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LETTERS

Lighter e-components allow more armor

Dear ***ARMOR***,

On behalf of Bob Hoeltzel and myself, I wish to express my gratitude to you and your staff for the assistance in publishing our article on the in-hub hybrid-capable electric drive. We both realize that some editing to fit in the space allocated is necessary, but I would like to point out to your readers that one crucial figure was left out of the caption for Figure 2 on Page 46. This figure shows the mechanical pieces of drive train removed from the Stryker and replaced by the e-drive components, but an important fact is that the exchange of drive trains reduced the Stryker vehicles' weight by 900 pounds. This simple exchange would allow 900 pounds of armor, for example, to be added to the vehicle while staying at its original weight. Not an insignificant advantage.

R.G. DUVALL
Major, U.S. Marine Corps, retired

COMMANDANT'S HATCH

COL Paul J. Laughlin
Commandant
U.S. Army Armor School

Armor's contribution to unified land operations

Reflection on the times that have shaped our Army and the armored force brings three critical inflection points in Armor history to mind. The first is the "inter-war years" between World War I and World War II, when men like GEN Adna Chaffee championed mechanization, Armor and Cavalry. Those efforts sowed the seeds of American and Allied success in World War II. In the 1970s, the Army sought to determine what the Vietnam experience and the Israeli wars for independence meant for the future of Armor and Cavalry. Men like GEN Creighton Abrams and GEN Donn Starry led the debate and made lasting changes to the Army structure, organization and doctrine. Finally, in the 1980s, GEN Starry and others led the adoption of Air-Land Battle, force modernization and a new focus on combined-arms training that allowed our Army to decisively win Operation Desert Storm.

In all three cases, there were bright, visionary and competent Armor and Cavalry leaders who brought about change in the Army that shaped the future for decades to come. Although we do not have the privilege of hindsight, today's Army may be at a similar critical time, and we must be prepared to take the reins to help shape the Army's future.

Today's debate focuses on what our strategy should be as we end combat operations in Afghanistan by the end of 2014. We anticipate having our forces regionally aligned to support geographic combatant commands, but details and implications are still forthcoming. There is a feeling by some that Air-Sea Battle is the way of the future because we know there will be a strategic shift to the Asian-Pacific theater, and that means the Department of Defense will focus solely on naval and air power. However, serious analysts recognize that while this theater is largely water, ***people live on the land*** and that is where the nation must employ ground forces to accomplish its goals.

In the Asian-Pacific, most nations' largest military component is their armies, and we should be prepared to partner with them. Armor has an important role to play in the Pacific since there are more than 51,000 armored vehicles in 19 Asian-Pacific nations. The friendly Asian nations that do not have armored forces will rely upon the United States to provide armor. We must critically examine Air-Sea Battle and point out that the terrain in the Asian-Pacific region is ideal for concealing armor from aerial reconnaissance and attack, once again requiring armored forces on the ground to shape and possibly fight in the Pacific area of operations.

Finally, those who say there is no role for armored forces in the Pacific are neglecting to learn from our own history. In World War II, Korea and Vietnam, armored forces proved critical to providing maneuver capability to light-infantry organizations with lethal results. In the time since these conflicts ended, the terrain, operational distances and threats have not changed enough to render armored forces obsolete. As such, our readers understand that we will shape operations and will win combat only by maintaining a strong and competent maneuver force composed of infantry, armor, fires, aviation and engineers … the combined-arms team.

The question that we in the Armor and Cavalry community must answer is, "What is our contribution to unified land operations?" It is our assessment that we must: (1) provide versatile forces that are expert in providing mobile, protected, precision firepower in support of combined-arms maneuver and wide-area security; (2) keep quality Soldiers and troopers in the force while focusing on leader development as the Army draws down to a smaller endstrength; (3) continue to improve our systems, our platforms and our doctrine to ensure we can meet any future challenge in any environment; and (4) most importantly, once we have answered the question, we must enter the debate vigorously and keep it going.

This issue of ***ARMOR*** should generate some debate in the Armor and Cavalry communities. We have included some very candid articles about our future role in the U.S. Army and on the future battlefield – I am certain that the authors will challenge your beliefs and assumptions, but our nation, Army and branch are at an important point in our history. As such, please read this issue critically and thoughtfully consider each author's points. Then, enter the professional discourse to help shape the future of our branch and the Army.

I propose that we use the pages of ***ARMOR*** and the monthly Armor newsletter, ***Thunderbolt Blast***, to host and shape the dialogue on the future of our branch and the Army in general. Write letters to the editor and articles, and enter the online debate to ensure we get the right answers to some very tough, yet critically important questions.

Great Armor and Cavalry leaders in the past have risen to shape the future of the Army during critical points in history. I know we are up to the challenge to honor them by leading the Army's way forward during this next great transition in our history, and I look forward to hearing your thoughts.

Forge the Thunderbolt!

Giddyup! **47**

GUNNER'S SEAT

CSM Miles S. Wilson
Command Sergeant Major
U.S. Army Armor School

Armor – Like to Have It or Absolutely Need It?

The end of the year is upon us, and traditional visions of spiked eggnog, hanging mistletoe and super-humungous flat-screen TVs dance in our heads. That is until our wives say, "No drinking, no kissing in front of the kids, and NO new TV!" But seriously, the end of the year is a time for reflection, resolutions and change. Here at the Armor School, we are faced with a decade-long question. Is Armor good to have but not needed, or is Armor a must-have and definitely needed to win? The answer often depends on the experiences of those asked.

Operation Iraqi Freedom provides us with many current and relevant examples to support the need to keep a healthy armored force in the active duty. The speed and lethality displayed in the early days of the invasion is unmatched in military history. The battles for Fallujah and Sadr City are other excellent examples highlighting the overwhelming benefits of mobile, protected, precision firepower. That concrete wall along al-Quds street in Sadr City was going to go up in 2008. But, I would say that without M1 tanks and Bradley Fighting Vehicles protecting our Soldiers, it would have been with a much greater loss of U.S. Soldiers. The Second Battle of Fallujah took place Nov. 7-Dec. 23, 2004. One of the main reasons there was a "second" battle was because tanks and Bradleys were not prominently used in the first battle earlier that same year. Again, I would offer that because we employed a much larger force of tanks and Bradleys the second time, there was no third battle of Fallujah.

The U.S. Marine Corps has and currently does use their M1 tanks in Afghanistan. I understand that the tanks can only operate in a small portion of Afghanistan, but from everything I've read, they are making a big difference and saving American lives. It's simply the ability to provide mobile, protected, precision, lethal firepower at distances the enemy can't match from a platform the enemy can't significantly damage. What difference would a company of U.S. tanks and Bradleys have made in 1993 during the Battle of Mogadishu?

Much of the current talk in the Army today is about "overmatch." Nobody wants to go into a fair fight. We as American Soldiers will follow the Geneva Convention laws and display the highest of Army values in combat. But we want to destroy our enemies with overwhelming shock, awe and firepower. As long as those fights occur on land, the Army Soldier will be there with boots on the ground. I cannot think of any other single thing that will protect him and provide him overmatch than the M1 Abrams main battle tank.

The U.S. Army is going through a major transition right now as it navigates around fiscal cliffs and sequestration. In the end, the Army will look very different in the year 2020. It will be smaller, regionally aligned and quite possibly unrestricted by gender. But it will still be the best Army in the world, and the tank and a strong active-duty armored force will be required to maintain that "best" title.

Let us also never forget those who have paid the ultimate price and can no longer be with us, and all those great Americans currently serving in harm's way.

Forge the Thunderbolt! Armor Strong!

Armored Forces: Mobility, Protection and Precision Firepower Essential for Future

by COL David B. Haight, COL Paul J. Laughlin and CPT Kyle F. Bergner

The U.S. Army's brigade combat teams will encounter a complex range of missions, environments and enemies, demanding units with appropriate balances of mobility, protection and precision firepower. Our forces must provide mobility, protection and precision firepower to ensure they accomplish missions across the full range of military operations. They must do this independently, as part of the Joint force and with international partners.

Units possessing the proper balance of mobility, protection and precision firepower operate with speed of action and the ability to combine firepower and maneuver to defeat the enemy rapidly and to accomplish the mission at minimal cost. Mobility, protection and precision firepower are essential to developing the situation in contact with the enemy and in overwhelming enemy forces in the close fight, ensuring we do not fight a fair fight. Battles in Sadr City, An Najaf, Fallujah, Tal Afar, Musa Qala and elsewhere bear witness to this basic requirement for mobility, protection and precision firepower – these capabilities proved requisite for success and were not organic to forces initially involved in these battles.

Our BCTs must be able to achieve mobility, protection and precision firepower in all conditions. While aircraft excel at mobility and can deliver precision fires, suboptimal weather conditions severely reduce their availability and capacity to deliver fire support, leaving some units without precision firepower or enhanced mobility. Units with mobility, protection and precision firepower in the proper balance are able to achieve decisive overmatch with the enemy due to their cross-country mobility, survivability and persistent direct-fire capability,[1] while forces who sacrifice one trait to amplify another often experience mixed results. For example, units fielded mine-resistant ambush-protected vehicles in response to increases in improvised explosive devices experienced significant reductions in their mobility because of overemphasis on protection. Furthermore, adaptations in the employment of IEDs reduced the protection of MRAPs.

While a perfect equilibrium is not feasible in every conceivable situation, the need for mobility, protection and precision firepower permeates light infantry, Stryker and armored units.

Mobility

The ability to maneuver cross-country with equal or greater ease than our adversaries is essential, even in the most restrictive terrain. Developed and employed to counter machineguns and battlefield obstacles, tanks restored tactical mobility in World War I, avoiding high casualties and disrupting the enemy through shock action. This tactical mobility under fire remains a requirement after a century of conflict.

For example, during and after World War II, armored combined-arms forces played a significant role in changing the character of war, as witnessed in the German blitzkrieg and the U.S. Army's breakout from the Normandy beachhead. In Vietnam, the mobility of mechanized forces from 1st Infantry Division, 1st Cavalry Division, 11th Armored Cavalry Regiment, 25th In-

fantry Division, 5th Marines and other units proved essential to Operations Lincoln, El Paso II, Cedar Falls and Junction City, among others.[2] The defeat of the Iraqi Army in Operations Desert Storm and Iraqi Freedom depended upon units' ability to fight for information and survive encounters with enemies while maneuvering through both open and restrictive terrain.

On the other hand, the imbalance of mobility, protection and precision firepower has often complicated missions, allowing enemy organizations to negate U.S. advantages and inflict unnecessary casualties. For example, during the initial phases of the Korean War, Task Force Smith's only effective anti-tank system was a single 105mm howitzer with six high-explosive anti-tank rounds.[3] After North Korea's superior T-34 tanks destroyed the American howitzer, Task Force Smith lacked the mobility, protection and precision firepower required to defeat the enemy's tanks. North Korean forces quickly routed Task Force Smith, killing 150 Soldiers.[4]

As another example, during the Battle of Mogadishu, the Rangers' and 10th Mountain Division's wheeled relief columns could neither withstand enemy firepower nor maneuver through improvised obstacles to reach the cut-off Rangers.[5] Pakistani and Malaysian armor were critical in extracting U.S. Army Rangers from Mogadishu and, shortly after the battle, 1st Battalion, 64th Armor, deployed to support U.S. forces in Somalia.[6]

Tactical mobility creates advantages in freedom of maneuver and speed of action. The ability to maneuver off-road creates tactical options for Soldiers and leaders on the ground, increases their unpredictability and allows them to surprise the enemy. Also, off-road maneuver deters adversaries from employing IEDs, mines and complex ambushes, since units can avoid routes that create predictable movement patterns.

The Israeli Defense Force exploited advantages in mobility and speed of action in Gaza during Operation Cast Lead, the IDF's 2008 operations against Hamas forces in Gaza. Recently an Israeli tank-battalion commander recounted an enemy communication intercepted during a counter-sniper operation into the Gaza Strip. Hamas forces reported the Israeli tanks were "moving too fast to be targeted" by Hamas' defensive belts, which consisted of modern anti-tank weapons.

The mobility of the mounted forces' protected precision firepower pairs favorably with dismounted forces, enhancing the strengths and mitigating the vulnerabilities of all members of these teams. Throughout Operations Iraqi and Enduring Freedom, mounted forces provided highly mobile, protected, precision, direct-fire support to dismounted forces. This provided dismounted forces freedom of maneuver, allowing them to close with and destroy enemies, and to seize key terrain and objectives with greater success.

Recently the U.S. Marine Corps' 1st Tank Battalion provided mobility, protection and precision firepower to dismounted forces in Afghanistan, allowing both conventional and off-road routes to be cleared while dismounted forces provided close-in security. The armored forces' mobility allowed dismounted forces to achieve overmatch and operate with greater effectiveness.

Protection

Forces maintain protection through survivability and the psychological effect of their presence on the battlefield. The physical protection provided by modern armor allows Soldiers and Marines to survive both expected and unanticipated attacks from enemy anti-armor systems – including rockets, guided missiles,

U.S. Army M1A2 Abrams tanks maneuver in the streets as they conduct a combat patrol in the city of Tall Afar, Iraq, Feb. 3, 2005. The tanks and their crews are attached to the 3rd Armored Cavalry Regiment. (*Photo by SSG Aaron Allmon)*

mines and IEDs. Two examples highlight this principle. In the first example, this protection proved important to the Canadian Army in recent operations in southern Afghanistan.[7] The Canadians used anti-mine devices on armored vehicles to protect dismounted forces and used the vehicles as mobile bunkers when in contact with the enemy. In the second example – the Marine Corps' experiences in Afghanistan – the M1A1s of the USMC's D Company, 1st Battalion, sustained 19 IED strikes over seven months, with only one minor injury. In all but two cases, company-level maintenance was enough to repair the damaged tanks.[8]

These examples show that the survivability of armored forces is much greater than that of light and medium forces.

Beyond surviving encounters with the enemy, a greater level of mobility, protection and precision firepower provides a beneficial psychological effect. Friendly forces and local populations gain confidence knowing they have forces with protection and mobile, precision firepower nearby. For instance, the USMC's 1st Tank Battalion's physical presence during operations in Afghanistan bolstered the local populace's confidence after the battalion quickly silenced the Taliban's attacks. Afghan road crews and their contracted security reported they accomplished more during the three weeks of the USMC's 1st Tank Battalion's presence than they had in the previous four months. The head contractor attributed the team's productivity to the tanks' disrupting effects on the Taliban's freedom of maneuver and will to fight.[9]

In his examination of Operation Cast Lead, Dr. David Johnson observed that Hamas fighters equipped with anti-armor weapons had to decide whether to hide and live or to engage the IDF tanks and become de facto suicide attackers. The ability of forces to bring overwhelming precision direct firepower to bear at any desired time and place intimidates and demoralizes adversaries, protecting friendly forces.

Precision firepower

The presence of forces with precision direct firepower on the battlefield provides an alternative to escalation directly from a Soldier's rifle to Air Force bombs:

- From its 120mm cannon, the Abrams tank fires several different precision rounds capable of destroying targets ranging from armored vehicles and hardened positions to obstacles and personnel. It also has .50 caliber and 7.62mm machineguns able to dispatch light-skinned vehicles and dismounted enemies as needed.
- The Stryker Mobile Gun System supports infantry forces against hardened structures, lightly armored vehicles and dismounted enemies with a 105mm cannon and .50 caliber and 7.62mm machineguns.
- The Bradley Fighting Vehicle's tube-launched, optically tracked, wire-guided antitank missiles, 25mm cannon and 7.62mm machinegun make it a valuable direct-fire support asset to infantry and reconnaissance units when faced with lightly armored and dismounted enemies.

All these vehicles have a variety of sights and fire-control systems that enable extraordinary precision under all conditions. Weapon systems like these allow Soldiers in contact to destroy enemy forces with scalable firepower – both at close range and beyond the maximum range of an enemy's weapon systems with discriminate precision. These precision direct-fire engagements minimize the collateral damage often caused by artillery, mortars or air strikes. Also, situational awareness and communication systems on armored vehicles enable Soldiers to engage enemies using indirect and joint fires with great speed and accuracy.

Multinational operations and Building partnerships

The U.S. Army is one of the few armies in the world with a balance of mobility, protection and precision firepower. This balance does not exist elsewhere in like quantity or quality – this includes the capabilities of many of our strategic allies. The U.S. Army can benefit from this unique balance in Europe, the Asian Pacific, the Middle East and other parts of the world through regionally aligned brigades.

In nations whose forces have this balance (for example, India, Taiwan, Australia, Indonesia, Kuwait and Saudi Arabia), American units will serve with like forces, mutually enhancing their tactical skills and understanding of combined-arms maneuver. In nations without these capabilities, American mobility, protection and precision firepower provide capabilities our partners cannot field.

Whereas many of our partners' land-based forces lack these capabilities, integrating our balanced forces into multinational operations creates a force capable of deterring and defeating enemy organizations. The deterrent effect of forces with mobility, protection and precision firepower stems from both their capabilities to deny an aggressor the prospect of achieving his objectives and from the complementary capability to impose unacceptable costs on the aggressor.[10] These partnerships also afford U.S. Soldiers the significant advantage of operating alongside indigenous forces in times of conflict. On a broader scale, they bolster the confidence of our allies and shape the broader security environment through the relationships they foster.

Conclusions

The complex and shifting operational environment, the lessons of recent conflict and emerging threats to national security require the U.S. Army to sustain balanced capabilities. In the future, as in recent conflicts, mobility, protection and precision firepower provide the Soldier on the ground a decisive advantage against all adversaries. These combined-arms capabilities make the U.S. Army unique among the world's armies and are required to accomplish the Army's mission to:

- Prevent future conflict;
- Shape the broader security environment; and
- When called to action, win decisively.

Forces with these capabilities have the ability to overwhelm and defeat enemies in close contact with operational mobility, survivability and lethal firepower, and these forces are invaluable during operations in any environment – including counterinsurgency, stability and security operations. Mobility, protection and precision firepower ensure our Soldiers do not fight a fair fight and are critical not only to armored forces, but also – more importantly – to the balanced Army team comprised of infantry, Stryker and armored BCTs.

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Notes

[1] Barrick, Timothy LTC, "USMC Tank Operations in Afghanistan," after-action review published Sept. 14, 2011.

[2] Starry, GEN Donn A., ***Mounted Combat in Vietnam***, Washington, DC: Department of the Army, 1989.

[3] Task Force Smith comprised 406 infantrymen equipped with two 75mm recoilless rifles, two 4.2-inch mortars, four 60mm mortars and six 2.36-inch bazookas. One hundred eight artillerymen augmented the infantrymen with six 105mm howitzers. The task force's Soldiers carried 120 rounds of ammunition and two days of C-rations – and only one sixth had seen combat. – Tucker, Spencer, ***Task Force Smith***, http://www.nj.gov/military/korea/factsheets/tfsmith.html, February 1992.

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[8] Barrick and Anderson.

[9] Ibid.

[10] Department of Defense, ***Sustaining Global Leadership: Priorities for 21st Century Defense***, January 2012.

Acronym Quick-Scan

BCT – brigade combat team
IDF – Israeli Defense Force
IED – improvised explosive device
MRAP – mine-resistant, ambush-protected
OLC – oak-leaf cluster
USMC – U.S. Marine Corps

Keeping the Sabers Sharp: Maintaining Relevance in the Modern Era

by CPT Ken Segelhorst

Contact front! The Armor Branch is under fire. With impending budget cuts and military downsizing, the Armor Branch has found itself in the crosshairs of political and military leaders alike. As our leaders speak out against the future deployment of large American land-based formations to Asia, the Middle East and Africa, the Army will find itself increasingly challenged to justify the number, size and cost of its heavy formations.[1] There is already a school of thought emerging that the Army should transition many of its heavy units into the National Guard, based on the premise that a large force-on-force armor engagement is unlikely in the foreseeable future.[2]

So how do we deploy our forces against downsizing and budget cuts? Do we stoically charge against overwhelming odds reminiscent of Lord Cardigan's Light Brigade, or is there a better solution? I suggest we flank the issue.

While we may not be able to keep our tanks from being mothballed, we can take action to protect our branch and troopers from underemployment. Just as manufacturers update their products to meet the needs of the marketplace, we must tailor our product to meet the demands of a changing Army. To remain relevant, we must transform our image to that of a light and swift deploying force well-suited for expeditionary warfare; further enhance and expand our reconnaissance skills and capabilities; and establish our own elite formations capable of rapidly deploying alongside Special Operations Forces to participate in future engagements.

Marketing Armor in an expeditionary era

Anyone who has studied marketing knows the importance of branding. Branding is the process involved in creating a unique name and image for a product in the consumer's mind. Branding is perhaps the most important facet of any business. It aims to establish a distinguishable presence in the market that attracts and retains customers. The image a brand, or name, evokes can have more to do with a product's fate in the marketplace than the performance of the actual product itself.

So, what does our branch's name say about us? To those outside the branch, the "Armor" name evokes images of heavily armored tanks, behemoths designed for combat on the open battlefields of dated force-on-force engagements. It also brings to mind images of long supply trains, substantial fuel requirements and sluggish deployment by massive, slow-moving cargo ships. While these images may have been a fair representation of Armor in past decades, today such images represent only one segment of the branch. Unfortunately for us, that segment happens to be ill-suited for our nation's projected demands.

No longer will the Army be structured for large-scale conflicts as it begins to downsize from 570,000 to 490,000 Soldiers.[3] Changes to U.S. defense strategy will demand units capable of conducting expeditionary warfare. The Army will increasingly demand light, flexible units capable of quick reaction and deployment for counterterrorism, security-force assistance and various stability-and-support operations around the globe. Some units within the Army's inventory are already extremely well-suited for such operations, including SOF and airborne infantry. Armor must repackage itself as a leaner, more agile force capable of contributing to these expeditionary operations.

Returning our name to "Cavalry" would offer a far more accurate representation of our branch and conjure a more attractive image to our "consumers." Today, more than 65 percent of our branch is serving in cavalry and reconnaissance roles, whereas only 35 percent is serving in traditional armor positions.[4] This division will only grow as policymakers continue to dismantle our heavy formations. We should update our branch's name and insignia to accurately reflect our current role as primarily a cavalry and reconnaissance force.

The "Cavalry" name may evoke images of John Wayne and the horse cavalry gallantly riding to the rescue of settlers in the Old West – not an unflattering image in the era of expeditionary warfare. Those more familiar with the present-day cavalry will recognize its role in reconnaissance and intelligence-gathering. To these individuals, the "Cavalry" name will likely bring to mind images of light and rapidly deployable vehicles maneuvering swiftly about the battlefield to conduct reconnaissance and surveillance operations. This is a far more attractive image for the modern era, where the value of timely and accurate intelligence cannot be understated and light, rapidly deployable units are desired. By embracing the Old West image and advertising ourselves as a modern-day cavalry capable of rapidly "riding to the rescue," we may enhance our marketability for future expeditionary operations.

Expanding Armor's reconnaissance role and capabilities

While changing our name back to Cavalry may improve our image and marketability, we must also look to improve and expand the services we provide. With current emphasis placed upon intelligence, surveillance and reconnaissance programs, it is only logical for Armor to appease consumer demand and focus its sights on this mission set. By expanding its reconnaissance and surveillance capabilities, Armor will improve its marketability and relevance for modern warfare. Armor should fight to establish itself as the "go to" branch for all ground reconnaissance operations, both mounted and dismounted; doing so will secure Armor a place within the Army's ever-changing force structure.

Before Armor can lay claim to dismounted-reconnaissance operations traditionally performed by the infantry, it must first ensure mastery of such operations. While schools like the Army Reconnaissance Course provide a solid foundation in reconnaissance, there are more courses available to further enhance our branch's reconnaissance capabilities. By increasing the number of officers and noncommissioned officers we send to schools like the Reconnaissance and Surveillance Leaders Course, Pathfinder, combat hunter/tracker, Sniper and Ranger schools, we will develop a more credible reconnaissance force with enhanced capabilities for modern warfare while substantiating our claim as the branch of choice for all ground-reconnaissance operations.

RSLC. The RSLC, created in 1986 to bridge the gap between the Army's long-range reconnaissance patrol and long-range surveillance units, is an elite course offered by the Ranger Training Brigade at Fort Benning, GA. Since that time, RSLC has become the Army's premier course for teaching dismounted reconnaissance and surveillance tactics, techniques and procedures. Using six-man LRS teams as the model for instruction, students are trained in a myriad of reconnaissance and surveillance TTPs, including close-target reconnaissance, reconnaissance-specific battle drills, surveillance- and hide-site construction, urban surveillance and various methods of insertion and extraction.

As reconnaissance elements must report their findings in a timely and accurate manner, RSLC also stresses communication and equipment identification. Students are trained to employ a variety of radio systems for voice and data communications. They learn proper reporting procedures, radio-wave propagation, antenna theory, and construction and employment of field-expedient antennas. To ensure they report accurately, students test on their ability to identify various vehicles, weapons and equipment from around the globe. All these skills are then tested during the course's final field-training exercise.

