5-73 Cavalry: CPT Anthony Capozzi and 1SG Geriah McAvin.

101st Airborne Division
From Troop B, 1-32 Cavalry: CPT Kolby Bissell and SFC Adolfo Dominguez.

7th Infantry Division
From Troop C, 8-1 Cavalry: CPT Joseph Krick and 1SG Sophal Saing.

U.S. Army Alaska
From Troop C, 1-40 Cavalry: CPT Linwood Bubar, 1SG Bryan Laessle and 1SG Robert Gaumond.

2nd Cavalry Regiment
From Troop I, 3-2 Cavalry: CPT James M. Gibbs, CPT William J. Vanderlip and 1SG Jonathan M. Duncan.

3rd Cavalry Regiment
From Troop M, 4-3 Cavalry: CPT Andrew L. Hummel and 1SG Jason M. Watson.

11th Armored Cavalry Regiment (ACR)
From Troop C, 1-11 ACR: CPT Michael N. Gonzalez and 1SG Erik R. Helton.

Joint Readiness Training Center (JRTC)
From Troop D, 1-509 Parachute Infantry Regiment: CPT Kyle T. Daniels and 1SG Joshua D. Dumond.

Army National Guard
From Troop B, 2-183 Cavalry: CPT Matthew Wright and 1SG Kenneth Roland.

From Troop C, 2-108 Cavalry: CPT Chad D. Ford, CPT Tommy A. Wynn, 1SG Michael E. Barrett and 1SG Earl W. McGee.

From Troop C, 2-106 Cavalry: CPT Brad A. Yakle and 1SG Russell L. Creviston.

Applied Combined-Arms Maneuver at Company Level

by 1LT James T. Casey

As a tank-platoon leader and executive officer in 11th Armored Cavalry Regiment (ACR), I've had the opportunity to observe first-hand how 20 separate brigade combat teams (BCT) (not including my own) operate in the decisive-action (DA) training environment. During these 20 National Training Center (NTC) rotations, I think I've seen a representative sampling of the Army and the current state of its implemented doctrine. Make no mistake, each BCT has strengths and weaknesses, and they're all formidable units. What I see, however, leads me to think that, as maneuver leaders, we are failing to properly implement combined-arms maneuver (CAM), especially at the company-grade-officer level.

Most officers seem to believe that maneuver warfare is just a term used to describe the process of "maneuvering" around a battlefield to seize key terrain and destroy more of the enemy's combat power than he destroys of yours.[1] An extension of this belief is that whoever has the highest favorable kill ratio wins the battle and therefore defeats his opponent. "Destroy" and "defeat," however, are only nominally similar. Ordering a unit to destroy another implies you're willfully choosing attrition as opposed to using maneuver to defeat your enemy.

To avoid confusion and emphasize my point, the Army Doctrine Reference Publication (ADRP) 1-02, ***Operational Terms and Military Symbols,*** definition of *destroy* is "a tactical mission task that physically renders an enemy force combat-ineffective until it is reconstituted" and *defeat* is "a tactical mission task that occurs when an enemy force has temporarily or permanently lost the physical means or *the will to fight*."[2] In fact, he who relies upon attrition to defeat his enemy has only an elementary understanding of maneuver warfare. If the U.S. Army, or any element thereof, decides attrition is the primary means of defeating a near-peer threat in a DA environment, we'll squander away our inherent advantages and needlessly risk lives and defeat. Therefore, deciding to "destroy" your enemy instead of applying true maneuver doctrine is akin to setting two expert heavyweight boxers in a ring and letting them whale on each other for 12 rounds; your pick may win, but he may not.

Create unsolvable problem for enemy

CAM is the process of seizing the initiative by creating an unsolvable problem set for the enemy based on an analysis of both friendly and enemy strengths and vulnerabilities. By identifying your own strengths, you can plan how to leverage these against your opponent's identified vulnerabilities. By identifying your own vulnerabilities, you can consciously determine how best to minimize exposure of these to your enemy while avoiding the enemy's strengths or advantages.

Leveraging your own strengths against an enemy's perceived critical vulnerability is central to planning your own course of action (CoA). Your evaluation of friendly and enemy strengths and vulnerabilities leads to selection of the decisive point of the operation. This is how you plan to leverage a defeat mechanism to exploit the enemy's vulnerabilities and thereby seize the initiative.[3] This starkly contrasts with the attrition-warfare approach to combat, which relies on overwhelming firepower and massing combat power in an attempt to destroy your enemy. In a near-peer conflict, both combatants will possess comparable capability to kill and destroy one another, therefore attrition does not give either side a tactical advantage.

I think one of the most important parts of planning an operation, but somehow one of the least emphasized, is the situation paragraph of an operations order. It's easily the least sexy, so generally it receives little attention, especially in the era of the pervasive concept of the operation. The friendly and enemy situations, however, are critical to creating a common operating picture (COP) at all echelons. Given that maneuver leaders in the Army have similar training, they make similar decisions if the necessary information is accessible. If the task and purpose happen to change suddenly, they'll still be making informed decisions in the context of a bigger picture.

If the intelligence officer doesn't offer a detailed capability analysis by weapon and vehicle type, vis-à-vis enemy formation types in the operational environment (OE), then company-grade leaders should prepare their own. By tailoring the four-step intelligence preparation of the battlefield process to what a company is likely to encounter, the company plan will gain valuable insight and result in a better-prepared fighting force.

