Infantry

Summer 2023

Infantry Week 2023

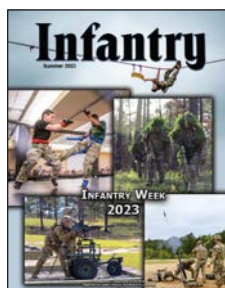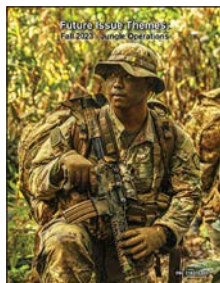# Infantry

FRONT COVER:
The front cover features photos from the four 2023 Infantry Week competitions: Lacerda Cup All Army Combatives Championship, International Sniper Competition, Best Mortar Competition, and Best Ranger Competition. (Photos by Patrick A. Albright, Denise Mosley, and David W. Logsdon)

BACK COVER:
A Soldier with the 25th Infantry Division conducts operations as part of Keris Strike in Malaysia on 5 November 2021. (Photo by SPC Richard Mohr)

Commandant's Note

BG LARRY BURRIS

Since our last issue, the U.S. Army Infantry School held one of our most important events of the year — Infantry Week. Providing an opportunity to showcase the readiness, lethality, and resiliency of service members from across the force during four separate competitions cultivates a competitive energy that is unmatched across the Army. As we look back over the jam-packed schedule of events that occurred from 10-17 April, we are reminded of the fundamental lesson that winning matters. It is as simple as that.

The profession of arms in which we have chosen to serve represents the highest stakes imaginable for those whom we are sworn to defend. Our nation's message to the world at large is that America and her coalition partners stand ever ready to take up the sword once again when we, those we defend, and our stalwart allies are alerted to distant drums or smoke on the horizon. Infantry Week saw teams of our own warriors and our allies engaged in four rigorous competitions: the International Sniper Competition, Lacerda Cup All Army Combatives Championship, Best Mortar Competition, and Best Ranger Competition. The results demonstrated the preparation and commitment of those warriors who came to Georgia intending to seriously compete with their peers. Within the first few pages of this issue, we highlight these competitions and offer our sincerest congratulations to the winners (Best Ranger – CPT Luke Ebeling and SPC Justin Rein, 75th Ranger Regiment; Lacerda Cup – XVIII Airborne Corps, Team Champion; Best Mortar – Team 18, 75th Ranger Regiment; and International Sniper – Team 7, Army National Guard). We also would like to thank all the competitors, cadre, staff, and supporters who made this week a success.

The U.S. Army Infantry School trains warriors and ensures the warrior spirit is instilled in each one of our Soldiers. We need to train to consistent and demonstrable high standards to anticipate or respond to emerging threats. This enables us to deploy quickly, strike decisively, and return to home station to refit, re-arm, and prepare for the next contingency. This imperative to update training and sustain proficiency has always kept our Army and those of our allies at the cutting edge — no matter where our aggressors seek vulnerabilities to exploit. We cannot — and must not — be tempted to rest on our laurels. This Commandant's Note has addressed the payoff for much of our technological success and the commitment that has long assured our dominance of a playing field that our adversaries will find it, at best, difficult to survive, let alone to surpass.

Winning matters. We win by developing cohesive teams that are highly trained, fit, and disciplined. *Proper* training management, a topic that often receives a lot of attention with sometimes little-to-no instruction, is vital to ensuring our Soldiers continue to receive valuable training and enable them to close with and destroy the enemy. In this issue of *Infantry*, we highlight this key function.

In this edition's first article, LTC Michael A. Hamilton discusses four key pitfalls in unit training management that can degrade a unit's readiness and proposes solutions for each pitfall. He stresses the importance of developing foundational knowledge before training, unlearning bad habits, establishing SOPs, and focusing on training that has clearly defined tasks and standards and builds task mastery.

We feature three articles from the Combined Arms Center-Training Management Directorate (TMD) that provide guidance for conducting company training meetings, leveraging the three basic training environments to maximize benefits, and using new features found in the Digital Training Management System. TMD is the Army lead for training management capabilities and develops the doctrine, processes, products, and systems that enable units to train. Its Unit Training Management page on the Army Training Network offers excellent resources for leaders planning training, and units can even request a mobile training team seminar that is tailored to their specific needs.

Among the other offerings in this issue is another article by LTC Hamilton, along with CPT Christopher J. Egan, that discusses considerations for improving small unmanned aircraft systems (SUAS) for light Infantry Battalions during decisive-action operations in restrictive terrain. After providing a comprehensive look at SUAS requirements and capabilities, the authors list recommendations for on-going and future SUAS modernization efforts.

SFC Leyton M. Summerlin's article "Standardizing Excellence" reminds us of the value in choosing the hard-right path over the easy-wrong as we evaluate the daily decisions that confront us. His insights reveal what a Soldier is all about when nobody is looking because that's the way the game is supposed to be played. In the ideal, unvarnished Army, a service member does what is right because it meets the Army standards we espouse with terms of our health, fitness, and marksmanship — and we expect others to accept our assertions at face value. In short, excellence is the standard and to offer anything less will be done at the cost of our reputation and hence our immutable credibility.

I am the Infantry! Follow me!

INFANTRY WEEK 2023

Best Mortar Competition
10-13 April

1st Place – Team 18, 3rd Battalion, 75th Ranger Regiment
2nd Place – Team 16, 1st Battalion, 75th Ranger Regiment
3rd Place – Team 17, 2nd Battalion, 75th Ranger Regiment
4th Place – Team 13, 82nd Airborne Division
5th Place – Team 19, 1st Battalion, 8th Marine Regiment
6th Place – Team 20, 2nd Battalion, 7th Marine Regiment
7th Place (Tie) – Team 15, 173rd Airborne Brigade
7th Place (Tie) – Team 3, 11th Cavalry Regiment
9th Place – Team 11, 25th Infantry Division
10th Place – Team 21, 3rd Battalion, 5th Marine Regiment
Top Shot - SPC Vincent Tolentino, Team 10, 25th Infantry Division
Best FDC Score - Team 19, 1st Battalion, 8th Marine Regiment

(Counterclockwise from top) Team 17 completes the gunner's exam station during Day 2 of the Best Mortar Competition. (Photo by SFC Rochelle Ralph)

Team 7 from the 10th Mountain Division rushes to the next event at Red Cloud Range during the 81mm mortar live-fire exercise. (Photo by David W. Logsdon)

Marines from Team 21 make adjustments to their deflection and elevation during a 120mm fire mission on Day 3 of the competition. (Photo by CPT Alex Werden)

Soldiers from Team 2 fire a 60mm mortar during the hand-held and direct lay live-fire exercise on Day 2. (Photo by SFC Jacob Desmarais)

Competitors from Team 18 carry an ammo can during the Mortar Physical Demands Test on Day 2 of the competition. (Photo by SFC Rochelle Ralph)

International Sniper Competition
10-13 April

1st Place – Team 7, U.S. Army National Guard (ARNG)
2nd Place – Team 31, 19th Special Forces Group (ARNG)
3rd Place – Team 32, Army Special Warfare Center
4th Place – Team 5, 1st Battalion, 75th Ranger Regiment
5th Place – Team 9, Warrior Training Center (ARNG)
6th Place – Team 20, Denmark
7th Place – Team 17, 2/75th Ranger Regiment
8th Place – Team 19, Massachusetts ARNG
9th Place (Tie) – Team 8, 11th Armored Cavalry Regiment
9th Place (Tie) – Team 29, 3/75th Ranger Regiment
Field Craft Award – Canadian Armed Forces
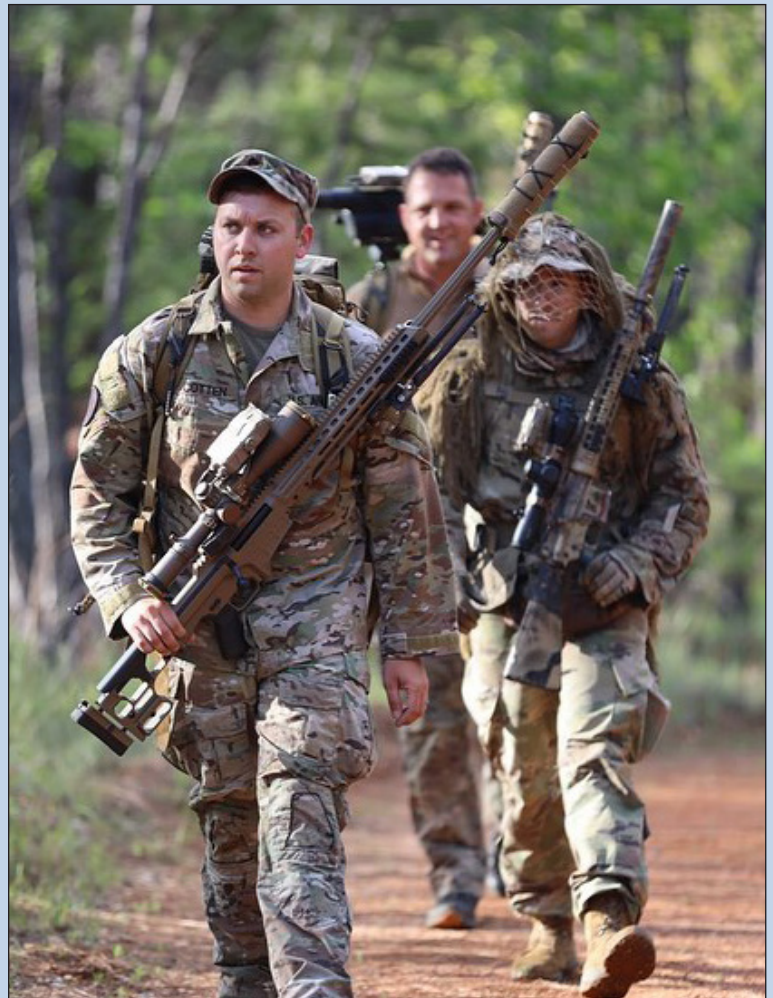
(Clockwise from top) A sniper from Team 1 conducts a stalking exercise during the first day of the International Sniper Competition (ISC). (Photo by Denise Mosley)

Team 7 from the Army National Guard moves to their next event on the first day of the competition. (Photo courtesy of Army National Guard Warrior Training Center)

An ISC competitor spots a target during Day 3 of the competition. (Photo by David W. Logsdon)

Team 3 from the 7th Infantry Division engages a target during the third day of the competition. (Photo by David W. Logsdon)

View more photos from all the Infantry Week competitions at https://fortmoore.smugmug.com/Ceremonies-and-Events/Postwide-Competitions/InfantryWeek.

Lacerda Cup
All Army Combatives Championship
10-13 April

The **18th Airborne Corps** was named overall champion of the 2023 Lacerda Cup.

The following are the results from the individual championship bouts:

Bantamweight – SGT Osvaldo Lopez, 7th Transportation Unit

Flyweight – SGT Patrick Terry, 4th Infantry Division

Lightweight – SFC Jacob Groves, 4th Infantry Division

Welterweight – 1LT Dylan Van Sickell, 10th Mountain Division

Middleweight – SFC Kenry Trowers, 173rd Airborne Brigade

Cruiserweight – SFC Ralston Thomas, 18th Airborne Corps

Light Heavyweight – 1LT Grant Pierson, 25th Infantry Division

Heavyweight – SPC Luther Egerson, 2nd Infantry Division

(Counterclockwise from top right) Soldiers competing in the Lacerda Cup grapple during the second day of the competition on 11 April. (Photo by David W. Logsdon)

A Soldier attempts to block a kick during Day 1 of the Lacerda Cup All Army Combatives Championship. (Photo by David W. Logsdon)

Soldiers battle it out during the advanced rules individual championships on 12 April at the Columbus Iron Works Convention and Trade Center. (Photo by Patrick A. Albright)

SSG Zachary Durkin from the 4th Infantry Division gets a headlock submission during the preliminary round of the Lacerda Cup on 10 April. (Photo by SGT Woodlyne Escarne)

39th Annual David E. Grange Jr.
Best Ranger Competition
14-16 April

1st Place – Team 36 – CPT Luke Ebeling and SPC Justin Rein, 75th Ranger Regiment

2nd Place – Team 56 – CPT James Moore and CPT Logan Storie, Maneuver Center of Excellence

3rd Place – Team 10 – 1LT Dean Smith and 1LT Kevin Moore, 2nd Cavalry Regiment

4th Place – Team 49 – MAJ Nathaniel Bishop and MSG Justin Kline, 1st Army

5th Place – Team 25 – 1LT Griffin Hokanson and 1LT Luca Mazzanti, 25th Infantry Division

6th Place – Team 42 – SFC Nicholas Whitney and 1LT Zachary Navara, Airborne and Ranger Training Brigade

7th Place – Team 32 – SGM Eric Echavarria and MSG Charles Gonzalez, U.S. Army Special Operations Command

8th Place – Team 46 – CPT Tanner Potter and CPT Daniel Erickson, Army National Guard

9th Place – Team 26 – 1LT Cameron Morello and 1LT Graham Ungrady, 25th Infantry Division

10th Place – Team 19 – 1LT Miles Keane and 1LT Carson Rhoads, 101st Airborne Division

(Clockwise from top) CPT Daniel Erickson from Team 46 prepares to enter Victory Pond during the helocast event on 16 April. (Photo by Patrick A. Albright)

CPT Luke Ebeling and SPC Justin Rein, Team 36, prepare to move a mannequin during a days stakes station at A.J. McClung Memorial Stadium in Columbus, GA, on 15 April (Photo by Markeith Horace)

Best Ranger competitors begin the unknown distance road march event on the first day of the competition. (Photo by David W. Logsdon)

SGM Eric Echavarria and MSG Charles Gonzalez, Team 32, move a casualty during the final day of the Best Ranger Competition. (Photo by Patrick A. Albright)

Going from Good to Great:
Avoiding Subtle Pitfalls in Unit Training Management

LTC MICHAEL A. HAMILTON

Training is one of the most important things we do in our Army. Rightfully so, units spend a lot of time and effort planning and executing training, and there's a lot of great training happening every day around the Army. But the reality is that unit training management is complicated, and there's a lot that can go wrong with it, despite our best efforts and intentions.

Army training doctrine is outstanding. But like all doctrine, experience is important in deciphering and fully appreciating all of its insights. Some of the pitfalls in unit training management are not described in detail within Army training doctrine and unfortunately have become commonplace as the status quo for how many units approach training. Rather than attempt to describe all the common pitfalls with unit training management — an effort that could easily fill a book — the following is an attempt to focus solely on some of the less obvious but more egregious issues, learned mostly through past failures of friction, frustration, and unmet training objectives.

There are four subtle pitfalls in unit training management that, while not thoroughly detailed in Army training doctrine, often have major negative consequences to achieving high standards in training readiness:

- Putting the Cart Before the Horse — Training Before Educating

- Unlearning Bad Habits — The Hidden Obstacle in the 8-Step Training Model

- Putting Theory into Practice — Establishing Standard Operating Procedures

- Overvaluing the Wrong Thing — Confusing Fancy Training with Good Training

Pitfall #1: Putting the Cart Before the Horse — Training Before Educating

> *"Knowledge without understanding is useless."*
> **— Thucydides**

Go to any large gym during peak operating hours, and you're bound to see someone doing wildly ineffective physical training — bad mechanics, unsafe form, lifting weights that are too heavy or light, gimmicky shortcuts, or following a poorly designed program. If the objective of physical training is to optimize fitness, each of these deficiencies will lead to failure in suboptimal results. The solution, then, is NOT merely executing more bad training with increased effort, since this would not fix the fundamental problem of ineffective training. Such shortcomings are not caused by a lack of effort but rather a lack of understanding. Education — the development of foundational knowledge — must precede training.

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

The bedrock of all Army training is doctrine. Doctrine is comprised of principles, terms, symbols, tactics, techniques, and procedures (TTPs) that are firmly rooted in time-tested theories and observations.[1] These foundational ideas form the intellectual framework needed to master the practical application of skills and are essential to truly understand the "why" behind unit training objectives. Too often, units neglect the deliberate and focused education necessary to comprehend the doctrinal concepts that underpin training objectives. This results in Soldiers who don't fully understand what they are being trained to do and are thus incapable of adapting their narrowly acquired skills to changing METT-TC (mission, enemy, terrain & weather, troops & support available, time available, civil considerations) conditions in dynamic and complex environments. Education empowers Soldiers with disciplined flexibility and adaptability that remain firmly rooted in sound doctrinal thinking.

Although Field Manual (FM) 7-0, *Training*, mentions the importance of leader development to training, it fails to clearly articulate the importance of education to achieving high standards in training or the consequences of under-educating a training audience.[2] In both FM 7-0 and FM 6-22, "leader development" is a broad concept that involves "the career-long synthesis of the training, education, and experiences acquired through opportunities in the institutional, operational, and self-development domains."[3] Thus, while Army training doctrine makes a clear distinction between education and training, it doesn't emphasize the crucial relationship between the two and seems to relegate education specifically to the institutional domain almost exclusively. The result of this is a chronic deficit in unit-level educational efforts that are critical to achieving high standards in training.

Compounding this risk is the fact that most unit training events — rightfully so — deliberately narrow the METT-TC variables in order to control the environment for training, evaluation, and safety purposes. Although necessary, this causes the training audience to build proficiency under narrow METT-TC conditions, which are subject to change in more complex and dynamic environments. Without acquiring broad-based knowledge and understanding through education prior to training, units frequently develop Soldiers who are either too rigid in their application of skills or reckless in jettisoning all doctrinal principles the moment unfamiliar METT-TC conditions arise.