While RSLC was designed to train infantry officers and NCOs, 19-series Soldiers have much to gain by attending. Sending our scouts to RSLC gives them the tools they need to conduct successful dismounted-reconnaissance and surveillance operations. More important than recon TTPs, RSLC students learn to conduct meticulous mission planning, well beyond what is taught at the basic course or ARC. The detail with which students learn to develop their plans and contingencies produces forward-thinking leaders capable of successfully completing the most challenging missions while, at the same time, mitigating risk. By increasing the number of scouts we send to RSLC, we will enhance our dismounted-reconnaissance capability and overall performance as a reconnaissance force.

Pathfinder School. The Armor Branch should also take advantage of the Army's Pathfinder School to further enhance its reconnaissance capabilities and expand its role. While Army Pathfinders mainly provide navigational aid and advisory services to military aircraft, the Pathfinder mission is one deeply rooted in reconnaissance, as the name suggests. Pathfinders routinely insert ahead of the main body to conduct reconnaissance; establish and operate day/night helicopter landing zones; establish and operate day/night parachute drop zones; conduct slingload operations; and provide air-traffic control for rotary-wing and fixed-wing aircraft. Having qualified officers and NCOs capable of performing these tasks would greatly enhance any reconnaissance troop's capabilities, particularly those operating within highly mobile airborne and air-assault formations.

While Pathfinders are valuable force multipliers when working with aircraft, there are only a handful of Pathfinder units within the Army, none of which are organic to brigade combat teams. This means that battalion and brigade planners must often rely on individual Pathfinders spread throughout the ranks for Pathfinder support. Reconnaissance squadrons could help overcome this flaw in BCT organization by taking responsibility for Pathfinder support within each brigade. This would justify Armor Branch sending a higher number of officers and NCOs to Pathfinder School, providing reconnaissance squadrons with a pool of qualified personnel from which Pathfinder teams could be identified, equipped and further trained. By taking responsibility for Pathfinder support within the BCTs, Armor would be providing a valuable service while expanding its role.

Combat hunter/tracker courses. To enhance our scouts' abilities to locate and track the enemy, we should send our 19Ds to tracking courses. Despite being one of the oldest skills known to mankind, tracking skills have all but disappeared among today's computer generation. While tracking, or signcutting, may seem primitive in today's digital age, the reality could not be further from the truth. Even with all the technological advances we have seen in the last decade, technology has not been able to match a human tracker's ability to interpret subtle visual cues inadvertently left behind by the enemy.

Tracking is particularly well-suited for counterinsurgency operations. Insurgents often employ guerrilla tactics and quickly flee the area after contact, seemingly without a trace. The inability to give chase and locate the enemy can frustrate even the most disciplined counterinsurgent force. In many cases, however, skilled mantrackers could provide these units with invaluable intelligence, helping turn the tables on the enemy and transforming them from the hunters to the hunted. The use of mantracking to fight modern-day insurgencies is not a new concept. Trackers have been employed by counterinsurgents throughout Asia and Africa with great success, particularly in Malaya and Rhodesia. If properly trained, our scouts could bring these skills to bear in Afghanistan and future operating environments.

Despite the fact that tracking has proven to be a relevant skill that has been successfully employed in several counterinsurgencies, neither the Armor School nor Infantry School currently offer courses in modern tracking techniques. Until Training and Doctrine Command recognizes the need to dedicate a formal course to this skill set, we have but two options for our scouts to receive formal instruction. The first option is the U.S. Marine Corps' Combat Hunter Course.

Combat Hunter is a 10-day course developed by expert trackers, world-renowned big-game hunters and Marine infantry instructors who train Marines to observe, profile and track the enemy. In the culminating exercise, each student must track the path of an instructor who is given a several-mile head start. While the Army has sent select officers and NCOs to this course, it is unlikely we will be able to send our scouts in large numbers. However, Armor could use the Marine's Combat Hunter Course as a model for the development of a similar course under the Armor School.

Our second option is the Tactical Tracking Operations School mentioned by SFC Brian Lackey in ***ARMOR*** magazine's September-October 2010 issue. TTOS is a privately owned business founded by David Scott-Donelan, an ex-Rhodesian Selous Scout and a major player in the development of the Marine Corps' Combat Hunter Course. TTOS has trained many SOF and conventional military units as well as law-enforcement agencies. Possibly contracted through the General Services Administration, they offer a variety of course formats, including a 100-hour course taught by mobile-training team. To quote Lackey, a graduate of TTOS, "[s]implistic in theory and in action, scout trackers belong in our units … without question."

Sniper School. Now that the Armor School has relocated to Fort Benning, we should also begin taking advantage of the Army's Sniper School. Army snipers' primary mission is to deliver long-range precision fire. Equipped with a sniper weapon system, M-14 or simply an M-4 with advanced combat optical gunsight, sniper-qualified scouts can provide their leaders with accurate and discriminating small-arms fire on reconnaissance and surveillance objectives. Such discriminating fire can be used to eliminate targets while preventing collateral damage and civilian casualties. While a sniper must be highly trained in

long-range rifle marksmanship, this constitutes only a quarter of the training at Sniper School.

A sniper's secondary mission is the collection and reporting of battlefield intelligence, not unlike that of our scouts. Snipers are extremely well-suited for this mission. They become masters of concealment and camouflage. They are trained to detect their targets and patiently stalk them, moving about unseen. Like trackers, snipers undergo intense observation training and exercises.

The lessons learned at Sniper School would greatly enhance our scouts' ability to move stealthily about the battlefield and provide direct observation and precision fires on reconnaissance and surveillance objectives. As such, we should increase the number of scouts we send to Sniper School and legitimize their sniper skills by fighting to award them the B4 (sniper) skill identifier, which is currently withheld from 19-series graduates of the Sniper School.

Ranger School. Lastly, producing Ranger-qualified leaders is essential to building our branch's credibility. Ranger School is the Army's premier course in small-unit dismounted operations. Students conduct patrolling operations in squad- and platoon-size elements in austere environments, including the mountains of northern Georgia and the swamps of the Florida panhandle. For more than 61 (at a minimum) grueling days, the lessons of light-infantry tactics are battered into the minds of Ranger students until they become second nature. Above all, Ranger School is a leadership school. It tests a leader's ability to plan missions, make decisions and lead Soldiers under some of the most stressful conditions outside of combat. As the sign says at the entrance of Camp Rogers, Ranger School is "not for the weak or fainthearted."

In addition to the leadership and light-infantry skills developed during Ranger School, students also gain credibility by earning the Ranger tab. The Ranger tab earns 19-series officers and NCOs a proverbial "seat at the table" within traditional light units and provides them with increased respect among their peers in the infantry and other branches. The reason BCT commanders want Ranger-qualified leaders goes well beyond the skills they learn at Ranger School. As members of an elite brotherhood, Ranger School graduates share a common bond. Having voluntarily subjected themselves to the trials and tribulations of Ranger School, graduates share an increased sense of trust and understanding with one another. When a commander sees a Ranger tab, he knows the man wearing it will accomplish his mission though he be the lone survivor.

By sending our 19-series officers, NCOs and troopers to these schools, we will develop a more versatile and adaptive formation capable of a wider range of reconnaissance and surveillance activities. Increasing our number of RSLC and Ranger graduates will greatly enhance our branch's credibility pertaining to dismounted operations and help legitimize Armor's bid for missions once reserved for the infantry. Producing trained Pathfinder teams will allow our branch to offer a service not currently found at the BCT level. Training our scouts as man-trackers and snipers will give our branch more skills to market. By sharpening our skills and providing these services, we will increase our legitimacy as a reconnaissance force and further enhance our marketability all at a nominal cost.

Forming an elite cavalry organization

The Armor Branch would also benefit from having an elite organization to call its own. The development of an elite 19-series formation would improve esprit de corps, increase performance, keep talent within the branch and provide a cadre of leaders with unique knowledge and experience. These benefits are evident in the infantry's 75th Ranger Regiment. The entire Infantry Branch takes pride in the 75th's accomplishments, contributing to a high level of esprit de corps within the infantry.

The desire to join the Ranger Regiment also lends itself to increased performance among infantrymen who must compete to join the regiment. The Ranger Regiment also helps retain top performers by offering a more challenging and rewarding career path within the branch. Conventional infantry units also benefit from the Ranger Regiment as both NCOs and officers rotate back into conventional units, bringing with them invaluable knowledge and experience. The Armor Branch would surely see similar benefits from forming an elite Cavalry squadron.

Like the Ranger Regiment, an elite cavalry squadron would need to be light and rapidly deployable to meet the demands of modern warfare. The squadron could be formed within the U.S. Army Special Operations Command. Within this organization, the squadron could operate independently or in support of other SOF elements. Independently, the squadron could conduct deep reconnaissance and direct action as a highly mobile force, much like the British Long-Range Desert Group of World War II. Operating in support of other SOF elements, the elite cavalry squadron could develop a relationship like that of the LRDG and Special Air Service in World War II or the Navy's special boat teams and sea, air and land teams today. The squadron could support other SOF elements by providing platforms for heavy weapons, infiltration/exfiltration, casualty evacuation and quick-reaction forces.

The squadron would require Armor's most adaptive and forward-thinking leaders, willing to mitigate risk through superior training and tactics rather than heavy armor and large combat formations. An elaborate selection process would be required to ensure the admittance of only the best and brightest 19-series personnel. Like the Ranger Regiment, leaders would rotate between conventional units and the elite squadron. Leaders would be required to prove themselves at each level of command prior to service in the squadron. For example, the Army would first require a captain to complete a successful command in a conventional unit before being eligible for command within the elite organization.

A special squadron would require special equipment. While the mine-resistant, ambush-protected all-terrain vehicle or ground mobility vehicle could prove an adequate vehicle for some operations, the mobility and flexibility offered by other vehicles would greatly enhance the squadron's adaptability, making it more flexible and rapidly deployable. The Land Rover 110 multi-role combat vehicle has been used by SOF elements around the world. While it lacks heavy armor, it is significantly smaller and lighter than most combat vehicles in the Army's inventory, and parts are readily available throughout the Third World.

A CH-47 Chinook helicopter can carry two combat-ready MRCVs internally. The Chenowth Advanced Fast-Attack Vehicle would be an excellent option for desert operations. The AFAV is light, fast and rapidly deployable. It can be transported internally by CH-47 or CH-53 Sea Stallion helicopter, and up to three AFAVs can be carried by a C-130 aircraft (two when configured for airborne operations). Exploration of the use of Polaris all-terrain vehicles and military utility vehicles' ability to navigate rough terrain may prove useful. This assortment of vehicles, equipped with the latest weaponry and communications packages, could prove lethal in the hands of our most elite scouts.

Infiltrating the Ranger Regiment

In addition to an elite cavalry squadron, add a troop of 19-series personnel to each Ranger battalion. The proposed cavalry troop would be responsible for manning the various combat vehicles in the Ranger Regiment's inventory, including Strykers. These

Strykers are primarily used for carrying Rangers to the objective. Who better to crew these vehicles than those specifically trained in mounted combat operations? The Regiment's Stryker fleet can also be supplemented with the M1128 Stryker Mobile Gun System. Manned by experienced 19As and 19Ks, the MGS could provide the regiment with precision fires from its 105mm cannon and 7.62mm coax. The 105mm would provide a column of Ranger Strykers the ability to engage and destroy hardened enemy positions and armored vehicles. Canister rounds would further enhance the Rangers' ability to engage and destroy light-skinned vehicles and dismounted personnel. The 105mm cannon could also be used to create breach points in walls through which Rangers could pass.

The Ranger battalions would benefit from having dedicated crews of 19-series personnel manning their vehicles. Unlike infantrymen, 19-series Soldiers would arrive at the regiment, after successful completion of the Ranger Assessment and Selection Program, already trained in mounted warfare, including crew drills, gunnery, vehicle maintenance and mounted tactics and techniques. Veteran scouts and tankers would bring with them years of experience in mounted warfare. They would undoubtedly outperform infantrymen less experienced in mounted operations and enhance the regiment's overall combat effectiveness and forced-entry capability.

Adding a cavalry troop to each Ranger battalion would also free manpower and reduce training requirements on Ranger infantry companies. By eliminating their need to fill vehicle-crew positions, Ranger companies would have more infantrymen available for dismount at the objective. Eliminating crew requirements would also reduce the number of individual and crew-level tasks needed to be trained by Ranger companies. This would provide company commanders more whitespace on the training calendar for dismounted-infantry tasks.

Conclusion

As the Army faces impending budget cuts and post-war downsizing, there will be increased infighting for missions and funding. The Armor Branch must take action to outmaneuver policymakers' crosshairs and remain a relevant force for future operations. Armor must change its image from that of sluggishly deployed and logistically demanding branch to that of a light and agile force capable of swift deployment to global hotspots. By changing our name back to Cavalry and advertising our reconnaissance- and intelligence-gathering capabilities, we will increase our marketability.

By embracing the SOF truth that men are more important than hardware and further developing our reconnaissance skills through formal education and experience, Armor will develop a force capable of challenging the infantry for dismounted-reconnaissance roles. The Armor Branch would also see significant benefits from an elite organization, whether it is an independent cavalry squadron or the Ranger Regiment. An elite organization would improve esprit de corps and help keep talent within the branch. It would provide Armor leaders with invaluable experience and provide an outlet for testing the latest mounted TTPs and equipment. Most importantly, it would help keep our 19-series Soldiers relevant for years to come.

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Acronym Quick-Scan

AFAV – Advanced Fast-Attack Vehicle
ARC – Army Reconnaissance Course
BCT – brigade combat team
LRDG – Long-Range Desert Group
LRS – long-range surveillance
MGS – Mobile Gun System
MRCV – multi-role combat vehicle
NCO – noncommissioned officer
RSLC – Reconnaissance and Surveillance Leaders Course
SOF – Special Operations Forces
TTOS – Tactical Tracking Operations School
TTP – tactics, techniques and procedures

Armor's Asymmetric Advantage: Why a Smaller Army Needs Mobile, Protected Firepower

by MG Bill Hix and Mark C. Smith

As the U.S. leaves two wars behind and adjusts its military to face an uncertain future, some question the need for the Army to maintain its current force mix — and in particular, those formations built around mobile, protected firepower. Yet it is precisely these forces that will remain essential as the Army shrinks and its list of potential missions grows.

Under the new national defense strategy, the Army will prepare to shape the strategic environment, prevent the outbreak of dangerous regional conflicts, and respond in force to a range of complex contingencies worldwide — all while responsibly reducing its endstrength. To minimize strategic risk, the Army must emerge from the coming transition years with a force that is more agile, versatile and resilient than ever, and which possesses lethality disproportionate to its size.

Most importantly, the future force must be able to exert control – on land – of people and resources. As Colin Gray writes: "From Carl von Clausewitz to Rear Admiral J.C. Wylie, USN, great strategic theorists have pointed to control as being the essence of the practical object in war, the purpose of strategic effect." History, recent experience and future estimates demonstrate the importance of mobile, protected firepower in achieving this control.

Lessons of experience

As a term, "mobile, protected firepower" describes forces with cross-country mobility, lethal firepower and effective armor protection. In today's U.S. Army, it takes the form of the armored fighting vehicles and main battle tanks in brigade combat teams, but it has been for decades at the core of effective responses to widely varying missions.

At the low end of the spectrum, such forces have long been part of military engagement, security cooperation and deterrence efforts. During the Cold War, the seminal NSC 68 report recognized that atomic weapons were inadequate to deter Soviet aggression and that the United States would need the capacity to confront local challenges locally – as in Europe, where armored forces would for decades deter Soviet and Warsaw Pact invasion. In Bosnia-Herzegovina in the 1990s, U.S. commanders sent the V Armored Corps across the Sava River to give the Implementation Force the "biggest dog" in the neighborhood and keep the peace. And in South Korea today, U.S. Army mobile, protected firepower underpins deterrence on the peninsula and elsewhere in the Pacific region.

Instances of mobile, protected firepower's use in crises and limited contingencies are similarly legion. During the Korean War, North Korean armored forces routed a poorly equipped U.S. infantry task force, leading to retreat and stalemate not resolved until more modern armored forces arrived to enable the breakout that exploited the Inchon landings. In Vietnam, as documented by GEN Donn Starry's ***Armored Combat in Vietnam***, armored forces proved critical throughout the conflict. More recently, in the Second Battle of Fallujah, armored forces spearheaded the advance into the city, enabling maneuver, protecting infantry, suppressing and destroying a determined, prepared enemy. And in Baghdad's Sadr City, mobile, protected firepower was essential to overcoming complex obstacles, deadly improvised explosive devices and intense urban fighting; it made possible the rapid exploitation of intelligence to crush the enemy with fewer casualties and reduced collateral damage.

In Afghanistan, armored vehicles allowed International Security Assistance Forces to survive initial engagements by IEDs and rocket-propelled grenades, and to respond with precise, timely, direct fire that generated less collateral damage than artillery or airstrikes. By contrast, Israel allowed its combined-arms skills and capabilities to atrophy, and was dealt setbacks in 2006 when challenged by Hezbollah's asymmetric, integrated standoff fires and area-denial strategy.

Finally, mobile, protected firepower has been a key to success in major operations and campaigns. During the 1973 Arab-Israeli War, Israeli tanks' penetration of Egyptian defenses and attack on surface-to-air missile sites allowed the Israeli Air Force to launch deep strikes. Nearly two decades later, Iraq used T-72 tanks to overwhelm Kuwaiti defenses in 1990. In the following year, Army-led combined-arms maneuver, spearheaded by an armored corps and following 30 days of air operations, drove the world's largest army from Kuwait in four days. In 2003, the U.S.-led invasion of Iraq created a shock effect of tightly integrated joint/combined-arms maneuver operations dependent on forces with mobile, protected firepower. Such capabilities allowed commanders to routinely assume risk in the face of uncertainty, such as pressing the attack despite sandstorms and losing track of nearly 20 Iraqi brigades.

Projecting credibility

Why is mobile, protected firepower so frequently used in such a wide variety of situations? Put succinctly, it provides the joint-force commander an asymmetric advantage. It helps soldiers close with the enemy, sustain momentum and assure success. It provides precision firepower to destroy enemy forces but is discriminate in its effects, limiting collateral damage. It allows the commander to press the advantage with limited risk during periods of ambiguity.

All this leads to a force that projects credibility. Perceived overmatch over would-be opponents discourages competition while serving as an example to allies and partners. In short, it can reduce strategic and tactical risk, particularly in the early stages of an intervention.

Perhaps most importantly, mobile, protected firepower allows forces to be flexible and adaptable. We can expect adversaries to confront overmatching Army brigade combat teams with unorthodox approaches instead of conventional force-on-force combat operations. As Rand's David Johnson observed: "Light forces optimized for irregular warfare cannot scale up to the high-lethality standoff threats that hybrid and state adversaries will present. ... [A] more prudent approach is to base much of a force's structure and future capabilities on heavy forces that can scale down to confront irregular adversaries as part of a balanced force that includes light infantry. ... Light infantry and medium armored ... forces cannot make a similar transition, even with a shift in training emphasis, because they do not have tanks and infantry fighting vehicles."

Retaining our advantage

The Army of 2020 will organize its major combat forces into armored, Stryker and infantry BCTs that provide varying levels of mobile, protected firepower, deployability and flexibility. Each type of BCT makes important contributions to combined-arms operations, yet the greater mobile, protected firepower capability of the armored units will provide the greatest versatility and agility across the range of military operations.

As the Army shrinks and rebalances its forces, there are several potential avenues that, while seeming to save money or offer

other benefits, would undercut the mobile, protected firepower available to joint-force commanders. For example, shifting armored BCTs into the Army National Guard to save money comes at the cost of the time required to train up and mobilize such forces. Similarly, eliminating some armored BCTs in favor of infantry units is deemed an acceptable risk in view of the money it would save. But these are false economies; a recent Rand analysis indicates that there is little cost difference in either case. Here, operational advantage should be our guide, a measure weighted in favor of armored forces.

Still others say that our advantages in communications, information and precision-strike technologies are so pronounced that we need not maintain armored BCTs as well. Yet, in the last decade of conflict, precision strike, for example, has been challenged by collateral damage and the enemy's ability to deceive, cover and conceal. While these technologies do excel at identifying and attacking targets, they are most effective when employed in combined-arms operations enabled by mobile, protected firepower.

Looking ahead

The Army is changing. The future force will be smaller and regionally engaged; it must also be responsive and decisive, with a robust mix of capabilities and capacity sufficient to give pause to our adversaries, reassure our allies and, when called upon, deliver the punch that defeats our enemies and exerts control to prevent chaos.

While the future is uncertain, the potential for armed conflict with those who can employ modern weapons is real. Engaging in combat operations without an advantage in mobile, protected firepower makes the odds for the enemy far too even, as seen with Task Force Smith in Korea in 1950 and even Task Force Ranger in Somalia in 1993. Without the firepower, protection and shock effect of armored forces, combat operations are likely to be prolonged, resulting in far greater casualties and destruction.

Preserving the advantages conferred by mobile, protected firepower is not just prudent, it is essential.

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Acronym Quick-Scan

ARCIC – Army Capabilities Integration Center
BCT – brigade combat team
CGSC – Command and General Staff College
IED – improvised explosive device
JFCOM – (U.S.) Joint Forces Command
OLC – oak-leaf cluster
TRADOC – (U.S. Army) Training and Doctrine Command

Armor at a Crossroads (Again)?

by LTC Andrew Morgado

"Today the U.S. Army is again facing new challenges. When the historians review the events of our day, will the record for our Army at the start of the 21st Century show an adaptive and learning organization? I think so, and we are committed to making it so. We are leveraging the momentum of the global war on terror to transform our Army's organization and culture. Our Army leaders and Soldiers are responding magnificently to significant organizational changes by demonstrating initiative, resilience and innovation at all levels. Even while modern technology is evolving with incredible speed and dramatically improving our capabilities, our most important resource remains our people. Self-aware, thinking Soldiers and leaders build learning, adaptive teams and organizations. For the 21st Century, we must have an Army characterized by a culture of innovation and imagination." – GEN Peter J. Schoomaker, foreword to 2007 edition of ***Learning to Eat Soup with a Knife*** *by Dr. John A. Nagl*

The death knell of the Armor Branch, specifically challenges to its utility in current and future conflicts, has been sounded many times over the course of my 18-year career as an Armor officer. Not unique to my relatively short tenure in the Army, this re-evaluation of relevance for the "combat arm of decision" normally centers on the limiting weight of our platforms to deploy; on questioning the necessity of heavy armor against adversaries that will not challenge us conventionally; or on the great cost of sustaining such a force in times of financial constraints. In previous challenges, an external event has intervened that allowed a delay in the final reckoning – namely, Saddam Hussein's invasion of Kuwait and the need for firepower and protection in invading Iraq and for close urban fights. Though these interventions have perhaps "saved the branch," the institution can no longer count on such "miracles." Armor is clearly at a crossroads and must define its role through a deliberate, intellectual process.

The genesis of this observation was my attendance at the 2012 Reconnaissance Summit, ably summarized by CPT Michael P. Stallings in the July-August edition of ***ARMOR*** ("2012 Reconnaissance Summit EXSUM").[1] Although its participants were engaged, intellectually stimulated and actively participated in debating the future role of reconnaissance (and thus closely tied with the future of Armor), many left with the impression that we were engaged in "pouring new wine into old skins" and the conclusions of the conference were pre-ordained. The future vision looked much like the present. As a result, participants were trapped in discussions about tactics when – in this period of great transition and in what may be viewed later as an "interwar period" – our thoughts should have turned to the operational and strategic questions on which the future of our mounted force will truly depend. Our emphasis on capturing the tactical lessons we have learned in more than a decade of war in Iraq and Afghanistan may be blinding us to the real needs of defining our roles in wars of the future.

Shimon Naveh, in his book, ***In Pursuit of Military Excellence***, studies the evolution of operational art. Though his work focuses on the progression of operational theory and its application, culminating with the American Army's application of operational art in the first Gulf War, his thesis hinges on the cognitive dimension of war and how different armies applied varying techniques to solve (or not solve) current and future challenges at critical crossroads. One of his greatest critiques was on the hab-

PFC Paul Conaway from 1st Battalion, 6th Infantry Regiment, 2nd Brigade, 1st Armored Division, completes his radio checks on the M1A2 Systems Enhancement Program tank at his motorpool located at Fort Bliss, TX. *(Photo by LTC Deanna Bague, Brigade Modernization Command)*

it of some armies to emphasize tactical excellence at the expense of what truly matters in the prosecution of war. One can summarize Naveh's thesis as "accumulating tactical success, as great as they may be, if not backed by professional, operational direction expressed by means of rational and coherent objectives may end up in a fiasco."[2] This is the fundamental challenge to Armor, a debate confined to a narrow and limiting set of problems viewed in a tactical context. We must set our sights higher and think on a different plane if we are to avoid a "fiasco." The stakes are simply too high to blindly adhere to the status quo. If we are to be relevant as a branch, our arguments must transcend the tactical and be tied to providing our Army, and therefore our nation, an operational and strategic rationale for our existence.

The maneuver community must address four key topics: how armored forces must be organized; how to take advantage of emerging technologies; what will constitute the principal maneuver platform (or platforms); and how to build consensus within the combined-arms community to be part of a true, comprehensive and integrated modernization strategy. The challenges to the utility of the Armor Branch are complex, interrelated with the larger "system" of Army modernization. This identification and discussion of the named four areas are long on pointing out the problems and quite short on presenting solutions. I am willing to weather the challenges of heresy, as this is not a challenge to a life I have known but an encouragement to reflect and influence positive change. This article is intended to launch the first (and it may be the last) salvo in the debate, but this intellectual exercise is too important to allow it to go on unaddressed.