I think the best way to analyze this at any level is by warfighting function (WfF). A company's most important areas are:

- **Fires WfF** – weapon systems' range, optics (i.e., thermal/low-light capabilities), munitions and the level of armor they're likely able to penetrate;
- **Maneuver WfF** – vehicle types and their level of mobility across your OE;
- **Protection WfF** – ability to withstand your weapon systems and the ability to carry infantry;
- **Mission-command WfF** – the combat effectiveness of a unit if its commanding officer or other key leader becomes a casualty and how the enemy orders' process affects decision-making and adaptation while in contact.

Once this is accomplished for both friendly (organic and attached company assets, adjacent organic battalion assets and available brigade assets) and enemy forces, you finish by viewing these capabilities in the context of the enemy's likely objective and desired endstate. From here, it's a relatively simple task of assessing the

enemy's likely CoA. Where and how will the enemy employ tanks and infantry? Will their success require engineers? Where, when and for what end-state will they employ their close-combat attack (CCA)/close air support/indirect fire (IDF)?

Having accomplished this, you should now have a broad understanding of what your opponent's scheme of maneuver will be; specifics and timeline aren't necessary as long as you understand the likely sequence of events that will unfold. Armed with this knowledge of the enemy's capabilities, it's easier to determine how to exploit their vulnerabilities through the use of a decisive point (DP) that leverages a defeat mechanism.

Destroy or defeat?

I mentioned earlier that "destroying" your enemy is not necessarily the best way to "defeat" him. Defeat mechanisms are defined in ADRP 3-0, ***Unified Land Operations,*** as "the method through which friendly forces accomplish their mission against enemy opposition." While this is a fairly broad and inclusive definition, it essentially lists four methods for neutralizing an adversary: destroy, dislocate, disintegrate and isolate. In short, the latter three are ways to defeat your enemy without having to destroy every vehicle or dismounted soldier. Selecting which to use to create your DP depends on your company's tactical task.

We'll cover an example of how to select a defeat mechanism momentarily.

Going back to the boxing analogy, we'll replace one of our champion boxers with a Brazilian jiu-jitsu (BJJ) fighter. The boxer, comfortable on his feet, means to beat his opponent by keeping him at arm's length and punching him. As long as the boxer is on his feet with enough space to build full momentum in his swing, he has an inherent advantage. The BJJ fighter mitigates the boxer's advantage by bringing the fight to the ground. This is an example of the "dislocate" mechanism; by moving the boxer from his comfort zone, he breaks the boxer's decision-cycle paradigm. The boxer, who trains on his feet, can't adequately fight back once he leaves the condition in which he planned to fight. The BJJ fighter's DP is to close the distance to the boxer, bring the fight to the ground and gain a dominant position. Once on the ground, the BJJ fighter has the advantage; his technique practices grappling on the ground to control his opponent and control the tempo to force the boxer into an unfamiliar defensive posture. He has seized the initiative, and now the boxer has to react.

Selecting the DP is a crucial part of the commander's plan because the DP helps create a COP for subordinates; however, I don't think commanders understand how to choose or name a DP. The most common DP I hear during

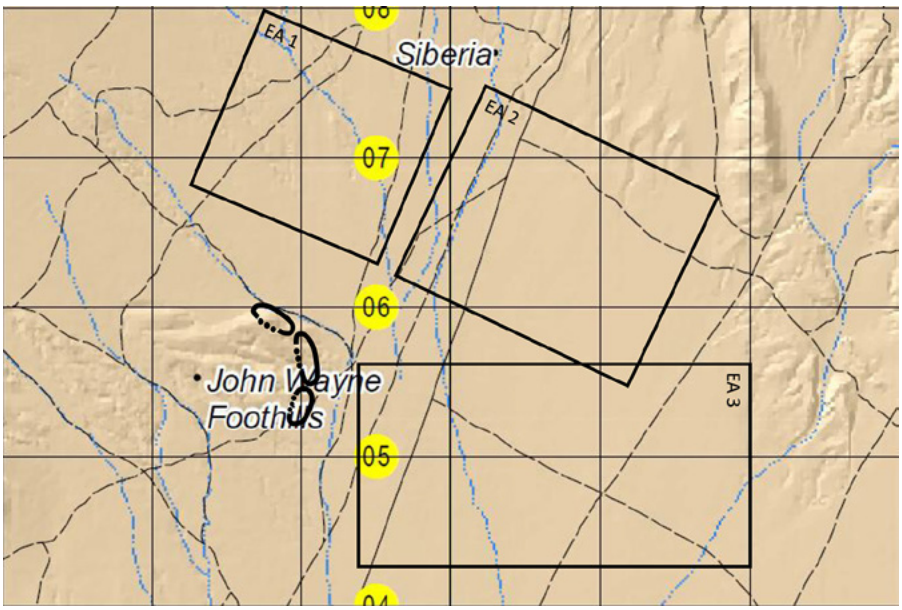

Figure 1. CoA sketch of an NTC engagement.

opords is something like "the DP of our operation is the destruction of two tank platoons. This is decisive because it will mean that we have more combat power than the enemy." The problem is this isn't a DP of an operation, it's a key task, or maybe an objective to be met; it's a measure of success. A DP is something that will substantially tip the scales in your favor; it's something that, if you accomplish it, should guarantee that you defeat your enemy.

Accomplishing the DP allows you to seize the initiative during an engagement, makes your enemy react to your tempo and (ideally) uses your strengths to attack or create a critical vulnerability in the enemy, thereby creating a defeat mechanism in your engagement. The achievement of the DP, whereby you catch or push your adversary off-balance and exploit the situation, while minimizing your own vulnerability, is the essence of maneuver warfare.

The DP is the same for all subordinate units. If a company identifies and names a DP, all platoons in that company have the same DP. In this way, all tank commanders and squad leaders know that no matter what their task is during the mission, it supports the DP for the company. This is why it's so important to conduct a thorough threat/friendly capability analysis.