The solution to this pitfall is simple but not easy: Units must invest sufficient effort in educating leaders on the doctrinal knowledge required to truly understand the skills and TTPs performed in training. One way to do this is to focus leader professional development (LPD) events, train-the-trainer activities, and "crawl"-phase instruction on analyzing the tasks to be trained through the lens of doctrinal concepts and principles. In other words, before training on any task, attempt to answer the question "why" in as much detail as possible from a doctrinal perspective. Japanese inventor and industrialist Sakichi Toyoda once proposed a problem-

> *Too often, units neglect the deliberate and focused education necessary to comprehend the doctrinal concepts that underpin training objectives. This results in Soldiers who don't fully understand what they are being trained to do...*

solving method that involved asking "five whys" to develop a deep understanding of problems.[4] By applying this technique in educating Soldiers on the doctrinal concepts that support unit training objectives, Soldiers can gain true understanding that enables disciplined adaptability.

As an example, when examining Battle Drill 2 (platoon assault) and the doctrinal rationale for identifying a vulnerable flank to assault,[5] applying the "five whys" learning technique may educate Soldiers on the following doctrinal underpinnings:

1) A vulnerable flank presents an opportunity to **maneuver** or move in combination with fire to achieve a position of relative advantage.[6]

2) The specific form of maneuver that achieves relative advantage on a vulnerable flank is an **envelopment**, which seeks to avoid an enemy's principle defenses (fires and obstacles) where they are strongest.[7]

3) This achieves a principle of direct fire planning and control in **minimizing exposure** through increasing survivability by exposing Soldiers to the minimum extent necessary to engage the enemy effectively.[8]

4) This also achieves **enfilade fire** in aligning the long axis of friendly direct fire beaten zones with the long axis of the enemy formation, which is the most preferable pattern of fire.[9]

5) Envelopment also achieves a characteristic of offense through **surprise** by attacking at a time, place, or manner for which enemy forces did not prepare or expect.[10]

Why does this matter? Understanding this logic empowers Soldiers to make appropriate decisions based on METT-TC and possibly NOT attempt an envelopment during the assault if the assumed conditions that justify the recommended TTP do not exist; for instance, if —

- There are no assailable flanks based on the enemy's disposition;

- Enfilading fires cannot be achieved based on the terrain or enemy array;

- There is insufficient concealment to move to a flanking position undetected to achieve surprise; or

- The enemy's frontal fires and obstacles are sufficiently weak enough to mitigate the risk of an audacious frontal attack.

In short, sufficiently educating Soldiers prior to training teaches them *how to think*, not just what to think — something our Army espouses as essential to fight and win in a complex world.

Pitfall #2: Unlearning Bad Habits — The Hidden Obstacle in the 8-Step Training Model

"Beware of false knowledge; it is more dangerous than ignorance."

— **George Bernard Shaw**

There's an ugly truth that many of us would prefer not to acknowledge: Not all Soldiers have been well trained in the past. In fact, some of them have been miseducated or poorly trained in bad TTPs, terminology, symbols, theories, and principles that are antithetical to sound Army doctrine. In many ways, this is a significant setback to unit training plans before the training even begins. Many leaders make one of the following dubious assumptions about their training audience that could jeopardize the effectiveness of their training from the very beginning:

1) They are starting with a tabula rasa (blank slate) of knowledge; or

2) Preexisting knowledge and skills are congruous with the future training standards to be achieved; or

3) It is easy to convince people that their preexisting knowledge and skills are either incomplete, misguided, or entirely wrong; or

4) Preexisting knowledge and skills are easily unlearned or untrained.

If any of these assumptions prove invalid (as they often do), then leaders immediately find themselves engaged in not only a training management effort but a **change management** effort, which is significantly more challenging. Training "blank slate" Soldiers is simple: Teach them what they don't know. But "untraining" — the process of replacing poor knowledge or skills with new knowledge or skills for the same tasks — is more complicated. In "untraining," leaders must convince Soldiers that the bad TTPs and knowledge they've already learned and inculcated is insufficient and motivate their buy-in and trust to abandon their comfortable status quo for something better.

For multiple reasons, "untraining" efforts have a tragically high rate of failure, often yielding to mediocrity in acquiescence to low standards. Novice leaders who lack the legitimacy of expertise and experience are largely incapable of "untraining" their units without significant help from senior leaders of greater authority, expertise, and experience. The reasons for this are validated by virtually every psychological theory of organizational change. For this reason, it is absolutely critical that senior unit leaders with expertise and experience participate in leader certification activities to the maximum extent possible.

Using John Kotter's 8-Step Organizational Change Model, we can envision the important role that senior unit leaders must play in unlearning bad knowledge or skills.[11] Leveraging their expertise, experience, and authority, senior unit leaders are critical in creating the climate for change by:

(1) Creating a sense of urgency to unlearn/"untrain" bad knowledge or skills;

(2) Building a coalition of subordinate leaders — especially NCOs — who can implement the change; and

(3) Creating a vision of what the higher training standards can and should achieve for the unit.[12]

Aligning this organizational change model with the 8-Step Training Model as soon as possible in the training glide path will significantly increase the chances of success for unlearning bad habits and achieving higher standards.

Pitfall #3: Putting Theory into Practice — Establishing Standard Operating Procedures

"It's the little details that are vital. Little things make big things happen."

— **Coach John Wooten**

Similar to his "five whys" method of dissecting problems, Toyoda also proposed that identifying practical solutions to problems requires asking "five hows" or five questions to determine the specific ways and means to implement solutions.[13] For example, if the generalized solution to a tactical command and control (C2) problem involves "reporting to higher headquarters," then the answers to the "five how" questions may reveal:

"Unit W should transmit Report X to Command Post Y using radio net Z in accordance with the unit PACE (primary, alternate, contingency, emergency) plan."

This is an example of a standard operating procedure (SOP), and not having SOPs codified for common tasks to be trained is one of the biggest causes of shortcomings in training. SOPs bridge the gap between what the doctrinal tasks require you to perform and how exactly your unit will perform them under specific METT-TC conditions. Fundamentally, training involves the development of specific skills under specific conditions to achieve specific outcomes. Lack of specificity in tasks, conditions, or standards is counterproductive to good training outcomes. Detailed SOPs are critical to high quality training.

Army training doctrine subtly signals the importance of developing SOPs prior to training in TC 3-20.0, *Integrated Weapons Training Strategy (IWTS)*. Training tables for crews, squads, and platoons include SOP class instruction as the first "crawl"-level training gate to be accomplished prior to "walk"- and "run"-level training (see Figure 1).[14] For a number of predictable reasons, Table I SOP instruction is one of the most consistently neglected gates in the ITWS training tables in many units, despite being critically important and doctrinally prescribed. Among the reasons why SOP development is consistently neglected is because it is both time-consuming and frequently lacks an organizing framework — in other words, with so many SOPs that could be developed, what are the required SOPs and where should units start? One technique for accomplishing this is to focus SOP development on adding detail to the performance measures (PM) within training and evaluation outlines (T&EOs) for mission-essential tasks (METs), battle tasks, and key supporting collective tasks.

Echelon	Table I	Table II	Table III	Table IV	Table V	Table VI
	PREREQ	PREREQ	PREREQ	Collective Task Proficiency	COORD / Rehearsal / Practice	Live-Fire Proficiency Gate
	CRAWL	CRAWL	WALK	RUN	RUN	RUN
Battalion	TEWT / Live	STAFFEX / Blended	CPX / Live	FTX / TADSS	FCX / Blended	CALFEX / Live-Fire
Company	TEWT / Live	STX-V / Virtual	STX / TADSS	FTX / TADSS	FCX / Live-Fire	CALFEX / Live-Fire
Platoon	CLASS SOP / Live	STX-V / Virtual	STX / TADSS	FTX / TADSS	FCX / Live-Fire	LFX / Live-Fire
Section						
Squad						

Figure 1 — Integrated Weapons Training Strategy Structure including SOP Class during Table I Training (TC 3-20.0, Table 1-1)

Figure 2 — Example "Five Hows" Technique for SOP Development from T&EO Performance Measures (Task 07-PLT-5037, Army Training Network)

While Army training doctrine provides T&EOs for many (but not all) unit tasks to be trained, the procedures prescribed within T&EOs often lack the level of detail required to enable practical application.[15] This is not a dismissal of the value of T&EOs but an argument to supplement the performance measures prescribed in T&EOs with detailed SOPs that enable units to achieve the doctrinal standards. Good SOPs enable units to meet T&EO standards during training.

Too often, units rely on the latent experience of leaders to compensate for a lack of clearly defined SOPs for how the unit should accomplish common tasks. The ambiguous and arbitrary nature of this latent leader experience is counterproductive to achieving clear standards of performance in both training and operations. Units must prioritize SOP development as a central component of effective training management. This requires leader emphasis, time, consistency, and direct participation in the SOP development process. Once developed, SOPs must be widely disseminated and integrated into the 8-Step Training Model, particularly in leader certification, execution, and evaluation.

Pitfall #4: Overvaluing the Wrong Thing – Confusing Fancy Training with Good Training

"I fear not the man who has practiced 10,000 kicks once, but I fear the man who has practiced one kick 10,000 times."

— Bruce Lee

Units sometimes fixate on conducting training that involves extensive resources, which often leads to two unintended consequences. First, resource-intensive training is hard for most units to repeat with the frequency necessary to develop mastery of tasks and skills. Second, the planning efforts for resource-intensive training are often preoccupied with acquiring resources to enhance the conditions of the training environment while distracting leaders from designing the event to sufficiently elicit all the tasks to be trained and assess all the standards to be achieved. The end result of such efforts is an impressive training event that fails to fully meet the training objectives. Good training is oriented on clearly defined tasks and standards.

Although the METT-TC conditions of the training environment can and should enhance the training event, they are not the point of it. The point of training is to accomplish tasks to standards, regardless of the conditions.

Another way to articulate this important point is to describe the tension between two principles of Army training: train as you fight and train to sustain.[16] The former prioritizes maximizing realism, while the latter prioritizes maximizing sustainability. Both cannot be accomplished all the time — the more realistic the training event, the harder it is to build and sustain mastery through repetition. Unit leaders must take care not to bias too heavily in favor of the training benefits of realistic training to the detriment of building mastery through repetitious low-resource training.

Part of the problem is that some units naively view low-resource training as low-quality training. The combination of this distorted outlook with a lack of focus on clearly defined tasks and standards causes units to miss opportunities to build mastery through low-resource repetition. A simple analogy for this is individual marksmanship training that routinely overlooks preliminary marksmanship instruction (PMI), dry-fire drills, and virtual training aids such as the Small Arms Marksmanship Trainer and the Engagement Skills Trainer. This kind of "live-fire only" outlook on marksmanship training inevitably leads to diminished training outcomes because the low-resource repetition necessary to build the fundamentals prior to the high-resource live-fire training was neglected. Ultimately, the units that achieve task mastery through frequent, well-planned, low-resource "crawl"- and "walk"-level training are arguably more prepared for combat than units who conduct infrequent "run"-level training events and do not achieve task mastery in the process.

So what's the solution? It may be helpful to further examine the possible root causes of this training pitfall and recommend that the solutions simply acknowledge and reverse these trends. What drives units to consistently miss opportunities to conduct repetitious, low-resource training? Some reasons may include:

1) Persistent excessive bias toward training realism at the expense of training frequency;

2) Lack of focus on clearly defined tasks and standards for training;

3) Underestimating the number and scope of tasks to be trained due to lack of a complete METL crosswalk;[17]

4) Insufficient emphasis on training evaluations in accordance with step #7 of the 8-Step Training Model;[18]

5) Lack of motivation and/or discipline to conduct frequent low-resource training to high standards, due to perceiving such training as tedious or boring; and

6) Low standards for training proficiency.

Conclusion

If you belong to a unit that routinely experiences these training pitfalls, the good news is you are definitely not alone. But the bad news is it can be very difficult to overcome the inertia of the status quo to affect change. This is especially true because the recommended solutions to these shortcomings all require substantial effort above and beyond the typical "passing grade" for unit training management. Once mediocrity is accepted at a relatively lower level of effort, it can be

very hard to generate buy-in to exert more organizational effort to achieve higher standards. Creating this momentum requires exceptional leadership that goes the extra mile in not accepting mediocre training readiness. Higher training standards are not only possible through avoiding these pitfalls, but they are also morally imperative for the combat readiness of our Soldiers.

Notes

[1] Army Doctrine Publication (ADP) 1-01, *Doctrine Primer*, July 2019, 1-2.

[2] Field Manual (FM) 7-0, *Training*, June 2021, 1-5.

[3] FM 6-22, *Developing Leaders*, November 2022, 1-1.

[4] American Society for Quality (ASQ), "Five Whys and Five Hows," https://asq.org/quality-resources/five-whys.

[5] Army Techniques Publication (ATP) 3-21.8, *Infantry Platoon and Squad*, April 2016, J-6.

[6] ADP 3-90, *Offense and Defense*, July 2019, 2-14.

[7] FM 3-90, *Tactics*, May 2023, 2-19.

[8] Ibid, 1-21.

[9] ATP 3-21.8, F-14.

[10] ADP 3-90, 3-2.

[11] John P. Kotter, *Leading Change* (Boston: Harvard Business Review Press, 2012).

[12] Ibid.

[13] ASQ, "Five Whys and Five Hows."

[14] Training Circular (TC) 3-20.0, *Integrated Weapons Training Strategy (IWTS)*, June 2019, Table 1-1.

[15] Army Training Network, https://atn.army.mil/.

[16] FM 7-0, 1-3.

[17] Ibid, Appendix B.

[18] Ibid, 3-9.

LTC Michael A. Hamilton is a 19-year Infantry officer with six deployments to Afghanistan and Iraq. His most recent assignment was battalion command of the 2nd Battalion, 504th Parachute Infantry Regiment, 1st Infantry Brigade Combat Team, 82nd Airborne Division from January 2021 to May 2023. His previous assignments also include serving with the 1st Armored Division, 75th Ranger Regiment, and 1st Security Force Assistance Brigade.

Paratroopers from 2nd Battalion, 504th Parachute Infantry Regiment conduct a platoon live-fire exercise (Photo courtesy of the 1st Brigade Combat Team, 82nd Airborne Division)

Company Training Meetings

TRAINING MANAGEMENT DIRECTORATE, COMBINED ARMS CENTER-TRAINING

Weekly company training meetings are vitally important to developing unit training proficiency. They ensure past training is reviewed for effectiveness, provide a forum to discuss and coordinate future training, and allow the commander to consider feedback and provide training guidance to subordinate company leaders. Field Manual (FM) 7-0, *Training*, is a leader's primary reference for understanding the importance of company training meetings.

Company training meetings are particularly important during the short-range planning horizon when training event execution is imminent. These meetings are only a part of the bigger picture of the training management cycle.

Figure 1 – The Training Management Cycle

Training Management Cycle

This cycle provides all Army leaders with a logical, chronological framework for developing unit training proficiencies (mission-essential tasks, weapons qualification, collective live-fire). Company training meetings occur weekly throughout the training management cycle, ensuring at the lowest echelons that training is executed and evaluated and that company commanders are assessing the results.

Prioritize and Assess Training Proficiencies. The first step in the cycle requires the commander, based on the unit mission, to prioritize and assess each of the unit's three training proficiencies. Once the commander prioritizes training, planning and preparation can begin.

Long-Range Planning and Preparation. The commander begins developing a long-range training plan to determine who, what, when, where, and why the unit will train in the next fiscal year (FY). This process results in the timely publication of the unit's annual training guidance (ATG). Publication of ATG is critical and ensures every echelon plans and identifies training resources early in the cycle. See FM 7-0, tables 3-1 and table 3-2 for specific ATG publication dates by echelon.

Mid-Range Planning and Preparation. As the unit executes ATG during the FY, mid-range planning and preparation centers on periodic (semi-annual and quarterly) reviews of training conducted and guidance refinement as necessary. Semi-annual and quarterly training briefings provide senior commanders the status of ATG compliance as the FY progresses. Training meetings held at brigade and battalion level also track ATG progress to ensure training resources for subordinate companies are coordinated and available when training begins.

Short-range Planning and Preparation. Throughout the FY, company-level units conduct weekly training meetings as a primary part of their training battle rhythm. Through these meetings, units continuously monitor and manage training in the short-range planning horizon (Weeks T-6 to T). This period just before training event execution is the culmination of long-, mid-, and short-range planning and preparation. It is in this period of the training management cycle that final training event preparations are made, final resource coordination is made, resources are received, and rehearsals are held. It is also at T-6 that company training schedules are approved and published.

Conducting Company Training Meetings

Company training meetings are the center of gravity of unit training management. During these weekly meetings, company leaders synchronize and coordinate their training efforts in support of the commander's ATG. Training — and only training — is discussed to maintain focus, direction, and purpose.

The company commander chairs the training meeting with maximum leader participation (see FM 7-0, Appendix E for a list of attendees and their responsibilities). The Digital Training Management System (DTMS) operator displays current unit training information to facilitate information sharing and minimize the need to reproduce existing data.

Prior to the company training meeting, platoon leaders conduct their own informal training meeting. The platoon training meeting includes the platoon leader, platoon sergeant, and squad leaders. It reviews current platoon training proficiencies, training recently conducted, and future training planning and coordination. It also ensures platoon-level training has been recorded using the Small Unit Leader Tool (SULT), which feeds into DTMS and updates information for the company meeting.

Company Training Meeting Focus

The commander ensures the agenda is followed and the discussion is concise and to the point. As a minimum, the following topics are the meeting's focus:

• Current training proficiency overview

• Training conducted the previous week and a review of subordinate feedback to include:

- Leader observations
- After action review (AAR) results
- Completed evaluator training and evaluation outlines
- Other sources of feedback available to the commander

• Leader development planning focusing on leader development goals and objectives

• Mid-range planning and preparations (training events inside T-16 to T-7)

• Short-range planning and preparations (training events inside T-6 to T) and the commander's short-range training guidance

During the meeting, the crosstalk between leaders ensures actions and lessons learned from previous training are fully discussed, recognized, and recorded for future reference.