Organizationally, our armored force has not undergone a significant organizational restructure for more than 40 years. The armored warrior of the early 1970s would easily recognize the basic structure of our tank and scout platoons, as well as our armor companies and cavalry troops. Echelon structures and even task-organization practices have remained consistent. Despite great increases in lethality and the addition of several communications, position-location and mission-command appliqués, we have not verified that this basic structure still makes tactical and operational sense. Naveh warns that we cannot limit ourselves to simplicity or what may have worked before when he writes, "The logic of this approach [assumes] that simplicity and lucidity were the key factors in military success. The utilization of these qualities in operational planning dictated, almost inevitably, the application of a direct or rather frontal approach in practical combat. However, since energy is the most common substitute for sophistication, one can always compensate for any apparent lack of insight with physical boldness."

Too much has changed to assume the same structure will apply to all situations. We now make the assumption that what we will see will look a lot like what has gone before. With the exponential rate of change in technology, this is becoming increasingly problematic. Integrated networks, sensors and beyond-line-of-sight killing systems are all developments that offer complex challenges to the old way of doing business. One of Naveh's biggest critiques of the German blitzkrieg was that it was a tactical system with no operational aim and thus was strategically incoherent or, conversely (due to Nazi Germany's unique strategic-leadership structure), its lack of strategic coherence caused a wasting of this tactical success.

Moving armored forces in a wedge, V or staggered column may be rendered completely irrelevant by the ready availability of sophisticated technologies in the hands of multiple enemies or by an adversary that will undoubtedly use complex terrain to his own advantage. Do we really need four tanks to move together? Is a company team of tanks, Bradleys and trucks really the best combination? We are also learning that that relatively "dumb" technology will befuddle our most state-of-the-art systems. Armored forces will compete against both ends of the technological spectrum. How the armor force uses technology also has other implications.

Technology has never been, and may never be, the absolute solution to tactical or operational problems. The temptation to rely solely on technology to solve our operational problems has been revisited several times throughout our recent history. The most notable and recent examples include the "revolution in military affairs" or even "shock and awe" as basic principles. Naveh warned that both in the first and second world wars, "[c]ommunication technology generated an illusion of control. … Hence, the communication illusion, which was generated by the devices technology provided, created deceptive faith in the absolute, centralized but effective mode of command. It encouraged the military leadership to ignore the factor of randomness and the principle of the inner-system cognitive tension, and to repress the healthy penchant for tactical initiative."

This same admonition is still applicable today, as many would advocate a complete revocation of the old way of doing business due to the apparent omniscient qualities associated with some of the current technologies. Although technology is not the cure-all, the Armor force has gone from representing the epitome of technological progress to being the laggard. As G-3 of the Brigade Modernization Command, responsible for evaluating the integration and evaluation of the Army's No. 1 modernization effort – the network – it is clear to me that Armor and heavy platforms are falling behind. Greater situational awareness now resides with the basic rifleman than with a tank or Bradley commander (or even that of an armored-company commander).

For example, the Army is preparing to field Capability Set 13, whose backbone is the Warfighter Information Network-Tactical, to the first eight brigades; only two of these are projected to be heavy brigade combat teams (one of these is 2/1 Armored Division, a testbed for these systems, currently attached to BMC). With the exception of one HBCT and 2/1 AD (a hybrid motorized and mechanized force based on an augmented modified table of organization and equipment; it also fields and maintains a standard HBCT set of equipment), the other Capability Set 13 recipients are infantry brigade combat teams.

Size, weight, power and cooling issues continue to challenge the integration of the most advanced technology we have to offer onto the current backbone of our armored force – the M1A2 Systems Enhancement Program tank and the M2A2/3 Bradley. Recommended solutions are a combination of systems that are engineered and integrated in a very deliberate process to enable a heavy platform with useful mission-command applications. If we are challenged in enabling our armored platforms with the highest development of our digital systems, how relevant is the tank and Bradley?

The venerable Abrams and Bradley platforms are entering their fourth decade of service and are projected to continue serving well into the next decade. The limitations of our current combat vehicles (tanks, Bradleys, Strykers) are well-known: not easily deployed, weight constrains maneuverability or, in the case of the Stryker, not as survivable. The high rate of fuel consumption, the physics of transporting bulk fuels to austere locations and the high cost of keeping the fleet fueled are now constants and will not go away.

Our efforts at achieving efficiencies at operational energy are only attacking the margins while the 800-pound gorilla – Abrams fuel consumption – remains largely ignored. This is not to degrade the Abrams' or Bradley's performance. Our current combat systems have served us well – with firsthand experience I can testify to their effectiveness in Iraq – but we have not adequately addressed what the next platform needs to look like and

A Soldier from 1st Battalion, 35th Armored Regiment, 2nd Brigade, 1st Armored Division, takes a defensive position during movement-to-contact training using the Rifleman Radio at Dona Ana Range, NM. *(Photo by LTC Deanna Bague, Brigade Modernization Command)*

do. Only the wheel vs. tracked debate (that regularly resurfaces in the pages of ***ARMOR***) seems to be the only platform-modernization problem that receives any attention in professional journals. Are we completely committed to the Abrams and Bradley simply because there are no viable alternatives? Must our thoughts be so linear and constrained? Are semi-autonomous weapons just too far out of reach? There is also a tendency to find a platform that "does it all," forcing compromises in firepower and protection (and thus weight) that leave us with the worst of both worlds. Soldiers in the current fight still need an Armor platform, and interim solutions may be necessary, but we also need to look to the horizon. The solution may lie in bringing together organizational, technological ***and*** platform changes together in a well-thought-out developmental process.

Naveh credited GEN Donn A. Starry as the critical figure in making air-land doctrine (Naveh's supreme example of tactical-operational-strategic coherence) work because he created consensus in the development of the winning doctrine. Naveh writes, "Starry encouraged creative independent thinking and dynamic production of operational ideas at all levels of existing services and combat arms. At the same time he provided the system with the authority to judge and the tools to select and assemble the various concepts into a complete and logical doctrine. Starry [laid] down three essential cornerstones. … [First] the formulation of any operational concept can be initiated by any echelon. … [S]econd, examining the concepts, articulating them within the ideas constituting the fabric upon which the complete doctrine is supposed to rest should be conducted by the [U.S. Army Training and Doctrine Command] Deputy Chief of Staff for Combat Development. … And the final stage of writing relevant doctrine must be performed by the Combined Arms Center."

GEN Starry built consensus for his ideas before codifying them in doctrine.[3] He understood the context within which he operated.

Naveh went farther back in history, to the Duke of Wellington, to offer another example of a military officer operating effectively within constraints. Naveh noted that Wellington "perceived accurately the politician's expectations of him, was fully aware of his operational limitations, defined his enemy's tactical limitations and operational weaknesses with great precision and, finally, was aware of the nature of his theater of operations."

Similarly emphasizing the cognitive component of soldiering, and to give Wellington's nemesis equal time, David Chandler expressed, "I know of no example in war which offers clearer evidence of how the numbers and morale of troops, important features as they are, may be overmatched by the weight of one person of genius."[4] The age of Napoleon is long gone, but we cannot underestimate the power of genius, or at least clear thinking, to get us beyond what we know now. Whether defining the next battlefield, anticipating the vagaries of future political debates or sequestration, we are faced with similar challenges and have similar opportunities and pathways.

The same tools available to GEN Starry are still resident, though on an institutional level, the Army must reinvest its human capital back into the generating forces as the tempo decreases in the operating forces. When the resourcing aspect is resolved organizationally, the structures for well-developed modernization are still in place.

For example, the Army Capabilities Integration Center is the son of DCSCD and serves as the architect for the Army of the future. TRADOC and ARCIC, with its integration of combat developers throughout the Army's centers of excellence, are well-positioned to refine requirements, challenge current assumptions and operationally test new concepts. BMC (subordinate to ARCIC) and its "triad" partners of Systems of Systems Integration Division (a division of the Assistant Secretary of the Army-Acquisition, Logistics and Technology) and Operational Test Command (subordinate command of Army Test and Evaluation Command) form the foundation of the Army's modernization and integration efforts. In simplest terms, TRADOC generates a list of

capability "gaps," SOSI assists in generating material solutions and ATEC/OTC applies the rigor of scientific testing procedures, while BMC evaluates the potential solutions in an operational context in the hands of tried-and-true, Forces-Command-brigade-combat-team-assigned Soldiers.

The triad executes network-integration evaluations twice per year at Fort Bliss, TX, and White Sands Missile Range, NM, offering two opportunities per year to test capabilities in an operational environment. In every NIE that a "heavy" platform or concept is not tested, the Armor force drifts further away from the mainstream of modernization. The NIE is a unique opportunity to exercise concepts in the field and leverages the most cutting-edge ideas and systems our Army and industry partners have to offer. Soon, incremental change will not be desirable or even possible for the Armor force. The divergence in modernization will soon demand a radical departure from what we know. That time may be upon us now. The development and progression of the Armor or heavy force cannot happen in isolation. Charting the way ahead is a give-and-take process that cannot be measured in available 19-series coded commands but in how well-integrated are heavy forces into the overall operational and strategic concept. Learning is the essential component.

In John Nagl's book, ***Learning to Eat Soup With a Knife***, the author addresses the required attributes for a learning military organization. Using Richard Downie's "institutional learning cycle" model as a basis of analysis,[5] Dr. Nagl addresses adaptation within military organizations. Nagl compared the British experiences in Malaysia and the American experiences in Vietnam as case studies of how an army adapted or alternatively failed to adapt to new circumstances. It is more than just history or context that shapes the organization. Nagl stresses it is what an organization "does" with these previous experiences that makes the difference. Contextual and situational differences in each theater aside, Nagl observes that, "[T]he British Army had few problems creating internal consensus that change was needed. … [A]n innovative and varied past created a culture amenable to the changes in organizational process required to defeat a complex opponent. … [T]he organizational culture of the American army permitted no doubt in the Army's leadership. … [A]n unshakeable belief in the essence of the organization precluded organizational learning."[6]

Nagl's book is a cautionary tale of how a good organization benefits from "seeing itself" and using self-regulation to make changes, while poor organizations miss or ignore the proper cues. He also highlights the dangers of envisioning your enemy and his capabilities in a way that only fits only your preconceived method of waging war. We as an Army cannot fall into the same trap of narrow thinking or allow organizational ossification and bureaucracy to stop the learning process. We must reward thinkers, even disruptive ones, to have an opportunity to break beyond what we understand now. With openness, we must also have the courage to entertain new concepts and the ability to test these concepts in an operational environment. Out of many ideas, some will be good; many will be quite poor. That is why experimentation, evaluation and testing are essential. How will history judge GEN Schoomaker's assessment in the epigram of this essay? Have we truly been innovative in solving the current crisis in Armor? It is one thing to "say" we encourage innovation, and it is quite another to actually inspire such activity.

Paraphrasing Mark Twain, the reports of Armor's death have been greatly exaggerated. Though a parochial assessment on my part, I am convinced Armor remains a relevant factor in future warfare. Armor officers and Soldiers provide a competent and broad-minded cadre of warriors who think in three dimensions, are adept at integrating combined arms and are battle tested. We just can no longer rely on old modes of thinking. We must challenge our organizational structures and how we employ technologies; consider a truly innovative platform or platforms; and lead the Army effort in jointly charting the way-ahead for the heavy force. We cannot linger on the "good old days" or hope for a peer competitor to sound the trumpet and resurrect the heavy formations of old. The underlying assumptions, which we must convince others are facts, are that mobility, protection and firepower will be required on the battlefield, regardless of the environment. Perhaps we resurrect the Napoleonic adage that "without cavalry [or armor], battles are without result."[7] Most importantly, we must be organizationally open to change, even drastic change, and be a learning institution.

I am sure the reader who expected to read a series of concrete recommendations to resolve these problems is greatly disappointed. This essay has raised many more questions than it has answered (I am not sure if I have answered any), but that was the aim of the entire exercise. The future is uncertain, but before we can field a force capable of defending our country and its interests, we must wage a friendly war in "the field of cognition" to chart the course ahead.

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Notes

[1] Stallings, Michael, "2012 Reconnaissance Summit EXSUM," ***ARMOR***, July-August 2012.

[2] Naveh, Shimon, ***In Pursuit of Military Excellence***, Portland: Cass, 1997.

[3] Naveh.

[4] Chandler, David G., ***The Campaigns of Napoleon***, New York: Scribner, 1966.

[5] Downie, Richard, ***Learning from Conflict,*** Westport: Praeger, 1998.

[6] Nagl, John A., ***Learning to Eat Soup with a Knife***, Chicago: Chicago UP, 2005.

[7] Chandler.

Acronym Quick-Scan

AD – armored division
ARCIC – Army Capabilities Integration Center
ATEC – Army Test and Evaluation Command
BMC – Brigade Modernization Command
DCSCD – Deputy Chief of Staff for Combat Development
HBCT – heavy brigade combat team
NIE – network-integration evaluation
OTC – Operational Test Command
SOSI – Systems of Systems Integration Division
TRADOC – (U.S. Army) Training and Doctrine Command

Subjective Thinking and the Relevancy of Heavy Armor in Modern Warfare

by CPT Thomas A. Rebuck

Since the end of the Cold War, many pundits – including some within the Armor community – have questioned the main battle tank's legitimacy as an instrument of modern warfare. This assertion is based on a multitude of assumptions regarding the presumed and/or anticipated nature of 21st Century conflict, most – if not all – of which are highly subjective, dangerously misguided or horribly wrong. This isn't surprising given the mad scramble of the 1990s to justify the Army's existence in the post-Cold War world. In this environment, any idea, theory or initiative was acceptable provided it distanced itself from Cold War methods, equipment or organization. Because it was the perceived embodiment of our Cold War-era Army, to those caught up in the quest for institutional validation, the Abrams became a convenient scapegoat – a pariah to be belittled and marginalized at every opportunity.

Although allegedly based on progressive views on the changing nature of conflict, allegations that heavy armor is, or will be, superfluous in the contemporary and future operating environments are backward and regressive. Such assertions mirror the myopic perspectives of post-World War I conventional wisdom, which viewed the tank as a one-dimensional weapon system, useless except as a tactical tool for close support of the infantry. This same type of narrow-mindedness is driving the current debate over the significance of heavy armor since it is based on the perception that the tank's sole purpose is to destroy other tanks. Since the Abrams was primarily designed to destroy Soviet heavy armor, it became easy for the unimaginative to see its *raison d'être* exclusively in the context of a massive confrontation of armor in a Warsaw Pact invasion of Western Europe. Subsequently, once this threat receded with the collapse of the Soviet Union, it seemed entirely reasonable to presume that the role of heavy armor in contemporary and future conflict had become superfluous.

While reference to other reasons questions the suitability of heavy armor for 21st Century conflict, these have little to do with its battlefield performance or capabilities, focusing instead on peripheral issues like logistical convenience and rapid deployment. In addition, critics have mistakenly equated the tactical mishandling of armor – as occurred in the First Chechen War (1994-95), for example – with armor being obsolete. In fact, over the past 90 years, almost from the moment of its first appearance on the battlefield, there have been continuous efforts to characterize the tank as a "legacy" system.

From general perceptions on the presumed end of conventional conflict, analysts have repeatedly pronounced the tank's impending redundancy/obsolescence. The debate over the relevancy of heavy armor exists on two levels: specifically, the MBT's utility and, generally, the accuracy of assumptions about contemporary and future warfare. While critics may dismiss the MBT's defenders as conservative reactionaries uncomfortable with change, it is they who are wrong and on both counts. Not only is the Abrams functional across the full spectrum of conflict, the demands of sustained ground combat will continue to require the presence of heavy armor in the U.S. Army's arsenal for many years to come. As we will see below, opposition to heavy armor has little, if anything, to do with its effectiveness or relevance on the modern battlefield, but with the subjective viewpoints or personal agendas of its critics.

"[T]he British army was an army supposed only to be ready for small wars. But was this small-war army in a fit state for war of any kind?" – Thomas Pakenham[1]

Transformation politics

Transformation began in the wake of the Cold War, when the specter of Soviet expansionism faded. After spending more than 40 years preparing to fight a single threat, the Army suddenly faced no apparent enemy at all. Confronted with the prospect of having to justify an annual budget with no specific enemy to prepare for, a movement grew within the Army that sought to make it appear "relevant and ready" by shifting its focus away from sustained ground combat and toward operations other than war. By marketing itself as a force to support humanitarian and peacekeeping missions around the world, it hoped to keep an unfriendly, if not hostile, administration and ambivalent legislature from slashing its budget. Thus, the effort to sell Transformation to Congress and the Army at large resembled nothing so much as an advertising and public-relations campaign rather than a true effort to implement Army reform.

This approach was manifest in the hyperbolic rhetoric adopted by the advocates of Army Transformation. In the March 2000 issue of ***Soldiers*** magazine, the hierarchy sought to present Transformation as the hip

new way the Army was going to operate. It asserted that Transformation would "provide to the nation an array of deployable, agile, versatile, lethal, survivable and sustainable formations which are affordable and capable of reversing the conditions of human suffering rapidly and resolving conflicts decisively." It also assured us that the new Army would be able to "operate across the full spectrum of operations … deploying to prevent, contain, stabilize or terminate crisis, deploying in stability-and-support operations to guarantee peace and protect forces, or deploying to major theater wars."[2]

While the rhetoric was polished to a blinding sheen, the reasoning behind it was not.

What we were seeing, in effect, was the institutional equivalent of a mid-life crisis. After years of focusing exclusively on the Soviet threat, the demise of our archenemy seemed to have left us without purpose or direction. The Army's response, like the 40-something individual who begins an emotional and usually superficial quest to find meaning in life, was less concerned with reinforcing or enhancing its fighting power than with justifying its existence in the post-Cold War world. Rather than placing it in an historical context, we chose to see the struggle against the Russian menace as an end unto itself, the end-all and be-all of conventional conflict. Thus we felt compelled to reinvent the Army by changing its mission focus and force structure once the Soviet threat receded.

While Transformation may have raised legitimate concerns regarding the Army's Cold War organization and methods, the solutions it offered were, and remain, unsatisfactory. They represent more of an organizational and doctrinal shell game than a legitimate effort at comprehensive reform. In fact, its proponents seemed more interested in remolding the Army's image than substantially improving its fighting power. Thus did the Transformationistas feel compelled to reinvent the Army, scrambling to scare up any job they could to ensure an adequate share of the defense budget. Their motto could have been, "Have Army, will travel; peacekeeping and humanitarian support missions our specialty." The Abrams had no place is this hip, New Age Army.

The true legacy of Transformation is a confused mishmash of theory, doctrine and reorganization. It threatens to cripple our capabilities for waging high-intensity warfare by discarding the means for successfully engaging in sustained ground combat. Conversely, while on a tactical level the Army has been adept at refining its tactics, techniques and procedures in Afghanistan and Iraq, the validity of those refinements remains problematic since it's arguable whether its overall approach to counterinsurgency operations in general, or Afghanistan and Iraq specifically, is or was correct in the first place. The failure to reconcile the needs of both low- and high-intensity warfare threatens our ability to engage in either type of conflict satisfactorily. Like the British Army of the late 19th Century, the U.S. Army is in danger of becoming a small-war army unsuited for war of any kind.

Ground combat threat

The end of the Cold War saw the Army fall into the same theoretical trap that has ensnared politicians and military thinkers for more than a century. They assumed that the inevitable post-war technological advances, economic conditions and political realities make the threat of sustained ground combat unlikely, if not impossible. What is truly frightening is that all ranks of the U.S. Army, from private to general officer, to great extent internalize this assumption. It is a partial consequence of its exclusive 40-year focus on the Soviet Union and Warsaw Pact. The breakup of this threat created a massive vacuum in the Army's sense of purpose, so it filled it by a similar all-consuming menace. Instead of using this breathing space to improve the Army's generic quality – refocusing on military excellence in general rather than a particular enemy in particular – it expended time, energy and resources on replacing its fixation on one mission (countering the Soviet threat) with that of another (low-intensity operations).

It is the inability to place modern events in an historical context that lulls the unwary into accepting that pernicious and oft-repeated fallacy that the threat of sustained ground combat has, for all intents and purposes, ceased and it is no longer worthy of serious attention. The seeming lack of an overt conventional threat(s) is, however, more apparent than real.

The only reason the threat of conventional conflict ***appears*** so remote is the ***perception*** the U.S. military can and will decisively defeat any attempt to engage it in sustained ground combat – a perception resting primarily on its success in operations Desert Storm and Iraqi Freedom. Should these perceptions change for any reason, their deterrence value suddenly becomes problematic, if not completely invalid. In fact, the assertion that low-intensity warfare will predominate in the 21st Century is a self-defeating prophecy, since refocusing the Army away from conventional conflict toward low-intensity operations will ultimately alter both the perception and the reality.

The perceived omnipotence of the U.S. military in the realm of sustained ground combat is itself far more fragile than conventional wisdom would have us believe. While many will claim that the Army's performance in Desert Storm and Iraqi Freedom proves it has attained an unprecedented level of military efficacy, such conclusions are not only highly subjective, they are dangerous. To presume the possession of unrivalled military excellence based on performance against an isolated Arab state possessing a third-rate military unable or unwilling to fight cohesively and lacking competent leadership at every echelon is dubious at best.[3] Even more egregious is the assumption that we would have defeated the Red Army with equal utility. Although the Iraqi armed forces were equipped with Soviet-style weaponry and trained in its doctrine, its cohesion, capabilities and resources were dwarfed by those of the Russians, making such comparisons spurious.

Another element contributing to the view that low-intensity warfare will predominate in the foreseeable future is the erroneous assumption that the ability to engage in sustained ground combat is the monopoly of a Soviet-style hoard equipped with heavy armor. In fact, the key element required to engage in sustained ground combat is cohesion and unity of purpose – the commitment and ability to work together toward a common objective – and not an army's size, equipment or doctrine. During the years of extensive U.S. ground-force involvement in Vietnam, neither the Viet Cong nor the North Vietnamese Army opposed Free World forces with heavy armor (although they did commit light-armored PT-76s in limited numbers). Yet, their cohesiveness and unity of purpose made them an extremely dangerous and lethal opponent nonetheless, one which the tank was used against with great effect.

The notion that nations are too economically interdependent in general, or dependent on the United States specifically, to ever accept the risks of conventional conflict is also of dubious merit. This has been one of the favorite and most convenient excuses for neglecting national defense since before World War I. First, the economic hegemony the United States has enjoyed for much of the 20th Century no longer exists, having been significantly curtailed by various Asian nations – and our national wealth lost to oil-producing states in the Middle East. Second, it also ignores the threat posed by foreign investment and purchase of an increasing percentage of the federal debt. Might not the desire to secure those investments provide the incentive or excuse to embark upon military action? To dismiss this possibility is to take for granted a degree of continuity in internation-

al relations that has never existed in recorded history. Third, in the minds of most politicians and the public, economic self-interest is an abstract concept open to subjective interpretation that will never guarantee peaceful coexistence.

At this point, we also need to challenge the assumption that the U.S. military will always have the luxury of operating as part of a coalition and never face the possibility of either fighting a war alone, or fighting alone against a coalition of other nations. Since the early 1990s, the spirit of cooperation that unified the West against the Soviet menace has worn increasingly thin. The refusal of many of our European allies to support our efforts in Iraq and their minimal support in Afghanistan is evidence of this. So profound has this rift become that only the political courage of Prime Minister Tony Blair kept our staunchest ally of the past 60 years active in the Iraq coalition. Without the shadow of Soviet expansionism hanging over their heads to encourage cooperation, the visceral hatred many foreign politicians have for the United States has come to the fore and loosened the ties upon which our alliances and coalitions have been built. Thus, basing our plans on the unshakable assumption that such coalitions will always exist is not only complacent but also irresponsible.

Finally, advocating the wholesale reorientation of the Army's force structure and equipment ignores the difficulties of ramping up for sustained ground combat once this threat becomes a reality. This makes it difficult, if not impossible, to rapidly transition the Army back to high-intensity warfare, either materially or philosophically. It is far easier to transition from high- to low-intensity operations than it is to transition from low to high. This is not to imply that we should be ignoring the requirements of low-intensity operations – particularly COIN – but that the baseline for Army readiness needs to remain sustained ground combat.

Rapid deployment and pre-emption

One of the excuses for banishing the MBT from our military arsenal is the alleged need for creating rapidly deployable forces that can airlift into a theater of operations. This would, in theory, provide us with a capability for "reversing the conditions of human suffering rapidly and resolving conflicts decisively." In other words, rapidly deployable forces facilitate a policy of pre-emption. Such perceptions, however, comprise the links in a circular chain of faulty reasoning:

- We need to downsize or eliminate our heavy conventional forces to create a lighter, more rapidly deployable force;
- Creating a lighter, more rapidly deployable force can facilitate pre-emption and prevent the escalation of conflict; and
- Facilitating pre-emption and preventing the escalation of conflict can downsize or eliminate our heavy conventional forces.