The COP is vital information for every leader in the formation because when the battle starts to unfold and the enemy doesn't act in the way you initially thought he might, subordinate leaders can take initiative while still supporting the company's DP. And, when leaders become incapacitated, radios stop working or the enemy is not cooperating, the COP and a DP can guide rapid decision-making to seize and retain the initiative at all levels of leadership.

DP key

Planning the DP of an operation involves creating an unsolvable problem for your adversary. I'll illustrate with an example. Figure 1 shows the CoA sketch of a previous engagement at NTC. A company-team-plus (CO/TM (+)) has established a hasty defense on a hill, overlooking a high-speed avenue of approach, which is your battalion's

planned axis of advance. Your company's task and purpose is to seize the John Wayne Foothills to prevent massing of fires against your battalion's decisive operation. Knowing the enemy's main defense is four to seven kilometers south of the John Wayne Foothills, we can guess the enemy's task is probably to disrupt your battalion's advance south along the avenue of approach to prevent massing of combat power against their own decisive operation.

We can make a few more assumptions at this point as well:

- A CO/TM (+) will have one to two mechanized-infantry platoons and one to two tank platoons;
- Its desired endstate is to disrupt forces traveling along Route Budweiser; and
- The CO/TM will probably be arrayed in a linear battle position (BP) on the east side of the John Wayne Foothills oriented east toward the avenue of approach.

The obvious place to arrange BPs is on the east side of the hill with a main engagement area (EA) centered on the high-speed avenue of approach. It also makes sense to have an EA north of the hill to turn units back toward the road and main EA. Looking at the template EAs, we assume a platoon or platoon-minus will cover EA 3, with the rest of the CO/TM covering EAs 1 and 2. Thus, the enemy is strongest against any force to the east. The combined-arms composition of this company also means the inherent vulnerabilities of a tank platoon are covered by the adjacent infantry – and vice versa. Attempting to destroy the enemy by attacking from open terrain would be costly.

The inherent strength of any prepared defense is the prepared fighting positions, coordinated direct-fire-control measures, planned implementation of all weapon systems and IDF, and the psychological security a defender enjoys as the one occupying a favorable relative position. If the attacker fails to undermine these advantages, then he will be forced to fight on the enemy's terms. The attacker can choose to force the defender to dislocate from his positions and abandon his carefully

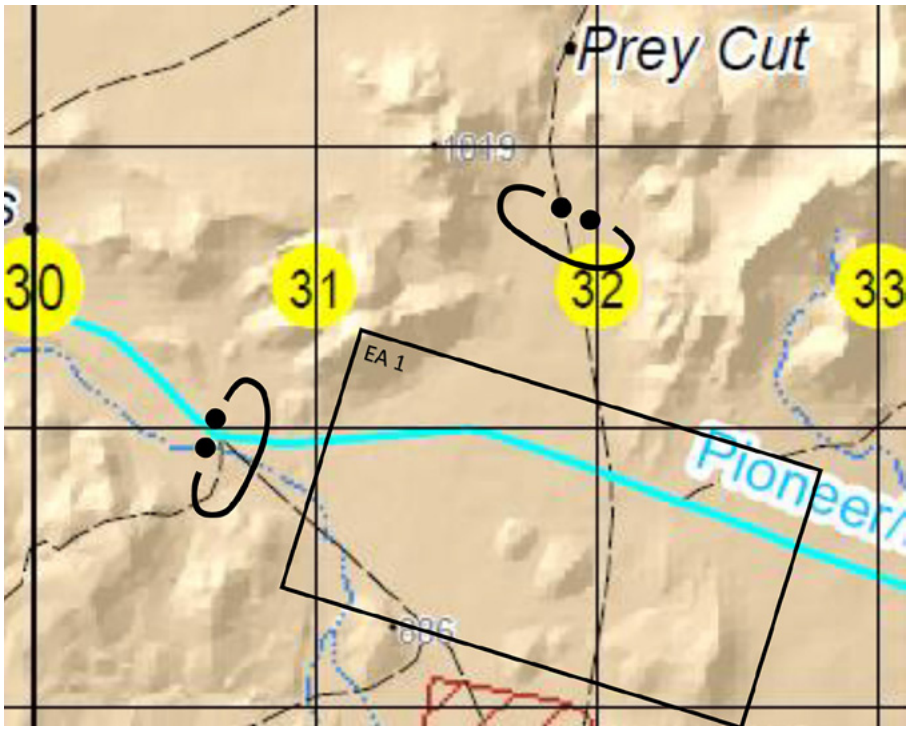

Figure 2. Platoon defense of canalized avenue of approach at NTC.]

selected EAs to undermine the defender's advantage. While the defender is adapting to his new situation, his unit will have to react to your tempo; he has to adapt to the circumstances you thrust upon him. Now, you have the opportunity to force your own advantage and seize the initiative.

The problem this enemy has is that with relatively limited resources, it has to defend its own position while simultaneously covering EAs 1 and 2.

The enemy most likely won't be able to defend against a turning movement[4] from the northwest. So, your DP is to dislocate the defending enemy CO/TM by rapidly seizing the northwest part of the hill while simultaneously fixing BPs on the east side of the hill. Your DP negates the use of his prepared BPs and prevents the enemy from reorienting to effectively counter your turning movement.

By fixing his primary BPs and simultaneously threatening to flank him from the west, you've handed the enemy commander an unsolvable problem if you execute your mission rapidly (i.e., faster than he can anticipate what you're attempting and adapt).

Like the BJJ fighter bringing the boxer to the ground, you've removed the defending commander's strength. His only options are to stay in place and become enveloped, or displace and risk getting destroyed while withdrawing.