T-Week Calendars — a Common Point of Reference

During training meetings, "T-Week" is a reference technique unit leaders use in association with each training event (each week of training has its own T-Week reference depending on the week of execution). It counts down the weeks prior to and after each training event — and helps identify the associated actions that need to occur during a particular week. For example, for a company situational training exercise (STX):

T-16 — Identify major training facilities (16 weeks before the event)

T-12 — Conduct training event planning (12 weeks before the event)

Leaders develop and modify T-Week calendars based on unit needs in association with installation and command

Figure 2 — T-Week Calendar (FM 7-0)

Weeks to Training	Activities
T-16	Identify major training facilities
Week T-12	Conduct training event planning
Week T-11	Refine event requirements
Week T-10	Begin pre-execution checks
Week T-9	Confirm resource requests
Week T-8	Execute reconnaissance and confirm resources
Week T-7	Publish the training event orders
Week T-6*	Review and complete deliberate risk assessments
Week T-5	Complete tactical plan and supporting products
Week T-4	Conduct certifications and complete prerequisite training
Week T-3	Conduct rehearsals
Week T-2	Finalize support and conduct opposing force rehearsal
Week T-1	Draw equipment or supplies and execute subordinate rehearsals and checks
T Week	Execute training
Week T+1	Recover and conduct final after action reviews
* Training schedule approved and published at T-6	

resourcing requirements. For example, coordination for Multiple Integrated Laser Engagement System (MILES) equipment may take 18 weeks to initiate a request on one installation, while on other installations it may take longer. Leaders must tailor their T-Week calendars accordingly.

Leveraging Online Training Support

During the meeting, company leaders view current unit training management data, which is available securely and online through DTMS. Command emphasis on routinely inputting training data into DTMS ensures the information is current, easily accessible, and displayable. Using DTMS to display the data precludes the need to create separate products to display training information already recorded and available.

The Army Training Network (ATN) is the primary entry point for all training information and resources. It provides a wealth of training products online to include how-to tutorials, videos and much more. Combined Arms Training Strategies (CATS) provide recommended training strategies to help develop training plans and identify training resource requirements. DTMS provides visibility of training calendars and mission-essential task (MET) assessments as well as access to SULT, the Digital Job Book (DJB), and other important training information.

Training Event Planning

During the company meeting, as the unit discusses future training event planning, leaders refer to the 8-Step Training Model. It is an effective technique for small units (company and below) to plan and prepare individual training events. It is a training management technique to ensure the unit accounts for major actions/activities as training event planning and preparations take place. Leaders are encouraged to refine/modify training models based on unit and installation requirements.

Figure 3
8-Step Training Model

1. Plan the training event
2. Train and certify leaders
3. Recon training sites
4. Issue the operation order (OPORD)
5. Rehearse
6. Train
7. Conduct after action reviews (AARs)
8. Retrain

Conclusion

Company training meetings are the center of gravity of unit training management, ensuring training occurs as planned and is effective. Understanding the "big picture" of the Training Management Cycle is key to understanding the role and impact company training meetings have in achieving unit training proficiency. These weekly meetings facilitate the vital flow of training information to leaders and provide a primary feedback mechanism for commanders in assessing training effectiveness. To learn more about company training meetings, read FM 7-0 and visit ATN at https://atn.army.mil.
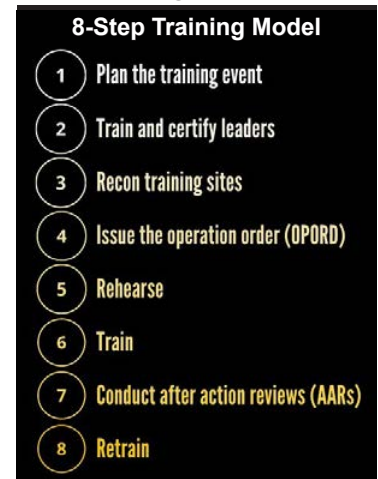
Leveraging Training Environments to Maximize Training Value

TRAINING MANAGEMENT DIRECTORATE, COMBINED ARMS CENTER-TRAINING

A training environment is an environment comprised of conditions, supporting resources, and time that enables training tasks to proficiency.[1] The conditions include aspects of operational variables such as political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT) that may exist during the unit's execution of the training. The resources a unit needs to replicate the conditions for training, such as training areas, ammunition, role players, and time, inform leaders on which training environment to consider when planning training. The Army recognizes three basic training environments: live, virtual, and constructive; however, units can use the three basic training environments in combination with one another. Leaders need to consider the benefits and limitations of the different training environments when creating training plans to leverage Army capabilities and maximize the value of training.

Planning Training

Commanders and their subordinate leaders design and schedule training events to achieve the desired proficiency levels in their prioritized tasks and weapons. Training events are where Soldiers and units learn to execute prioritized tasks — individual tasks, battle tasks, and collective mission-essential tasks (METs) — to achieve the commander's desired end state. Commanders need to consider the training environment in which to train their Soldiers early in the planning cycle. Resourcing the required environment may require a significant lead time to secure the needed training resources. Additionally, the different environments each have constraints or limitations the commander must consider when determining his preferred environment for a training event. The methodology known as crawl-walk-run allows commanders to sequence training events from relatively simple tasks to increasingly more complex tasks. Some training environments support the crawl phase of training better than they support the run phase. At certain echelons, the desired training environment may be impractical or too expensive to resource.

Virtual and constructive training environments may help individuals and units build proficiency in a task prior to executing the task in the live environment. Leaders should consider multiple training environments when developing their training plans to build proficiency levels in their prioritized tasks and weapons. NCOs may start in the live training environment by teaching Soldiers skills such as the steady hold factors in rifle marksmanship. Once the Soldiers develop the rudimentary skills, the NCOs expand the marksmanship

Infantry Soldiers assigned to 2nd Battalion, 503rd Parachute Infantry Regiment, 173rd Airborne Brigade, move toward a bunker in preparation for a live-fire exercise as part of Swift Response 23 in San Gregorio, Spain, on 16 May 2023. (Photo by SSG John Todd)

training by engaging simulated targets in the Engagement Skills Trainer II (a virtual training environment). Finally, the Soldiers test their marksmanship skills in the live training environment at the qualification range. Leaders modify the conditions under which a task is executed to increase realism and improve individual and unit mastery of the task.

Other Planning Considerations. Leaders need to think through the conditions in which an individual or unit will operate. Opposing forces, Joint and host nations forces, civilians, criminal elements, higher headquarters, and robust effects simulators (to include chemical, biological, radiological, nuclear, explosives [CBRNE] effects) are all conditions that leaders must consider and resource. In addition, the leaders must consider the standard to which the unit must train and how to evaluate the training. Instrumentation, observers, evaluators, and after action

Paratroopers with 1st Battalion, 503rd Infantry Regiment take aim with an M4 carbine using the Engagement Skills Trainer in Vicenza, Italy, on 19 March 2020. (Photo by Davide Dalla Massara)

reviews need to be planned and resourced. The training environment chosen for a training event impacts the resourcing requirements needed for execution.

Training Environments

Live. Units execute training in the live training environment in field conditions using the unit's tactical equipment in most cases. Live training involves real people operating real systems. Individual weapons qualification, situational training exercises, and field training exercises are all examples of training that take place in the live training environment. The live training environment is familiar to most Soldiers and typically is the first training environment considered by leaders when they are planning training. Depending upon the training objectives of the training event, the live environment requires greater resources than other training environments. Installations maintain weapons ranges, training areas, and training aids, devices, simulators, and simulations (TADSS) for tenant unit training requirements and manage unit access to these resources. The live training environment is usually available for training Soldiers from individual task training to battalion-level collective training. In specific instances, the Army provides opportunities to train brigade collective tasks in the live environment at combat training centers. The live environment exposes the Soldiers to the widest variety of environmental conditions (heat, cold, rain, snow, limited visibility, etc.) and creates the greatest confidence in their equipment, tactical acumen, and leadership abilities. With unlimited time and resources, units execute training in the live environment to receive the benefits of using their actual equipment, in realistic conditions, under their own leadership.
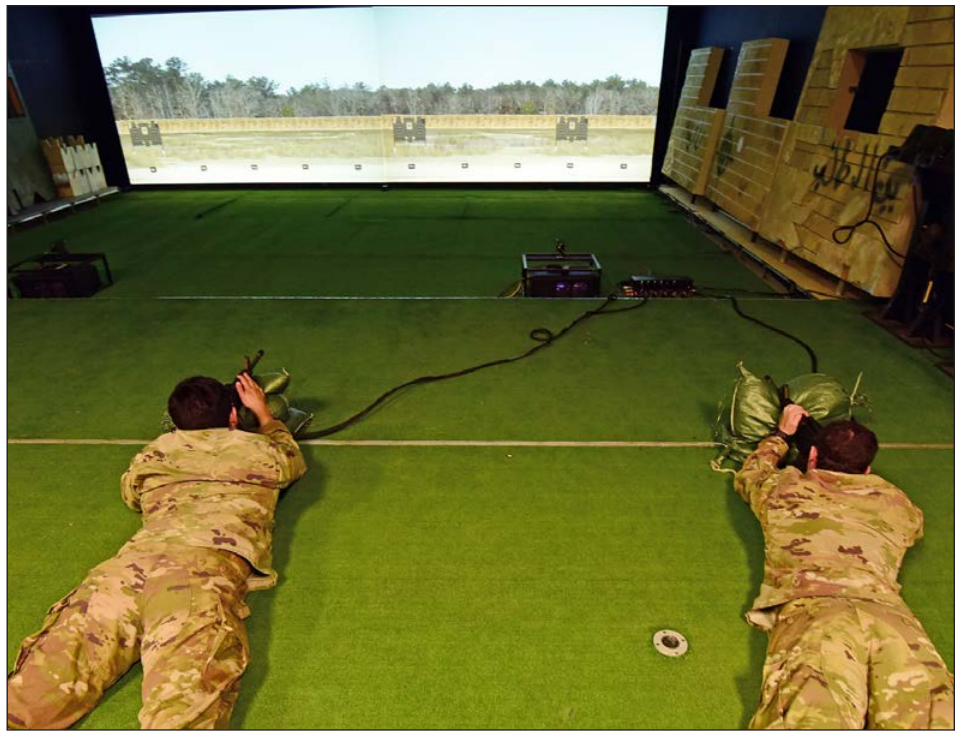
Virtual. The virtual training environment involves real people operating simulated or actual systems to achieve the commander's training objectives. Units use the virtual environment to exercise motor control, decision-making, and communication skills.[2] Commanders may use individual and platform-based weapons simulators, such as the Engagement Skills Trainer II or Close Combat Tactical Trainer, to develop basic skills in their Soldiers, teams, and crews prior to training in the live environment. Using the simulators doesn't replace training in the live environment but rather enhances the training that can occur in the live environment by bringing the Soldiers into the training at a higher proficiency level. Commanders who consider virtual training opportunities often realize more productive and efficient unit training at the range or in the field, reducing costs in time and other resources.

Gaming is a subset of the virtual training environment and is useful to help train individuals and small units. The Army continues to invest in virtual systems to train Soldiers in individual skills and collective tasks. Installations maintain virtual training devices and systems in a similar way to how they manage the resources for the live training environment. Soldiers and leaders can find simulators available for use by visiting the "TADSS at Your Local TSC" link under "Home Station Training Enablers" on the Army Training Network (ATN) website (https://atn.army.mil). The Army Training Support Center (ATSC) provides a searchable listing of TADSS by device number, nomenclature, or proponent. Viewing the device, leaders can determine if the simulator is available on their installation or a nearby installation.

Constructive. Constructive training uses computer models and simulations to exercise command and staff functions. It involves real people interacting with simulated units operating simulated systems.[3] The constructive environment supports training by providing the appropriate levels of model and simulation resolution and fidelity needed to support the commander's training requirements. The Army has two basic constructive environments units can use: the Joint Land Component Constructive Training Capability (JLCCTC) or the Division Exercise Training and Review System (DXTRS). The Army uses JLCCTC for brigade and higher command post exercises (CPXs). DXTRS is a low-overhead simulation that is useful for brigade and below.

The constructive training environment supports training of commanders and their staffs in the control of maneuver, logistics, intelligence, air defense, and artillery units. Response cell operators control the actions of entities (or units) that represent the combined capability of personnel, weapons systems, and platforms. The entity (or unit) executes the operation in a doctrinally sound manner and generates realistic effects/damage reports. The constructive environment provides feedback to the commander and staff through the unit's organic mission command systems in the tactical operations center (TOC). Commanders and staffs train on their normal operational functions, and the simulation processes training unit orders and training audience responses. Constructive training is available from the platoon level but is routinely used for training headquarters elements from battalion through echelons above corps. While less resource-intensive than live training, the constructive environment requires significant advanced planning and resourcing to effectively train unit command and control functions.

Combining Training Environments

Blended training is conducted concurrently within two or more training environments. When planned and resourced, blended training can include information systems that enable the unit commander and other leaders to receive a common operational picture or that enable the activities in one training environment to stimulate reactions in the other environment.[4] Leaders may consider blending the fire and maneuver of a platoon element in the live environment with other platoons operating in the virtual environment to train a company MET if maneuver space is limited. Blending training environments increase the complexity of the training event and require careful planning and control to ensure orders for a virtual element are not transmitted into the live environment. Challenges such as these add rigor to a training event and increase the stress on unit leadership while expanding the scope of the training available to a unit.

The integrated training environment is enabled by integrating architecture to allow full interaction between the virtual and constructive environments. The integrated environment can also allow limited interaction between live forces and the virtual or constructive environments.[5] Integrating the virtual and constructive environments provides the opportunity to execute multi-echelon training of individuals, crews, and staffs simultaneously in locations otherwise inaccessible to the unit. The integrating architecture replicates constructive entities in the virtual environment and conversely displays virtual entities in the constructive environment. Commanders and staffs receive information on their mission command systems to stimulate command actions and respond to events in either training environment.

A Word About the Synthetic Training Environment (STE)

The Army is currently investing in improving virtual and constructive training through their STE effort. STE is designed to provide training resources at the point of training need and includes a focus on seamlessly integrating live, virtual, and constructive training to meet the commander's training objectives at multiple echelons. Systems such as the Soldier Virtual Trainer and the Reconfigurable Virtual Collective Trainer are approaching initial operating capability and will soon be available to Soldiers. The simulators and simulations in the STE environment will replace many of the virtual and constructive systems currently being used by Soldiers and units. As STE and the supporting simulators and simulations come online for the Army, the Training Management Directorate (TMD) will continue to provide Soldiers access to information on the systems through ATN as well as through social media posts on the TMD Facebook page.

Conclusion

The Army continues to invest in quality training environments to provide Soldiers with the most realistic training possible. Leaders need to consider how specific training environments address their training objectives and resources available for their training events. The three basic training environments, along with the capability of blending or integrating them, provide commanders the opportunity to maximize the value of training using increasingly complex conditions to achieve proficiency in their prioritized tasks.

Figure 1 — Training Environments (FM 7-0)

Environment	Participants	Description
Live Training	battalion and below	executed in field conditions using tactical equipment
Virtual Training	brigade and below	computer-generated battlefields in simulators
Constructive Training	platoon through echelons above corps	computer models and simulations
Blended Training	platoon through echelons above corps	two or more training environments
Integrated Training	platoon through echelons above corps	virtual and constructive environments, to include information systems

Notes

[1] Field Manual (FM) 7-0, *Training*, June 2021, J-1.
[2] Ibid, J-4.
[3] Ibid, J-5.
[4] Ibid, J-8.
[5] Ibid, J-9.

Innovations in Training Management

TRAINING MANAGEMENT DIRECTORATE, COMBINED ARMS CENTER-TRAINING

Over the last several years, the Training Management Directorate (TMD) has introduced several innovations to improve accessibility to (and usefulness of) digital training records and planning tools in the Digital Training Management System (DTMS).

Digital Job Book

The Digital Job Book (DJB) was introduced to provide Soldiers access to their training and qualification information. The DJB provides Soldiers the ability to select between seven tabs (Physical Training/Weapons Qualification/Training Schedules/Army Warrior Tasks [AWT]/Individual Critical Task List [ICTL]/Expert Badge/Tasks) to view their individual training data that's been recorded in DTMS. This "read only" function enables Soldiers to verify their training information for accuracy and eliminates the requirement for Soldiers to hand-carry training records when moving to a new unit.

In 2020, TMD made the DJB accessible using personal computers as well as mobile devices with a username and password. Soldiers can review their training records anywhere they have access to an internet connection, not just from a CAC-enabled computer.

Small Unit Leader Tool

The Small Unit Leader Tool (SULT) is available for junior leaders to easily view and update the training status of their assigned Soldiers. When given the proper permissions and having the right subordinate personnel aligned to the leader

Figure 1 — Example Digital Job Book Screen

by the unit's DTMS manager, the SULT provides company-level and below leaders the ability to manage and update their subordinate's training, qualification, and readiness data. The training data that is recorded in the SULT automatically populates in DTMS, which not only informs their command of the small unit's training status but also shares the training information to other Army authoritative systems. The SULT helps leaders manage Soldier training and ensures the Soldiers' records are up to date.