This logic seems flawless until the question arises of what happens when pre-emption doesn't work and events escalate out of control anyway.

First, even if there is a consensus that pre-emption is a legitimate instrument of foreign policy, there is no guarantee that a particular administration will possess the moral fortitude or political will necessary for its execution. Second, for pre-emption to be a viable option, it requires the approval and/or cooperation from any number of foreign countries for airspace clearance, ground access, airbases, ports, etc., which are likely to prove problematic unless an overt threat exists to the countries themselves. Note here Turkey's refusal to allow 4th Infantry Division egress into Iraq through its territory during Operation Iraqi Freedom.

Third, it dismisses the probability that the deployment of U.S. forces is just as likely to result in escalation as de-escalation. The entire premise presupposes an unprecedented capability for micromanaging and manipulating the perceptions and reaction of foreign governments and non-governmental groups.

It is paradoxical that so much emphasis is on rapid-deployment capability when the preponderance of future missions, at least as foreseen by critics of heavy armor, do not inherently require rapid deployment. Peacekeeping, stability and support or other low-intensity operations do not require the large-scale, rapid deployment of U.S. forces. In fact, the approach for such missions should be a slow, cautious and deliberate manner to ensure that clear identification and definition of objectives and end-states. In light of this, does it matter whether it takes 96 hours or 96 days to position a force in a particular region?

The only scenarios in which the benefits of a rapidly deployable force could drastically impact our national-security interests are precisely those which a lightweight force is least capable of handling. Countering a Soviet invasion of Western Europe – which, if successful, would have drastically tipped the geopolitical scales against the United States – is the type of scenario requiring a large-scale rapid deployment of U.S. forces. Peacekeeping operations in the Balkans – or anywhere else, for that matter – do not.

"It is easy for ignorant people to think that success in war may be gained by the use of some wonderful invention rather than by hard fighting and superior leadership." – GEN George S. Patton Jr.[5]

At any rate, rapid-deployment capability should never take precedence over the mobility, survivability and lethality of a particular weapons system. As pointed out by COL Daniel Whiteside, "Whether or not a combat system can get on a C-130 aircraft must be a secondary consideration. Fighting vehicles, tanks and artillery pieces must be selected to defeat a specific threat – not on the ability to get them to a theater."[4]

The only result of rapidly deploying forces that are incapable of successfully engaging a determined, cohesive and determined foe will be military and political disaster.

Technology as panacea

For the past century, there has been an endless procession of military theorists touting the future dominance of one form of technology or another. While each of these "visionaries" may have been partially correct in one way or another, their overall claims were usually extremist and wildly inaccurate. For example, even after 90 years and an exponential advancement in aviation and weapons technology, the efficacy of strategic airpower has yet to meet the expectations of its original theorists. This obsession with technological gadgetry reflects a serious cultural flaw of Western militaries, namely the desire for painless, quick-fix, silver-bullet solutions. Rather than viewing technology as a tool in the Army's repertoire – the means to an end – this mindset views it as an end unto itself.

Coupled with such notions is the idea that "technological overmatch" will enable the U.S. Army to do more with less, allow-

ing us to slash our combat-arms components. While this kind of thinking plays well with politicians and pacifists, dovetailing nicely with a vision of the Army as an international constabulary / humanitarian-relief organization, it flies in the face of military logic and common sense. First, technology is not capable of replacing Soldiers in low-intensity/COIN operations, let alone under the conditions of sustained ground combat. This is a proven point in Iraq and Afghanistan, where we have been blocked by decentralized, low-tech opponents, requiring a larger commitment of "boots on the ground" than originally anticipated.

The belief is that network-centric technology will provide such complete and overwhelming situational awareness that we will be able to detect and destroy enemy forces before they ever get close enough to knock out our future fleet of unmanned drones or lightly armored combat vehicles. The most parochial armor officer would be happy to turn in the keys of his Abrams if the Army were to develop a smaller, lighter and more fuel-efficient combat vehicle, provided that it was (in and of itself) as lethal, mobile and survivable as the M1A2. However, implying that a complex network of automated systems somehow imparts the same level of survivability and lethality to a light armored vehicle as several inches of depleted-uranium armor and one 120mm smoothbore cannon is absurd. It ignores the possible – if not probable – development of effective countermeasures against such systems, or the potential for a catastrophic system failure of the network's hardware or software. It essentially dismisses the fact that the capability of such systems is inevitably degraded under typical battlefield conditions – like dust and smoke – especially in urban environments, the presumed battleground of the future operating environment.

The other side of this issue is the rush to condemn an existing type of technology as obsolete because of the initial, but transitory, impact of a new counter to that technology. This occurred following the 1973 Yom Kippur War when theorists were writing the tank's obituary based on the initial success of Egyptian Sagger anti-tank guided missiles. Although the Israelis were at first surprised by the Sagger's effectiveness and initially suffered heavy tank losses, they quickly adjusted their tactics and were able to neutralize the Egyptian ATGM teams. The fallacy of the tank's demise was, in fact, demonstrated even before the conflict was over; the Israelis went on to achieve a decisive victory in which their tanks played the predominate role.

One need also to consider the continued utility of the mechanically simple, yet extremely durable and reliable, A-10 Warthog to recognize that new is not necessarily better – and certainly not cheaper.

Conclusion

The debate over the relevancy of heavy armor exists on two levels: specifically, the MBT's utility and, generally, the accuracy of assumptions regarding contemporary and future warfare. In both cases, the MBT's critics are wrong. Supposedly they base their arguments' progressive views on the changing nature of conflict. However, their thinking is backward and myopic – backward in that it mirrors post-World War I conventional wisdom in viewing the Abrams as a one-dimensional weapon system; myopic since it presumes the threat of sustained ground combat is, essentially, nonexistent.

The Abrams is a versatile instrument of war, able to function across the full spectrum of conflict. It can instantaneously respond to any situation at any given time, literally transitioning from COIN operations to fighting enemy heavy armor in seconds. No other ground combat vehicle in the U.S. arsenal provides this capability or flexibility.

While suitable for low-intensity operations, it is doubtful whether a light armored vehicle like the Stryker Mobile Gun System could equal the Abrams' performance under the demanding and lethal conditions of sustained ground combat. Furthermore, the notion that network-centric technology will impart the same benefits as several inches of depleted-uranium armor and one 120mm smoothbore cannon to a light armored vehicle is beyond comprehension. Until the Army develops a new combat vehicle that, in and of itself, possesses the same level of lethality and survivability as the Abrams, its elimination as an instrument of war will have negative, if not disastrous, consequences.

The critics of heavy armor will also aver that the threat of conventional conflict is essentially non-existent and the need for an MBT superfluous. Yet, the only reason this threat seems so remote is the perception that a) the U.S. military will decisively defeat any and all attempts to engage it in sustained ground combat, and b) the ability to engage in sustained ground combat is the monopoly of a Soviet-style hoard equipped with heavy armor – which apparently no longer exists.

On the one hand, refocusing the Army away from conventional conflict toward low-intensity operations will ultimately alter both the perception and reality of its warfighting dominance, thus eliminating its value as a deterrent to conflict. On the other, cohesion and unity of purpose – not the possession of heavy armor – are the primary requirements for engaging in sustained ground combat. In either case, once one looks past the original perceptions of the MBT's critics, not only does the possibility of high-intensity conflict become increasingly real, each underscores the ongoing need for a lethal, mobile and survivable weapons system like the M1A2 Abrams MBT.

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Notes

[1] Pakenham, Thomas, ***The Boer War***, Avon Books: New York, 1979.

[2] http://dtic.mil/soldiers/mar2000/features/vision1.html, 2000.

[3] Note that the Israeli Defense Force – itself all but isolated and alone – routinely defeated multiple Arab nations simultaneously with the same expeditiousness as a coalition of nations disposed of the Iraqi army in 1991 and 2003.

[4] Whiteside, COL Daniel, retired, ***Armed Forces Journal***, May 2000.

[5] Blumenson, Marvin, ***The Patton Papers, 1885-1940 (Vol. I)***, Houghton Mifflin: Boston, 1972.

Acronym Quick-Scan

ATGM – anti-tank guided missile
COIN – counterinsurgency
MBT – main battle tank

From Blackhawk to Bradley: A Quick Story about Flexibility

by Christopher G. Hume

The versatility of the modern American infantryman is evident in almost every report coming out of Iraq and Afghanistan. As the platoon leader of 1st Platoon, C Company, 1-32 Cavalry, I was fortunate to witness one example. It did not necessarily happen during a firefight or on a specific day but over a period of several months in the full spectrum of operations indicative of the conflict.

On Christmas Day 2005, the Soldiers of 1st Platoon, Charlie Company, 1-32 Cavalry (Reconnaissance, Surveillance and Target Acquisition), 1-101st Airborne, were three months into their tour and adjusting to their new forward operating base in Muqdadiyah, Iraq. Muqdadiyah sat a few dozen kilometers from the provincial capital of Baqubah. The men from Fort Campbell, KY, had transformed from an infantry battalion to a RSTA squadron in less than six months. They adapted well to using armored trucks in daily operations and focused on the ever-shifting shape of the enemy. Everyone knew the evolving battlefield demanded flexibility and versatility, and that it did not look kindly upon those who resisted change in the name of tradition.

Despite the change that defined their short history, no one could have predicted the next challenge they would face. It did not come in the form of a new deadly enemy tactic, technique and procedure or a serious loss of leadership, but with the introduction of a new tool: the M2A2 Bradley Fighting Vehicle. These air-assault infantrymen, accustomed to helicopter insertions and the occasional truck ride, soon learned to operate, maintain and fight in a fully tracked, armored vehicle typically found in mechanized infantry formations. Many greeted this painful transition with resistance and doubt, but it did not take long for everyone to realize the advantages of the protection and firepower the BFV brought to the table. The strengths could not be ignored, and all became disciples of this unfamiliar beast.

The platoon's story began a year and a half earlier on the Tennessee-Kentucky border. Charlie Company had a tumultuous birth and history considering its short existence. Due to Army Transformation, the former 3rd Battalion, 327th Infantry Regiment, was reduced to one infantry reconnaissance company consisting of two platoons, a mortar section and a sniper section. The remaining two companies became cavalry troops composed entirely of cavalry scouts, military-occupation specialty 19D, of the Armor Branch. For various reasons, the infantrymen did not work well with the 19Ds, causing a huge training hurdle. The officers were more understanding, but friction defined the first several months. There was also a shortage of vehicles and equipment since the modified table of organization and equipment had changed. The platoons shared the few trucks the unit owned.

On a positive note, the mass downsizing of MOS 11B allowed Charlie Company to keep the best Soldiers from 3rd Battalion, so most of the men were physically fit and extremely competent in their technical and tactical expertise. Unfortunately, the importance of that infantry and reconnaissance expertise was debatable because the purpose and employment of Charlie's platoons were questions. They initially trained as a line-battalion scout platoon, focusing on dismounted reconnaissance and surveillance, hide sites and long-range movement by foot. This was fitting since many came from the now-disbanded 3-327 scouts. However, the battalion commander, LTC Arthur Kandarian, who was acutely aware of his unit's reduced manpower, considered them as rifle platoons minus machineguns.

The debate only accelerated when battalion live-fire exercises began and all platoons in the battalion were expected to execute convoy operations. Finally, one month prior to deployment, the two platoons became three by detaching one team from each and placing the fire-support officer in the platoon-leader position. All platoons in the squadron, the battalion's new name following re-flagging, would be manned and equipped the same.

Satisfaction in finally having clear guidance overshadowed the infantrymen's expected resistance to more change. Of course, the nature of deployments made this comfort short-lived as change would once again define the experience of 1st Platoon, Charlie Company, and all members of 1-32nd Cavalry Squadron.

The first few months of the deployment found 1st Platoon in a small forward operating base near the Iranian border, temporarily attached to the squadron's A Troop. The men found comfort in the leadership of A Troop's commander, CPT Sean Brown. Although a tanker, he took good care of his infantrymen and welcomed them into the fold. The enlisted men also learned to respect and work with the 19Ds, as their knowledge of vehicles exceeded the average rifleman's. Operations at the first FOB were routine and without great incident.

The fall elections of 2005 were the greatest priority, resulting in solid coordination with the local Iraqi Security Forces. Things were going so smoothly, in fact, that the troop handed operations over to the Iraqis, with military-transition-team supervision, and headed to their new home an hour's drive down the road in Muqdadiyah. What waited for its Soldiers surprised everyone, most of all the men of 1st Platoon. They would relieve a mechanized infantry battalion, the 1-30th Battle Boars of 3rd Brigade, 3rd Infantry Division, and keep a few of their toys, the M2A2 Bradley Fighting Vehicles.

After the jump from foot to trucks, the next leap to tracked vehicles was not totally out of the realm of possibilities. A rumor that the unit would have tracked vehicles had surfaced prior to deployment, and a few of the 19Ds who had Bradley experience conducted driver's training at Fort Campbell. Despite this now-obvious indicator, none of the men in 1st Platoon ever thought it would be them who mounted such a vehicle. Most of them did not know the difference between an M2 and an M1, referring to anything with tracks as a "tank." However, the battalion commander could not afford to exclude any of the small force currently posted in Muqdadiyah and demanded that each platoon of A Troop attend the train-up. Therefore, in between left-seat and right-seat rides for the area of operations orientation, the 101st boys went to Bradley school, courtesy of the Battle Boars.

During those four days of training, the men and officers learned everything from loading and unloading the weapons systems to changing track. The designated drivers drove, the designated gunners fired and the platoon leadership soaked up as much as they could. The training culminated in a condensed gunnery and "road test" out in sector. Some in the platoon received extra training on their road test, thanks to a well-concealed 155mm

artillery shell that exploded off the right side of the platoon leader's vehicle. The scenario repeated another two dozen times in the platoon's eight-month relationship with the Bradley. Yet this first incident was the one most remembered for selling the infantrymen on the advantages of armor; the Bradley performed as advertised.

Once the Bandits of 1-32 took over their new battlespace, they lost no time in getting the Bradleys into the fight. Route clearance became an obsession of the commanders, and as a result, the men of A Troop, 1-C included, spent many long hours out on the roads. The vehicles also proved an excellent conveyance for sniper teams and other dismounted assets that needed insertion in sector. As the men's experience grew, and they became comfortable with the vehicles, the missions became more complex and coordinated.

Many times the Bradleys were used to support patrol bases in sector, dismounted surveillance platforms, raids and cordon-and-searches. The vehicles proved to be excellent for insertion of small dismounted patrols. The survivability and the carrying capacity allowed a complete element to ride together and get on the ground quickly without compromise. These techniques, of course, did not come right away, and the lessons learned by the men of 1st Platoon could fill volumes.

Maintenance was a vertical learning curve. As stated before, every man in 1st Platoon had a light-infantry background. Most had never even seen a Bradley. The few A Troop 19Ds with mechanized experience, which included a mechanic, helped tremendously. However, this did not prevent the inquisitive infantrymen from breaking, and then learning how to fix, just about everything that bolted onto the vehicle. The most comedic incident involved the lug nuts for the road wheels. The boys soon discovered that when the wheels came loose, they would shoot off the side of the vehicle at high velocity. Several wheels later, they finally learned that the lug nuts were to blame; problem solved.

Since each piece of equipment in the Army has its own specific characteristics, it requires its own standard operating procedures, load plans and crew drills. The platoon devised contingency plans for vehicle recovery, casualty evacuation, modified fuel loads and down-weapon drills. Also, the gunners learned how to implement the Integrated Sight Unit, which was a very useful optic, and incorporate its thermal capabilities into route clearance. The drivers learned how to maneuver in restricted terrain, but not before learning several painful, yet amusing, lessons. For example, ground that looks dry is not necessarily so, bridges that support trucks don't always support Bradleys, and house walls make for tight turns.

Despite all the mistakes and challenges, the men of 1st Platoon, more than any, became masters of their new trade. In mission after mission, light-infantry skills were combined with the skills of the Bradley crewmen to accomplish tasks otherwise beyond the normal capabilities of either a purely mechanized force or a purely light force.

In late spring 2006, the rest of Charlie Company eventually linked up with 1st Platoon in Muqdadiyah. Thanks to a close relationship among its young leaders, due in part to the fact that many of the Soldiers were previously in 1st Platoon, 3rd Platoon was given some rudimentary instruction on Bradley operations and successfully implemented the vehicles into their own patrols.

The integration of mechanized and light-infantry operations came to a head during the last month of the deployment. Tireless intelligence-gathering through patrols, interrogations, surveillance and informants finally produced a mature target list for an improvised-explosive-device cell in a nearby village. The number of objectives demanded that all of Charlie Company would participate. The plan called for a mounted Bradley insertion followed by foot infiltration. Coordination among all the units was imperative to avoid compromise. If anyone in the village expected anything besides a normal route clearance mission, the targets would flee.

Once all three platoons settled in their respective assault positions, the Bradleys withdrew to the FOB for quick-reaction force duties. At H hour, all three dismounted elements moved across the large canal encircling the village and hit three objectives simultaneously. This caught local nationals by surprise, causing capture of the targets after only a brief fight. Once the initial assault occurred, the Bradleys returned to provide security and prisoner transport. The integration was flawless and the mission a success. The firepower and speed provided by the Bradleys, and the stealth and situational awareness of the dismounted Soldiers, combined to form a lethal and versatile team.

Flexibility is a virtue of all Soldiers, especially infantrymen. Some units learn how to adapt early, and others drag their feet and resist the very mention of change. Initially, the men of 1st Platoon were reluctant to veer from their predestined path. Yet as their training and then their deployment progressed, versatility came to define the very nature of their identity. From dismounted infantry battle drills, reconnaissance work and foot patrols, to truck maneuver and finally mechanized operations, their willingness to learn and adapt was ever-present.

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Acronym Quick-Scan

BFV – Bradley Fighting Vehicle
FOB – forward operating base
MOS – military-occupation specialty
RSTA – reconnaissance, surveillance and target acquisition

The Ground Combat Vehicle

by Darrell W. Barden

Lessons-learned from the current operating environment highlight that the current fleet of combat vehicles does not adequately counter the current threat, and the vehicles lack capabilities. Therefore, they do not perform the operational requirements of future warfighting concepts or threats effectively. The asymmetric environments of Operation Enduring Freedom and Operation Iraqi Freedom reveal capability gaps within the Army's current ground-combat fleet. Though an array of appliqués addresses these gaps to varying degrees, these solutions push Army combat vehicles to or past their size, weight and power limits.

In the Iraq conflict, for example, the Abrams, Bradley and Stryker received various modifications to make them more survivable in non-contiguous warfare. The modifications (and the mine-resistant, ambush-protected vehicles) resulted in more capability gaps to other functions like mobility, reliability and operational flexibility.

Moreover, the intent for the Infantry Fighting Vehicle variant is to mitigate the gap created by the Bradley IFV; it "breaks up squad integrity and does not provide for rapid egress and ingress of all the squad members with mission-essential equipment." The Ground Combat Vehicle requirement for Force Management-Soldier Capacity states that the vehicle must provide seating for 12. This number includes the three-man crew and a nine-man infantry squad with their organic weapons, personal protective equipment and mission-essential equipment.

The Ground Combat Vehicle intends to address these gaps for the 2017-2050 force. The first increment of the GCV effort is an IFV designed to provide the infantry squad with highly mobile and protected transport to the decisive locations on the battlefield. In addition, the IFV will provide both destructive fires against threat armored vehicles and direct-fire support for the squad during dismounted assaults. The new IFV also increases the infantry's tactical mobility, survivability and lethality against light and heavy armored threats.

The GCV program is presently in the first of a three-phase development effort: technology development. During TD, the GCV Project Management Office is executing a three-pronged acquisition strategy that uses contractor-developed, best-value designs, technical and operational studies of existing vehicle platforms and continued analysis of existing alternatives to assess GCV requirements against costs and schedule. Then the program will move into production.

In December 2010, as part of the assessment of existing vehicle platforms, the Maneuver Center of Excellence Maneuver Battle Lab and the U.S. Army Training and Doctrine Command's Analysis Center conducted an experiment with the GCV. The experiment determined if the requirement to carry a crew plus nine Soldiers provides enough operational advantages to retain the requirement in the GCV capabilities-development document.

The experiment considered two alternatives: a GCV with a seven-man carrying capacity and a GCV with a nine-man carrying capacity. The experimental design employed two mechanized-infantry platoons. One platoon consisted of soldiers from Company A, 1-29th Infantry Regiment – the TRADOC experimental force. The second platoon was a composite of Soldiers from the 121st, 48th Infantry Brigade Combat Team, Georgia Army National Guard. Data collection included direct assessment/observation of Soldiers conducting standard infantry missions and tasks, surveys, video capture of operations and end-of-mission after-action reviews. The assessment found that missions conducted with the nine-man capacity were more operationally effective than missions conducted with the seven-man capacity. This finding validated the GCV CDD nine-man capacity requirement.[1]

The Program Executive Office for Ground Combat Systems requested that the MCoE support these efforts, with specific emphasis on the operational assessments of select non-developmental combat vehicles (Israeli Namer, Swedish CV9035, double-V hull Stryker, turret-less Bradley and M2A3 Bradley). The insights and data from these assessments will inform the Milestone B AoA dynamic update, with specific uses in the modeling and simulation support to the AoA.

Over the past 12 months, the MBL coordinated the efforts of 14 organizations and conducted assessments on three continents to ensure the Army gets its GCV requirements right. The operational assessments were conducted in parallel with the technical analysis within the non-developmental vehicle Combat Vehicle Analysis Strategy to provide data to TRAC in support of the GCV dynamic AoA. There were two phases of operational assessment. The first phase focused on the Namer and took place in Israel Jan. 10-Feb. 9, 2012. The EXFOR received one week of new-equipment training before the OA and then began assessing the Namer to address gaps identified in the GCV initial-capabilities document as well as meet requirements in the draft GCV CDD within the host country.

The OA focused on vehicle attributes that address GCV requirements. The OA team conducted a front-end analysis to determine which CDD requirements (key performance parameter, key system attributes and additional system attributes) will most likely be impacted by the Namer's characteristics. The OA was designed to assess the Namer employed throughout the full range of military operations. The EXFOR employed the vehicle against a TRADOC Intelligence Support Agency-trained opposing force that reflected IFV-like projected threat.

Before Phase II, 15 EXFOR Soldiers, comprising five crews, deployed to Denmark March 5-30, 2012, for NET on the Royal Danish Army CV-9035 IFV. The training EXFOR crews received prepared them to operate the vehicle safely and proficiently during the May 2012 assessment at Fort Bliss, TX. The MBL and TRAC team conducted an analysis of Study Issue 1 (GCV CDD refinement) concurrent to the EXFOR conducting crew NET to inform the requirements for the GCV CDD and AoA. The EXFOR also received Stryker NET at home station April 9-20, 2012, to ensure their proficiency with that vehicle.

The second OA phase consisted of the EXFOR crews receiving CV-9035, Namer, Stryker DVH, turret-less Bradley and M2A3 Bradley refresher training before conducting the OA May 16-23, 2012, at Fort Bliss. Phase II was conducted at the platform level using static assessments and situation-training-exercise lanes. Data-collection efforts focused on quantitative data during the static assessments and qualitative data during the STX lanes. The Soldiers were engaged in multiple day and night operations with the five vehicles across open desert and urban terrain in dynamic, demanding scenarios. The evaluation for each

vehicle included durability, capacity, modularity, lethality, interior space and operational capability.

At Fort Bliss, the MBL led a Phase II session that was instrumental in informing Army leaders about eventual requirements for a new IFV to ensure mission success. The Army leadership will use the data collected from this assessment to determine what characteristics and capabilities best define what we want to see in a future IFV.

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Notes

[1] "GCV Soldier-Carrying Capacity Experiment Analytic Results Briefing" to MCoE commanding general, March 14, 2011.

Acronym Quick-Scan

AoA – analysis of alternatives
CDD – capabilities-development document
DVH – double-V hull
EXFOR – experimental force
GCV – Ground Combat Vehicle
IFV – Infantry Fighting Vehicle
MBL – Maneuver Battle Lab
MCoE – Maneuver Center of Excellence
NET – new-equipment training
OA – operational assessment
STX – situational-training exercise
TD – technology development
TRAC – TRADOC analysis center
TRADOC – (U.S. Army) Training and Doctrine Command

Figure 1. BAE Systems illustration of the Ground Combat Vehicle. *(Courtesy BAE Systems)*

Filling in the Blanks: Leveraging Simulations to Provide Tactical Experience

by Dale Spurlin, Steven R. Scholtz and James Valentine

Baking is both art and science – very similar to the application of Army tactics. Bakers follow a recipe to combine ingredients in just the right proportions, yet they also know by touch, sight and smell if the dough is ready. Teaching someone to bake is much easier when the student can identify ingredients, operate kitchen appliances and has had some prior baking experience; the opposite conditions can result in a kitchen nightmare.

With an increase in the number of students with limited or no maneuver experience above the platoon level, tactics instructors at the U.S. Army Command and General Staff School sometimes face conditions in the classroom akin to a culinary disaster. The development of tactical plans based on the military decision-making process recipe can result in plans that fall short of expectations or fail for lack of knowing how the different tactical ingredients react in the real world.