Leverage strengths

Maneuver warfare is about leveraging friendly strengths against an enemy's vulnerability, creating a defeat mechanism. As in the previous example, you can achieve this by exploiting weak aspects of their disposition to dislocate them. Another way to accomplish this is by leveraging enablers and combined arms. Armor and infantry units have unique strengths and weaknesses; when operating together, they can protect each other's vulnerabilities while also exploiting the disadvantages of an enemy unit's composition, as shown in Figure 2. It shows a platoon defense of a canalized avenue of approach based on another engagement at NTC. Each vehicle has a turret-down BP.

Your CO/TM is conducting a movement-to-contact (MTC). The hills on the east and south canalize your formation toward the road. Your inherent strength is your ability to employ dismounts, armor, aviation and IDF. Your vulnerability is a lack of knowledge about the terrain and the knowledge that you're moving into an unknown enemy situation.

The enemy armor platoon's strength is his L-shaped anti-vehicle ambush using prepared positions. He is highly vulnerable, however, when infantry and enablers, such as CCA or IDF, are leveraged in conjunction with a mechanized threat from the road. Granted, you don't necessarily know the enemy's composition lacks integrated infantry or air-defense assets during this MTC scenario; this is all the more reason to leverage your infantry and enablers in conjunction with your armored vehicles during your planning.

By studying your map in this scenario, you recognize that your formation will be necessarily canalized in this area. Canalization is a natural vulnerability for you, just as it is a strength for your adversary. If he is defending in this area, his likely DP is to canalize your formation and isolate any units in his EA. By isolating a formation on or near the road, he is limiting your ability to mass effects by restricting your maneuver space and options.

With this in mind, your DP is to disintegrate your enemy's defense by simultaneously maintaining pressure on him from the area near the road, while your infantry establishes an anti-tank attack-by-fire position on the hill. If you were to do either independently, he could react appropriately; against infantry and CCA, he moves away from the hill, elevates his weapon systems and suppresses; against tanks, he fires comfortably from his defilade positions. However, if he is threatened by both, he can't adequately react to either because whichever threat he focuses on first, the other combat arm will ensure his destruction. His only option that potentially allows survival is to withdraw under pressure, which also risks his annihilation. Similarly, IDF will either force him to move out of the impact area or button-up in his defilade BPs. This would allow you to destroy him as he withdraws or maneuver on his position if he stays in his covered positions to avoid IDF. In either scenario, you are able to exploit his response and seize the initiative.

It's important to draw a distinction here. Successful implementation of the appropriate DP can often result in the partial or wholesale destruction of your enemy, at least at the company level. This isn't the point of maneuver warfare, however. The goal is to defeat your enemy by leveraging your strengths against his critical vulnerability. When he recognizes his difficult position, the enemy soldiers may suspect their leaders are incompetent, they may panic and lose discipline; in short, it may cause them to lose the will to fight. Even if it doesn't, by creating a critical vulnerability in the enemy, you can seize the initiative and fight from a relative advantage. I don't mean to suggest that destroying your enemy in some situations is irrelevant or unnecessary; rather, this should be a byproduct of successfully leveraging a critical strength against a critical vulnerability to create a complex or unsolvable problem to defeat your opponent.

As it currently operates, I don't think the U.S. Army practices maneuver warfare adequately, despite what may be believed. True maneuver warfare is the process of seizing the initiative by creating an unsolvable problem based on an analysis of friendly and enemy strengths and vulnerabilities.

The DP of an operation is using a defeat mechanism to successfully leverage your own strengths against an enemy's critical vulnerability. This will interrupt his decision cycle by creating an unsolvable problem set, which will either paralyze his decision-making process or pressure him to make poor tactical decisions in the heat of the moment. This will position you to follow through and decisively defeat your opponent. Ideally, your successful implementation of these maneuver principles will enable you to defeat your enemy without the need to destroy him in a battle of attrition, where success is highly dependent on the relative size of the two formations and their respective reinforcements.

Like in our boxing metaphor, two near-peer foes are too evenly matched to accurately predict the winner when they both intend to use attrition as a defeat mechanism. When you replace one of these boxers with a BJJ fighter who leverages his own strength against an opponent's critical vulnerability (maneuver against attrition strategy), the BJJ fighter is better suited to seize the initiative and win the engagement. Army leaders need to progress beyond viewing maneuver warfare as moving around the battlefield to assume positions that enable superior kill-death ratios. Maneuver warfare involves preventing an even contest. Why should a fight be a gamble between two evenly matched opponents?

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Notes

[1] Robert Leonhard, ***The Art of Maneuver***, New York: Ballantine Books, 1991.

[2] Emphasis is the author's.

[3] ADRP 1-02, ***Operational Terms and Military Symbols,*** defines the DP as "A geographic place, specific key event, critical factor or function that, when acted upon, allows commanders to gain a marked advantage over an adversary or contribute materially to achieving success."

[4] Turning movement (ADRP 1-02): Form of maneuver in which the attacking force seeks to avoid the enemy's principle defensive positions by seizing objectives behind the enemy's current positions, thereby causing the enemy force to move out of their current positions or divert major forces to meet the threat.

Acronym Quick-Scan

ACR – armored cavalry regiment
ADRP – Army doctrinal reference publication
BCT – brigade combat team
BJJ – Brazilian jiu-jitsu
BP – battle position
CAM – combined-arms maneuver
CCA – close-combat attack
CoA – course of action
COP – common operating picture
CO/TM (+) – "shorthand" for company/team-plus
DA – decisive action
DP – decisive point
EA – engagement area
IDF – indirect fire
MTC – movement-to-contact
NTC – National Training Center
OE – operational environment
WfF – warfighting function

Saving Future Gallons: Overview of New Field Manual 7-0

by James L. Young Jr.