The SULT provides first-line leaders the ability to record training data for each individual or en masse for their team/squad. The tool provides visibility for course registrations (Army Training Requirements and Resource System [ATRRS] courses their Soldiers are scheduled to attend), and tabs for record mass Army Combat Fitness Test (ACFT), height and weight, weapons assignment and qualification, ICTL,

Figure 2 — Example Small Unit Leader Tool Screen
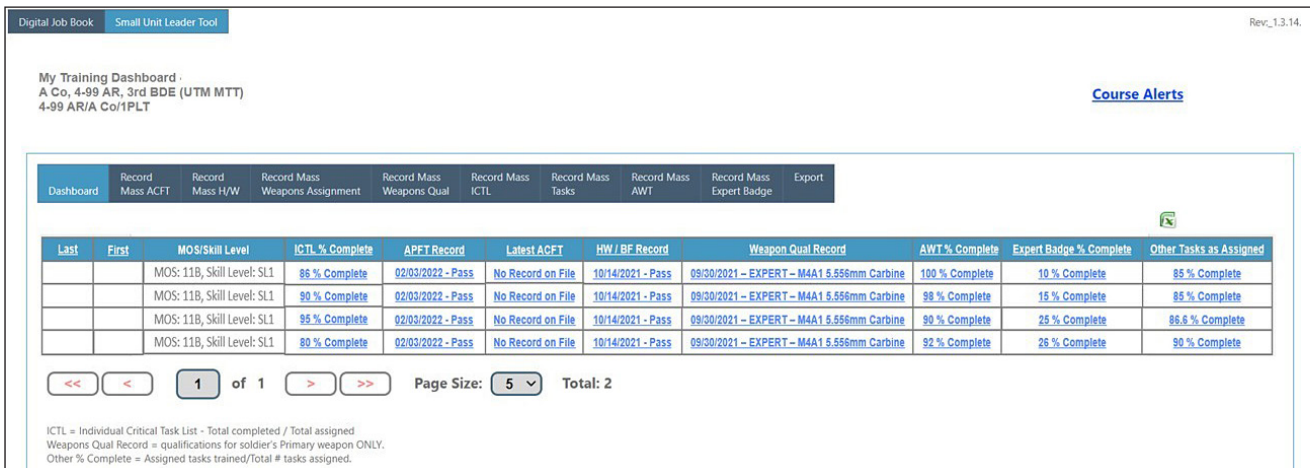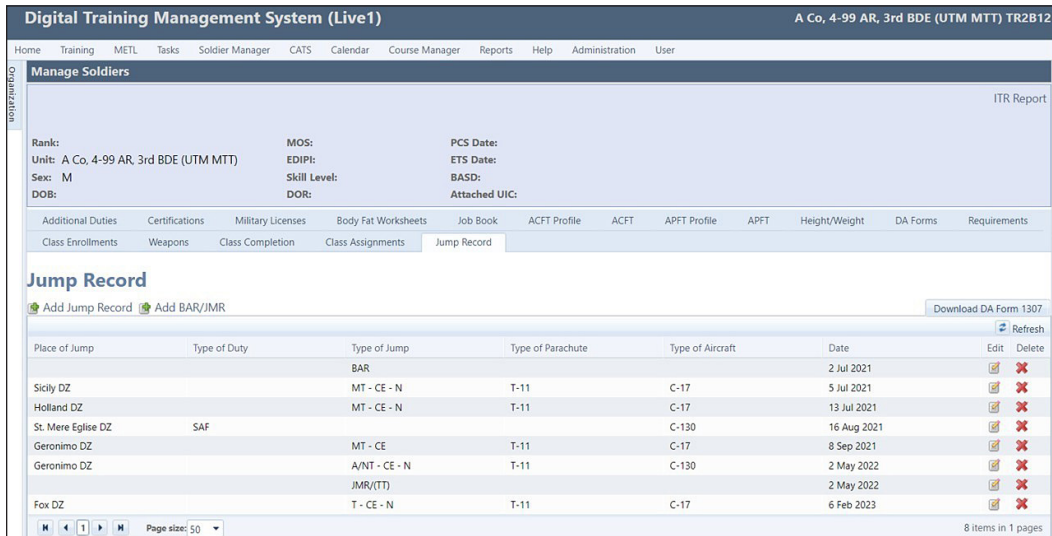
Figure 3 — Example Digital Jump Record Screen

tasks, Army Warrior Tasks, and expert badge. Leaders can also easily export a subordinate's training and qualification information into an Excel workbook that allows users to save, filter, or print the Soldier's last training data.

Digital Jump Record

The automated Jump Record tab in DTMS is an excellent example of effective collaboration between the operational force and TMD. In less than six months, this teaming approach took the airborne unit requirement from a concept to an initial fielded solution available to Soldiers. This type of direct collaboration with input from the field enables the Army to quickly evolve and adapt to the needs of the warfighter.

The Jump Record tab in DTMS mirrors the DA Form 1307 that is familiar to Airborne Soldiers with drop-down menus to make data input easier. The menus include inputs for the drop zone, jumpmaster duties, type of jump, aircraft,

parachute, and jump date. The Jump Record tab provides a detailed digital record for individual Soldiers that can follow them throughout their career.

Expert Badge Tab

In October 2021, the U.S. Army Training and Doctrine Command (TRADOC) and Combined Arms Center (CAC) command sergeants major asked for the DJB and the SULT to be enhanced to allow Soldiers to view individual tasks associated with preparation for a proponent expert badge (Expert Infantryman Badge, Expert Field Medical Badge, Expert Soldier Badge). Additionally, the senior enlisted Soldiers wanted to allow leaders to record task training evaluations associated with the expert badges in the system. Within six months, TMD developed an Expert Badge Tab for the DJB and SULT that Soldiers can access on personal devices (computer, tablet, phone). Soldiers and leaders can enter informal task evaluations during the train-up period and track test preparation prior to the actual badge testing event.

The SULT dashboard includes a column displaying expert badge percentage complete for the members of the unit. A Soldier's completion percentage is hyperlinked to a detailed view of that individual's training status and allows input of expert badge evaluations based on the Soldier's primary Military Occupational Specialty (MOS).

The view defaults to the first lane in the expert badge testing list, but leaders can select other lanes using a drop-down menu selection. Leaders record task evaluations (Go

Figure 4 — Example Expert Badge Task Completion Screen

or No Go) for their Soldiers and save the results into the Soldiers' training records.

The Army Training Network (ATN) also designed a page dedicated to expert badge training information. The ATN website provides a single point of entry, allowing Soldiers and leaders to find proponent expert badge regulatory guidance, training support packages, and suggested training/testing timelines. The ATN page does not reproduce or replace the proponent pages for each badge.

Long-Range Planning Tool (LRPT)

The LRPT enables brigade, battalion, and company/troop/battery leaders to plan and schedule prioritized collective tasks using proponent-developed and approved Combined Arms Training Strategies (CATS). Many users are unfamiliar with and have limited experience in using CATS for planning. The LRPT helps simplify the search for training events to achieve required proficiency

Figure 5 — Example Long-Range Planning Tool Screen

levels in mission-essential tasks, weapons qualification, and collective live-fire tasks. Starting with their prioritized tasks, units select events in a progressive (crawl-walk-run) methodology. Companies, platoons, and squads can select tasks using the same unit task list and add training events to the company calendar.

Part of the flexibility of the LRPT is the ability to edit the calendar using a simple drag-and-drop capability. Users can add, delete, or move events prior to obtaining calendar approval. Additionally, the LRPT allows users to create and save multiple plans, allowing the ability to create multiple courses of action to brief to the commander for decision and to modify calendars if the commander chooses to blend courses of action. The unit publishes the plan and the calendar as training guidance once the commander two levels up approves the training plan and the training calendar.

Unit Training Management MTT Available

The Unit Training Management (UTM) Mobile Training Team (MTT) can provide support to brigade and below organizations. The UTM MTT provides a three- to four-day training management seminar focused on FM 7-0. The team will work with unit leadership to customize the experience based on unit type and the commander's training goals. Team members will then conduct a series of leader discussions on training management and hands-on workshops designed to help the unit build "Battle Tasks" for platoon and below formations, including the identification of critical individual tasks that support the commander's training prioritization. The team will provide an introduction to the Army Training Management System (Army Training Network, Combined Arms Training Strategies, and Digital Training Management System) as well as practical exercises focused on enabling unit commanders to effectively plan mission-essential task list (METL)-based training for their unit. Participation of unit leadership at the battalion or brigade level (commander, command sergeant major, executive officer, S3, S3 NCOIC, company commanders, first sergeants, staff, and other unit leaders) is required for a UTM seminar. We encourage platoon leaders and platoon sergeants to also participate. Requests must be received a minimum of 90 days out from the date of training. The team can also provide assistance over the phone, through video teleconference, Microsoft Teams, and email as required.

For more information, go to: https://atn.army.mil/unit-training-management-(utm)/unit-training-management-(utm)

If the Infantry Were a Football Team, Would It Win a Game?

Ways to Increase Access to Training Resources and Prioritize Training Time

CPT D. REX WINSLOW

Imagine you're the new coach of an elite football team. You know you must win games and decide that the best way to win is to develop a highly trained team capable of defeating its opponents. You're eager to kick off the season with practice. Despite your zeal to train your team, you run into obstacles. Before you schedule practice, the team owner must approve of the practice schedule weeks in advance. Before you use the field created for your team, you must receive permission from the field manager. Before your players can use the pads, jerseys, and other equipment purchased for them, you must receive permission from the equipment manager. The physical trainer must also be on site to provide medical coverage. If any one permission is not gained weeks prior, practice will be cancelled.

Additionally, you're greatly frustrated that a significant percentage of your team changes as the season goes on. The team you started with looks nothing like the team you ended with. The revolving door of players and coaches unraveled your efforts to build a highly trained and cohesive team. In the middle of the season, you lost your defensive coordinator and gained a new one. You think to yourself, "what is the point of trying to build team unity with a team that morphs so rapidly?"

At the end of the season, how many games do you think you could win in these conditions?

Elite football teams do not train this way. Organizations make it easy for their teams to train by empowering their coaches to organize training without micromanagement from the top — and without needing permission from supporting managers. Additionally, the core of their team remains together throughout the season, with few exceptions, as trades and changes generally happen in the off-season.

Now imagine you're a new company commander eager to begin command. Your commander tasks you to develop a highly trained company capable of winning on the battlefield. Like the coach, you run into obstacles. You may not be able to easily acquire resources for your training plan. All your requests must be approved by echelons much higher than your position weeks in advance. Range Branch must approve your use of the land, and before you can use your vehicles (your property), battalion mechanics must approve the request. You also may not have easy access to the ammunition necessary to train. On top of that, as you lead your company from team live-fire to company live-fire exercises,

the manning of your unit may change. In addition to lower ranked Soldiers leaving, some of your team leaders, squad leaders, and even a platoon leader or platoon sergeant may change. Even though you receive Soldiers to replace them, unit cohesion and mutual trust may not fully materialize due to the fluidity of your company.

Unfortunately, some junior officers may struggle to sufficiently train their units due to the difficult processes in place to resource and schedule training as well as their inability to maintain unit integrity and cohesion.[1] These are problems that can be fixed. In this article, I will discuss these two challenges and then offer solutions that both resolve these issues and adhere to Field Manual (FM) 7-0, *Training*, and FM 6-22, *Developing Leaders*.

"The Army trains to fight and win — it is what we do..."[2] Fighting and winning our nation's wars is our top priority, and training is the principal means to achieve this end. You would be hard pressed to find any lieutenant colonels and above or command sergeants major professing that they want to interrupt or block small unit training. They actively and openly encourage it.[3] You would also find it difficult to discover any junior leaders and lower enlisted who do not want more training to become experts in their craft. Because Soldiers at both the top and the bottom want the same thing and Army doctrine declares training a top priority, one would assume that training would be conducted as frequently as desired. Sadly, this may not always be the case.[4] There is often a disconnect between the training circumstances we desire and what is happening on the ground. Why is that? There are often too many obstacles between Soldiers and their resources, and units can morph too frequently.

Challenge 1: Training Resources

The current process to get Soldiers their resources is often burdensome.[5] For example, there are approximately 11 levels of permission that company leadership must obtain before they can train any of their sub-units.[6] All permissions must be granted on time, and mostly in order, for the training to occur. If even one permission falls through, whether due to purposeful rejection or accidental negligence, that training is not executed. This process can restrict the amount of training opportunities conducted.[7]

The time requirement can also impact small unit training. For example, securing land resources such as training areas

(TA), ranges, and the Engagement Skills Trainer (EST) must typically be completed four weeks in advance. Any request made within the four-week window requires additional memorandums and justifications explaining why training was not planned further out. This stigmatizes requesting training resources within that window.[8] By essentially denying short-range training opportunities, small units can lose out on potential training time.

I personally experienced this obstacle preventing training. As a platoon leader, I found that an EST bay was open for the following week. I wanted my platoon to practice shooting and simulations at the EST because we had available time (white space). In order to do this, I needed to coordinate through my executive officer (XO) with leadership at much higher echelons and obtain additional memorandums because I had requested outside the standard time requirement. Despite my persistent efforts, the paperwork died somewhere in the process. The day of desired training came and went, and the EST went unused. Too many barriers between myself and an available resource prevented training. It made me doubt the utility of trying to organize white-space training with available resources because the process can be too difficult with almost no payoff. Would this situation have ended differently if I had been able to directly coordinate with the EST?

This scenario probably repeats frequently. There are many unused and unclaimed land resources available each week.[9] Even though higher echelon leaders want small unit leaders to train, small unit leaders want to train, and there are many available land resources to use, units still may struggle to train while resources go unused.

If junior leaders are unable to access resources to train their units, by default, that unit only trains when they certify as a unit during their situational training exercises (STXs)

Soldiers conduct training using the Engagement Skills Trainer II at the Panzer Range Complex in Germany. (Photo by Martin Greeson)

and live-fire exercises (LFXs). What does this mean in practice then? Units are getting minimal repetitions training as a unit, which is insufficient. By only performing the required training found in a typical training cycle of 6-9 months, a fire team will conduct 36 repetitions operating as a team, or 4-6 repetitions per month respectively. Infantry squads conduct 27 total repetitions operating as a squad, or 3-4.5 repetitions per month; platoons conduct 18 total repetitions as a platoon, or 2-3 per month; and companies conduct 9 total repetitions as a company, or 1-1.5 per month.[10] If units only train together during required certification, then they only train a few times each month. Imagine your football team trying to win games by practicing their offensive plays only a few times a month.

Too many obstacles between Soldiers and their training resources can artificially limit training opportunities, which dulls lethality. Must there really be that many barriers to accomplish the Infantryman's main purpose? Are all these permissions necessary, or could we safely reduce the number? I believe this is the case, and I will discuss this more later in this article. But first, let's examine a second obstacle to lethal units — fluid units.

Challenge 2: Personnel Turbulence

Assuming that a unit trains as frequently and easily as it should, a change in personnel could erode the gains made by that unit. As a unit trains together, it becomes more cohesive. Soldiers build trust and learn each other's tendencies and reactions. Eventually they become proficient in intercommunication, whether verbal or non-verbal, and develop trust. When Soldiers leave and new ones arrive, the unit is essentially new and must rebuild what was lost. This occurs naturally for all teams. However, if the turnover is more rapid than the ability to train, unit training may become almost pointless. The revolving door of Soldiers entering and exiting can impede small units from achieving meaningful cohesion and advanced training.[11]

This steady trickle is largely due to drastically different timelines of individual Soldiers, which require permanent changes of station (PCS), changes of duty, expiration terms of service (ETS), taskings, etc. While leaders do not try to change the composition of their units during training, external requirements sometimes force these changes, and leaders are left reacting. Fluid units undercut lethality. Imagine a football team trading their quarterback every week and what problems that would pose for their offense and team cohesion.

Solutions

The dual challenges of inaccessible resources and fluid units may prevent infantry units from executing and fully benefitting from their training. Here, I will propose solutions aligned with Army doctrine that I believe would allow infantry units to

become more lethal and preserve combat power. There are both immediate and long-term actions that commanders can take for both problems. I will first offer the immediate solutions commanders can implement and then the long-term solutions.

There are actions that installation senior leaders could take to improve training. As previously noted, a number of training resources may go unused every week because of the four-week time requirement. Allow platoon leaders, squad leaders, and team leaders to conduct "white-space" training on short notice on these land resources. This can be done by authorizing company commanders (and delegatory authority to an XO) to acquire available land resources with range branch, rather than needing a higher echelon to schedule land use in the advance window. Ensure range branch's role is providing coordination and not giving permission. The risk is low, especially if there is no ammunition, and units could conduct quality training such as practicing their standard operating procedures, training as units in real environments, using range targets to work on battle drills, achieving "maximum 'repetitions' to sustain proficiency over time," executing "more complex collective tasks," and avoiding "task atrophy."[12] Make available land assets easily accessible to small unit leaders.

In the short term, concerning fluid units, the most obvious remedy is for leaders to look at probable timelines for their Soldiers and assign roles and responsibilities as best they can. More importantly, higher units, particularly battalions and brigades, must fulfill taskings in a predictable manner.[13] Higher units can destroy training opportunities through taskings. Tasking Soldiers to details in a predictable manner (such as duty weeks) and resisting the "hey you" mentality will allow junior leaders the time and predictability needed to accomplish their first task and purpose: close with and destroy the enemy.[14]

Additionally, leaders must implement, protect, and expand "sergeant's time training," which is "training time set aside by unit commanders for unit NCOs to train their Soldiers in specified tasks and skills."[15] By vigorously protecting the doctrinally prescribed sergeant's time training, and possibly expanding it to team leaders and platoon leaders, unit training can occur more frequently. Connecting units with the available land resources and protecting and prioritizing training time will increase the frequency and repetitions of their training.

In the long term, senior leaders on an installation should implement a training process where company commanders possess more authorization to resource training. Company commanders should be able to schedule land directly with range branch and draw from an ammunition allocation.[16] If "70-80 percent of training should occur at platoon level and below," then that makes company commanders "the primary trainers of their elements," who are "responsible for assessing unit training proficiency and prioritizing unit training."[17] Therefore, the Army should empower company

> *By vigorously protecting the doctrinally prescribed sergeant's time training, and possibly expanding it to team leaders and platoon leaders, unit training can occur more frequently.*

commanders with easy, direct access to training resources. Company commanders are the commanders closest to individual Soldiers. They possess the authority of an officer and commander and can assume risk. Placing authorization to resource training at this level uses the principle of command and control and significantly reduces the levels of permission needed to train. This moves resources closer to Soldiers while maintaining command and control of training assets, and it also balances risk mitigation.[18]

This process should include giving company commanders direct and unimpeded access to their own property. For instance, to use and shoot 60mm mortars, the battalion commander may have to sign the risk assessment. The 60mm mortar is an asset given and used at company commanders' discretion. It is their property — part of their unit. The same is true for vehicles. Vehicles are company commanders' property, but their use can be denied by battalion mechanics. Company commanders should be authorized to use their vehicles without the dispatch process if they want to assume that risk. I do not believe that many commanders would ever do this, but it keeps their property under their control.[19]

As for fluid teams, the long-term solution is to align Soldier movement with training cycles.[20] Zealously protecting a unit during its training cycle is paramount to seeing the fruit of quality unit training. The Army Marketplace for officers is a step in the right direction to make movement cycles more predictable; perhaps extending similar programs all the way to lower enlisted, or simply having movement cycles for enlisted Soldiers, may stabilize units and help preserve unit integrity and gains made during training. A detailed Soldier movement program is beyond the scope of this article, but synchronizing Soldier movement and training cycles is a goal worth pursuing.