To fill the experience gap in students during instruction, we have added the use of a commercial-off-the-shelf simulation during tactics lessons. The simulation – Combat Mission: Shock Force® – replicates modern U.S. equipment fighting a fictitious war near Syria against a hybrid threat of Soviet-equipped conventional forces and irregulars. Players direct the actions of squads, individual vehicles and platoon formations across rural and urban terrain displayed in three dimensions. The software supports two-player or single-player games in either real-time or turn-based formats. Single-player mode is possible at one of four computer artificial-intelligence levels to provide better enemy actions and reactions to challenge the human player.

Like all good games, CMSF is easy to learn but hard to master. Using the editing tools, the instructor can create an endless number of scenarios, including large urban maps with specially designed buildings. CMSF does not require the latest computer technology; it will run without a hitch on Windows XP and graphics cards with modest video random-access memory.

Also, like most games, it is not perfect. There is no way to represent complex obstacles. Fighting positions must be created with each scenario before play. Calls for fire must be on observed targets. To date, these shortcomings have been only minor distracters.

The standard lesson plan for CGSS offensive and defensive lessons (part of a series of lessons on Army tactical doctrine) calls for instructor-facilitated discussion of doctrine followed by a practical exercise where students apply the doctrine using a map or sketch to solve a simple tactical problem. Student briefings of their solutions and instructor feedback close out the lesson. This is similar to the culinary student who reads a recipe, talks about it with other students, and proposes when it would be most appropriate, but never actually bakes a cake. Past students have indicated that they leave the lesson understanding the fundamentals of Army tactics but are unsure of their application in real operations.

Prior experience and an opportunity to immediately apply instruction are two fundamental characteristics of adult learning. We schedule a two-hour session to teach students the basics of the simulation, with the instructor giving over-the-shoulder help as needed. Students work alone or in pairs to allow them to become comfortable with the simulation. The lesson for offense or defense tactics begins with a short review of doctrine and an orientation to the simulation scenario. The students now have a tactical problem with visible forces portrayed in 3D against a competitive foe. Students develop a basic tactical plan and begin playing the same scenario emphasizing the lesson's tactical concepts.

After about 30 minutes, the instructor halts the simulation and facilitates a discussion of student actions and results to solicit good and bad applications of tactical principles. This discussion also draws out details about how weapons and forces really act in combat. Students resume their missions in simulation and report their outcomes with the changes they made from the earlier discussion. Student gaps in experience fill quickly.

Appreciation for the effects of terrain. Maneuvering forces in contact emphasizes the effects of terrain on friendly and enemy weapon systems. Students gain a better appreciation of what rolling or urban terrain with multistory buildings does to observation and fields of fire. Cover is significantly different than concealment when weapons engage enemy forces. Some systems perform better than others in different types of terrain. For example, despite its maneuverability on roads, students find the Stryker vehicle is much less mobile in open or hilly terrain.

Appreciation for time and space relationships. Indirect fires and the variability of movement rates for tracked, wheeled and dismounted forces lead to a better understanding of synchronizing operations. Too little, too late due to a misunderstanding of time and space relationships, movement rates and decision-point criteria is a common lesson-learned from the simulation. Watching forces move in simulation provides a more tangible experience than consulting movement-rate tables. Anticipating indirect-fire support and coordinating ground movements to receive maximum benefit also takes practice. This leads to greater student understanding of how to anticipate decision points and focus information collection to support those decisions – at a time that permits friendly forces to react effectively.

Understanding battlefield geometry. Students of tactics wrestle with the array of units on the battlefield to maximize their combat-power effects while reducing the risks of fratricide. The application of appropriate graphic control measures is difficult when leaders lack an understanding of where munitions go and what their effects look like. CMSF fills this experiential gap by showing the effects of indirect and direct weapon systems. Fragments from large-caliber munitions cause area effects and small-arms fire ricochets off objects, sometimes resulting in fratricide. Field exercises with Multiple Integrated Laser Engagement System equipment cannot replace seeing how system location and firing vectors affect the massing of combat power. Students leave the simulation with a greater understanding of how these factors combine with terrain to create or prevent massed effects on their targets.

Awareness of sustainment constraints. Although the simulation does not permit the evacuation of casualties or damaged vehicles, the classroom discussion period permits instructors to engage students on how Army forces would perform those actions for the losses incurred in the simulation. The simulation accurately models

ammunition consumption, which in turn prompts students to consider how to get more ammunition to their forces before systems run out.

Tangible examples of unit advantages and disadvantages. Although students come with experiences from within the different formations of the Army, few come with experiences from all of them. It is hard for some of them to articulate why one tactical unit is superior to another except by referring to doctrinal manuals. Using the simulation's range of scenarios that incorporate Stryker, Bradley, Abrams and humvee vehicles in pure and mixed formations (with and without dismounted elements), students have an opportunity to experiment and compare these systems side by side to ***know*** their pros and cons, rather than merely reciting generic doctrinal statements.

Although CMSF replicates units much smaller than the focus of CGSS curriculum, exercises for battalion and higher operations generally use constructive simulations where symbols represent aggregate units on a map-like display. This conceptual representation is too abstract for students with little experience in actual unit operations. CMSF provides a foundation of shared experiences for the instructor to extrapolate lessons and concepts to higher echelons.

For example, the realization that a company can use most of its basic load of ammunition in one simulation engagement spurs discussion with Logistics Corps officers on what these consumption rates would look like for larger formations and how to better anticipate ammunition resupply during operational planning. With a little preparation, instructors can use CMSF scenarios to give students practice in understanding the situation, visualizing and describing a course of action, and giving clear commander's intent during planning. During mission execution, they practice giving mission orders and accepting prudent risks.

Because of CMSF, we see students gravitate to lower-scale maps in discussing possible offensive and defensive operations later in the curriculum, where they can better visualize distances and the effects of terrain. Student plans for brigade and division operations are more feasible. Wargaming during the MDMP is more realistic, with fewer arguments over the outcomes of engagements. Using a simulation to fill a gap of experience creates a foundation to build higher-echelon planning skills, yielding tangible im-

provements in student performance and confidence.

We are not reinventing the wheel. The U.S. Army has long used simulations for training purposes. However, most COTS simulations have been overlooked, and CMSF provides an inexpensive, easy-to-learn method of teaching basic tactical fundamentals. It has filled a gap in student experience of basic combat operations, permitting faculty and students to progress resolutely to higher levels of tactical operations with a strong visualization of what their units can and cannot do.

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Acronym Quick-Scan

AS3 – Combined Arms and Services Staff School
CGSS – Command and General Staff School
CMSF – Combat Mission: Shock Force®
COTS – commercial-off-the-shelf
ILE – intermediate level education
MDMP – military decision-making process
STX – situational-training exercise

Special Operations as a Warfighting Function?

by John P.J. DeRosa

MG Bennet Sacolick, commander of the U.S. Army John F. Kennedy Special Warfare Center and School, and BG Wayne Grigsby, director of the U.S. Army Mission Command Center of Excellence, recently reflected on the ongoing Army "campaign of learning" and offered their insights into Special Operation Forces and conventional-force integration. In particular, they have placed special emphasis on the introduction of the "human domain" and a "seventh warfighting function" to Army doctrine.[1]

They suggest the human domain is an outward focus of the environment beyond the interrelated dimensions of the information environment. They further suggest that the human domain is contrasted with the inward focus of the moral, physical and cognitive components of the individual in what Joint doctrine describes as the human dimension.[2] A doctrine purist may bristle at the convergence of these ideas, and indeed this idea may not survive the doctrinal change recommendation; however, it lays the groundwork for their other recommendation: a new, yet unnamed, seventh WfF.

The human domain, as offered by Sacolick and Grigsby, represents the "totality of the physical, cultural and social environments that influence human behavior. The influence is to the extent that success of any military operation or campaign depends on the application of unique capabilities that are designed to fight and win population-centric conflicts." They suggest that the concept is complementary to the domains of land, air, maritime, space and cyberspace and integrates Special Operations capabilities with conventional forces to win population-centric conflicts. From the concept of the human domain and assessing a gap in the Army's capabilities to work with host nations, regional partners and indigenous populations, the seventh WfF as offered intends to integrate "lethal and nonlethal capabilities to assess, shape, deter and influence foreign security environments."

This proposal is not the first attempt to codify a seventh WfF in Army doctrine. In the recent revision of Army Doctrine Publication 3-0, the proposal to introduce a Special Operations WfF was dismissed right away by the Army.[3] Also, the Training and Doctrine Command campaign-of-learning seminar, "How the Army Builds Partners and Capacity to Prevent, Shape and Win" (when debating SOF-conventional force integration) considered the introduction of a seventh WfF, but the working groups could not reach a consensus.[4] Moreover, the Joint doctrine community considered the inclusion of the capstone concept for Joint operations military-activities concepts, of which "engagement" is included, only to dismiss changing the current constructs of military engagement, security cooperation and deterrence in the revision of Joint Publication 3-0, ***Joint Operations***.[5] In this article, I will carry forward portions of this discord and offer rationale for not codifying their proposal for this new WfF.

Policemen with 2nd Battalion, 3rd Afghan National Civil Order Police Brigade, endure a dusty day of training led by members of Special Operations Task Force - South in Kandahar Province, Sept. 22, 2010. *(Photo by SGT Ben Watson)*

Army doctrine defines a WfF as a group of tasks and systems (people, organizations, information and processes) united by a common purpose that commanders use to accomplish missions. The Army's WfF are fundamentally linked to the Joint functions.[6] Joint doctrine defines Joint functions as "related capabilities and activities grouped together to help Joint-force commanders integrate, synchronize and direct Joint operations. Functions that are common to Joint operations at all levels of war fall into six basic groups: [command and control], intelligence, fires, movement and maneuver, protection and sustainment."[7]

This new WfF proposes to group tasks and systems united to manage "lethal and nonlethal capabilities to assess, shape, deter and influence adversaries and the operational environment."[8] However, it does not conclude what that might be.

The arguments oscillate between activities of engagement, building partner capacity, shaping and Special Operations.[9] Of these activities, Special Operations may promote the most parochial response. The primary response would be that lethal and nonlethal capabilities to assess, shape and influence are not unique to SOF, nor do they comprise the core doctrinal tasks of Special Operations.[10] Secondly, those capabilities are not unique to the conditions of Special Operations.[11] The schizophrenic nature of this proposal may suggest there is no solution yet. It may suggest they are leaning toward Special Operations, as the chief of the Army Special Warfare Center and School is leading the effort. Perhaps the real WfF will appear when the forthcoming Army concepts that propose this effort receive validation through experimentation and assessment.

The generals submit that shaping activities required by the future operating environment provide the driver for the integration of general purposes forces and SOF. However, this may present the biggest doctrinal hurdle for codifying a new WfF. The transition from peacetime military engagement activities to major operations and campaigns may not require military commanders ***at all levels*** to synchronize and integrate SOF to accomplish their mission. As presently constructed, the WfF are universally applicable to commanders across both the continuum of conflict and range of military operations.

It is worth noting that the introduction of a Special Operations WfF may not address the organization impediments of SOF-conventional force integration, a stated purpose of this initiative. U.S. Special Operations Command and its Army service component command do not intend to cross-pollinate SOF personnel lower than the divisional headquarters (nor do they have the capacity to do so). Their priority effort of late has been rearranging command relationships of the theater Special Operations commands and the geographic combatant commands.

This is in direct conflict with the practice of the population-centric fight being at brigade-combat-team-and-lower level. This further speaks to this WfF's lack of universal applicability. Currently all commanders employ all WfFs to organize the elements of combat power across both the continuum of conflict and range of military operations. With the current order, and in light of the organizational change efforts the SOF community is now advocating, brigade-and-lower commanders may not routinely be required to integrate SOF capabilities into their operations as they do the other WfFs.

Another supporting idea worth noting is the idea that SOF provides a level of language and regional expertise needed for shaping activities that are not resident in conventional forces. When it comes to language and regional expertise, this may be a significant fallacy of ubiquitous SOF capability and capacity.

Department of Defense policy defines regional expertise as capabilities in one or more foreign languages and includes an understanding of geographic, social and economic issues of a region – and may include unique expertise in one or more countries in a region at the graduate-school level.[12] It lists regional experts as foreign-area officers, attachés, security-assistance officers and political-military officers. It specifically notes SOF as language-capable with regional orientation and "may not possess a high degree of language skill and regional expertise in the area in which they are assigned to operate."[13]

Further compounding this requirement is the complexity of language-capability requirements. The United States recognizes 195 countries in the world, of which there are 200-plus languages (and 6,909 dialects).[14] When considering language skills alone, only 70 languages (seven critical) are recognizable as needed to support national security.[15] By comparison, the most populated force with language training, SOF, is limited to only 10 languages selected and used for initial training.[16]

This challenge of language selection led to SOF trained in the Serbo-Croatian language tasked with missions in support of peacekeeping operations in a predominantly Albanian-speaking Kosovo.[17] However, as DoD policy notes, having language capabilities in SOF does not confer the capability to understand the dynamics of the history and culture of those 195 countries and associated regions. As Professor Andrew Exum, a former Army special operator and adviser to GEN Stan McChrystal and GEN David Petraeus, notes, "If these Soldiers had been immersed in two years of intensive language training and an additional four years of education in the people, tribes, history and cultures of Afghanistan, at the end of those six years, they would still have only a fraction of the local knowledge of an illiterate subsistence farmer native to the region."[18]

There are other arguments offered in other forums. At some point, one of these organizing principles may prove value-added and join the ranks of the other WfFs in Army doctrine. However, I am skeptical that the other services will find enough value to include it in Joint doctrine. I suspect the resolution of this debate will be through decree and significantly linked to codifying bureaucratic tools for SOF capability development in a purported "era of fiscal constraint."[19]

It is not a national secret that USSOCOM would rather the services develop capabilities for SOF using service budgets and regularly seeks to transition Special Operations' particular capabilities to common service use. Nonetheless, the initiative to develop an Army concept to integrate "lethal and nonlethal capabilities, assess, shape, deter and influence foreign security environments" beyond the current Army concept for building partner capacity may be beneficial. That is, if the concept is subjected to validation through experimentation and assessment, its organizing principles may prove value-added and join the ranks of the other WfFs in Army doctrine.

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Course; and the Armor Officer Basic Course. He received a master's degree in national-security studies and a bachelor's of arts degree in economics from California State University, San Bernardino. He was an Army Fellow to Massachusetts Institute of Technology's Seminar XXI for Assessment Year 11-12.

Notes

[1] Sacolick, Bennet S. MG, and Grigsby, Wayne W. Jr. BG, "Special Operations/Conventional Forces Interdependence: A Critical Role in 'Prevent, Shape, Win.'" ***ARMY***, June 2012.

[2] U.S. Joint Staff, Joint Publication 3-13, ***Information Operations***, Washington, DC: Government Printing Office, Feb. 13, 2006. JP 3-13 notes interrelated dimensions of the information environment as physical, informational and cognitive.

[3] Gleiman, Jan K. LTC, "Operational Art and the Clash of Organizational Cultures: Postmortem on Special Operations as a Seventh Warfighting Function," U.S. Army Command and General Staff College, Fort Leavenworth, KS, Oct. 24, 2011.

[4] Army Capability Integration Center, "Event Summary for the How the Army Builds Partners and Capacity to Prevent, Shape and Win Seminar," Feb. 7-10, 2012, http://www.arcic.army.mil/Docs/UQ12-BPC-Event-Summary.pdf.

[5] U.S. Joint Staff, Joint Publication 3-0, ***Joint Operations***, Washington, DC: Government Printing Office, Aug. 11, 2011.

[6] Department of the Army, Army Doctrine Publication 3-0, ***Unified Land Operations***, Washington, DC: Government Printing Office, Oct. 10, 2011.

[7] JP 3-0.

[8] Sacolick and Grigsby.

[9] ARCIC, "Event Summary."

[10] Department of the Army, Field Manual 3-05, ***Special Operations***, Washington, DC: Government Printing Office, September 2006. FM 3-05 defines the Special-Operations core tasks as unconventional warfare, foreign internal defense, direct action, special reconnaissance, counterterrorism, military information support operations, civil-affairs operations and counter-proliferation of weapons of mass destruction.

[11] U.S. Joint Staff JP 3-05***, Special Operations***. Washington, DC: Government Printing Office, April 18, 2011. JP 3-05 defines Special Operations as "operations requiring unique modes of employment, tactical techniques, equipment and training often conducted in hostile, denied or politically sensitive environments and characterized by one or more of the following: time sensitive, clandestine, low visibility, conducted with and/or through indigenous forces, requiring regional expertise and/or a high degree of risk."

[12] Chairman Joint Chiefs of Staff Instruction 3126.01, ***Language and Regional Expertise Planning***, Department of Defense, Change 1, April 14, 2006.

[13] Ibid.

[14] U.S. Department of State, "Independent States in the World," accessed at http://www.state.gov/s/inr/rls/4250.htm.

[15] U.S. Department of Defense, "National Security Education Program," accessed at http://www.nsep.gov/students/languages/.

[16] Sunds, Benett, "Selecting Foreign Languages for United States Army Special Operations Forces," master's thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, June 2006. The 10 languages are listed as Arabic-Modern Standard, Korean, German, Russian, Spanish, French, Persian-Farsi, Indonesian (Bahasa), Tagalog and Mandarin Chinese. Accessed at http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA463798.

[17] Ibid and an interview by the author with a U.S. Army Special Operations officer whose name is withheld under conditions of non-attribution, May 29, 2012.

[18] Exum, Andrew, "Special Forces, or the Danger of Even a Lot of Knowledge," ***World Politics Review***, June 13, 2012. http://www.worldpoliticsreview.com/articles/12050/abu-muqawama-special-forces-or-the-danger-of-even-a-lot-of-knowledge.

[19] Perhaps it is better to suggest that the Department of Defense will no longer have a blank check to fund unquenchable capability requirements.

Acronym Quick-Scan

ARCIC – Army Capabilities Integration Center
JP – joint publication
SOF – Special Operations Forces
USSCOCOM – U.S. Special Operations Command
WfF – warfighting function

Manuscript deadlines 2013

Edition	Suspense for manuscripts
April-June 2013	Feb. 4, 2013
July-September 2013	May 3, 2013
October-December 2013	Aug. 9, 2013
January-March 2014	Nov. 5, 2013

A Scout Platoon Leader's Perspective on the Complex Threat

by 1LT Derek Wales

*(**Editor's note:** 1LT Derek Wales, Red Platoon leader, Assassin Troop, 3-1 Cavalry, participated in a National Training Center rotation where his parent unit, 3rd Brigade, 3rd Infantry Division, was the first unit to encounter a hybrid contemporary operating environment force threat, representative of the more complex threat the U.S. Army expects to face going forward.)*

A briefing explained that this rotation would play heavily in determining some of the future task organization and doctrinal decisions for the Army. Working as a scout platoon leader within an armored brigade combat team, armored reconnaissance squadron, I was one of the first Soldiers and leaders to get a glimpse of how the BCT structure would function in high-intensity combat in a complex threat environment.

Others of higher rank will write about the "big picture" of this rotation. However, my perspective is that of the platoon leader, and the victories and challenges I saw from my humvee. My intent is to assist future platoon leaders rotating through NTC or the next conflict.

The complex threat is the diverse and dynamic combination of regular forces, irregular forces and/or criminal elements all unified to achieve mutually benefitting effects (Training Circular 7-100). At the NTC, this meant there was a regular army augmented with guerrilla forces. Also, there were insurgent and criminal groups in the area who could be swayed to work for either the United States or the COEFORs. In the scenario, U.S. forces were the guest of the host nation, so there were issues with working with the HN regular-army forces who had the same equipment as the enemy, which caused significant problems with positive identification.

How long are your fangs?

The ARS has limited ability to fight for information. There are no M1s. We have Bradleys, which are a very capable platform, but still not a tank. My troop brings eight Bradleys to the fight, three of which are in Red Platoon, my command. Four humvees supplemented my three Bradleys, but they did not hold up too well under cannon fire. Therefore, stealth and surprising the enemy was at a premium. As far as teeth at the platoon level, we have 25mm chain-guns and tube-launched, optically tracked, wire-guided missiles on the Bradleys, a couple Javelins and a choice of MK19s, M2s and M240s for the humvees.

The troop typically fought a mechanized infantry company, which had at least two T-80s and four or five BMP2s as well as a five or six BRDMs. Therefore, the enemy had superior firepower, and we had to tailor our task organization to survive.

Task organization

Coming into the fight, I knew the enemy was always going to have superior firepower. My platoon sergeant and I discussed our options for task organization. We could go with two or three sections. Doctrinally, the platoon normally divided into three sections, each containing one Bradley and one humvee, with the platoon leader and platoon sergeant in a headquarters section. In theory, this gives the platoon the ability to cover a greater frontage.

We decided on a two-section layout. Our Alpha Section, where I was, acted as the lead element for scout operations and consisted of one Bradley containing the senior scout and three hum-

U.S. Soldiers from the 1-14th Cavalry, 3-2 Stryker Brigade Combat Team, Fort Lewis, WA, capture a high-value target at a simulated Afghan village at the National Training Center, Fort Irwin, CA, Aug. 20, 2011. The soldiers will conduct a search and verification of the captured subject as training and preparation before deployment. *(Photo by SPC Hanson Mendiola)*

vees (the two Javelins in the platoon increased our anti-armor capability). The platoon leader was in Alpha Section because of the superior surveillance systems – I better understood how the situation was developing.

Bravo Section had only one humvee (the platoon sergeant). The reasons I placed the platoon sergeant in Bravo Section were two-fold. One, I had a senior individual there who could control direct fires, and two, he was in a position behind Alpha where he could effectively casualty-evacuate both sections.

We discovered the following benefits to the two-section structure:

- Although my span of control as the platoon leader did not change, the number of elements I was actively maneuvering did. Having to maneuver two sections meant I communicated with Red 2 (Alpha Section leader), Red 5 (Bravo Section leader) and Red 4 (platoon sergeant), making mission command much simpler. If I had three sections, I would have had to maneuver Red 7 (Charlie Section leader) as well. This left the net more clear and allowed guidance and reporting to travel seamlessly up and down the chain of command.
- Planning was simpler. Inherently our maneuver element was Alpha (three humvees and one Bradley), which was stealthier and had more pervasive surveillance devices (three Long-Range Acquisition Systems and Bradley optics). Bravo (two Bradleys and the platoon sergeant) was the natural choice for support because of its superior firepower.
- Formations became simpler. I typically used somewhere between a platoon line and an echelon right or left with Bravo (generally in a V with the Bradleys in front), staying a few hundred meters behind Alpha (typically operating in a wedge, which allowed me to control movement and make contact with the smallest element). This formation would almost become a platoon, because it gave us a great deal of flexibility.
- Since Bravo worked behind Alpha, I had freedom to maneuver most of my combat power once we made contact with the enemy because Bravo Section had two of my Bradleys.
- Also, casualty evacuation and recovery was much easier to operate on a section level. For example, if you used the three-section concept from Field Manual 3-20.98, you would have sections that consisted of only a Bradley and a humvee. If a Bradley was destroyed, you would be in a situation where you had a humvee trying to fight against something capable of destroying a Bradley and no way to recover the vehicle or many of the wounded. With a two-section structure, the section leader had two or three vehicles to continue the fight and recover casualties and vehicles.

However, that does not mean two sections were without drawbacks.

- Alpha Section only had one Bradley, and it was impossible to recover if it was destroyed without having the other section come in and support. Alpha and Bravo had to remain within supporting distance of each other.
- The platoon could observe fewer named areas of interest simultaneously.
- Also, it was hard to do any form of envelopment with only two working sections. I did not have enough elements to block all avenues of escape for the enemy.

How to work it

When using two sections, it is crucial for the platoon leader to understand how the various enablers can help maintain support-

ing range and distance, and the time it will take to satisfy various priority information requirements because of limited frontage. All these things are considered during troop-leading procedures. For example, a scout weapons team working with the platoon's Kiowa Warrior helicopters could have them maneuver between the two sections and cover a greater area, so even if the sections were not within supporting range and distance, the platoon was.

STX and FSE

The 10 situational-training exercises and three full-spectrum engagements were a voyage of discovery into the world of the COEFOR and friction within friendly systems.

Getting poked in the eye by the inter-visible man

A scout likes nothing better than to find a great observation point that provides a commanding view of the battlespace. It allows us to maintain standoff and develop the situation. Many commanding pieces of terrain allow a scout to see for miles at the NTC. This is true especially with the LRAS. However, an enemy mechanized infantry company could maneuver within a few hundred meters away, perfectly concealed from view in one of the hundreds of wadis that crisscross the NTC. These lines of inter-visibility are a maddening component of the terrain, and it is the COEFOR's home turf, so they know where they are and how to use them. This duplicates the real world, where insurgents will be more familiar with the terrain.

The COEFOR used this inter-visibility to attempt to poke us in the eye. As scouts, we found that good terrain analysis, movement techniques and formations helped, but only to a certain degree. Knowing how to use terrain is crucial to success on the battlefield and at the NTC.