As the U.S. Army confronts its post-Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF) missions, it faces a myriad of possible adversaries, threats and missions. Whether discussing the "Pacific Pivot,"[1] possible operations in sub-Saharan Africa or the seeming resurrection of the North Atlantic Treaty Organization's mission against Russian ground forces, it is clear the next decade is unlikely to resemble the previous 15 years of warfare.

Despite being ever more interconnected, the world remains a complex environment that will present the nation's civilian leaders with increasingly more dynamic challenges. Many of these situations will require land forces capable of deterring and defeating capable, diverse threats. This article will provide a short introduction on how the new Field Manual (FM) 7-0, ***Train to Win in a Complex World***, helps accomplish this. With this understanding, unit leaders should see why it is imperative they read this FM as soon as possible.

Providing combat-ready units

As the title states, FM 7-0 focuses on providing Army leaders at all echelons the tools and structure necessary to train their formations to "win in a complex world." With guidance and suggestions from across the entire Army, the Training Management Directorate (TMD) of the Combined Arms Center–Training (CAC-T) at Fort Leavenworth, KS, wrote the new FM 7-0 with five major goals in mind:

- First and foremost, the new FM 7-0 is designed to provide an easily understood and executable process for restoring the Army's training culture.
- The previous training proficiency ratings of T (trained), P (proficient) and U (untrained) have been updated to T (fully trained), T- (trained), P (practiced), P- (marginally practiced) and U (untrained). This change gives commanders the ability to make evaluations more objective.
- FM 7-0 supplements the Training Publication 350-70 series in guiding Army proponents as they update their collective task and evaluation outlines (T&EOs).
- Previously successful training techniques and concepts such as "hip-pocket training," the 8-Step Training Model and the band of excellence are now revised, fully explained and given the authority of formal doctrine.
- Finally, to train as Soldiers will fight, FM 7-0 addresses how important replicating the operational environment (OE) is to unit training proficiency.

How ready is 'ready'?

Before this edition of FM 7-0, the Army's assessment process was much more art than science. Commanders were expected to use their knowledge of the OE, existent Army doctrine and the experience of their unit's senior officers and noncommissioned officers (NCOs) to determine their unit proficiency (T, P or U) in a given task. With the increasing pressure to focus on unit deployment, unit leaders often made a conscious decision to modify or ignore doctrinal standards to prepare for and deploy in support of ongoing operations. This resulted in the Army's gradual loss of its institutional knowledge on how to prepare for contingencies in lieu of the focus on deployments in support of OIF and OEF. Exacerbating this, most units' training objectives, deployment gates and mission requirements were determined at higher echelons as senior leaders focused on meeting deployment timelines and conducting operational missions.

These factors, plus a lack of emphasis on training doctrine during professional military education, helped create a poor home-station training culture in the Army during the war on terrorism. By 2012, junior leaders and NCOs had little or no doctrinally based knowledge about how to plan, prepare, execute and assess unit training. After discussions with leaders and personal observations, the Chief of Staff of the Army (CSA) directed successive inspections by the Inspector General and mobile-training teams to assess the state of training across the Army from 2012-2014. The results confirmed the CSA's belief that the Army had lost much of its ability to effectively conduct home-station training. Subsequently, the CSA directed CAC-T to develop and publish an updated version of FM 7-0 to remedy these issues.

The new FM 7-0 addresses these issues by fully outlining how a commander receives training guidance from higher headquarters and the steps needed to perform an objective assessment of a unit's ability to provide the capabilities for which it was designed using proponent T&EOs. These newly developed T&EOs now contain specific, objective evaluation criteria that units apply to measure the performance of collective tasks. This increased objectivity helps ensure units train to, and are evaluated against, an approved objective standard. Unlike previous task-proficiency guidelines, the updated objective criteria take into account how personnel turbulence affects unit readiness. In addition, it requires unit leaders to truly develop a robust OE during the planning process to facilitate realistic unit training.

Figure 1 provides an example of the objective task-evaluation criteria matrix that is integral to each T&EO.

Developing proponent T&EOs with this matrix removes much of the subjectivity that previous evaluation methods often fell prey to during assessments. No matter how well a unit at 80-percent strength performs its task, it cannot get higher than a T-. Similarly, units that do not perform tasks during the day and night cannot obtain a T.