Conclusion

The challenges of our current training culture are highlighted in the example of a football team. The resources are often barricaded behind permissions to the point that it may artificially limit training opportunities. In addition, units may change too frequently to fully realize gains from unit training. No successful team would choose to train this way, and we should not choose to train this way either.

FM 7-0 and FM 6-22 contain cures to our training ills. For us leaders, and particularly commanders, it gives the following directive: "It is a commander's duty to fight through

distractions and protect training. It is the higher echelon commander's responsibility to defend their subordinate organization's approved training from unforecasted requirements and to underwrite associated risk to lower priority missions. Regardless of the quality of planning and preparation, there will be challenges to the execution of training. The fight to train ethic separates great trainers and units from the others."[21] To be great trainers, I recommend authorizing company commanders to access training resources directly, cutting down on the number of permissions required to train, zealously preserving units, and ceasing to dismember units through details and taskings. If we allow the Infantry to train, we will expertly fulfill our task and purpose with unmatched lethality and win our nation's wars by closing with and destroying the enemy.

Notes

[1] In preparation for this article, I polled 104 junior officers (first lieutenant through captain) from three classes of the Maneuver Captain's Career Course (MCCC). Those polled identified the top four reasons preventing them from training as follows: "higher unit taskings," "Soldiers pulled away for other things" (i.e., unable to maintain unit integrity), "lack of resources," and "not having the ability to resource my own training" (i.e., difficulty resourcing and scheduling training). I polled this demographic because these ranks are tasked by commanders to do the leg work for scheduling and resourcing. They make the products, request the necessary signatures and permissions, submit range packets to range branch, and are usually the OICs during training. They are part of training from start to finish, are often the most involved with the process, and have a good sense of what works and what does not. A copy of the poll is on file with *Infantry* (usarmy.moore.tradoc.mbx.infantry-magazine@army.mil).

[2] Field Manual (FM) 7-0, *Training*, 1-1.

[3] Ibid, 3-4.

[4] Fifty-eight percent of junior officers polled did not agree that the Army prioritizes training in garrison, and only 0.9 percent said that there were no obstacles preventing them from training more.

[5] Sixty-one percent of junior officers polled described the process to resource and schedule training as either "difficult" or "very difficult."

[6] Example permissions:
Acquire Land and Ammo:
Company -> Battalion Land and Ammo
Battalion Land and Ammo -> Brigade Land and Ammo
Brigade Land and Ammo -> Division Land and Ammo (or equivalent)
(Once for Land, and Once for Ammo) = 6 permissions
Dispatch Process:
Company -> Mechanics
Mechanics -> Company Executive Officer
Company approval = 3 permissions
Range Branch Packet Approval:
Company -> Battalion for Deliberate Risk Assessment
Company -> Range Branch for Range Packet = 2 permissions

[7] According to my poll, most squads and teams had two or fewer days in a standard week to conduct MOS-specific, tactical training, and a large percentage of platoons were unable to find more than two opportunities to work on platoon tactics outside of a field training exercise (FTX), STX, or LFX during a training cycle.

[8] For example, the language used in FM 7-0, 3-7, declares that changes to training within the four-week window shows a lack of leadership.

[9] I pulled information from the Range Facility Management Support System for multiple infantry installations and counted the number of available land resources within the four-week window. While I cannot give exact numbers or percentages due to confidentiality, a sizable number and percentage of training areas, ranges, and ESTs go unused each week.

[10] This assumes twice-a-day repetitions and one night repetition for an STX, and three repetitions for day and night each for an LFX (dry, blank, live, day and night for a total of six). A training unit then receives nine repetitions with STX (three) and LFX (six) training. This set of nine repetitions repeats for each unit training at echelon. For example, a squad will perform their nine repetitions from their STX and LFX and repeat unit training for both platoon and company STX and LFX (two more sets).

[11] Seventy-seven percent of junior officers polled believe that this constant flow harms their units.

[12] FM 7-0, 3-4, C-1, 1-3.

[13] The top two polled reasons junior officers could not train more is because higher echelons pulled their Soldiers to fulfill taskings, often for last minute or same-day details.

[14] If S3s disperse the task evenly across the battalion, then they are pulling Soldiers from many squads. Now, many squads are missing Soldiers and cannot train as a squad. However, if the designated unit on duty takes the tasking that week, then the rest of the squads are intact and can train as a squad.

[15] FM 7-0, 4-4.

[16] Seventy-eight percent of junior officers polled prefer this method.

[17] FM 7-0, 3-3, 1-2.

[18] Ibid, 3-4.

[19] This would mainly be used for those times when the dispatch process is taking too long and possibly jeopardizing training. It would be unwise, and not recommended, to use this authorization to override a denied vehicle which possesses a hazard to Soldiers.

[20] Move Soldiers during the Red Cycle (FM 7-0, 3-3, 3-5). Seventy percent of junior officers polled prefer that their platoon remain "frozen," or the same, throughout the duration of the training cycle.

[21] FM 7-0, 1-4.

Soldiers assigned to the 3rd Brigade Combat Team, 25th Infantry Division receive a class on the M120 mortar system as part of sergeant's time training. (Photo by SSG Armando R. Limon)

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Improving the Tactical Employment of SUAS for Light Infantry Battalions in Decisive Action

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Authors' Note: *The purpose of this article is to describe the challenges of current small unmanned aircraft system (SUAS) capabilities and employment from the perspective of U.S. Army light infantry battalions executing decisive-action operations in restrictive terrain. It is heavily METT-TC (mission, enemy, terrain and weather, troops and support available, time available, civil considerations) influenced and not intended to speak definitively for all SUAS employment. The scope of this analysis is also limited to currently fielded "program of record" SUAS and makes no claim to fully know/ understand the latest state-of-the-art SUAS capabilities, research and development efforts, or the conceptual direction of SUAS doctrine. Hopefully, the observations and lessons learned contained within this article can inform both on-going and future SUAS modernization efforts — both materiel and doctrinal — wherever they currently stand. As with all* Infantry *articles, the views expressed in this article are solely those of the authors and do not represent the official position of the Department of Defense, the U.S. Army, or any element of it.*

For the past two training rotations at the Joint Readiness Training Center (JRTC) at Fort Polk, LA, our light airborne infantry battalion has aimed to maximize the use of our SUAS systems to win on the battlefield. Unfortunately, what we have concluded over the past two years is achieving this is a lot harder than it should be. This is not due to a lack of effort or proficiency but because light infantry battalions are basically trying to "squeeze a square peg into a round hole" by employing the currently fielded SUAS to meet battalion-level decisive-action SUAS requirements in restrictive terrain. There are fundamental disparities between:

- The environmental challenges of restrictive terrain for SUAS employment;
- The light infantry battalion's SUAS requirements for decisive-action operations; and
- The current SUAS capabilities the Army has fielded infantry battalions.

Environmental Challenges of Restrictive Terrain for SUAS Employment

SUAS operations in restrictive terrain are significantly challenging for four reasons:
1) Suitable sites for launch and recovery are limited;
2) Favorable surface wind conditions to enable successful

Paratroopers in 2nd Battalion, 504th Parachute Infantry Regiment move in restrictive and severely restrictive terrain during training. (Photos courtesy of authors)

launch and recovery are negatively impacted;

3) Communications ranges are substantially reduced; and

4) Positive visual identification of ground-level objects and terrain features requires direct overflight and takes longer due to increased concealment and dead space.

The consequence of having limited open areas and favorable surface winds in restrictive terrain is that successful SUAS launch and recovery depends heavily on short take-off and landing (STOL) capabilities. There are a number of ways to achieve this — from various types of launching devices to rotary-wing lift systems — but the preferred STOL solution is one that does not significantly reduce the range and endurance of the SUAS. Another consequence of having limited suitable launch and recovery sites (LRS) in restrictive terrain is that the selection of suitable LRS may require increased standoff from the named area of interest (NAI), thereby increasing the required range and endurance of the SUAS. The difficulty of increased concealment and dead space in restrictive terrain also increases the endurance (time of flight) required for the SUAS to positively identify ground-level threats, objects, and terrain features. Among all the challenges of SUAS operations in restrictive terrain, perhaps none are more difficult than reduced communications ranges due to decreased line-of-sight (LOS) and radio wave attenuation by dense vegetation and buildings. The combined result of these environmental constraints is that STOL capabilities, extended range, increased endurance, and resilient LOS communications links are critical to successful SUAS operations in restrictive terrain. (Note: Reduced SUAS communications ranges in restrictive terrain are also influenced by restrictions on flight altitude driven by common airspace management techniques. Proposed solutions for mitigating the loss of comms link that involve SUAS flights above 700-1,000 feet above ground level [AGL] are effectively infeasible solutions in the decisive-action operating environment.)

Light Infantry Battalion SUAS Requirements for Decisive-Action Operations

Army Techniques Publication (ATP) 3-21.20, *Infantry Battalion*, describes four operational activities relevant to SUAS employment for the infantry battalion:

- Reconnaissance,
- Surveillance,
- Screening as a security operation, and
- Observed fires, including target acquisition (TA) and battle damage assessment (BDA).

It is crucial to emphasize that light infantry battalions routinely execute all of these activities in restrictive terrain, which, independent of any other METT-TC considerations, inexorably drives the battalion-level SUAS requirements of STOL, resilient LOS communications, and increased range and endurance for all the aforementioned reasons. However, there are other METT-TC factors that drive these unique battalion-level SUAS requirements beyond the challenges of restrictive terrain.
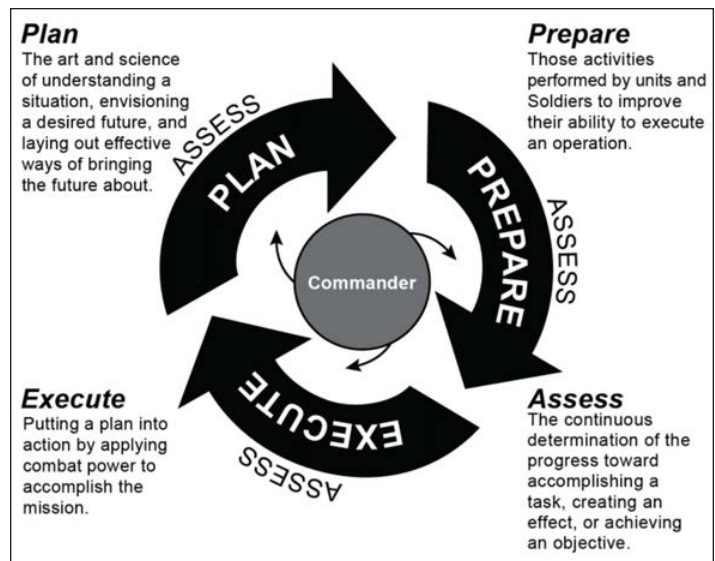
Figure 1 — The Operations Process

SUAS requirements during the planning phase may involve NAIs that are geographically farther away from friendly forces prior to initiating movement for the execution phase.

The Operations Process, Army Operational Framework, and Distance. Army Doctrine Publication (ADP) 5-0 defines the operations process as "the major command and control (C2) activities performed during operations: planning, preparing, executing, and continuously assessing the operation."[1] The key idea here is that intelligence collection (IC) activities and SUAS requirements in support of the battalion's planning are different from the IC activities and SUAS requirements in support of execution. SUAS requirements during the planning phase may involve NAIs that are geographically farther away from friendly forces prior to initiating movement for execution. Short-range SUAS are better suited for IC activities during the execution phase and do not fully meet the SUAS requirements of battalion-level IC in support of planning.

The Army Operational Framework described in ADP 3-0, *Operations*, provides two additional concepts that are important for understanding the unique nature of battalion-level SUAS requirements: area of influence (AOI) and "deep" vs. "close" areas. An AOI is a geographical area wherein a commander is directly capable of influencing operations by maneuver or fire support systems normally under the commander's command or control.[2] The light infantry battalion's "pacing" asset within its AOI is the M120A1 120mm mortar system, with a maximum range of 7.2 kilometers. At present, currently fielded SUAS limit the battalion's ability to employ effective observed fires throughout the AOI due to the difficulty of maintaining reliable communications link in restrictive terrain. For the same reason, currently fielded SUAS systems fail to meet the battalion's requirements for SUAS activities in "deep areas" — the area where commanders "set conditions for future success in close combat," including "efforts to prevent uncommitted enemy forces from being committed in a coherent manner."[3] Battalion-level SUAS activities in deep areas require extended range and

endurance in order to set conditions for companies during the execution phase of the operations process. Short range/endurance SUAS are better suited to IC, security, and observed fires in the "close area" — "the portion of the AO where the majority of subordinate maneuver forces conduct close combat."[4] They are company enablers that do not meet battalion-level SUAS requirements.

Surveillance, Security, and Endurance. Field Manual (FM) 3-98, *Reconnaissance and Security Operations*, describes surveillance as distinct from reconnaissance in that surveillance is passive, continuous, and layered to provide "mixed, redundant, and overlapping coverage."[5] FM 3-98 also states that "employed together, UASs and manned or unmanned ground reconnaissance elements provide excellent surveillance capability."[6] Effective surveillance is critical to providing early warning for screening during security operations. At present, a lack of extended endurance SUAS systems in restrictive terrain limits the infantry battalion's ability to provide continuous and layered surveillance of NAIs, because of an inability to loiter for long periods of time, and rapidly cross-cue from ground-based assets and sensors. As stated in FM 3-98, reconnaissance efforts can absolutely complement surveillance, but short-duration capabilities cannot independently achieve effective surveillance — especially in restrictive terrain. In accordance with FM 3-98, surveillance should also be maximized, which is significantly hindered by decreased SUAS endurance and downtime in transitions to and from ground control station (GCS) and NAIs.[7]

Observed fires in restrictive terrain. Restrictive terrain poses a significant challenge to effective ground-based observation of indirect fires (IDF). Observation distances in restrictive terrain are typically limited to 150-300 meters or less. The result of this is an inability to effectively observe fires from the ground level — including target acquisition, adjustments, and BDAs — outside the risk estimated distances (RED) of IDF assets. Short-range/endurance UAS assist with this to some extent, but it is not uncommon for planned and unplanned IDF to take 10-30 minutes or longer to process and execute, limiting the ability for short-range/endurance SUAS to effectively adjust, conduct BDA, and re-execute as required. The ability to observe, adjust, and conduct BDA for IDF is directly tied to the observer's uninterrupted ability to observe the target.

Tactical Transitions and the Importance of Maximizing IC Capacity. As infantry battalions transition between offense and defense, it becomes imperative to maximize IC capacity to balance IC/security requirements for current operations and IC support to planning for future operations. The employment of all available reconnaissance and surveillance (R&S) capabilities to cover as many different NAIs as possible becomes very important during these tactical transitions. This inevitably motivates infantry battalions to delink scouts and infantry companies from SUAS capabilities that have the potential to meet battalion-level IC requirements while increasing IC capacity. Of course, without dedicated, modified table of

organization and equipment (MTOE)-authorized personnel at the battalion level to accomplish this, trained SUAS operators must either be detached from subordinate units or be under the direct operational control of the battalion headquarters.

Current SUAS Capabilities

The AeroVironment RQ-11 Raven SUAS has been the primary SUAS within the infantry battalion for over a decade. Originally fielded during the global war on terrorism (GWOT), this system is fielded at the company level, operated mainly from a stationary GCS by a minimum of two operators, and has an optimal endurance of one hour with a maximum range of 10 kilometers. The Raven is well-suited for operations in uncontested areas with relatively open terrain — in other words, environments with the benefit of unobstructed LOS and relatively secure LRS in rear areas.

Very similar to the RQ-11 Raven is the AeroVironment RQ-20 Puma SUAS. Although not officially authorized for the infantry battalion MTOE, the RQ-20 Puma is an Army program of record system, historically employed by special operations forces (SOF), that is often available to infantry battalions as excess equipment. Much like the Raven, the Puma is operated primarily from a stationary GCS by a minimum of two operators; however, it doubles the range and endurance of the Raven, boasting an impressive two hours of flight time and a maximum range of 20 kilometers. Like the Raven, the Puma is well-suited for operations in semi-permissive areas in relatively open terrain.

A Soldier with the 2nd Brigade Combat Team, 1st Cavalry Division launches an RQ-11B Raven during a live-fire exercise in Bemowo Piskie, Poland, on 30 March 2023. (Photo by SSG Matthew A. Foster)

Above, a Soldier with the 2nd Infantry Brigade Combat Team, 34th Infantry Division performs pre-flight checks on an RQ-20 Puma during training in Kosovo on 21 January 2020. (Photo by SSG Tawny Schmit) At right, an Infantryman assigned to the 1st Infantry Brigade Combat Team, 11th Airborne Division releases a Black Hornet during training at the Yukon Training Area in Alaska on 3 April 2023. (Photo by SrA Patrick Sullivan, USAF)

Finally, the FLIR Systems PD100 Black Hornet Nano UAS is the latest fielded SUAS capability within the infantry battalion. It has an optimal endurance of 25 minutes and a maximum range of 2 kilometers. Unlike the RQ-11 Raven and RQ-20 Puma, the PD100 Black Hornet is a vertical take-off and landing (VTOL) system that can be easily operated on-the-move by a single Soldier. The PD100 is well suited for short-range, company-level operations in contested areas in severely restricted terrain — in other words, environments with heavily vegetated areas and obstructed LOS and LRS in hostile areas.