As a platoon, we found the most impactful way to use terrain was actually on the crew level. Sagger and berm drills greatly increased the crew's survivability (there were several occasions when a crew of mine would have double-digit near misses because of hiding behind the terrain). Also, slow and deliberate movement as the platoon approached the areas of potential enemy contact allowed us to make contact on our terms.

Ravenous desire for information

One of the best ways to develop the situation and observe enemy movement is aerial surveillance. My troop was the only unit in the brigade to put up an RQ-11 (Raven) unmanned aerial vehicle, and that aerial view makes the enemy think twice about having a permissive maneuver environment. However, it took five hours and 37 minutes after the air was cleared to launch the Raven in an already approved restricted air zone (the whole time we were waiting for brigade to give us a launch code). This might be something that higher-level staffs would want to put in their command-post exercise battle rhythm for practice to rehearse the systems prior to the rotation.

LRAS-zle dazzle

The LRAS and thermals on the Bradley were truly amazing force multipliers. In one instance, one of my scouts correctly identified an enemy vehicle parked on a hilltop 13 kilometers away as being an anti-aircraft gun system. The COEFOR misjudged how much concealment the darkness gave them. The built-in target location module in the LRAS was indispensable in calling in rapid indirect fire.

Steel rain – make it pour

The precise grid coordinates provided by the LRAS allowed mortar rounds on target within five minutes of spotting the enemy, all without revealing the scout team position. That is one advantage of having the mortars within your troop. Also, it is much easier to communicate effects to them.

On any stationary vehicles we engaged with indirect fire on the mortar section, the sergeant would often drop four rounds instead of the typical one high explosive for an adjust-fire. That way, we were very likely to destroy or disable it. However, since the mechanized enemy was often on the move, mortars were effective at disrupting but rarely destroyed him – especially BMPs and T-80s. If he was moving, the best thing to do was to drop rounds in front of him, causing him to displace laterally. This would at least delay the time before the enemy was within direct-fire range. Although the troop did become very proficient with its 120mm mortars, they were only effective at disrupting the enemy and shaping the battlefield.

The mortar situation caused me to stumble onto another potential modified table of organization and equipment deficiency: the troop has only four 13Fs, which the Bradley fire-support team typically uses. It would have been useful to have one within each platoon, either by having more 13Fs or by having scouts help crew the Bradley fire-support team.

Coming out of the box

After Training Day 14, I was more than eager to come out of the box. We had been there for 15 days (we sped to live-fire during reception, staging, onward movement and integration), and it turned out to be a fantastic learning experience. These were all tactics, techniques and procedures we discovered were effective at the platoon level across a breadth of mission types. I hope my observations alleviate some of the growing pains for many lieutenants rotating through NTC and wherever the U.S. Army finds itself next.

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Acronym Quick-Scan

ARS – armored reconnaissance squadron
BCT – brigade combat team
BMP – Boyeva Mashina Pekhoty (Russian fighting vehicle)
BRDM – Boyevaya Razvedyvatelnaya Dozornaya Mashina (Russian scout vehicle)
COEFOR – contemporary operating environment force
FSE – full-spectrum engagement
HN – host nation
LRAS – Long-Range Acquisition System
NTC – National Training Center
STX – situational-training exercise

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Active Listening: the Leader's Rosetta Stone

by MAJ Joel P. Cummings

> ***Lloyd**: What do you think the chances are of a guy like you and a girl like me ... ending up together?*
>
> ***Mary**: Well, Lloyd, that's difficult to say. I mean, we don't really. ...*
>
> ***Lloyd**: Hit me with it! Just give it to me straight! I came a long way just to see you, Mary. The least you can do is level with me. What are my chances?*
>
> ***Mary**: Not good.*
>
> ***Lloyd**: You mean, not good like one out of a hundred?*
>
> ***Mary**: I'd say more like one out of a million.* [pause]
>
> ***Lloyd**: So you're telling me there's a chance. ... Yeah!* [Moments later, Lloyd discovers Mary is married.]
>
> ***Lloyd**: Husband? Wait a minute ... what was all that one in a million talk?*[1]

In the movie, "Dumb and Dumber," Lloyd demonstrates how a person can hear what someone is saying without listening to what that person is saying. Lloyd's lack of listening skills prevent him from understanding the other person's point of view. Lloyd does not know he is a poor listener. The combination of these two deficits creates entertaining interpersonal conflicts. We laugh at Lloyd because he reminds us of someone we know, perhaps ourselves.

Although Lloyd provides a humorous example, poor listening skills may lead to more interpersonal conflict than is necessary. Understanding how to be a good listener is the key to improving interpersonal relationships. A good listener can be an effective communicator as well as an empathetic leader. Therefore, if effective communication and empathy are leadership traits worthy of development, then developing your listening techniques is a good place to start.

I came to this realization during my year at the Army's Command and General Staff College. Before the course, I received my Multi-Source Assessment and Feedback survey based in large part from my leadership position preceding the course. The feedback from my subordinates and peers made me realize that I needed to work on my listening skills. In hindsight, I learned not to assume my subordinates would give me the feedback I need unsolicited. Throughout my CGSC year, I learned about and reflected on how to be a better leader by being a better listener. Now that I have resumed a leadership role, I find these theories highly effective in practice.

Army leadership doctrine recognizes the importance of listening to those we lead to make better plans and decisions.[2] Field Manual 6-22, ***Army Leadership***, calls this skill active listening.[3] "Active listening helps communicate reception of the subordinate's message verbally and nonverbally," according to FM 6-22. "To capture the message fully, leaders listen to what is said and observe the subordinate's manners."[4] Active listening is an essential component to the leadership competency of "communicates."[4] Leadership doctrine also recognizes that communication is essential to the other seven leadership competencies.[5]

In addition to the described leadership competencies, active listening could also develop the leadership attributes in FM 6-22, especially empathy. Empathy is defined in FM 6-22 as "the ability to see something from another person's point of view, to identify with and enter into another person's feelings and emotions, enabl[ing] the Army leader to better care for civilians, Soldiers and their families." Empathy cannot be achieved if we are hearing, but not listening to, what the other person is saying. Furthermore, empathic listening facilitates the ability of a speaker to fully express his or her thoughts and feelings.

In this vein, FM 6-22 describes how an Army leader actively listens during a counseling session: "Active listening implies listening thoughtfully and deliberately to capture the nuances of the subordinate's language." Through this technique, the active listener may discover the imbedded meaning in what the person is saying.[6] Throughout counseling, the manual places more emphasis on listening rather than speaking.

Given the importance of active listening in Army leadership doctrine, this article will explore how to become a better Army leader by being a better listener. Army doctrine recognizes active listening as a prerequisite to effective communication. Active listening also achieves the shared understanding required of empathy. But if the value of listening is that obvious, why doesn't everybody do it? It's because active listening is easy to understand but difficult to master. The discipline needed to actively listen, especially when under stress, requires extensive practice, patience and emotional endurance.

The process is more difficult and complex than this article may suggest. However, practicing effective communication skills such as active listening develops other leadership attributes and competencies. In this way, active listening is the Rosetta Stone of leadership. Like a decoder, active listening helps a leader translate interpersonal communications. Armed with an understanding of communication skills, leaders can unlock other dimensions of influencing behavior.

Active listening is not a passive activity. The term *active listening* includes the listener's responses and body language while listening. Active listening draws out what the speaker is trying to convey. The active listener confirms that the message received is the message intended. In the end, active listening creates the impression on the speaker that the listener received the intended message. Active listening creates a feeling in the speaker that his or her views are important to the organization.

What active listening looks like

In ***People Skills, How to Assert Yourself, Listen to Others and Resolve Conflicts***, Dr. Robert Bolton breaks down listening behavior into three skills clusters, each having four supporting listening skills.[7] By breaking listening behavior into its component parts, Bolton simplifies the task of listening. Practitioners of active listening may focus on one skill at a time. Later, the active listener may work to integrate several skills at the same time. Bolton's list of listening-skill clusters is in Table 1.

The skill cluster of *attending* is a good place to start. Attending represents the physical, non-verbal aspect of listening. When a person attends to what another is saying, that person is listening with his or her whole body, according to Bolton. Attending conveys a psychological presence of the listener with the speaker. The speaker feels that he or she has the listener's undivided attention. This non-verbal message is communicated in four ways: posture, body position and motion, eye contact and environment.

Posture of involvement. Attending starts with a *posture of involvement*. "Communication tends to be fostered when the listener demonstrates a relaxed alertness with the body leaning slightly forward, facing the other squarely, maintaining an 'open' position and situating himself at an appropriate distance from the speaker," Bolton wrote. A listener with a posture inclined to the speaker motivates the speaker to open up. The listener is "on the edge of his seat," so to speak. The listener moves so that his or her shoulders are squared with the speaker and his or her eyes are at the same level as the speaker. If a desk is in the way, the listener should move so that no physical barrier is blocking the non-verbal message of involvement.

Open body position. The posture of involvement requires the listener to maintain an *open body position*. Tightly crossed arms and legs signals defensiveness or being closed off. On the other hand, during a seated conversation, leaning forward to rest your elbows on your knees could convey an open position while at the same time signaling a posture of involvement. This nonverbal message is best conveyed from about three feet away. In our culture, this is about the right distance to convey a psychological presence without making someone feel uncomfortable.

Appropriate body motions. While maintaining an open body position, the listener should use *appropriate body motions* to convey an attitude of attentiveness. A listener who is as still as a statue will project a cold or aloof feeling. A listener who makes distracting motions and gestures telegraphs a divided attention. An active listener is aware of his or her repetitive movements. Appropriate body motions are in response to what the speaker is saying as opposed to stimuli unrelated to the speaker. An active listener may be so in tune with the speaker that his or her gestures synchronize with the speaker.

Eye contact. Just like with maintaining appropriate body posture and body movements, *eye contact* is essential but fails if overdone. Too little eye contact is an obvious nonverbal cue that the listener is psychologically absent from the discussion. Too much eye contact, such as staring, may make the speaker uncomfortable. The active listener knows how to softly focus on the speaker, shifting his or her gaze at the right time and place before resuming eye contact. The listener shifts his or her gaze to the speaker's hand gestures or an object to which the speaker is referring. After that break in eye contact, the listener resumes the soft focus on the speaker's eyes. Eye contact not only conveys the message of attentiveness but also allows the listener to read the speaker's nonverbal messages.

Listening skill cluster	Skill
Attending skills	Posture of involvement
	Appropriate body motion
	Eye contact
	Non-distracting environment
Following skills	Door openers
	Minimal encourages
	Infrequent and open questions
	Attentive silence
Reflecting skills	Paraphrasing
	Reflecting feelings
	Reflecting meanings
	Summative reflections

Table 1. Dr. Robert Bolton's listening-skill clusters.

Non-distracting environment. The context of appropriate posture, movement and eye contact must be in a *non-distracting environment*. The listener will have a hard time focusing if another conversation is nearby or a radio is playing. In addition to noisy distractions, barriers like a desk or service window create a physical barrier to the nonverbal aspect of communication. When the listener senses a distraction, the active listener tries to remove or minimize the distraction.

I practiced attending skills when I became the deputy staff judge advocate in a legal office. On Day 1, I realized that my office was not structured for listening. I noticed that my L-shaped desk protruded into the middle of my office. If someone entered, my desk would be between us. Also, my computer monitor would be at the left corner of my eye. An email popping into my inbox could cause my eyes to flicker in that direction. Furthermore, the nearest open chair was across my desk, which invited people to sit with a desk between us.

To create an environment conducive to active listening, I turned my desk so it lined the corner wall of my office. This opened up the center of the floor. If someone entered my office, I would have to turn my back on my computer to greet him or her. If someone needed to talk at length, I would move to a small table in my office. In one-on-one settings, I would position my chair at the table to face the other person and to the side of the table. The table would be a mere armrest, as my shoulders were mostly squared off to the speaker. (See Figure 1.) Although I am not always a good listener, I structured my environment to facilitate good listening.

Although nonverbal cues promote effective communication, sometimes *following skills* are needed to nudge the speaker. Following skills are used when the speaker is having a hard time expressing an idea, or at least needs time to express it fully. Perhaps the speaker is trying hard to choose the right words on a touchy subject. Following skills help the speaker work out the message so the listener can understand its true meaning. These skills are directed at the listener's primary challenge: to stay out of the other person's way during the conversation.

Door openers. The use of *door openers* is a following skill – a way to let someone know you want to listen to what he or she has to say. Door openers typically have four parts:[8]

1. Describe the other person's body language;
2. Give an invitation to talk or to talk about the reason for that body language;
3. Use silence or a pregnant pause to allow the other person to decide what to say (if the person chooses not to talk, usually it is best to respect that person's privacy and move on); and
4. Attend with appropriate posture, movement and eye contact.

A listener can use door openers to initiate a conversation when someone acts like something is bothering him. You say, "Hey, you look ticked off. What's up?" Door openers can be in the middle of a conversation if you sense the other person is avoiding a subject. "Is this project upsetting you? What's the matter?" Door

openers target the emotions behind a conversation to understand the speaker's perspective.

Minimal encourages. Like door openers, *minimal encourages* is a following skill that gets the listener out of the speaker's way but keeps the listener participating in the conversation.[9] Minimal encourages are one- or two-word responses (hence, "minimal") which encourage the speaker to keep talking. Although the listener could use a simple "mm-hmm," several other responses could work such as "Go on," "Oh," "Tell me more" or "I see." These responses do not require agreement with the speaker. The listener is simply conveying the message of respectful attendance.

A minimal encourage could be combined with a door opener in the following conversation. Speaker: "I can't figure out what to do. I guess I am just confused." Listener: "Confused?"

Following skills like these help draw out the true meaning when the speaker has a hard time articulating the message.

Infrequent, open questions. When a speaker is searching for words, the listener actually is more helpful by asking fewer questions. If a question is needed, an open question is best, such as "What's on your mind?" "An open question provides space for the speaker to explore his thoughts without being hemmed in too much by the listener's categories," according to Bolton. Closed questions direct an answer such as "yes/no," "true/false" or a multiple-choice answer. If an open question is called for, ask one question at a time. Even with open questions, less is more.

Attentive silence. In addition to infrequent questions, active listeners know the value of silence. Attentive silence gives the speaker time to think about what he or she is going to say. Silence lets the speaker set the pace of the conversation. Together with nonverbal cues, silence can nudge a speaker to say what is really on his or her mind. Instead of filling the silence with talk, the listener can use the pause to focus on attending to the other, observing nonverbal cues and thinking about what the speaker is trying to say. Silence conveys patience. The message of patience may help the speaker relax. The silent patience of the listener also conveys respect to the speaker. When the speaker falls silent, this may also mean the speaker finished saying what he or she planned to say.

Letting the conversation fall silent for a moment may be a good way to transition to the next phase of effective communication. The next step in the conversation is to ensure that the message the listener received is the message the speaker intended. For this step, *reflecting skills* are needed.

Reflecting skills demonstrate to the speaker that the listener received the speaker's idea as it exists in the speaker's mind. "In a reflective response, the listener restates the feeling and/or content of what the speaker has communicated and does so in a way that demonstrates understanding and acceptance," writes Bolton. These skills convey understanding and acceptance, not necessarily agreement.

Reflective responses. Generally, reflective responses have four parts, according to Bolton. First, the reflective response is nonjudgmental. In being nonjudgmental, the response summarizes what was said without a good or bad value attached. Second, it is a reflection of what the listener thinks the person has experienced. Third, it is concise. Fourth, the reflection conveys a meaning deeper than what the speaker said. Also, all reflective responses require the listener to give the speaker a chance to correct the listener's understanding.

There are four kinds of reflective responses. *Paraphrasing* briefly restates the essential facts of what the speaker has just said using the speaker's words. *Reflecting feelings* states the underlying emotion the speaker is expressing, both verbally and nonverbally. *Reflecting meanings* combines the first two skills by connecting the underlying feeling with the asserted facts. A reflected-meaning formula could be, "You feel _____ because _____." Finally, you can bring all three reflecting skills together in a *summative*

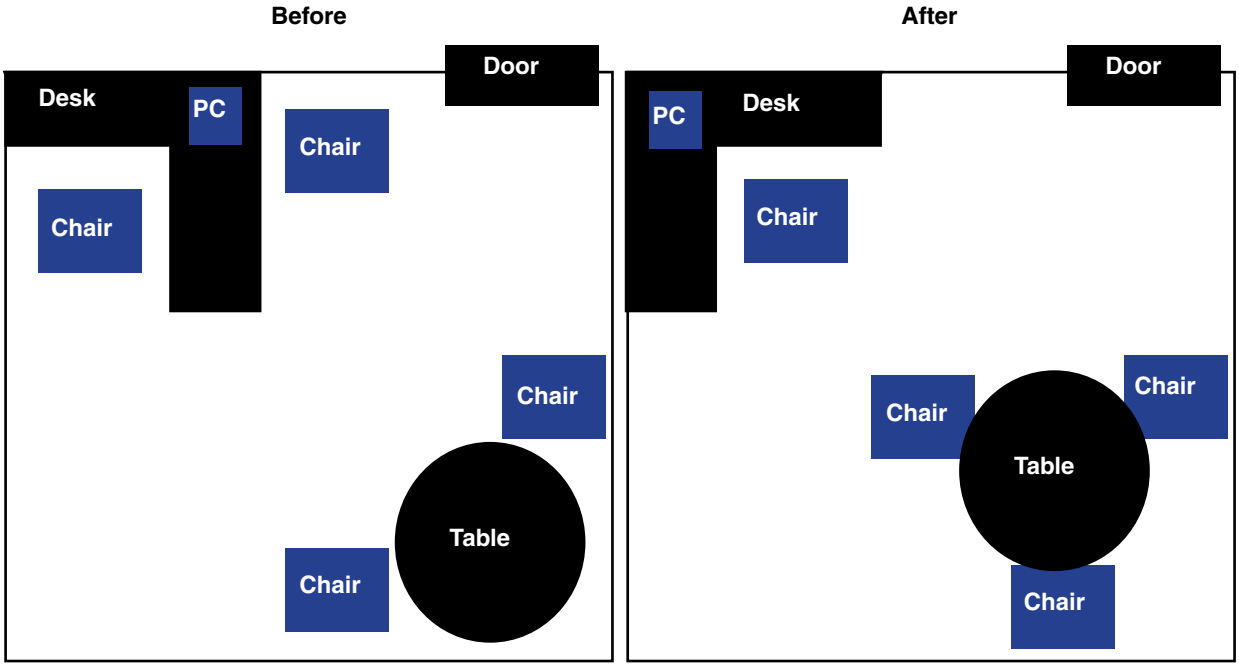

Figure 1. Before and after illustration of the author's office set up for active listening.

reflection. After some discussion, summative reflections work well to capture patterns and themes to draw a conclusion or tie up the conversation.

Here is an example of how reflecting skills would work. Imagine you are the battalion executive officer and supervisor of LT Smith, who is having a bad day. First, LT Smith was late to physical training. Since he has not been late before, you gave him verbal counseling and a warning. Later that morning, you notice he is acting distracted as if something is bothering him. Towards the end of the day, the battalion S-4 tells you that he had to put LT Smith at attention during a heated discussion about an overdue report. LT Smith's actions upset and disappoint you, but you resist an emotional reaction.

Since you want to know what is really going on with your Soldier, you decide to practice active listening to discover the root cause of the problem. You understand that unobserved reasons are often the cause of observed bad behavior. You take LT Smith to a shaded and discrete area behind the headquarters. You sit together on some crates while you position yourself for attentive listening. You relate your observations of his behavior and ask him what is going on. You let LT Smith talk using your following skills to draw out his explanation. After a brief silence, you feel that LT Smith has fully expressed himself.

You discover that LT Smith and his wife are having marital trouble over finances and child rearing. You could state a variety of reflective responses to check out your understanding of what he said. Your reflection could focus on the facts (paraphrasing). "You argued with your spouse, then you lost your cool with the S-4. Sounds like you are having a really bad day." Alternatively, your reflection could focus on the unstated feelings (reflecting feelings). "I know you didn't mean to, but your anger at home is affecting your duty performance. That must be frustrating." Also, you could focus on the underlying meaning of what he said (reflecting meanings). "You felt mad because the S-4 pulled rank on you."

You could also choose the most challenging reflective response in which you summarize the conversation into a few succinct sentences. "Your home life makes you frustrated. But you also did not see why the S-4 felt you disrespected him. You felt that you were in the right in the argument with the S-4 and he overreacted. Is it possible that your anger may be preventing you from taking responsibility for your actions?" This response is challenging because it carries a greater risk of confrontation over the conclusions you have drawn. Understanding the risk of disagreement, you make sure LT Smith has ample opportunity to correct your understanding and you are careful to avoid defensiveness.

After you demonstrate understanding, you have a greater chance of communicating your message. You need to fulfill your responsibilities as his supervisor. Active listening does not change Army standards of discipline.[10] Understanding and acceptance does not require you to agree with LT Smith's point of view. Empathy is not pity or sympathy. Your message in this case may be best related in a written counseling covering the day's events. You could warn him of the negative consequences if he persists in his current course of conduct. You can tell him you will not tolerate disrespect to leaders. You could order him to seek a financial adviser or suggest a chaplain. If LT Smith admits he was in the wrong with the S-4, you could also encourage him to go apologize. Tough love and active listening are not mutually exclusive.

Improving and measuring your listening skills

As in the preceding hypothetical scenario, active listening is about creating a feeling of understanding in the other person. This feeling can be measured; in fact, the Army has institutional mechanisms to evaluate how subordinates feel about their leaders. Army doctrine emphasizes feedback as an essential technique to leadership development across all competencies and attributes – emphasizes it so much that FM 6-22 mentions feedback 57 times.

Doctrine encourages leaders to seek feedback informally and often. Feedback can be formal as well. Formal feedback may be in the form of command-climate surveys or the MSAF, which is an excellent tool for all leaders to assess their leadership.[11]

Common to all the suggestions for improving listening skills is the discipline to listen well at all times – not just when it matters most to the listener. In his book, ***What Got You Here Won't Get You There***, Marshall Goldsmith describes this as the ability that "separates the great from the near-great."[12] This is "the ability to make a person feel, when you're with that person, that he or she is the most important (and the only) person in the room." The skill Goldsmith describes is the endstate that active listening achieves. Anyone can be an active listener when on a first date, when trying to impress someone or when listening to the boss.

"The only difference between us and the super-successful among us – the near-great and the great – is that *the great ones do this all the time*. It's automatic for them. For them there's no on and off switch for caring and empathy and showing respect. It's always on. They don't rank personal encounters in terms of importance. They treat everyone equally – and everyone eventually notices."[13]

Goldsmith writes that the skill that separates the great from the near-great is 90 percent listening. "And listening requires a modicum of discipline – the discipline to concentrate," he said. He suggests a listening-discipline exercise of closing your eyes and counting to 50 without letting any nagging thoughts invade your brain. This is a listening-concentration exercise that will improve your ability to focus on what another is saying, since active listening is disciplined listening.

When practicing listening, Goldsmith advocates eliminating the desire to impress the other person with how funny or smart you are. "Your only aim is to let the other person know that he or she is accomplishing that," according to Goldsmith. Let the speaker be the center of attention. Focus on what the speaker is saying, not on planning your response. Keep your mind from wandering by monitoring your listening behavior, moderating your responses and looking for nonverbal cues. Then do this all time in every interpersonal encounter.

Army leaders have the opportunity to practice this skill and increase their discipline every day. Army leaders do not have to be active listeners to their subordinates to compel compliance. Fortunately, subordinate Soldiers generally have the discipline to follow orders in the face of toxic or nearly toxic leaders. However, this provides an amazing opportunity for Army leaders who strive to actively listen. Imagine the difference in fostering commitment over mere compliance.

Conclusion

Just as the Army strives to foster commitment over compliance, it also encourages its leaders to be active listeners. Active listening is a means to a valued end. Active listening is the beginning, not the end, of becoming a leader who "influenc[es] people by providing purpose, direction and motivation while operating to accomplish the mission and improving the organization."[14] Since

Army leadership doctrine encourages this behavior, why not dig a little deeper into these practices? You will find a benefit to effective communication outside of your profession as well.

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Notes

[1] "Dumb and Dumber," New Line Cinema, 1994, written and directed by the Farrelly brothers, http://www.imdb.com/title/tt0109686/quotes.

[2] Field Manual 6-22, Oct. 12, 2006.

[3] Ibid.

[4] FM 6-22, Figure A-5. Competency of *communicates* and associated components and actions.

[5] FM 6-22, Figure A-5, "Leaders communicate effectively by clearly expressing ideas and actively listening to others. By understanding the nature and importance of communication and practicing effective communication techniques, leaders will relate better to others and be able to translate goals into actions. Communication is essential to all other leadership competencies."

[6] FM 6-22: "Stay alert for common themes. A subordinate's opening and closing statements as well as recurring references may indicate his priorities. Inconsistencies and gaps may indicate an avoidance of the real issue. Certain inconsistencies may suggest additional questions by the counselor."

[7] Bolton, Robert Dr., ***People Skills, How to Assert Yourself, Listen to Others and Resolve Conflicts***, New York: Simon & Schuster, 1986.

[8] Ibid.

[9] Ibid.