Furthermore, with T, T-, P, P- and U fully defined in the new FM 7-0, there

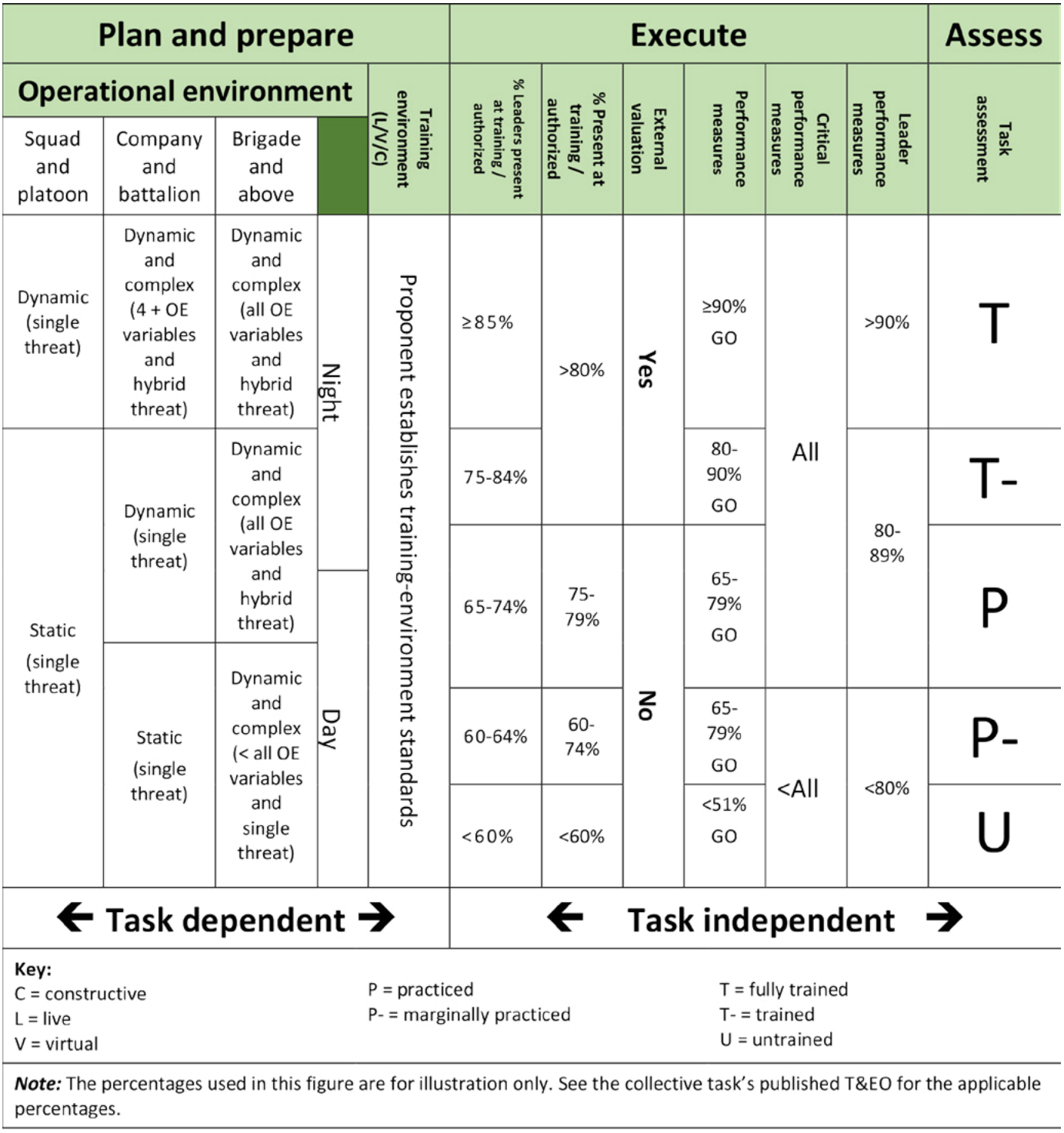

Figure 1. Objective task-evaluation criteria matrix from FM 7-0.

should be little difference between a light-infantry battalion's assessed readiness in a Pacific Command division compared to that of another unit in the continental United States. In this manner, staffs at all levels will be able to swiftly compare units of the same types when determining force structures for future contingencies.

Home-station training

Since 2001, most home-station training has been governed by the need to provide forces to OEF and OIF. As the Army transitions back to a predominantly home-station training environment, FM 7-0 provides the framework for relearning some of the institutional knowledge that has eroded. Rather than a distinct theater mission, FM 7-0 serves as the guide for providing units that are as prepared for high-intensity operations in the Baltics as they are for humanitarian assistance in Micronesia. The foundation for this is the "plan-prepare-execute-assess" training framework that relies on the military decision-making process (MDMP) and troop-leading procedures (TLPs) to achieve success. At company-level and

below, MDMP and TLPs are augmented (but not replaced) by the 8-Step Training Model. Combined, all these serve as the initial guidelines that start leaders onto the path for success (even if they do not guarantee a positive outcome).

Plan-prepare-execute-assess is the Army's operations process that guides leaders in ensuring their subordinates are given the tools to succeed. Applying this to training should not differ significantly from the same process employed for military operations. In both cases, commanders should leverage their own experience and that of their staff to create training events to help ensure unit readiness. FM 7-0 guides commanders and their staffs on how to apply the MDMP to prepare a unit training plan. Much as a commander and his/her staff should be able to prepare mission orders after reading Army Doctrine Reference Publication (ADRP) 5-0, all Army officers and NCOs should have a clear understanding of their role in the revised training process after reading FM 7-0.

FM 7-0 will also benefit Army officers and NCOs when it comes to training capability, not just as they detail the planning process. The new ***Train to Win in a Complex World*** guides leaders during the concurrent "prepare" phase of Army training. With sections that detail everything from T-week checklists to the 8-Step Training Model, the new FM 7-0 helps even the most inexperienced leader/staff to plan and coordinate training resources. There are examples in the FM that lend themselves to scheduled or impromptu officer professional-development programs and sergeants' time training. In this manner, units can begin educating leaders during the planning phase and reinforcing these lessons during preparation before execution.

Defining OE

As can be seen from both the example T&EO chart and definitions, the path to a T assessment is heavily dependent on both the opposing force and other shifting OE factors. ADRP 5-0 defines the OE as "[a] composite of the conditions, circumstances and influences that affect the employment of capabilities and bear on the decisions of the commander." FM 7-0 leverages this definition and the 7-100 series of manuals produced by U.S. Army Training and Doctrine Command's G-2 (intelligence) to ensure units are required to craft a truly objective training environment.

Or, put another way, to be considered fully trained, commanders at all levels must meet all facets of their intended OE. This includes, as a minimum, a thinking, adaptive opfor that will challenge the training audience.