For all the wide-ranging SUAS capabilities currently fielded to light infantry battalions, none of these systems fully meet the battalion's mission requirements for IC, target acquisition, and BDA in contested areas with restrictive terrain. Each of these systems falls short of meeting critical requirements in several ways – whether it be launch and recovery limitations in restrictive terrain, communications reliability in restrictive terrain, range, or endurance. As previously described, "the devil is in the details" of how and where light infantry battalions operate along with the technical capabilities and limitations of each of these systems to meet those requirements.

Understanding the Current Capability: What Are SUAS Really For? Since the initial fielding of the RQ-11 Raven SUAS circa 2006 during GWOT and its inclusion in the infantry battalion's MTOE under the scout platoon and infantry companies, two basic questions remain unanswered definitively by doctrine:

1) Are SUAS intended to be employed only as company-level enablers or as battalion-level IC assets as well?

2) Are SUAS intended to merely enhance existing IC capabilities or to increase overall IC capacity?

Fundamentally, these questions acknowledge and plead consideration for the distinction between SUAS employed as company enablers vs. SUAS employed as battalion-level IC assets. Although this distinction — and therefore these questions — are left uncontemplated by existing Army doctrine, three facts support the conclusion that the Army has, historically, only envisioned SUAS as company-level enablers that merely enhance existing ground R&S capabilities:

1) Within the infantry battalion, SUAS are MTOE-authorized equipment only for infantry companies and scout platoons, not for battalion-echelon elements;

2) Within the infantry battalion, units are not authorized any additional MTOE personnel to serve as dedicated SUAS operators; and

3) The trend of Army SUAS modernization seems to be increasingly smaller and shorter range capabilities that favor employment at the company and below level in the "close" area.

However, the contemporary shift from the counterinsurgency and stability operations of the GWOT to more decisive-action operations has revealed increasing evidence to support the argument that infantry battalion headquarters require dedicated SUAS assets that meet unique battalion-level requirements, and current SUAS capabilities — materiel, personnel, and doctrine — fall short of meeting these requirements. In other words, as far as SUAS capabilities are concerned, infantry battalions need both "apples" (man-packable, short-range/endurance systems) AND "oranges" (man-portable, extended-range/endurance systems), not just more apples trying to be oranges.

Doctrinal Gaps in SUAS Employment. ATP 3-21.10, *Infantry Rifle Company,* is full of vague, conceptual examples of how UAS could support battalion IC requirements for decisive-action operations but provides no specific tactics,

techniques, or procedures (TTPs) for the employment of current SUAS capabilities in support of battalion IC. It doesn't even mention the currently-fielded MTOE SUAS by name, nor does it attempt to firmly solidify who should normally employ these systems within the battalion — companies, scouts, or headquarters elements. ATP 3-21.10 doesn't even mention SUAS employment of any kind, despite these systems being company MTOE equipment. ATP 3-04.64, *UAS Multi-Service Tactics, Techniques, and Procedures for the Employment of Unmanned Aircraft Systems*, ironically fails to offer specific TTPs relevant to small-unit transport, LRS establishment, launch, contingencies, or recovery for currently fielded SUAS, although it makes some attempt to conceptualize SUAS planning, flight operations, and environmental considerations.

The doctrinal publication for scout platoon operations, ATP 3-20.98, provides the best attempt to describe specific TTPs for SUAS employment in support of infantry battalion IC but falls woefully short of utility in two important ways. First, it fails to reconcile the fundamental problem of the wasted IC economy of relying on scouts to employ SUAS — because whenever scouts are operating Ravens or Pumas, they're not operating their own eyes and ears to conduct ground-based reconnaissance, surveillance, or security. This is likely a consequence of the RQ-11 Raven SUAS being included as authorized MTOE equipment for the scout platoon, but it lacks the detailed analysis of the technical capabilities and limitations of the RQ-11 Raven and the associated impacts for scout operations in restrictive terrain. Furthermore, if the METT-TC conditions were deemed best suited for SUAS employment within any given NAI, then arguably the battalion would rather commit scouts to other NAIs to maximize R&S capacity or utilize short-range, VTOL systems such as the PD100 — not long-range, fixed-wing SUAS like the RQ-11 Raven — to enable short-range scout reconnaissance or layered surveillance of an NAI.

Second, assuming scouts were the preferred operators for SUAS, ATP 3-20.98 makes no attempt to describe how they would deliver the bulky equipment of fixed-wing Raven/Puma SUAS to a given GCS/LRS under suboptimal METT-TC conditions: dismounted movement in severely restricted terrain. The technical considerations for RQ-11/RQ-20 transport, launch, flight, and recovery are not considered in detail in order to provide useful recommendations for how light infantry scouts would actually accomplish this. Perhaps MTOE vehicle transport is contemplated (if not specifically mentioned) in scout employment of Ravens/Pumas, but it absolutely cannot be assumed that METT-TC conditions will always accommodate mounted movement/transport during light infantry reconnaissance operations.

Recommendations

The following are specific recommendations to meet the minimum SUAS requirements for light infantry battalion IC, security, and observed fires in restrictive terrain during decisive-action operations:

> *[T]he contemporary shift from the counterinsurgency and stability operations of the GWOT to more decisive-action operations has revealed increasing evidence to support the argument that infantry battalion headquarters require dedicated SUAS assets that meet unique battalion-level requirements...*

1) Battalion-level SUAS should have an operating range of 10-12 kilometers. This allows infantry battalions to conduct IC in "deep" areas to enable deliberate planning and set conditions for companies prior to the "close" fight in decisive-action operations. This also allows the battalion to provide effective observed fires in restrictive terrain throughout its entire AOI covered by organic 120mm mortar fires out to its maximum range. Finally, this capability allows infantry battalions to mitigate a lack of suitable LRS with sufficient open areas for successful launch and recovery by allowing more standoff between suitable LRS and NAIs.

2) Battalion-level SUAS should have an operating endurance of 90-120 minutes. This gives infantry battalions the ability to provide continuous and layered surveillance of NAIs by reducing downtime in transitions to and from GCS and NAIs. Similarly, this increased endurance also enables a more effective ability to screen during security operations. It also provides battalions the ability to rapidly and more responsively cross-cue SUAS from ground-based assets and sensors. Finally, this capability allows infantry battalions to overcome increased aerial concealment and dead space in restrictive terrain by providing increased time of flight to positively identify ground-level threats, objects, and terrain features.

3) Battalion-level SUAS should have STOL capability. At present, the RQ-11 Raven and RQ-20 Puma are both very challenging to launch and recover in restrictive terrain because of the open area required to gain altitude above tree-top level, as well as the limited force/speed-of-hand launch methods for fixed-wing SUAS to generate lift under suboptimal surface wind conditions. This is unfortunate because, otherwise, both these fixed-wing SUAS possess the range and endurance desired for battalion-level SUAS operations… if they could only get up and stay up in the air in complex terrain. As previously mentioned, there are a number of ways to achieve STOL — from various types of launching devices to rotary-wing lift systems — but the preferred STOL solution is one that does not significantly reduce the range and endurance of the SUAS.

4) Battalion-level SUAS should have resilient LOS communications links for operations in restrictive terrain. There is a tremendous opportunity to accomplish this — and more — in the use of Mobile Ad-Hoc Network (MANET)

solutions such as the TrellisWare TSM waveform as the primary communications link for the SUAS. Doing so would enable hundreds of other ground-based Integrated Tactical Network (ITN) radios within the MANET to serve as retransmission nodes between the GCS and the air vehicle (AV), improving the resiliency and reliability of the SUAS link. This solution could also (potentially) improve the ground tactical communications of infantry units by providing an aerial retransmission capability built into the SUAS. Finally, this solution could provide real-time AV position location information (PLI) into battalion common operational picture (COP) systems, which significantly increases situational awareness (SA) for intelligence collection, processing, exploitation, and dissemination (PED), while also providing integrated identify friend or foe (IFF) capabilities to prevent friendly counter-UAS fratricide.

Additionally, the following non-essential capabilities would significantly enhance the infantry battalion's SUAS employment efforts:

- Expanded access to full-motion video (FMV) beyond the GCS. During the execution phase of decisive-action operations, the rapid cross-cueing and dissemination of intelligence to ground units is imperative. Currently, the speed of this cross-cueing and dissemination is limited to direct communications (often voice) between the SUAS GCS, main command post, tactical command post, and ground force leaders. The ideal flattening of this critical information and SA would be direct access to the SUAS FMV by ground force leaders via receiver solutions, ideally compatible with existing ITN end-user devices (EUDs) to reduce additional equipment required on the assault.

- Integrated, real-time AV PLI and sensor data into battalion COP systems. The efficient cross-cueing and PED of imagery intelligence collected from SUAS is often hindered by a lack of real-time SA at battalion C2 nodes on the exact location of the AV and the center point and field of view of the SUAS FMV in relation to mission graphics. Programs such as the Unified Video Dissemination System (UVIDS) have been accomplishing this for Group 4-5 UAS for over a decade. This capability would significantly improve the infantry battalion's ability to make sense of what the SUAS is observing and quickly act on that information, both in planning and execution.

- GCS map compatibility with battalion COP graphics to enable SUAS flight planning and execution. Currently fielded SUAS GCS map software is not fully compatible with the digital COP systems battalions use to plan and C2 operations. This challenges SUAS mission planning and execution. The ideal GCS map system would be capable of receiving and building the same digital COP graphics as the battalion's C2 nodes and subordinate units.

- Low-power, beyond line-of-sight (BLOS) PLI reporting to enable downed aircraft recovery. SUAS operations in restrictive terrain will inevitably result in downed aircraft. The recovery of downed SUAS in these situations in complicated by the inability to pinpoint the exact location of the AV due to

the loss of LOS communications, as well as the fact that the SUAS position can change significantly between loss of link at altitude and crashing. A low-power, BLOS PLI capability built into the SUAS would significantly increase the chances of successfully recovering the SUAS, or (at minimum) speed the recovery efforts or inform the decision not to attempt recovery based on confirmed information of the SUAS' location in denied areas.

- Integrated IFF capabilities to prevent friendly counter-UAS fratricide. The proliferation of friendly and enemy UAS capabilities increases the chances of misidentification and fratricide in counter-UAS efforts. Friendly forces would significantly benefit from increase SA on the real-time location and status of adjacent unit UAS to prevent counter-UAS fratricide. This would also make friendly counter-UAS efforts against enemy systems more effective in speeding the process of identifying enemy UAS.

A Final Plea for Dedicated SUAS Manning at the Battalion Level. Considering all the aforementioned recommendations for advanced materiel capabilities to support battalion-level SUAS employment, all would surely be undermined without highly proficient SUAS operators who deliberately train on SUAS employment in a variety of METT-TC conditions. This is not a proposition for all SUAS operators within the battalion to be MTOE authorized, just the ones responsible for the most complex mission with the most advanced SUAS capabilities for the widest tactical impact. Such important future capability "oranges" cannot be truly optimized with old "apple" manning solutions.

Notes

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

[2] ADP 3-0, *Operations*, July 2019, 4-3.

[3] Ibid, 4-4.

[4] Ibid.

[5] Field Manual 3-98, *Reconnaissance and Security Operations*, January 2023, 4-8.

[6] Ibid, 4-7.

[7] Ibid, 4-8.

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CPT Christopher J. Egan currently serves as the battalion intelligence officer for 2-504 PIR. He is a previous Infantry officer with a deployment to Syria and Iraq in support of Combined Joint Task Force - Operation Inherent Resolve. He previously served with the 1st Stryker Brigade Combat Team, 25th Infantry Division. For the past year as an Intelligence officer, he has managed the battalion SUAS program and executed numerous SUAS missions during home-station training and a decisive-action JRTC rotation.

Transitions: From Deliberate to Dynamic in the Close Fight

MAJ JEFFREY W. JENNINGS (JJ)
MAJ JONATHAN BUCKLAND

Success in modern large-scale combat operations (LSCO) requires the ability to make fluid adaptations to existing plans, the timely issuance of clear and concise orders, and shared understanding of the common operational picture (COP) with higher, adjacent, and subordinate commands. Staffs must be proficient at both deliberate and hasty planning to be successful. First, staffs must be expert at executing the deliberate procedures associated with the military decision-making process (MDMP) and the battle rhythm events through which the commander makes decisions, issues orders, and communicates with higher and adjacent commands. Second, staffs must define, establish, and practice the dynamic planning methodology through which they will rapidly adjust to changing situations. If MDMP is the cake, the rapid decision-making and synchronization process (RDSP) must be the icing.

When the Marne Division fought the World War I battle for which it is named (the Second Battle of the Marne), it played a pivotal role in defending against a German offensive that had been planned (deliberately and methodically) for months. The German Army's plans for this grand assault relied heavily upon the element of surprise. However, just as the 23 infantry divisions the Germans had assigned to the attack prepared to climb out of their trenches on 15 July 1918, Allied guns initiated an intense barrage on the German attack positions. The attacking troops were stunned — clearly, surprise had been lost — but they carried out their assault anyway. When German troops finally reached the Allied front lines, they found them mostly empty. The Allies, aware of the impending attack, had withdrawn their forward-most elements to subsequent positions, rendering German preparatory fires ineffectual. The Germans continued to fight their plan, as it had existed for months, without adjusting to the new battlefield situation. They remained rigidly dedicated to their scheme of maneuver and were ultimately beaten by the Allied force that included the recently formed American 3rd Division.

The Germans were not alone in their failure to adapt to changing or unexpected battlefield conditions. Throughout World War I, technology outpaced tactics, battlefield communication was scant, and plans were rigidly followed. Indeed, the very outset of the Great War is tied inseparably to the much-studied Schlieffen Plan, which was first outlined by German tacticians nearly a decade before the war began.[1] The Schlieffen Plan famously lacked flexibility and did not account for the possibility that things might not go exactly to plan. Among other flaws (which this article will not attempt to cover), the Schlieffen Plan required the enemy to behave as expected. The fact that this rarely occurs should serve as encouragement for canny strategists to leave elbow room for adaptability in their plans, establish the systems for rapidly exercising that adaptability, and practice until expert-level proficiency is gained.

The commander may rapidly change plans in execution due to unforeseen opportunities, unexpected enemy actions, short-suspense orders from higher, or other stimuli. When this occurs, the staff must be quick and effective in adapting plans; communicating with higher, adjacent, and subordinate commands; and publishing clear and concise orders. Just as the battle staff seeks to become expert at deliberate battlefield processes, it must also create opportunities to develop master-level proficiency in the dynamic processes. The latter will keep the commander inside of the enemy's decision cycle when the situation changes quickly and unexpectedly.

An American machine-gun crew engages enemy positions using a 37mm "pom-pom" gun during the Meuse-Argonne Offensive in 1918. (National Archives photo)

Opportunities to hone these skills exist in the form of staff academics, command post exercises (CPXs), and warfighter exercises (WFXs).

The division is now the unit of action within the Army. As such, communications within division staffs must be fast, flat, and accurate to allow subordinate units time to plan and react to the ever-changing operational environment of multidomain operations. During the 3rd Infantry Division's WFX 23-2, the division planned to conduct uncoiling operations from unit tactical assembly areas, forward passage of lines (FPOL) with multinational counterparts, offensive operations in the enemy's disruption zone (DZ), and wet gap crossing (WGX) operations — all within the first three days of the exercise. Within an effective team, processes must be in place for the division staff to react rapidly and transition from deliberate to dynamic staff processes. The nucleus of this team, the future operations (FUOPS) and current operations (CUOPS) cells, must have an established, positive relationship that allows them to efficiently adjust and codify the plan and fighting products, transition to the current fight, and disseminate to subordinate units. Within an ever-changing operational environment, this flexibility at the division staff level will enable the unit of action to fight and win in LSCO.

Deliberate Staff Processes

No unit is the same when it comes to the construct of the staff, specifically within the FUOPS or CUOPS cells.[2-3] This variance may be due to manning or how the division operations officer (G3) sees each cell as "fit for purpose" for their fight. At the start of WFX 23-2, the 3rd Infantry Division had a published battle rhythm with five major events in which the commander, staff, and subordinate units participated. The battle rhythm events that fell into this section include the battle update brief, commander's visualization, operations synchronization, commander's update brief, and the staff transition brief. "The battle rhythm is a deliberate daily cycle of command, staff, and unit activities intended to synchronize current and future operations."[4] Through these five battle rhythm events, the commander, staff, and subordinate units were able to communicate up, down, and within to ensure that the full operational picture was painted for the commander to make timely and accurate decisions.

This battle rhythm worked well during the first three days of the exercise as we conducted the FPOL, destroyed the enemy in the DZ, and completed the WGX. During these events, the FUOPS and CUOPS teams were able to execute deliberate and timely handovers of the division's key fighting products: the execution and synchronization matrix, operation schedule, conditions checklist, and execution checklist, when applicable. Our prescribed battle rhythm enabled effective communication and synchronization primarily because our planning cycle had prepared the team to fight out to the 96-hour planning horizon. In other words, the team was operating within a deliberate environment that allowed the staff to manage combat losses and efficiently adjust to minor (but not major) situational changes.

> **Within an effective team, processes must be in place for the division staff to react rapidly and transition from deliberate to dynamic staff processes.**

Dynamic Staff Processes

Once the exercise progressed past the WGX, the operational environment became more dynamic. Combat losses grew and ground lines of communication lengthened. At this point, the division staff no longer had the luxury of multiple days, or even hours, to receive information and provide options for the commander. In other words, the decision space was truncated by the tempo of the operation. As a result of these new variables and constraints, the evolving plan needed to be rapidly produced within the staff, approved by the commander, and disseminated to subordinate units. Time was critical and limited. The staff needed to act rapidly to avoid being outpaced and outmaneuvered by the enemy — the form of this rapid action is RDSP. Summarized, RDSP is a decision-making and planning technique that commanders and staffs commonly use during execution when available planning time is limited. Leaders combine their experiences and intuition to understand the situation and develop a course of action (COA) quickly. The RDSP is based on an existing order and includes five steps:

1) Compare the current situation to the order,
2) Determine whether a decision, and what type, is required,
3) Develop a course of action,
4) Refine and validate that course of action, and
5) Issue and implement the order.[5]

In practice, what this meant for the 3rd ID battle staff across several WFXs was operating outside of the established battle rhythm to rapidly organize for-purpose working groups that could solve problems, make recommendations, adjust plans, and communicate quickly and effectively. In other words, when the situation changes suddenly, the staff cannot afford to wait until the next pre-planned event to adjust or disseminate the newly evolved plan. To imagine a quarterback calling an audible at the line of scrimmage would not be misplaced here. For the battle staff, this likely manifests through the chief of staff, G3, or chief of operations (joined by one or more G35 planners and other representatives from relevant warfighting functions) quickly organizing a current operations-focused team to conduct short-range planning.