[10] FM 6-22: "Inexperienced leaders are sometimes uncomfortable when confronting a subordinate who is not performing to standard. Counseling is not about leader comfort; it is about correcting the performance or developing the character of a subordinate. To be effective counselors, Army leaders must demonstrate certain qualities: respect for subordinates, self-awareness, cultural awareness, empathy, and credibility."

[11] GEN Ray Odierno, Army Chief of Staff, in http://msaf.army.mil/LeadOn.aspx: "I believe that multi-dimensional feedback is an important component to holistic leader development. By encouraging input from peers, subordinates and superiors alike, leaders can better 'see themselves' and increase self-awareness. A 360-degree approach applies equally to junior leaders at the squad, platoon and company level as well as to senior leaders. The ability to receive honest and candid feedback in an anonymous manner is a great opportunity to facilitate positive leadership growth."

[12] Goldsmith, Marshall, and Reiter, Mark, ***What Got You Here Won't Get You There***, New York: Hyperion, 2007.

[13] Goldsmith, emphasis in the original.

[14] FM 6-22.

Acronym Quick-Scan

CGSC – Command and General Staff College
FM – field manual
MSAF – Multi-Source Assessment and Feedback (survey)

SSG Gustavo Padilla (left), talks with his sponsor, SSG Kofi Kyereme, both from Task Force 4th Battalion 27th Field Artillery, 2nd Brigade Combat Team, 1st Armored Division, Multinational – Baghdad, before his appearance before the SGT Morales board at brigade headquarters. *(Photo by SGT Daniel Nochols)*

The Army Family

by CPT Lance Brender

People often say that the Army is a family. The men and women we serve with are our brothers- and sisters-in-arms. Sometimes the bonds we build with them can be as strong, if not stronger, than the bonds we have with our biological families. Feeling this way is not surprising, considering how long and how closely Soldiers work together, especially when serving in combat together.

The dynamics of an Army unit are strikingly similar to a traditional family. There are parent figures and sibling roles. When leaders learn to recognize a unit's "family" dynamics, they can improve the unit's effectiveness and be better leaders themselves.

Units, like families, can demonstrate both functional and dysfunctional characteristics. For example, traditional families live together, face challenges, meet with victories and defeats, integrate new members, grieve or farewell lost ones, strive and come together. They also choose to deal with these life changes in either constructive, mission-focused (functional) or destructive, non-effectual (dysfunctional) ways. The effects of dysfunction on a unit's bottom line – accomplishing the mission and taking care of Soldiers – have a direct impact on its squads, platoons, companies or battalions. Conversely, a functional unit makes its Soldiers more resilient and bolder, and directly improves mission accomplishment.

Background

The terms "functional" and "dysfunctional" are elements of personality psychology. Prominent contributors to the field include Sigmund Freud, the father of psychoanalysis, and Jean-Martin Charcot. Early 20th Century researchers in humanistic psychology, such as Abraham Maslow, Carl Rogers and Gordon Allport, furthered these concepts into socio-analytic theory, which has largely influenced Western psychological theory for the last 70 years.[1] The forms of dysfunction are:

- Addiction;
- Control;
- Unpredictability and fear;
- Conflict;
- Abuse;
- Perfectionism;
- Poor communication; and
- Lack of diversity.[2]

Conversely, the forms of functionality are:

- Expression of the five freedoms (power to perceive; to think and interpret; to emote; to choose, want and desire; and to be creative through the use of imagination);
- Clear and consistent communication;
- Negotiated differences;
- Unfolding process of intimacy;
- Trusting;
- Individuality;
- Openness and flexibility;
- Fulfillment of needs;
- Accountability; and
- Open and flexible rules.[3]

I focus on three aspects of both dysfunction and function that I believe will be most helpful to leaders creating an effective command climate in their unit. The three dysfunctional traits are poor communication, conflict and abuse, and the three functional traits are trust, accountability and fulfillment of needs.

Dysfunctional unit

Many people have experienced a bad unit. Soldiers know when they are in one when they dread getting up for pivotal response training in the morning, hate the idea of seeing their coworkers or walk into an evaluation report counseling not having a clue what the boss is going to say to them.

The dysfunctional unit does not really know anything about its members and does not care to find out. It is not interested in reconsidering any preconceived notions about its people. It exploits the weaknesses of its members out of spite or a desire to get ahead. It gossips, mocks and plots. Soldiers and leaders do

not trust one another. The dysfunctional unit performs poorly both in garrison and combat. Permanent-change-of-station orders can never come soon enough in this type of unit.

Poor communication. The Army talks a lot about communication, of which it has the technical aspect down to a science. It has telecommunications systems that can talk, share graphics and transmit data across the globe. It has the operations order to deliver a quick and concise tactical plan to subordinates and military personnel, and all-Army-activities messages to disseminate administrative information to the entire Army. Dysfunctional units, like families, fail not because they cannot talk but because they cannot send a good message.

The dysfunctional unit will likely participate in biweekly command and staff meetings, have weekly training meetings and hold daily leader huddles, much like a dysfunctional family may attend community gatherings, go to church and eat dinners together. These things are not bad, but the dysfunction is in what they say. One example might be the subordinates the leader chooses to address.

The dysfunctional unit will call a meeting and not invite or enforce the habitual attendance of all key members. This fractures the unit by alienating the absent party and implying to the regular attendees that either their absent comrades are above the law or are not worthy of consideration. Either case erodes the unit's cohesion.[4]

What the dysfunctional unit talks about is not any better. The unit may make generalizations of one company, platoon or squad, either favorably or unfavorably, regardless of current or overall performance. This commander, like a parent with favorite and problem children, will speak on preconceived, and often incorrect, notions of who each unit is – what each is capable of and what each is worth. This immediately reinforces in the minds of the participants who is "in" with the commander and who is "out."

The dysfunctional unit then reinforces failure when the commander, having his preconceived notions, dismisses or minimizes the thoughts and abilities of those he sees as his "screw-up" subordinate leaders while overlooking excesses from those he labels in his head as squared away. This double standard fractures the unit and quickly turns a functioning Army organization into an in-fighting, destructively competitive, less effective group.

Communicative dysfunction culminates in how subordinate leaders, like children talking to their parents, push information back up to the leader. These dysfunctional subordinate leaders will naturally fall into a survival role as they try to succeed with their commander. The subordinate may assume the "hero" role if the leader is lacking confidence, and tell him how an operation is going to run, overriding the commander's plan. Another subordinate may be the "lost child," that junior leader who is often considered ineffectual or leading an inconsequential group, who will have his legitimate needs or genuinely good ideas dismissed. Still a third subordinate may be the "scapegoat" who points out the unit's flaws but, in the commander's mind, is clearly the source of the problems. Peers and subordinates quickly identify this last type as an easy and legitimate target for derision, undermining his leadership ability and degrading the unit.

Conflict. Conflict within a unit can sometimes be more destructive than contact with the enemy. Consider the example of parents fighting in an unhappy home. Parents' open fights or concealed arguments are obvious to children and affect the whole family. Conflict like this has direct parallels to the military.

How many Soldiers have served in units where "mom and dad" (battalion commander and S-3, company commander and executive officer, platoon leader and platoon sergeant) clearly did not agree? The conflict between the two makes subordinates choose who to give their loyalty to – and the one with the higher rank does not always win.

Like children in a broken household, Soldiers will most likely give the appearance of loyalty to both parties but will throw their heartfelt support behind whichever leader they feel will take better care of them or protect them when problems arise. Obviously, this deeply divides a unit. Clear "us vs. them" delineation arises between those who choose to be loyal to one leader or another, sowing dissention within the unit.

Another example of conflict is among peers. Peer conflict can be the result of jealousy and arrogance, much like it can be among siblings. Peers in a unit largely do the same or similar tasks and often for the same boss. In the case of a dysfunctional family, children who perceive themselves as filling similar niches within the family will try to outdo each other. More nefariously, they try to sabotage the other to make themselves look better and receive recognition from a parent.

Similarly, the dysfunctional unit becomes cutthroat and provides an environment seemingly designed for destructive competition. Everything from order-of-merit lists to evaluation reports codifies and reinforces the concept that people's worth is relative and capable of reducing to a rank-ordered number. This gives a clear incentive, like career advancement, for peers to do everything in their power to appear superior to their comrades.

The dysfunctional unit sees peers fighting openly or scheming covertly, searching for ways to try to impress others or prove their dominance, exposing and capitalizing on the weaknesses of their fellows to the detriment of the unit. This unit suffers from poor morale and low readiness ratings, and may experience a higher risk of suicide. Some will argue that a culture of fierce competition helps a unit by encouraging individuals to strive against their peers for success; this is competition gone awry. The best units are not those with one stellar performer and his vanquished competitors; rather, the highest performing units are those with all their Soldiers contributing to mission success through the genuine support of their peers, leaders and subordinates.

Abuse. The term "abuse" is overused in modern society. However, abuse within the Army, like within families, is very real. Abuse in a family setting more often passes from parent to child and is more often psychological than physical. Weak parents bolster their natural leadership positions through abusing their authority and withholding affection, support or other benefits. An example of this in a dysfunctional unit would be a weak command team. When a dysfunctional unit leader is emotionally unsound or feels psychologically threatened (such as by a more impressive subordinate leader, a non-conformist black sheep or someone they feel lessens their prestige), he reacts abusively.

As in a family, leader abuse is usually not physical. Dysfunctional leaders more often punish those they resent or feel threatened by with the Army versions of withheld affection (not praising, not submitting for awards, giving poor evaluation reports, not greeting in public) and hostility (criticism, derision in private and in front of subordinates, gossip, seeking out excuses for official discipline). This dysfunction is particularly destructive to a unit as subordinates not only attempt to avoid the brunt

of the leader's abuse, but also begin to justify the leader's poor behavior.

Career Soldiers sometimes say that "ass-chewings don't matter" and that an explosive or degrading session with a superior is nothing to them. This is not true. If "ass-chewings" do not matter, why do they work so well? Except in the case of Soldiers (or children) who have completely given up, a verbal lashing will at least get most people to ***try*** to appease their boss. However, punishment automatically inspires anger and resentment in the recipient. Justified or not, punishment makes people feel adversarial to the one administering the punishment. Moreover, as most leaders know as both the giver and receiver of diatribes, exploding at a subordinate is at best a flawed leadership tool.

Indeed, if a leader is famous for losing control of himself, his subordinates will react in one of two ways. The more self-confident group will lose respect for the intemperate leader as one who lacks control, is insecure and lacks respect for his subordinates. The less self-confident group will internalize the leader's anger and will inevitably deal with the internal conflict (cognitive dissonance) of their situation by either concluding that they really ***are*** worthless or by excusing the leader's abuse as being a good thing. An example of the latter would be a leader who constantly explodes over the smallest infractions, threatens people with physical or career harm, or derides them publicly; yet this Soldier is passes as a "hard leader" or someone who just wants to make the unit better. This manner of excusing abusive leader behavior is exactly like children excusing their degrading parents and is just as reprehensible.

Functional unit

People who have been in a good unit know it is good. They feel great coming to work each day, feel confident about rolling out on a patrol and go on to speak about the days they were in that unit as some of the best times of their life. This is a place where they are familiar with the people they work with and know that every Soldier there has their back. The friendships they make there will pay dividends over a lifetime.

There they are not only accepted but also praised for being themselves. There is genuine respect for their accomplishments and efforts and appreciation for their character. They receive consistent recognition for their hard work and have no doubt the boss regards them fairly and is going to take care of them. Their leadership encourages them through setbacks and tough times. This unit is a strong performer and conducts itself well in garrison and combat. This is the kind of place Soldiers never want to leave.

Trust. Good units, like good families, are built on trust. Just like children, growing up and taking on roles of increasing responsibility, Soldiers rely on the assumption they have the trust of their leaders. Moreover, this trust is not false trust that is on the lookout for failure, but genuine trust that the Soldier is seeking to do the right thing because it is the right thing to do and maintains that trust until proven wrong.

Trust allows the subordinate the freedom of action to accomplish his tasks as best as he can. Soldiers, like children, constantly find themselves in new situations that require creative adaptation. This is only more intense for leaders. Even in garrison, leaders get a rapid turnover of Soldiers and a new boss every one or two years. They PCS every three years and get a new job at often unexpected times. In combat, change is constant as the tactical situation develops.

This rapid change demands that Soldiers make immediate, important decisions without necessarily knowing what "right" answer their boss is looking for. This is where the assurance of a leader's trust becomes imperative. The functional unit's leader trusts that his subordinate is disciplined, resourceful, honorable and performing as best as he knows how. This assurance of trust opens up a world of possibilities for the subordinate to surprise his leader with the inventive and effective ways he will solve problems.

It also reinforces the subordinate's confidence in his ability to make the right choice, even when the situation is ambiguous. The functional unit's Soldiers and leaders are not worrying about what the boss is looking for or if they are making the choice that will please him. They do not act confident because they are born studs, but because their leader has clearly and genuinely set the tone in his unit that subordinates have his trust and as long as they can justify their actions when called to accountability. Now, this does not mean that people will not make mistakes or even fail. Rather, it means that even with mistakes and failure, the leader makes clear to the subordinate that he knows his subordinate's successes, mistakes and failures were in pursuit of the right ends for the right reasons. This level of trust and encouragement galvanizes the subordinate's faith in his own decision-making ability and gives him the confidence to accomplish his leader's intent.

Observing trust in a functional unit unveils a truth that Army leaders often ignore: it must be given before it can be earned. The functional unit emplaces trust in its members and gives them opportunities to justify this trust. The best leaders then exploit the displayed abilities of their Soldiers through appropriate praise, tough assignments and increasing levels of responsibility. Dysfunctional units assume their members will fail and create situations to try to find failure. Not surprisingly, failure is what they often find.

Functional leaders give those in their charge the benefit of the doubt in uncertain situations and take back that trust only when their subordinates clearly show fundamental character flaws (i.e., impediments to doing being able to do the right thing, like integrity violations). If a unit does not have the time or resources to rehabilitate a fundamental character flaw, the functional leader will reclaim the trust he placed in his subordinate and remove him from his position to protect the rest of the unit.

Accountability. Accountability in a functional unit is the fair and universal acknowledgment of and consequences for transgressions. In a family, it is important for every member to see that every other member is held to the same standard in light of the situation and that the standard is applied equally. This does not necessarily mean punishment or, if punishment is involved, each person receiving the same punishment. It means that transgressions against the family's accepted code of conduct (what we might call the Army Values, the Uniform Code of Military Justice or informal expectations) are acknowledged and corrected regardless of the transgressor's status, rank, popularity, ability or anything else. One example of this would be a family where the accepted rule is to be faithful to your time commitments.

In a functional family, the child who plays hooky for a day and the parent who falsely calls in to work sick would both be held accountable to the family group for their actions. In a functional family, no one is above accountability. Responsible Soldiers and leaders, like responsible children and parents, accept correction and accountability for their actions to their superiors privately whenever possible, correct their mistakes and publicly do the right action the next time the opportunity arises.

Accountability in a functional unit is not about shame, determining worth or punishment for punishment's sake, but a performance-oriented tool that generates a command climate of fairness and mutual respect. Accountability creates an environment where erring members can be corrected, forgiven, begin performing again or be justly judged to be unwilling to improve (and subsequently chaptered out).

The concept of correcting, forgiving and moving past a transgression without mental reservation against the transgressor is the key to a unit's long-term performance. It is the key because no one, from the highest-ranking officer to the newest delayed-entry program recruit, has not transgressed a rule. No matter how much we as an Army strive for perfection or build planning models and tools, pretending we can achieve perfection, we cannot.

Perfection is beyond human capacity to even define, much less achieve. Not all accidents are preventable (or we would not have any by now), the enemy gets a vote and good people make mistakes. Bearing this in mind, dysfunctional units that cannot correct and genuinely move past transgressions will quickly lose the ability to harness the talents of their members and will perform poorly. The functional unit, however, will quickly assess accountability for a transgression, correct the core of the issue and accept the member back into the team without reservation so that he can return to performing and contributing.

Fulfillment of needs. In 1954, Abraham Maslow described the range of human requirements in his hierarchy of needs (Figure 1). These needs are sequential; higher-order needs are not met until lower-order needs are satisfied. Every human action is in pursuit of the fulfillment of these needs. The Army, like a family, exists to satisfy these needs, both for the country it protects and the Soldiers who voluntarily serve in it. Consider this in the context of a family.

Families provide physiological protection to their members and establish a home to provide for safety needs. Men and women marry and have children to begin to meet their belongingness and love needs. Family members work hard at their jobs, schoolwork and family roles, both to meet their esteem needs and to begin meeting their aesthetic and cognitive needs.[5]

Finally, adult family members attempt to achieve self-actualization (reaching one's full potential) by achieving an intrinsically good and selfless end for those around them by means of their career, volunteer service, marriage, etc.

The similarities to the Army are strikingly direct. A functional unit provides for its physiological needs by providing food and drink, or the money to buy it. It further gives safety in garrison with things like secure buildings and in combat by establishing perimeters and patrols. It then provides belongingness and love through establishing unit identities, conducting counseling and providing engaged leader support.

Once the unit meets that need, it tries to meet esteem needs through awards programs, promotion ceremonies and informal opportunities for giving praise. Next, the Army then can apply concepts like the Army Values and its leadership philosophies to begin to meet the aesthetic and cognitive needs of justice, fairness and order. Finally, in a functional unit with members working towards a goal they believe in, the Army strives to give its Soldiers self-actualization by honorable accomplishment of public service towards the noble end of serving their country.

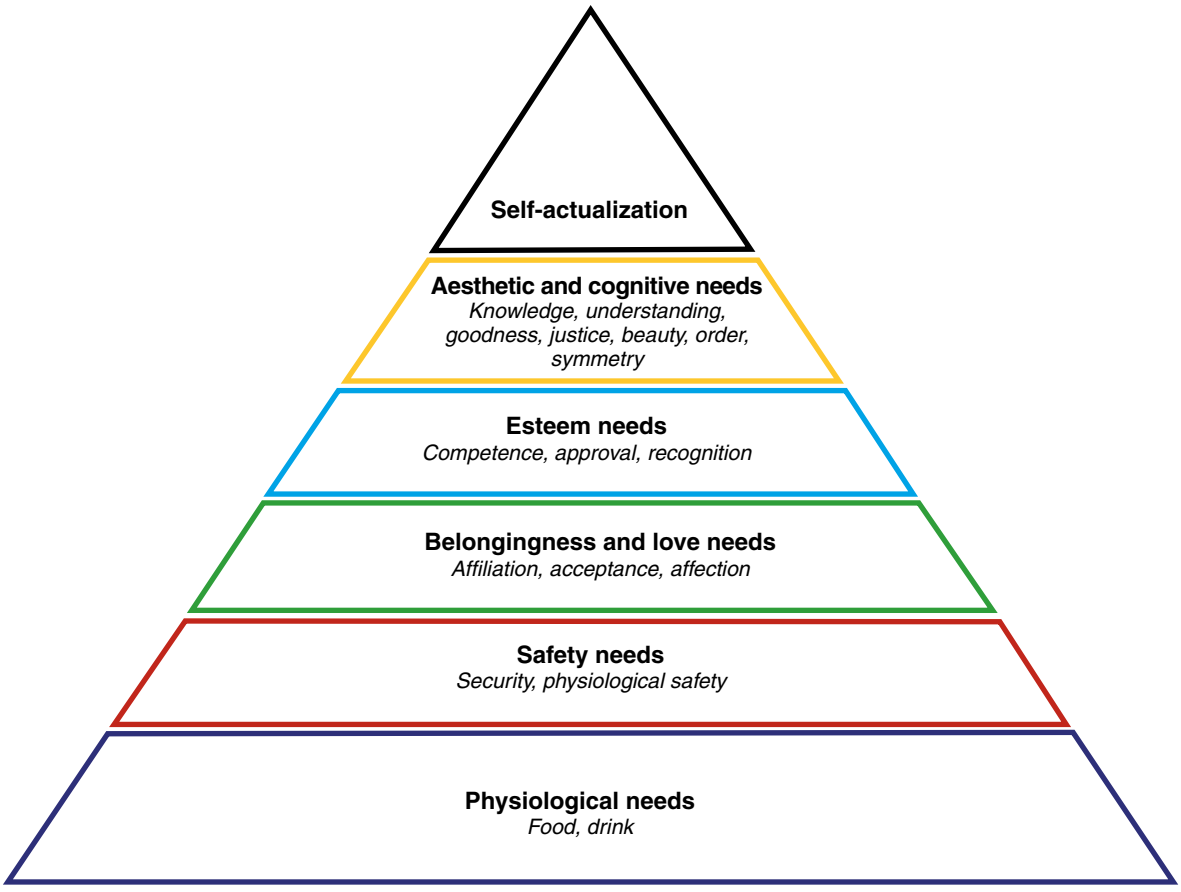

Figure 1. Maslow's hierarchy of needs.

Each Soldier, regardless of rank or position, has these driving needs. The functional unit recognizes these needs and uses its members' desire for fulfilling them to achieve their task and purpose. Leaders in this unit begin to fulfill their own higher-level needs of belonging, esteem, cognition and self-actualization by accomplishing their mission's purpose through their subordinates. Subordinates, the Soldiers and junior leaders of the unit, are the key to mission accomplishment and the only reason for a commander's position to exist.

Functional leaders receive their commander's intent and accomplish it by creating a plan that has opportunities for their Soldiers to fulfill their own needs, from physiological to self-actualization. By creating opportunities for meeting these needs and equitably rewarding accomplishment, the commander relieves himself of the need to coerce, threaten or force his Soldiers into doing the work. His Soldiers will give their utmost to accomplish the mission because they want to do well.

In this functional unit, Soldiers come to work and creatively think, work hard and collaborate toward the commander's intent and the unit's mission because it fulfills who they are and what they need. Soldiers have genuine motivation and a sense of purpose; they accentuate their strengths and work hard to overcome their weaknesses because accomplishing their purpose is not just a job, it is who they are.

Rehabilitating a dysfunctional unit and capitalizing on a functional one

The leader's outlook on his unit directly affects its morale, ability and ultimately its survival on the battlefield. His outlook and actions will determine whether that organization is functional or dysfunctional. To create a functional command climate, a commander must first honestly assess his unit and himself.

Is his unit dysfunctional? Do his company commanders, platoon leaders or squad leaders fight among themselves and betray one another? Does his staff look for opportunities to avoid work because they will not cooperate with each other? Do his Soldiers hate coming to work because they feel there is no way they can ever be a good Soldier in their leader's or peer's eyes? If so, it is the commander's responsibility to recognize the dysfunction that is defeating his unit from within and immediately counteract it, starting with his own attitude.

The commander should reconsider his own measurements of who his Soldiers are and what determines their worth. He should recognize how his Soldiers contribute, even if they have flaws. He must give each person in his charge a visible, attainable and real way to achieve success in his view and acknowledge that success when it is complete. He must put personal and organizational effort into helping his Soldiers overcome their issues. He must recognize and validate honest effort and hard work, even if it is a work in progress. He must capitalize on the strengths of his subordinate leaders, stop comparing one to another in terms of worth and overcome weaknesses through retraining, not just scorn. Lastly and most importantly, if he wants to be a winner himself, he must give every member of his unit the confidence to know they are winners.

If a commander is fortunate enough to have a functional unit, he must capitalize on its momentum and not rest. He must continue to ensure his Soldiers know they are significantly contributing to mission accomplishment. He must continue to use the tools the Army has given him: counseling, awards, public praise, private correction, constructive feedback, rewards for accomplishment and opportunities to demonstrate excellence. He must continue to accept failure and mistakes as a necessary part of the pursuit of success. Above all, though, he must make clear to each of his Soldiers that they are his team, his victory and his family – and no matter how bad the situation gets, he will always have their back.

In closing, I will share a brief memory of one experience I had in a functional unit. I was an observer/controller augmentee at the National Training Center at Fort Irwin, CA, in late 2008. I worked with Tarantula Team observing a unit's headquarters and headquarters company. My immediate supervisor was a Medical Service Corps captain, and his partner was a very capable senior-noncommissioned-officer medic. These were two accomplished Soldiers but unassuming professionals dedicated to the well-being of their rotational unit, their peers and even the hired help like me.

They quickly integrated me into their work group, trusted that I was capable and would give my utmost to any task without reservation and honestly respected my effort. I felt like a valued member of a winning team. I repaid their trust and respect with all the talent, experience and effort I had to offer – to the benefit of both them and the rotational unit.

Now, while it is true that the small size of this group made it easier to work together, this does not negate the basic principles that guided its leaders. The leadership made themselves and everyone within their group cohesive, effective and a greater asset to the Army. They are an example of the power and worth of the functional Army family.

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Acronym Quick-Scan

PCS – permanent change of station

Whither Armor?

by retired COL Clinton J. Ancker III

Periodically, since its introduction in World War I, defense analysts (military and civilian) announce the death of the tank, or wax eloquent on the unsuitability of the tank in various conditions. It has continued to the present day.

The argument against the tank usually takes one of three forms. First, the tank is obsolete because an effective counter has been found. Second, the tank cannot be used in certain physical environments (usually the ones declared the most important for warfare at the time). Third, the tank is useless in some form of warfare (the one declared the wave of the future). Yet the tank endures in almost all modern armies today.