To assist brigade and battalion commanders' processes to replicate an adaptive opfor, division and corps staffs have to partner with installations to determine necessary resources going forward. The new FM 7-0 facilitates this by bringing terms such as "static," "dynamic" and "complex" from esoteric opfor manuals to the forefront of the Army's revitalized training culture. In reading FM 7-0, leaders will see that these terms are not only critical to proper training and employment of operational variables – in other words, the political, military, economic, social, information, infrastructure, physical environment and time variables – but they are actually quite easy to apply to a thinking, resourced hybrid threat, too. Rather than being confronted with rote, formulaic opfor to obtain a T, Army leaders should have to adapt to, outsmart and outmaneuver the same level of thinking adversary they are expected to meet in a contingency.

In all cases, OE changes should be made with an eye toward both the training environment (live, virtual or constructive) and an endstate of fully trained companies, battalions and brigades.

Trained-and-ready force

FM 7-0 makes clear that the endstate of the execution phase is a trained and proficient force. This is achieved by leveraging published T&EOs, leader observations and the after-action-review process to develop a plan to ensure units become proficient in the objective, published standards. While assessment occurs concurrently with all phases of the plan-prepare-execute cycle, it is critical during execution to ensure resources are properly planned and coordinated. This goes beyond merely conducting long-range planning for resources to be available; it also applies critical thought to using resources to achieve unit training objectives.

Given the Army's planned methods for evaluating and assessing unit readiness, it makes little sense for a brigade to give a maneuver battalion whose companies are all at T an extra task iteration if a sister combined-arms battalion still has companies at P or T-. Conversely, if all the maneuver battalions in a division are assessed at T- in "defend," a division commander anticipating high-intensity operations would be prudent to ensure that assigned artillery battalions can perform counterfire tasks to a similar level rather than conduct more force-on-force lanes. In both cases, leaders' assessments use a combination of experience, knowledge of the intended OE and resources at hand to facilitate the training process.

Train today to win tomorrow

This article is merely a summary of what can be found in the new FM 7-0. While not a panacea for the training atrophy that has occurred during the last 15 years of combat, ***Train to Win in a Complex World*** is a vital first step to return the Army to a broad base of readiness rather than focusing on a specific set of skills. By providing a framework to units on how to train, the new FM 7-0 helps develop a "common language" across the Army for what correct training looks like. In turn, leaders who read it will be able to maximize the returns their units receive for their investment in "training sweat."

If deterrence fails, it will be the sweat paid today and in the near future that saves Soldiers' blood in the initial phase of the conflicts to come.

James Young is a Department of the Army civilian employee who has served as a training analyst since 2009 at TMD, CAC-T, Fort Leavenworth, KS. After graduating from the U.S. Military Academy, he served as a platoon leader, company/troop executive officer and assistant brigade S-3 (training) in Korea, at Fort Lewis, WA, and in Friedburg, Germany, from 1997-2003. Currently helping with production of FM 7-0, he is a 2010 graduate of military intermediate-level education. Mr.

Young has a master's of arts degree in history and is completing his doctorate in history, both from Kansas State University.

Notes

[1] The "Pacific Pivot" refers to President Barack Obama's stated strategic policy of focusing on the Pacific Ocean as the United States' primary focus.

Acronym Quick-Scan

ADRP – Army doctrine reference publication
CAC-T – Combined Arms Center-Training
CSA – Chief of Staff of the Army
FM – field manual
MDMP – military decision-making process
NCO – noncommissioned officer
OE – operational environment
OEF – Operation Enduring Freedom
OIF – Operation Iraqi Freedom
T&EO – task and evaluation outline
TLP – troop-leading procedure
TMD – Training Management Directorate

BOOK REVIEWS

Scouts in Contact: Tactical Vignettes for Cavalry Leaders, LTC J. Frederick Dente and LTC Bradley S. Nelson, Center for Army Lessons Learned, 2016, 135 pages, free download at http://usacac.army.mil/organizations/mccoe/call/publications.

At the Maneuver Warfighter's Conference held at Fort Benning, GA, this summer, GEN Robert Abrams, Forces Command's commanding general, spoke on the use of reconnaissance-and-security formations in the U.S. Army and said that reconnaissance and security are beyond broken – these are in crisis because our leaders do not understand our own doctrine. He reinforced this message in his command training guidance for Fiscal Year 2017 through his requirement that troop commanders attend the Cavalry Leader's Course and that platoon leaders attend the Army Reconnaissance Course. GEN Abrams went beyond just functional training, though – he directly challenged units to emphasize their leader-certification mechanisms to ensure the right individuals were in leadership positions.

Scouts in Contact: Tactical Vignettes for Cavalry Leaders is an excellent tool for squadron commanders and command sergeants major to use in their leader-certification programs. ***Scouts in Contact*** is a series of tactical-decision exercises built from experiences observed during Cobra Team's many rotations at the National Training Center. The book affords squadron commanders a low-cost option for repetitive, effective training that affords scout-platoon leaders and platoon sergeants the opportunity to develop their ability of "how to think" and "how to apply principles" in rapidly evolving, ambiguous situations.

Included are 12 vignettes, complete with a situation paragraph, base graphics, indicators of success, indicators of failure and instructions for the exercise controller. Units are able to take the book to their local Training Audiovisual Support Center and have the graphics printed to enable larger, tabletop exercises. This allows multiple platoon leaders to be engaged and offer a variety of opinions on how and why they would accomplish the mission in a certain way.

For leaders who are unfamiliar with employing tactical-decision exercises, the Cobra Team has also developed a chapter solely dedicated to explaining facilitation of the exercises and another chapter on conducting after-action reviews.