The methodology may vary and should be discussed and iterated upon by each staff as they work through their developmental progression (academics, CPX, etc.). For the Marne staff, it most often looked like a small group (too many minds can muddle the process) containing current operations representation from each warfighting function, joined by at least one G35 planner and led by the chief of staff or deputy chief of staff. This team gathered around the analog COP on the current operations information center floor and ran through a quick two-minute drill to ensure a shared understanding of

the evolving situation. It then transitioned into a short course-of-action development (COA DEV) session, quick wargaming, and subsequent composition and issuance of a flash fragmentary order (FRAGORD) to subordinate units. We learned that for this process to function properly, each representative (by warfighting function) must arrive at the short-term planning session equipped with accurate, up-to-date running estimates. Those products will inform the process and contribute toward the overall efficiency and efficacy of RDSP outcomes.

As an outcome of RDSP, the importance of properly communicating changes to the mission/task and purpose cannot be overstated. Our experience showed that to ensure effective dissemination and shared understanding, the staff must go beyond simply typing the flash FRAGORD into an email or chat service. While that should be done, it must be supplemented by an immediate virtual gathering so that division leaders can verbally convey the changes to the plan/mission and intent to subordinate commanders. Finally, any changes to the plan must be quickly communicated to higher and adjacent headquarters. Though unexpected opportunities may present themselves to the division staff, it remains essential to stay nested with the higher headquarters' intent and to continue maneuvering in a fashion that supports your adjacent units' scheme. Seizing an initiative at the division level that threatens to destabilize the entire corps scheme of maneuver and simultaneously provides new and interesting opportunities to the enemy commander is a step in the wrong direction. In other words, the staff must ensure that their RDSP is disciplined and remains nested with higher and that they do not get swept away by their imaginative momentum.

Closing Thoughts

Success in modern war requires battle staffs to think quickly, fluidly adapt their existing plans to unexpected changes in battlefield conditions, and issue clear and concise orders in a timely fashion. To stay inside of the enemy's decision space, the staff must be expert at both deliberate (MDMP) and dynamic (RDSP) processes. In contact, the commander will need to use both to make decisions and direct battlefield operations. An overreliance on deliberate processes (time-protected MDMP, battle-rhythm events, etc.) and a lack of practice at RDSP (ad-hoc working groups, rapid COA DEV, swift orders development and publication, etc.) equate to sailing a large ship with a small rudder. When required, you simply will not be able to turn as quickly as needed to keep the enemy reacting to you in LSCO. Through each iteration of staff academics, CPX, WFX, and other training opportunities, battle staffs must seek to gain expert-level proficiency in their dynamic processes.
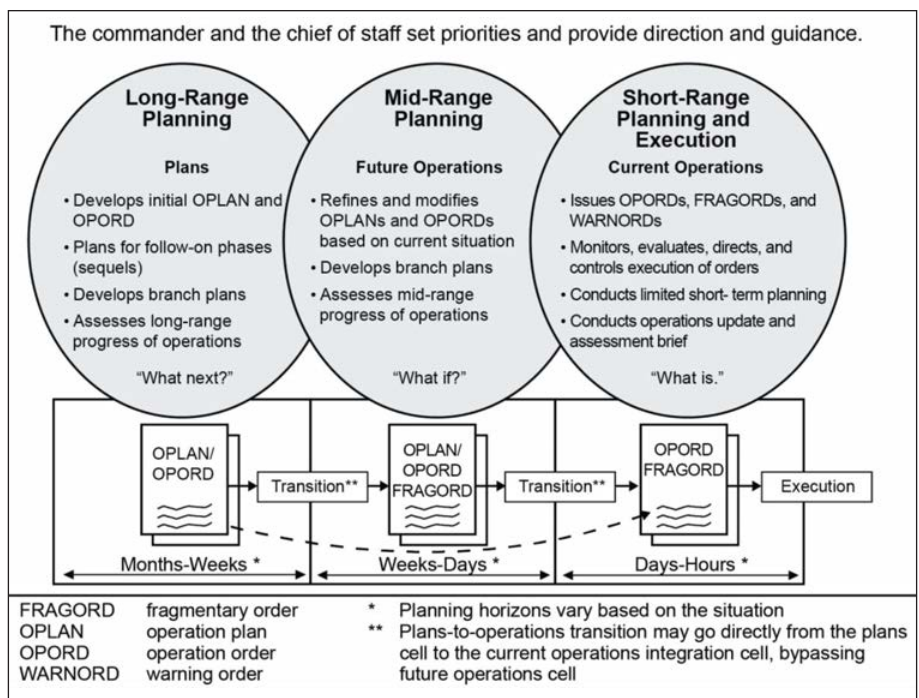

Figure 1 — Integrating Cells (FM 6-0)
Integrating cells are organized by planning horizons, which allow commanders to focus the organization's planning efforts to shape future events.

Notes

[1] For a concise review of the Schlieffen Plan, see LTG (Retired) Daniel Bulger's article at https://www.ausa.org/articles/schlieffens-perfect-plan or Geoffrey Parker's *The Cambridge History of Warfare* (Cambridge: Cambridge University Press, 2019), 273-274.

[2] Field Manual (FM) 6-0, C*ommander and Staff Organization and Operations*, May 2022, 8-5.

[3] Ibid, 8-6.

[4] Ibid, 4-1.

[5] FM 5-0, *Planning and Orders Production*, May 2022, 1-10.

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Benefits of Blended Task Organizations:

Techniques for Effectively Integrating Strykers with Armor

CPT GALEN KING

During two recent rotations at the National Training Center (NTC) at Fort Irwin, CA, brigade combat teams (BCTs) employed atypical, blended task organizations coupling Stryker and armored battalions. By capitalizing upon the complementary and reinforcing capabilities of both formations, these two BCTs were highly successful in combining arms in the close fight. Moreover, by employing these blended task organizations, leaders built critical combined arms proficiency that is integral for armored divisions of 2030.

Understanding and Preparing for the Future Operational Environment

Codified in Field Manual (FM) 3-0, *Operations*, doctrine highlights that the operational environment (OE) is the aggregate "of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander." It includes components of the five domains understood in the human, physical, and information dimensions. Peer threats and adversaries seek to contest the joint force's capability across these domains, dimensions, and threshold of conflict by using information warfare, systems warfare, preclusion, isolation, and sanctuary. Complemented by the proliferation of sensors, long-range precision fires, and democratization of information, these methods create a hyper-lethal and transparent OE marked by "uncertainty, degraded communications, and fleeting windows of opportunity." Multidomain operations (MDO) define how the Army contributes to the joint force in this OE during large-scale combat operations (LSCO). MDO prioritizes the tenets of agility, convergence, endurance, and depth in building and generating combat power across five dynamics: leadership, firepower, information, mobility, and survivability.

Understanding the scope of LSCO, doctrine identifies the division as the Army's principal tactical warfighting formation (PTWF). Waypoint 2028 and Army 2030 codify this shift, identifying five retooled division task organizations: armored (reinforced), armored, light, air assault, and airborne divisions. Projected to incorporate most of the Army's mechanized and motorized forces, the armored division is unique among the new force structures due to it combining two armored brigade combat teams (ABCTs) with one Stryker brigade combat team (SBCT). The armored division's force structure is purpose-built to enable divisions and BCTs to combine arms by blending the capabilities of both formations to amplify the division's combat power.
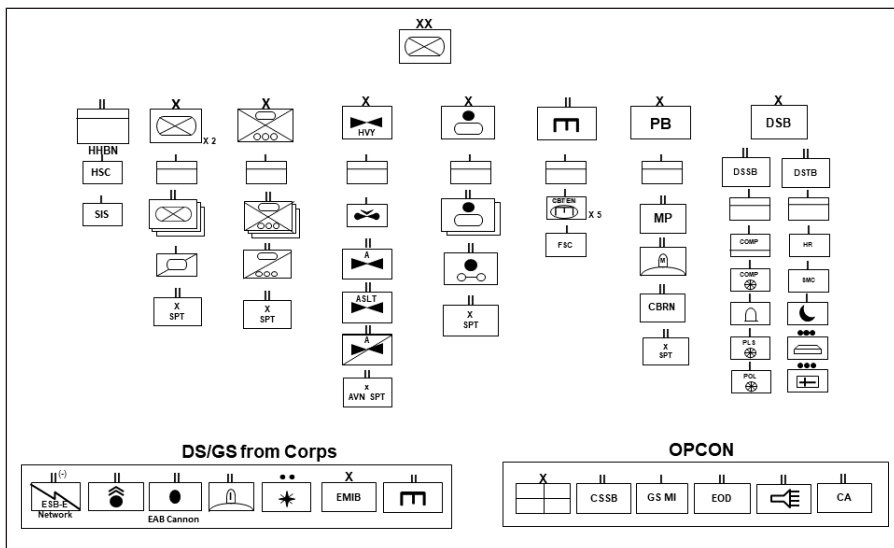
Figure 1 — Army 2030 Armored Division Task Organization

The ABCT and SBCT in LSCO

The armored division is built around its two ABCTs, which each have three combined arms battalions (CABs). Per FM 3-96, *The Brigade Combat Team*, the ABCT optimizes mobility, protection, and firepower to concentrate overwhelming firepower, speed, and precision during offensive operations. The ABCT and its subordinate battalions, however, have notable limitations. The infantry CAB's table of organization and equipment (TOE) maintains 18 nine-Soldier infantry squads and 12 Javelin command launch units (CLUs) to optimize speed and protection. Compared to a current Stryker battalion, this TOE contains nine fewer infantry squads and 15 fewer Javelin CLUs. The CAB's force structure increases its vulnerability to enemy anti-tank (AT) systems and prevents the CAB from clearing or retaining complex restrictive, wooded, or urban terrain. The CAB's vulnerability is compounded by its lack of organic indirect fires with its four 120mm mortars instead of the Stryker battalion's 10. Lastly,

the ABCT's increased maintenance and logistical requirements present challenges to the formation's tactical endurance, especially with increasingly extended and contested lines of communication (LOC).

In contrast, the SBCT "is an expeditionary combined arms force organized around mounted infantry." While the Stryker battalion's reduced mounted protection and firepower limits cross-country tempo during the offense, its 27 nine-Soldier infantry squads, 27 Javelins, and 10 mounted 120mm mortars enable the Stryker battalion to deliberately clear and retain complex terrain and population centers. This capability is complemented by the formation's reduced logistical and maintenance requirement. As an expeditionary formation, Stryker companies maintain 72 hours of supply on hand and can travel approximately 300 miles before refueling. The Stryker battalion also maintains the capacity to transport 10,000 gallons of fuel via its forward support company (FSC), tripling the formation's range and tactical endurance. Stryker formations are also currently using a newer mission command capability set than CABs. The SBCT's capability set includes the Point of Presence (POP) and Soldier Network Extension (SNE) platforms. These capabilities enable a more accurate digital common operational picture (COP) and rapid digital fires processing from the battalion tactical command post (TAC). Stryker battalions also have two self-securing retransmission (RETRANS) teams, instead of one in a CAB. This added RETRANS team enables increased line of sight (LOS) communications for both lower and upper tactical internet (TI) communication. Per their TOE, Stryker battalions also have more tactical satellite (TACSAT) systems, yielding redundant communication options at range.

Being built around mounted infantry, however, SBCTs lack the protected firepower, mobility, and speed of the ABCT, especially over open terrain and during a combined arms breach. Relative to the SBCT, an ABCT's two engineer companies feature three M2A3-mounted engineer platoons, four joint assault bridges (JABs), six assault breacher vehicles (ABVs), and six T9/D7R dozers. Comparatively, the SBCT features Engineer Squad Vehicle (ESV)-mounted engineer platoons, four Rapidly Emplaced Bridge Systems (REBS), six Mine Clearing Line Charge (MICLIC) trailers, and six T5/D6 dozers. Based on this difference, the ABCT engineer company is far more capable of providing protected local security and mobility during complex breaches in a LSCO environment.

Best Practices for Integrating Strykers and Armor

By better understanding both formations' capabilities and limitations, combining these two formation types can demonstrably increase units' ability to combine arms during close operations.

Attack into Urban Area. FM 3-0 highlights the ubiquity and complexity of urban combat in LSCO. Based on the SBCT's TOE, Stryker formations are well-suited to support joint campaigns in complex urban terrain. The Stryker battalion can execute all three components of the breach organization (support, breach, assault) when augmented with an ABCT engineer company's breach squad and combat engineer platoons. With the ABCT's combat engineer platoons, three ABVs, two JABs, 250 dismounted Infantrymen, and 10 120mm mortars, this battalion team is capable of breaching complex obstacles, rapidly clearing urban terrain, and transitioning to stability operations.

Vignette #1: During an attack on Objective (OBJ) Dodgers (Razish) at NTC, a Stryker battalion — augmented with one mechanized infantry company (-) and one engineer company (-) — was tasked as the main effort to seize key urban sites within Razish. Prior to its attack, the BCT's two CABs would seize OBJ Iron and establish a support by fire (SBF) to enable the battalion's combined arms breach. During the BCT's attack, however, the two CABs were heavily attrited
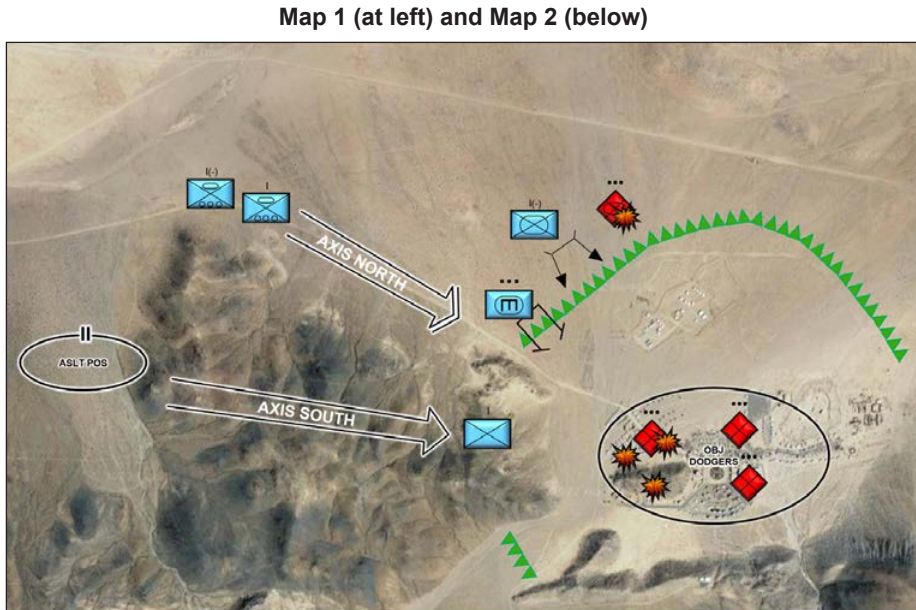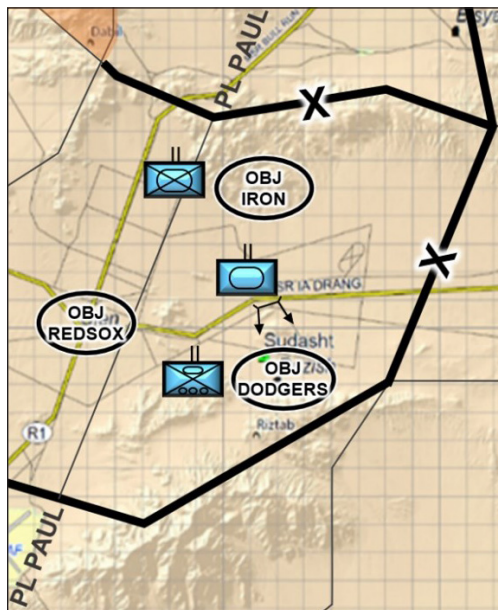
Map 1 (at left) and Map 2 (below)

A Bradley Fighting Vehicle enters an urban area during an NTC rotation.

by dismounted enemy AT positions and armor and were unable to establish the SBF north of Razish. Recognizing the loss in combat power and tempo, the Stryker commander deployed one dismounted company along Axis South to clear the rugged terrain west of Razish and destroy enemy north of Razish. Using its nine Javelin CLUs, the company destroyed one mechanized platoon (+) north of Razish and identified the enemy AT systems. Prior to the battalion's combined arms breach, the battalion commander initiated accurate and responsive mortar suppression from the battalion's consolidated mortar firing point (MFP). Synchronized with the battalion's ten 120mm mortars, the attached mechanized company (-) and engineers breached a wired anti-vehicle ditch with its JAB. Having rapidly breached the enemy's obstacles and maintained responsive mortar suppression, the Stryker battalion massed 25 nine-Soldier infantry squads along two axes to seize Razish and transition to a hasty defense. Due to the battalion's complementary use of its mechanized and motorized capabilities, it maintained tactical agility. Moreover, by optimizing its capabilities, the augmented Stryker battalion enabled the BCT to focus its field artillery (FA), army attack aviation (AAA), and other maneuver elements on attriting the enemy in depth and successfully transitioning to the BCT's deliberate defense (see Maps 1 and 2).