So the question is why? In reality, the existence of the tank is not predicated on a stand-alone weapon system – a large, tracked, turreted, heavily armored and armed system employed in large quantities – but rather a broader concept of warfare. Here I am using Colin Gray's distinction between war – "the use of violence to solve political problems" – and warfare – "the methods by which war is prosecuted." It is not the tank *per se* that persists (although they do), but the concept of combined arms using mobile, protected firepower as the base.

While there are other forms of conflict (economic, political, informational), it is armed conflict, combat, that distinguishes war from the other forms. Since the early days of recorded combat, there are three essential capabilities for land combat: (1) the ability to move around the battlefield to gain a position of advantage (mobility); (2) the ability to deliver a blow sufficient to kill or psychologically demoralize and enemy (shock or firepower); and (3) the ability to defeat such blows by the enemy (protection).[1] Much of warfare's evolution consists of attempts to gain a significant advantage in one or more of these capabilities. Over time, the proportion of these three has varied greatly, with one or more gaining ascendancy, while doctrine, technology, training and leadership worked out ways to restore balance or tip the balance in favor of one to gain an advantage over the others.

The search to restore movement on the Western Front in World War I led to the development of the tank, which combined mobility (using the internal-combustion engine and caterpillar tracks), firepower (machineguns and cannons), and protection (armor). It was the only system that combined all three into a single platform, even if the execution was marginal. By World War II, the tank had been refined sufficiently to be a significant element in a war of movement and a major factor in warfare.

As mentioned above, throughout its history, the tank has periodically been criticized as obsolete. Terrain for which the tank was deemed unsuitable included forests, jungles and urban terrain (which hindered mobility and severely limited its effective range, rendering it vulnerable). The types of forces deemed invulnerable to tanks were dispersed, highly mobile light infantry operating among the people (insurgents and terrorists). The weapons that made the tank irrelevant were nuclear weapons, air-delivered ordnance and effective, long-range, anti-tank guided missiles.

Yet the tank still survives among the armies of the world, and has actually seen a resurgence of interest and a widening of its utility. The answer to this seeming contradiction lies in the continued need for a combination of mobility, firepower and protection, even if the form is not a conventional turreted heavy-metal system riding on continuous tracks, although it may. It is not the tank by itself that endures, but rather the combined-arms team that is built around mobile, protected firepower, whether built around a conventional tank or some other platform.

When the tank has failed, it has usually failed for two reasons. First, a lack of imagination by those using it (the French in 1940). Or second, a failure to employ it as part of a combined-arms team that took advantage of the inherent utility of mobile, protected firepower and while providing means to overcome the real, but not crippling vulnerabilities, of such a system.

The most notable failure of a tank-only force is probably the initial stages of the 1973 Arab-Israeli War. Based on their success in 1967, the Israeli Defense Force focused their efforts on their air force and armored corps. This had two negative effects in 1973. First, it made their enemies' task much easier. Instead of having to find solutions to a combined-arms force, they concentrated on only two major capabilities: airpower and tanks. For both, the Arabs found technological and doctrinal solutions. Second, because the IDF had focused on only two capabilities, once these were effectively neutralized, the IDF had no ready-made solution to the problem. The result was a near-disaster for the IDF, a disaster that was only averted by reintroducing a combined-arms approach to combat.[2]

In the aftermath of the 1973 war, some mistakenly drew the conclusion that the anti-tank guided missile meant the end of the tank. On Jan. 2, 1974, ***The New York Times*** featured an article that stated "Infantry armed with modern antitank missiles can fight armor to a standstill and is on its way to restoration as the queen of battle. … The effectiveness of such infantry against tanks and the steady development of mobile, accurate surface-to air missiles offer a second important weapons lesson: The tank-and-fighter bomber team, which has ruled most battlefields since 1940, has been eclipsed as the decisive tactical formation."[3] Actually, few tanks were destroyed by Saggers in 1973. It was the psychological shock and the lack of combined-arms response that impacted the IDF so profoundly.[4] Far from heralding the death of the tank, it was simply a wake-up call for a return to a combined-arms solution approach to warfare.

The so-called "revolution in military affairs," sparked primarily by the overwhelming success of Operation Desert Storm, also resulted in calls for the reduction or elimination of armored forces. Typical of this was "The Ghosts of Omdurman," an article in the U.S. Army War College's journal, ***Parameters***. The author argued that "Lacking the allure of the victorious march through

France, sticky counterinsurgencies and messy contingencies have been handed off to the light-infantry and special-operations forces, leaving the mainstream Army free to indulge in AirLand Battle in all its blitzkrieg spectacle." Further on he states, "Tactically, armored pursuits are exotic and exquisite things, but infantry legions on patrol are the stuff of superpower interventions."[5] The clear implication was that the time of armor was over and the time of light infantry had arrived. If ever there was a time to prove this, it was the aftermath of Operation Iraqi Freedom and the ensuing counterinsurgency campaign. Leaving aside the fact that the march to Baghdad that toppled Saddam Hussein's regime was spearheaded by a combined-arms armor heavy force, the 3rd Infantry Division (Mechanized) and several other heavy combined-arms teams of the U.S. Marine Corps and our coalition partners, the subsequent fight would seem to fit the mold that the author described: a fight optimized for light infantry and special operations.

But what happened was almost the opposite. Light-infantry units quickly demanded greater mobility, protection and firepower. The humvee was quickly modified by putting armor packages on it for greater protection and mounting weapons with greater firepower.[6] It became, in essence, a very light armored vehicle, combining mobility, protection and firepower. Another adaptation was the employment of the Stryker medium-weight wheeled armored vehicle. Its great on-road speed allowed it to move from one area to another rapidly and arrive with more protection and firepower than the humvee. As the enemy became adept at attacking these vehicles, both were provided with increased armor protection. As the growth potential of the humvee was limited, it became too vulnerable to be the primary mover along routes threatened by improvised explosive devices. To address this, the U.S. Army adopted the mine-resistant, ambush-protected vehicle. This large wheeled vehicle was designed specifically to balance mobility, firepower and protection for the environment in Iraq. And the tank?

It is not the tank by itself that endures, but rather the combined-arms team that is built around mobile, protected firepower.

Originally considered of little value against insurgents and in urban areas, the tank soon became invaluable. As one division commander put it, "No one wants to go downtown without tanks."[7] Tanks were not only useful in open desert terrain, they were increasingly of great value in urban fighting.[8] The Marines in Fallujah asked for U.S. Army tank units to supplement their own armor, as the Marine commander believed that "Based on intelligence that revealed the formidable strength of the insurgent defenses in Fallujah, the Marines believed they did not have enough tanks and heavy fighting vehicles to quickly penetrate the outer defenses and spearhead the assault."[9] Units that at first deployed without tanks requested their tanks be sent to Iraq because the combination of mobility, firepower and protection proved to be invaluable when required to close with a competent enemy.

Urban fighting is not the only close environment where tanks in combined-arms teams have proven useful. The idea that the tank is useless in jungle terrain has been demonstrated to be a fallacy many times over. The Japanese used them effectively in the capture of Singapore.[10] Field Marshall William Slim's ***Defeat Into Victory*** has several references to the utility of tanks in jungle warfare: "Tanks can be used in almost any country except swamp. In close country they always have infantry with them to defend and reconnoitre."[11]

And: "The Dismal Jimmies who had prophesied, one, that the tanks would never get to the line, two, that they could never climb the hills and, three, if they did the trees would so slow them up that the Japanese antitank guns would bump them off as sitting targets, were confounded. The tanks, lots of them … crashed up the slopes and ground over the dug-in antitank guns. … It was the old problem of World War I – how to get the infantryman on to his enemy without a pause in the covering fire that kept his enemy's head down. It was solved in Arakan – and copied throughout the Fourteenth Army – by the tanks. …"[12]

A similar note was struck in Vietnam. The utility of armored forces was clearly evident. GEN Donn A. Starry in his work, ***Mounted Combat in Vietnam***, reinforces the idea that combined-arms forces built around armor and mechanized infantry were effective in an area originally thought to be inappropriate for them: "It was widely believed that Vietnam's monsoon climate, together with its jungle and rice paddies, constituted an environment too hostile for mechanized equipment: it was further agreed that armored forces could not cope with an elusive enemy that operated from jungle ambush. … It was not until 1967, however, when a study titled 'Mechanized and Armor Combat Operations, Vietnam' … that the potential of armored forces was fully described. … The study's findings [were] that armored cavalry was probably the most cost-effective force on the Vietnam battlefield. … From early March 1965 until the ceasefire in January 1973, U.S. armored units participated in virtually every large-scale offensive operation. … After eight years of fighting over land on which tanks were once thought to be incapable of moving, in weather that was supposed to prohibit armored operations, and dealing with an elusive enemy against whom armored units were thought to be at a considerable disadvantage, armored forces emerged as powerful, flexible and essential battle forces. … When redeployment began in early 1969, armored units were not included in the first forces scheduled for redeployment, and indeed planners moved armored units down the scale time and again, holding off their redeployment until the very end."[13]

While the examples above relate to the use of armor in jungles, its use in urban operations has also evolved over time. Probably the best example of this is the recently published Combat Studies Institute study ***Breaking the Mold: Tanks in the Cities***. From the foreword: "Few lessons are as prevalent in military history as is the adage that tanks don't perform well in cities. The notion of deliberately committing tanks to urban combat is anathema to most. In ***Breaking the Mold: Tanks in the Cities***, Ken Gott disproves that notion with a timely series of five case studies from World War II to the present war in Iraq. … These cases demonstrate that tanks must do more than merely 'arrive' on the battlefield to be successful in urban combat. From Aachen in 1944 to Fallujah in 2004, the absolute need for specialized training and the use of combined arms at the lowest tactical levels are two of the most salient lessons that emerge from this study. When properly employed, well-trained and well-supported units led by tanks are decisive in urban combat. …"[14]

The utility of armor in cities is further demonstrated by the October 2003 fight in Mogadishu, Somalia ("Blackhawk Down"). In that densely crowded city, it was only a tank force that was able to rescue the embattled Rangers after other attempts had failed. Similarly, in Iraq, Navy SEAL sniper Chris Kyle said, "They [the enemy] were all around you, everywhere"; he soon realized the only safe way to enter [the city] was aboard armored vehicles.[15]

The use of armor in Iraq's cities caused a change in U.S. Army urban-operations doctrine in the 2003 edition of the field man-

The use of armor in Iraq's cities caused a change in U.S Army urban-operations doctrine in the 2003 edition of the field manual on urban operations.

ual on urban operations. The following summed up the approach to armor in cities: "Although masses of heavy force are not normally required, successful UO require all the combined-arms capabilities of all Army forces. … Other type forces – such as armor, artillery and chemical – have essential roles in specific types of [UO] but are less applicable across the range of Army operations. … UO requires an increased proportion of dismounted infantry and engineer capabilities. Armor is not required in the same high numbers." Three years later, in the next edition of the manual, experience in Iraq had changed the Army's position significantly. It now stated, "One tactic, effective combined-arms task organization, includes an increased dismounted-maneuver capability, combined with armor and combat engineers, continuous operations and technological enhancement. … Armored forces and attack helicopters also can facilitate maneuver through shock action that can have a psychological effect, particularly against less well-trained threats and, in discrete instances, hostile crowds."[16]

What comes through in all these examples is that the combined-arms team that employs mobile, protected firepower is useful in almost any environment.

A more recent attack on these systems comes from a consistent and long-standing critic of the U.S. military and its conduct of operations, William S. Lind. Writing in the on-line journal, ***The American Conservative***,[17] he states: "Each year, the Marine Corps picks a lucky city to host [Marine Week]. … [The] public square was full of tanks, artillery pieces and Light Armored Vehicles. … But against non-state opponents, those Marines are 0-4. They, along with the rest of our armed services, lost in Lebanon, Somalia, Iraq and Afghanistan. …" The clear implication is that these systems, tanks, artillery and light armor, are irrelevant in what he calls Fourth Generation Warfare. He further states, "Real wars with important outcomes are now fought and won by ragtag militias, gangs and tribes. … In a fair fight, the U.S. Marines would beat any of them, except perhaps Hezbollah. But what we think of as fair fights are jousting contests, tank against tank, fighter plane against fighter plane. … Of course we want jousting contests, [but] the forces of the Fourth Generation avoid them. We are left to tilt at windmills."[18]

But his critique misses the point. While one can argue endlessly about the best approach to conduct a counterinsurgency, it is not war if there is no fighting. Without fighting, there is no role for the military. The fighting in counterinsurgency has different rules, but it is fighting nonetheless. And when fighting, tanks and armored personnel carriers are useful, because, when you do fight, you need mobility, protection and firepower. The firepower may be employed more discriminately, but it still must move around the battlefield and be protected. That is why in both Iraq and Afghanistan, there has been resurgence in the use of armor.

One example is the Canadians in Afghanistan. In 2003, the Canadian Army planned to do away with heavy armor, replacing their tanks with the Light Armored Vehicle. But circumstances in Afghanistan dictated the need for armor in this environment. When the decision to acquire and use tanks was made, a political-science professor at the University of British Columbia trotted out the arguments that the tank was simply too vulnerable in that terrain against that enemy.[19] However, the Canadian experience was the opposite: "By deploying tanks and armoured engineers to Afghanistan in October 2006 and supporting the acquisition of the Leopard 2, the leadership of the Canadian Forces has acknowledged the importance of maintaining heavy armour in a balanced force. … The hard-earned experiences of the Canadian Army and our allies in sustained combat in Afghanistan and Iraq have proven we must be prepared to get our hands dirty and come into physical contact with the enemy if we wish to define their strength, composition and intentions, and subsequently kill them. Canadian tanks and armoured engineers have better protected our dismounted infantry soldiers in Southern Afghanistan, allowing them to close with and destroy a fanatical and determined enemy in extremely complex terrain." [20]

The Canadian experience was that armor became an integral part of a combined-arms team that was needed to defeat a determined enemy. While killing Taliban was not the only thing needed to succeed against the insurgents in Afghanistan, without the ability to do so, the rest of the efforts would amount to nothing. Appeals to "a better narrative" and reforming the Afghan government and security forces would all be for naught if the ability to close with and destroy a fighting force were not present. This is something that the proponents of Fourth Generation Warfare seem to omit from their calculations. An enemy that only has to face light infantry has a much simpler task than one that has to face a multi-faceted combined-arms team.

This Canadian experience was mirrored by the U.S. forces that began deploying armor to Afghanistan in 2010 for the same reasons: the ability to deliver mobile, protected, firepower against an enemy that was increasingly able to fight light infantry effectively.[21]

More evidence that armor is valuable in urban operations is that both the United States and Germany have modified armor systems to improve their survivability in urban fighting. The United States has two upgrade programs, one each for the tank and the Bradley Fighting Vehicle. Called Urban Survivability Kits

"Anyone who thinks you can win a war without tanks doesn't appreciate the power of an armored vehicle and what it can do with its armor and firepower on the battlefield." – BG Yigal Slovik, former commander of the IDF armored corps.

(BUSK for the Bradley and TUSK for the tank), they provide increased protection for the crews against blast. The Stryker was also provided with increased protection against rocket-propelled grenades in the form of slat armor.[22] The Germans have produced a version of the Leopard A6 designed specifically for urban combat that features increase crew survivability and a shorter gun tube for better maneuverability in restricted terrain.[23]

The final argument against tanks is that they have outlived their usefulness because they are designed for tank-on-tank engagements and airpower has rendered these fights untenable. Some have argued that no country will take on a modern Western force in conventional combat when the Western forces are so good at this kind of fight. This was part of the reasoning behind

the lack of preparedness of the IDF in Lebanon in 2006. The Israeli air force had assured the IDF that they didn't need massed armor because any enemy massed forces would be dealt with by the air force. While the IDF did not face a massed army that provided lucrative targets for the air force, they did face an opponent that could only be defeated by capable battalion and brigade armored and mechanized combined-arms teams. They concluded that combined-arms forces, including mobile, protected firepower, were essential even against irregular forces in urban and densely compartmented terrain.

Partly because of this experience, the IDF has created the world's heaviest armored personnel carrier, the Namer. It is built on the Merkava tank chassis and weighs nearly as much – but it provides a very high level of crew protection and is an integral part of their modernized ground-air combined-arms team. BG Yigal Slovik, former commander of the IDF armored corps, in a recent ***Jerusalem Post*** article had this to say: "Anyone who thinks you can win a war without tanks doesn't appreciate the power of an armored vehicle and what it can do with its armor and firepower on the battlefield."[24]

While the tank has been the subject of criticism since its inception, it remains a key component of any effective, modern combined-arms team. There are armies that do not have mobile, protected firepower. Some have been successful against armies that do (Hezbollah in Lebanon in 2006). But that does not mean that the tank is useless, any more than an insurgent's lack of space capability means that space capabilities are useless. In fact, the tank, as part of a combined-arms team, has proven itself quite flexible and adaptable and a significant contributor to tactical success in widely disparate circumstances.

I shall close with some observations:

- Mobile, protected firepower is useful, even necessary, if a force has to close with and destroy a determined enemy.
- Armor can be adapted to almost any environment and any threat.
- The battle of tank vs. anti-tank will probably not be solved to the complete advantage of one over the other.
- It is not a single system, the tank, that is useful; it is combined arms that wins in combat. Mobile, protected firepower is a critical element of combined arms.
- Do away with armor and the enemy's problem is much simpler, allowing the enemy to concentrate its limited resources on what is left of the combined-arms team.
- While enemies may decide not to take a Western army on in a conventional fight, Western armies may decide to take on significant conventional forces in some circumstances (Operations Desert Storm and Iraqi Freedom). In these cases, mobile, protected firepower is often a dominant force, even if air power has destroyed much of the opposing forces' strength.

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Notes

[1] See, for example, ***Army Doctrine Primer***, Development, Concepts and Doctrine Center, Shrivenham, UK, May 2011, Page P-22.

[2] See Finkel, Meir, ***On Flexibility: Recovery from Technological and Doctrine Surprise on the Battlefield***, Stanford, CA, Stanford University Press, 2011, Chapter 8, "The Israeli Recovery from the Egyptian Sagger Missile Surprise."

[3] The memo, with the attached excerpt from the newspaper, is in the author's personal files. The extract was only a few column inches of the article, without the page number or title of the article attached.

[4] Finkel.

[5] Bolger, Daniel P., "The Ghosts of Omdurman," ***Parameters***, U.S. Army War College, Autumn 1991.

[6] Wright, Donald P., and Reese, COL Timothy R., ***On Point II: The Transition to the New Campaign: The United States Army in Operations Iraqi Freedom May 2003-January 2005***, Combat Studies Institute Press, U.S. Army Combined Arms Center, Fort Leavenworth, KS, 2008, Page 504 on increasing the humvee's firepower so they could act as guntrucks, and Pages 510-512 on the U.S. Army's project to provide increased armor protection for humvees and other wheeled vehicles.

[7] Comment by a former division commander in Iraq during a counterinsurgency seminar at Fort Leavenworth attended by the author.

[8] ***On Point II***, Page 40 for an example of tanks being used to rescue a less well-armored force in an urban environment; Pages 341-342 for another example of a true combined-arms team with light infantry, tanks and Bradleys used for urban fighting.

[9] Ibid.

[10] ***Understanding***, Joint Doctrine Publication 4, Development, Concepts and Doctrine Centre, Shrivenham, UK, December 2010.

[11] Slim, Field Marshal Viscount William J., ***Defeat Into Victory***, New York, David McKay Company, 1961.

[12] Ibid.

[13] Starry, GEN Donn A., ***Mounted Combat in Vietnam***, Vietnam Studies, Washington, DC, Department of the Army, 1978.

14 Gott, Kendall D., ***Breaking the Mold: Tanks in the Cities***, Combat Studies Institute, Fort Leavenworth, KS, 2006.

[15] Plaster, MAJ John L., "American's Deadliest Sniper," ***American Rifleman***, July 2012.

[16] Department of the Army, Field Manual 3-06 (Field Manual 90-10), ***Urban Operations***, Washington, DC, June 2003.

[17] www.theamericanconservative.com.

[18] Lind, William S., ***America Goes Jousting: Our Splendid Military Is All for Show,*** http://www.theamericanconservative.com/articles/america-goes-jousting/, July 31, 2012.

[19] Cadieu, MAJ Trevor, "Canadian Armour in Afghanistan," ***Canadian Army Journal***, Vol. 10.4, Winter 2008.

[20] Ibid.

[21] Chandrasekaran, Rajiv, "U.S. Sending Tanks To Hit Harder At Taliban," ***Washington Post***, Nov. 19, 2010.

[22] McLeary, Paul, "Bradley upgrades done early, under budget," ***Army Times***, July 30, 2012, and ***On Point II***.

[23] Personal observation by the author at an equipment display during U.S.-German staff talks.

[24] "Powering ahead," ***Jerusalem Post***, July 13, 2012.

Acronym Quick-Scan

IDF – Israeli Defense Force
UO – urban operations

OPERATION SABER JUNCTION

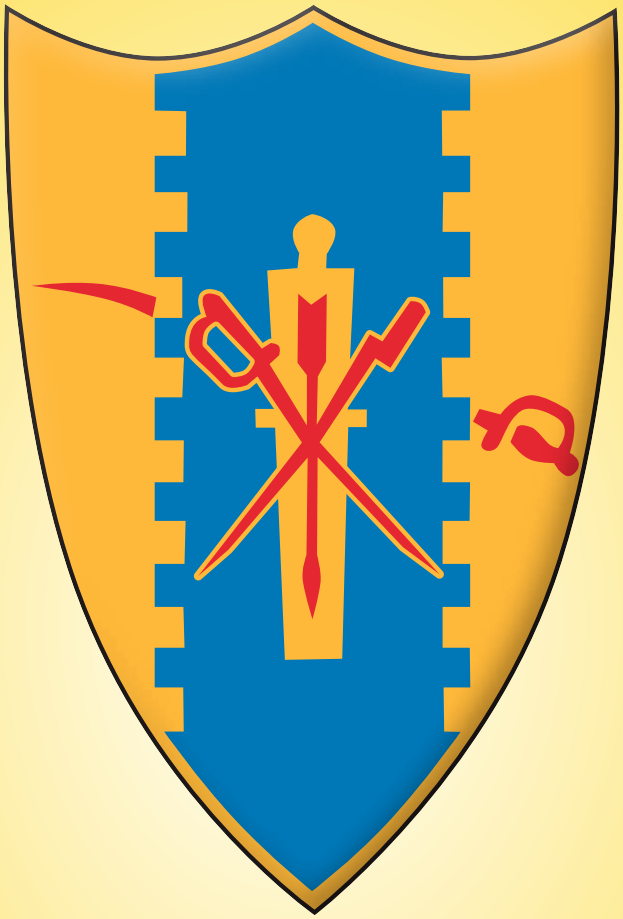
This year's Saber Junction was the most multinational and complex exercise U.S. Army Europe has conducted in 20 years.

Using host-nation security forces, unified-action partners and extended maneuver-rights areas added realism to the scenario. "What that did was replicate the complexities that are found in the current operations we conduct in Afghanistan and elsewhere, as well as what our future operations will be as military forces from around the globe continue to reduce, re-man and restructure," said MAJ Andy Watson, 2nd Cavalry Regiment's regimental operations officer. "The writing is on the wall: as conflicts become more encompassing, you're going to see more multinational and multi-governmental operations occurring where unified-action partners, host-nation security forces and multinational forces and allies are going to have to work together towards common or similar goals.

"Getting to see the effects of conducting a large-scale maneuver operation across terrain that is a mix of rural and urban, and how you have to plan for and adapt to the uncontrollable variables of a host-nation population, was a major benefit of the exercise," said Watson, an Armor officer who has deployed five times to Kuwait, Iraq and Afghanistan. "[This] infused [into the scenario] a series of dynamic situations we had to deal with, to include adapting operations to deal with road construction or heavy flow of traffic, [and] taking into account the effect that the positioning of our forces would have on local nationals and how it would impact their daily life.

"It provided [2nd Cavalry Regiment] an outstanding opportunity to validate the previous year's worth of training as we came out of reset and conducted a significant amount of training, everything from the fire-team level all the way up to squadron," Watson said. "We found that Saber Junction [decisive-action training environment rotation] was a great opportunity for us to validate the way we've trained and what we've trained on, and to ensure we are building the competencies and confidence throughout our formation, necessary to be ready to execute any mission or operations we are assigned."

4TH CAVALRY REGIMENT



The distinctive unit insignia was originally approved for the 4th Cavalry Regiment Nov. 6, 1922. It was amended to change the method of wear Dec. 12, 1923. It was again amended to correct the description April 27, 1926. The insignia was redesignated for the 4th Reconnaissance Battalion Dec. 11, 1950. It was redesignated for the 4th Armored Cavalry Reconnaissance Battalion June 30, 1955. The insignia was rescinded May 24, 1956. It was reinstated and approved for the 4th Cavalry Regiment Aug. 30, 1957. The shield is yellow for Cavalry. The attack on the intrenchments at Selma is symbolized by the embattled blue pale and red bayonet. The capture of Hood's Artillery is shown by the reversed cannon. The rout of the enemy's cavalry at Murfreesboro is shown by the reversed saber, and the successful Indian campaigns by the reversed arrow. The shield contains the regiment's triumphant saber at the charge.

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