The deliberate thought and detail put into this book has made it a unique, ready-to-go-out-of-the-box tool that can be employed as part of unit's leader-development or leader-certification programs.

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Ramadi Declassified: A Roadmap to Peace in the Most Dangerous City in Iraq, retired COL Anthony E. Deane, Praetorian Books, 2016, 367 pages, $28.99 (hard cover).

Many books aspire to reveal the true nature of war. ***Ramadi Declassified*** accomplishes that goal. I deployed three times to combat in both Iraq and Afghanistan, and I find that, short of actually joining a unit in theater, this story is as close as a reader can get to deploying to a warzone. Author COL Anthony Deane, a retired U.S. Army armor officer, commanded 1st Battalion, 35th Armor Regiment, and was charged to free the city of Ramadi from al-Qaeda during the "surge" in Operation Iraqi Freedom. Part historical account, part leadership study, ***Ramadi*** fills a long-neglected void in military writing – namely the unexplored area between the squad on the battlefield and the generals commanding the theater.

Ramadi, however, is more than a book about combat. With just the right amount of background material to place the Battle of Ramadi into the larger Anbar Awakening, readers will learn of the challenges found in commanding, training, deploying, fighting and redeploying a battalion task force.

Deane's writing mirrors the same style of leadership he employed as a commander – direct and occasionally reinforced by salty language. The campaign to liberate Ramadi from the horrors of fundamentalist Islamic terrorism is not for the faint-hearted. Deane does not shy away from revealing al-Qaeda's vile inhumanity or the cost of warfare in U.S. and Iraqi blood. Although clearly not what my wife would describe as a "feel-good book," ***Ramadi*** does have a surprising element of humor. More than once I found myself laughing out loud at the author's dry wit in even the darkest moments of battle.

Ramadi's greatest value may be found in its author's analysis on leadership, including his own as a battalion commander. Deane is a reflective and honest writer unafraid of examining his own successes, failures and growth. His insights on leadership alone make ***Ramadi*** a must-read for the professional soldier. However, past, present and future military leaders will learn many other valuable lessons within ***Ramadi's*** pages. This book is what the Army field manual on counterinsurgency, Field Manual 3-24, attempted to achieve – i.e., a "how to" for military leaders to conduct successful counterinsurgency operations.

Be warned, reading ***Ramadi*** is a bit like watching the blockbuster movie ***Titanic***. We know how this story ends. The soldiers of 1-35 Armor achieved their mission to "take back Ramadi … but don't make it another Fallujah," but peace in Anbar was short-lived. Deane makes a strong argument that Shia political hegemony in Baghdad, combined with short-sighted U.S. foreign policy, doomed the success of the Anbar Awakening. U.S. forces withdrew from Iraq, leaving an Iraqi security apparatus unprepared to defeat al-Qaeda and its successor ISIS. As of this writing, Ramadi is again in

Iraqi government hands but is more than 80 percent destroyed. ISIS remains a viable, if diminished, threat. American Soldiers returned to Iraq. And the war continues.

LTC CHRIS HEATHERLY
Professor of Military Science
Washington State University Army ROTC

2017 Gainey Cup
May 1-4

Hosted by the U.S. Army Armor School at Fort Benning, GA

Troopers from across the U.S. Army, U.S. Marine Corps and ally and partner nations will compete to determine the "best scout squad." This competition will physically and mentally challenge all troopers by rigorously testing the trooper's knowledge, tactical competence and fortitude in the fundamentals of reconnaissance and security operations.

Scout teams will run a gauntlet of tasks to evaluate their cavalry-specific skills such as reconnaissance fundamentals, target identification, call for fire, troop-leading procedures, day and night live-fire, obstacle courses, observation-post establishment, helicopter-landing-zone establishment, knowledge of weapons, communication devices and sensors, and physical endurance.

Figure 1. A scout team runs through a reconnaissance lane during Day 2 of the inaugural Gainey Cup competition March 3, 2013, at Fort Benning, GA. Five-man scout teams competed for the right to be called the "best scout squad." *(Photo by Ashley Cross, Maneuver Center of Excellence Public Affairs Office photographer)*

The purpose of the Gainey Cup is to bring cavalrymen from across the world together in a healthy, competitive environment while developing scout proficiency that will extend into both the garrison and tactical environment.

Visit the Website at http://www.benning.army.mil/armor/gainey-cup/ for more information.

The Gainey Cup is named for retired CSM William J. "Joe" Gainey. Gainey was the first senior-enlisted adviser to the Chairman of the Joint Chiefs of Staff, then a newly created position. The position was established to advise the chairman on professionally developing enlisted personnel assigned to joint billets.

Gainey began to serve in this position Oct. 1, 2005. He retired April 25, 2008, after nearly 33 years of service.

15TH CAVALRY REGIMENT

The distinctive unit insignia was originally approved for 15th Cavalry April 6, 1935. It was redesignated for 15th Cavalry Reconnaissance Squadron (Mechanized) Nov. 10, 1944, and then redesignated Jan. 21, 1948, for 15th Constabulary Squadron. The insignia was redesignated for 15th Cavalry Nov. 28, 1958, then redesignated for 15th Armor Nov. 13, 1963. The distinctive unit insignia was redesignated for 15th Cavalry Aug. 2, 1968. The insignia was amended to correct the description Oct. 4, 2002. The red and white divided shield represents the old cavalry guidon. The regiment saw fighting in the Philippines as indicated by the crossed kris and kampilan of the Moro and Lake Lanao campaigns. In the war with Germany, the regiment was in France in the vicinity of Bordeaux, and the golden lion is taken from the arms of that city. The translation of the motto "All for one, one for all" is indicative of the spirit that has made the regiment.

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