Movement to Contact. Defined in FM 3-96 as an offensive operation designed to develop the situation and establish or regain contact, a successful movement to contact (MTC) relies upon making "initial contact with small, mobile, self-contained forces to avoid decisive

engagement." To avoid making decisive contact with its main bodies, BCTs and battalions organize into an advance guard, flank and rear security, and the main bodies. Due to their increased density of infantry, dismounted AT systems, 120mm mortars, and logistical endurance, Stryker companies and battalions are well-suited to gain and maintain enemy contact as an advance guard. By clearing restrictive or complex terrain as an advance guard, Stryker formations can reduce the threat of enemy AT systems and preserve the endurance of a larger armored formation.

Defend. As BCTs transition from an attack or MTC to a defense, motorized-mechanized teaming is again extremely effective. When augmented with an armored company or platoons, a Stryker battalion can effectively couple dismounted AT systems, tactical endurance, and responsive mortar fire with the ability to engage enemy at range, exploit, or counterattack.

Vignette #2: During a recent rotation at the NTC, a Stryker battalion deployed as part of an ABCT in place of one of its organic CABs. During the first phase, the ABCT conducted an eastward MTC that culminated in its defense along Phase Line (PL) Robert. During its defense, the Stryker battalion was augmented with a tank troop from the cavalry squadron and occupied the southern battle position (BP) to prevent the enemy brigade tactical group (BTG) from enveloping the BCT from the south. As a supporting effort, the Stryker battalion would turn the enemy north into Engagement Area (EA) Center, where it would be destroyed by the BCT's main effort. As seen in Maps 3 and 4, the Stryker battalion anchored its

A Soldier prepares to fire a Javelin during a recent National Training Center rotation at Fort Irwin, CA. (Photos by CPT Galen King)
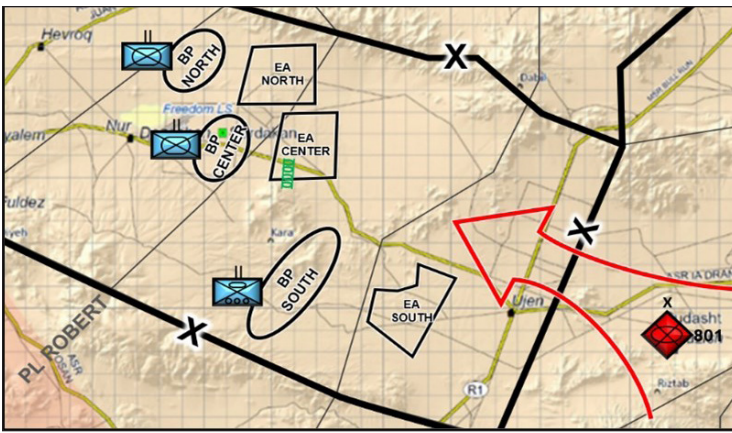
Map 3
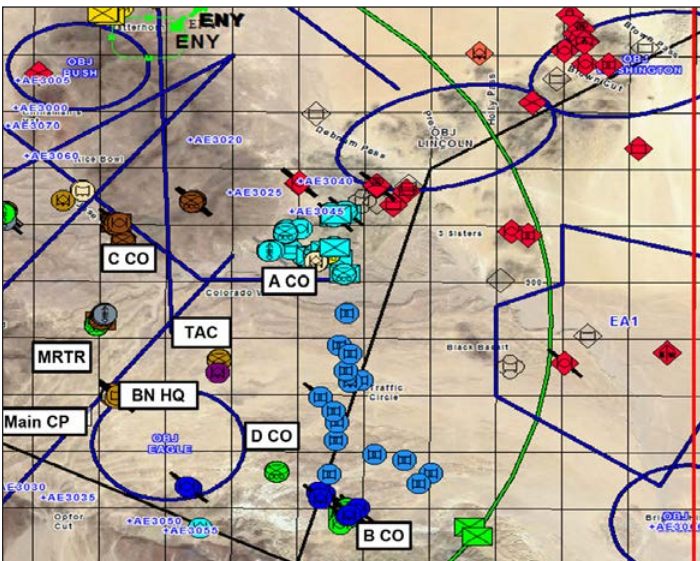
Map 4

BP on its centrally located tank troop. Concealed in a wash, the tank troop's flanks were protected by three dismounted Stryker companies with 27 Javelin observation posts (OPs). The BCT prioritized its FA, AAA, and engineers to the main effort due to this control of restrictive terrain; protected, direct-fire lethality; and organic mortar support. During the enemy's attack, the Stryker battalion rapidly destroyed one motorized infantry company through a combination of its mortars, tank troop, and dismounted Javelins. As the enemy deployed towards EA Center, the Stryker battalion simultaneously launched a counterattack with its tank troop and continued to attrit enemy from its concealed AT positions. At the conclusion, the enemy BTG was unable to penetrate the BCT's northern BPs, and the BCT initiated its attack on the city of Razish. Through its combined arms employment of its blended task organization, the Stryker battalion enabled the ABCT to optimally prioritize key BCT assets to its weighted effort.

Techniques for Effectively Building Blended Battalion Teams

1. Standardized Processes. BCTs and battalions must codify their attachment/detachment procedures and checklists within widely known tactical standard operating procedures (TACSOP). Additionally, when units commonly operate together, codifying these habitual relationships enables subordinate leaders to rapidly execute task organization changes.

2. Resourced Enablers. Parent organizations must task organize units with the requisite recovery, maintenance, and sustainment support necessary for the unit to rapidly integrate into its new blended battalion or BCT team. Additionally, coupling armor and Stryker units requires persistent intra-brigade coordination between leaders at the brigade support area, combat trains command posts, and maintenance collection points to share commodities and field service representative expertise to regenerate combat power. At the brigade, it is imperative that gaining units deliberately coordinate and plan for the accommodation of the task-organized element's common authorized stockage listing to their supply support area. This coordination extends to units' mission command systems as well. Here it is essential that task-organized units ensure that critical upper TI terminals, services, and accounts are validated and requested by their gaining headquarters to enable rapid mission command and digital fires processing.

3. Integrated Planning and Effective Rehearsals. After a unit completes attachment procedures with its gaining parent headquarters, it is essential that the unit's senior members heavily imbed in the higher headquarters' planning. In addition to integrated planning, successful blended task organizations also rely heavily on a variety of rehearsal techniques and types, focusing predominantly on rehearsing key complex actions like breaching, gap crossing, and integration of mechanized vehicles and dismounted Stryker Soldiers.

Building Combined Arms Proficiency. In preparation for an increasingly dynamic OE and the expanded role of the division as the PTWF, Regular Army, National Guard, and multinational Stryker and armored elements should increasingly train together during collective training. These opportunities train leaders to maximize the complementary and reinforcing capabilities of both formations and generate critical combined arms proficiency now for the armored divisions of the future.

CPT Galen King is a maneuver planner and previous task force operations observer-coach/trainer (OC/T) at the National Training Center, extensively coaching combined arms maneuver across all formation types. His previous assignments include serving as commander of Headquarters and Headquarters Company, 2-2 Stryker Brigade Combat Team (SBCT), 7th Infantry Division, Joint Base Lewis-McChord, WA; battalion S3, 1st Battalion, 17th Infantry Regiment, 2-2 SBCT; commander of C Company, 4th Battalion, 23rd Infantry Regiment, 2-2 SBCT; brigade chief of plans, 2-2 SBCT; company executive officer, 3rd Battalion, 187th Infantry Regiment, 3rd Brigade Combat Team, 101st Airborne Division (Air Assault), Fort Campbell, KY; scout platoon leader, 3-187 IN; and rifle platoon leader, 3-187 IN. His military schooling includes the Infantry Basic Officer Leader Course, Ranger School, Airborne School, Air Assault School, Pathfinder Course, Stryker Leader Course, Maneuver Captain's Career Course, and Maneuver Leader Maintenance Course. He earned a bachelor's degree in political science from Davidson College.

What You're Getting Wrong About Resilience and How to Truly Train It

MAJ RYAN CRAYNE

Resilience is an attribute that military leaders discuss often that has many definitions. The Army's Resilience Directorate defines resiliency as "the ability to persevere, adapt, and grow in dynamic and stressful environments." Army Doctrine Publication (ADP) 6-22, *Army Leadership and the Profession*, defines resiliency as "the tendency to recover quickly from setbacks, shock, injuries, adversity, and stress while maintaining a mission and organizational focus." In simple terms, resiliency can be defined as the ability to adapt and overcome in the face of adversity. As our Army's operating environment and mission becomes more dynamic and uncertain, fostering resiliency in our Soldiers and leaders will be key in ensuring they can overcome new and complex challenges. The question must be asked then is how are we training this key attribute as an Army?

Most often, discussions within the military and elsewhere on resiliency revolve around concepts that aim to alleviate, avoid, or reduce stress. The U.S. Army's Master Resiliency Doctrine lists some of the core competencies of resilience being self-awareness, connection, and optimism. This published doctrine goes on to describe master resiliency skills as mental frameworks like hunting the good stuff and avoiding thinking traps, and doctrine recommends practices like rhythmic breathing and journaling. Are these competencies, skills, and practices enough to train resilience in our teams? Shouldn't a core component of resiliency training be the recursive practice of intentionally imposing hardship and adversity on yourself and your Soldiers? Resiliency is not an attribute that is simply learned or acquired through classroom discussion, but rather, a skill that must be trained. Resiliency is also not trained through the avoidance or alleviation of stress. **On the contrary, resilience is developed by welcoming and embracing challenges in order to become familiar with — and overcome them.**

There are three key methods we can train to build more resilient Soldiers and units. **First**, resiliency is built by deliberately inducing stress into our training. Soldiers cannot effectively learn to overcome adversity if it is foreign to them. **Second**, to further resiliency, our Soldiers should not just endure hardship but be able to plan and think their way out of it. Incorporating critical thinking into training develops resilience by making it instinctual for our team members to find ways to overcome obstacles in complexity. **Finally**, we must prepare our Soldiers for their inevitable encounters with failure. Failure in their systems, their tools, and in their ability to complete the mission. Our team's ability to overcome failure is of vital importance and a hallmark of a resilient force.

The foundational way in which we can train our Soldiers to be more resilient is by introducing controlled stressors into the training environment. Our teams achieving success in optimal conditions is not an appropriate benchmark for us to evaluate as satisfactory performance. We must be able to do our jobs in adverse conditions, in degraded states, and in the face of external stressors. How can we ensure our Soldiers are able to accomplish the mission when they are cold, wet, tired, and hungry? By

Paratroopers in the 173rd Airborne Brigade pull simulated casualties during a stress shoot lane at Grafenwoehr Training Area, Germany, on 14 December 2021. (Photo by Markus Rauchenberger)

intentionally introducing them to factors like this in training. As leaders, we must figuratively, and literally, hunt the bad stuff and train alongside our Soldiers to overcome these hurdles to build resilience. Maintaining focus when the stakes are real and conditions are not ideal doesn't happen by coincidence. Our Soldiers should be able to self-inoculate their own duress when faced with these stressors and build resiliency in the process. We must train to be comfortable with being uncomfortable. Leaders can do this by introducing stressors into training environments in a controlled manner. Train your Soldiers to shoot well when physically exhausted, move well in the dark and in inclement weather, and plan well when they are tired and hungry. Through the process of coping with and succeeding despite these stressors, our Soldiers gain resiliency to face the new challenges to come. Although enduring stress and adversity during training builds fortitude, it is not enough to simply impose hardship and consider our teams to be resilient. Our teams must be able to adapt and overcome, not just endure through the challenges presented to them. Soldiers must be able to critically think and solve problems under duress to cultivate comprehensive resilience.

A key aspect to being resilient is the ability to persevere after setbacks and in stressful environments. Our Soldiers when faced with resistance or adversity, should instinctively transition to a problem-solving, critical-thinking mindset. Critical thinking, like resiliency, is a skill that must be trained. In the current multidomain operating environment, Soldiers will be tasked with solving problems and executing complex missions in foreign environments. Being resilient in these conditions will be key to their success. Frequently in training, we take for granted problem sets that could be used to train critical thinking in our Soldiers. Test your Soldiers' ability to navigate without a Global Positioning System (GPS), employ equipment that they are unfamiliar with, and find solutions to problems in ambiguous situations. Soldiers should know how to react in the absence of orders and how to manage volatile and uncertain situations. They cannot be prepared for this unless we place them in these circumstances during training. Resilience will not be developed, and skills cannot be honed, through optimistic thinking alone. Our Soldiers must face obstacles and overcome them to develop the resilience. While it is imperative that we incorporate training that builds resilience through solving problems with critical thinking, we must also train our Soldiers to operate through failure.

Resilience as a skill is derived through the iterative process of achieving success by overcoming obstacles. We cannot train this skill in our Soldiers, however, without exposing them to failure. When our teams are completing a mission, treating a patient, or engaging in combat, they — and their equipment — will inevitably fail. Too often, our training scenarios simulate a landslide victory for ourselves with all systems

Paratroopers from the 82nd Airborne Division participate in an attack during training at Fort Polk, LA, on 1 May 2023. (Photo by SPC Luis Garcia)

being fully operational and without incurring any casualties. Failure is often said to be a great teacher, and our Soldiers can learn resilience from it if we leverage its lessons in training. Junior Soldiers should be tested and required to perform the roles of those senior to them. Force-on-force training as well as live-fire scenarios should simulate casualties into a large percentage of iterations. Leaders must train their teams on what to do when communications fail, weapon systems malfunction, and mobility platforms break down. Simulated failure in training both induces external stressors and requires critical thinking to react, all while realistically depicting the realities of our profession.

A Soldier's first encounter with fatigue, stress, complexity, or defeat should not be on the battlefield when it matters most. Our Soldiers should be well acquainted with these adversaries and have a mental playbook detailing past instances in which they conquered these foes in training. Leaders cannot expect to build resilient Soldiers through mental-hardening tactics alone. **Resiliency as a skill is learned the hard way, through tough realistic training that includes applying controlled stress, complex problem solving, and the harsh truth of failure to our teams.** Leaders should incorporate both mental resiliency education along with the intentional application of these three resiliency training methods to achieve capable and resilient organizations that are prepared for the complexity and uncertainty of our future operating environment and missions.

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Standardizing Excellence

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Standardizing excellence means repeatedly raising the bar after normalizing what is considered exceptional. Living up to this principle requires consistently making the hard-right choices over the easy-wrong ones. From working out when we don't feel like it to finishing a task under inconvenient circumstances, the more we choose the hard-right decisions, the more excellent we become. Conversely, we decrease our overall excellence when we decide to take the easy-wrong paths, such as not adhering to a standard or skipping out on training opportunities to leave work early. Whether we're improving or declining in excellence, this change often occurs subtly and incrementally and is attributed mainly to the countless micro-actions in our daily lives. Regardless of the severity of the incident, making the hard-right decisions will undoubtedly create rising tides that raise all ships.

This article will discuss why this concept is vital to our Army and then provide a framework for how leaders can assess their units and develop excellent Soldiers and teams.

Why Is Excellence Important?

A simple example of decreasing excellence in the Army is when a leader goes to an on-post establishment, such as the gym, and sees a Soldier with uniform infractions. The Soldier has an unauthorized necklace hanging from his/her shirt, one pant leg rolled up, and an out-of-regulation haircut. However insignificant these infractions may seem, when the individual is not held accountable, it sets a lower bar and creates a substandard norm. For instance, suppose these minor infrac-

Paratroopers from the 3rd Brigade Combat Team, 82nd Airborne Division conduct an air assault operation during Joint Readiness Training Center Rotation 23-07 at Fort Polk, LA, on 30 April 2023. (Photo by SPC Luis Garcia)

tions persist because the Soldier is never corrected. This undisciplined behavior leads to carelessness and transfers into other parts of the Soldier's life, eventually affecting those around him/her or inspiring others to do more of the same. This is the Soldier who looks for shortcuts in the field and loses equipment, doesn't adhere to the standards for preventive maintenance checks and services (PMCS), making the equipment non-mission capable, or worse, doesn't care enough to have the proper safety measures in place and hurts or kills another Soldier during training or combat.

The seemingly insignificant infractions are tiny sparks, but when left unchecked, they inevitably start a fire that harms the organization and everyone in it. The most common sparks are the daily disciplines in our lives that are written off as "not that important" for ease, comfort, or merely because no one is enforcing them. This example of the Soldier in the gym is just one of many we see in the Army.

These minor violations are like a tiny pebble in our shoes. The pebble leads to improper running form, and the improper form leads to knee pain. A compensating running pattern then leads to hip problems, and the hip problems become back pain which worsens until we are combat ineffective. But we chose to become combat ineffective because we chose the easy wrong and ignored the root of the problem, a seemingly insignificant pebble. After all, it wasn't that big of a deal — it was just a tiny pebble. Fast forward to when these Soldiers become leaders and develop their Soldiers to not care about these minor violations. Where does this lead? How quickly do individuals or a team decline to an ineffective state when they have multiple pebbles in their shoes? How many daily

Figure 1

incidents like this happen across an entire post or the Army? What are the downstream results from these incidents? What are the results across generations? How does this affect our ability to standardize excellence?

What makes the Army excellent is not its equipment, tactics, or procedures — it's the quality of its Soldiers. It rings true that mediocre people, given the best tools, will produce nothing better than mediocre results. However, when excellent people are given mediocre tools, they will deliver exceptional results. This means that in order to standardize excellence across the Army, we must clearly define what makes an excellent Soldier.

The Soldier Archetype

When we look at the life of a Soldier, we see a simple outline take shape that is debatably the same for anyone, regardless of profession. We start to see a scale titled "Life," which balances two parts: home and work. This idea is reflected simply in how we compartmentalize our day, whether by choice or requirement. In a 24-hour day, an average person spends about one-third of the day sleeping, one-third at work, and one-third at home. While sleep is a benefit that equally belongs to the other parts, it's clear that home and work are the two main parts of a Soldier's life. Many of us are familiar with a similar concept where one side is work and the other is life. We should caution against this approach not because it is entirely wrong but because it lacks specificity and lends the notion that life and work are disconnected and act in opposition, which is untrue. Life encompasses both our work and home; when these parts are out of balance, one can seriously impact the other.

To further define the work part of this outline, we can ask ourselves what 10 things make a perfect Soldier? After asking

approximately 800 drill sergeants and about 200 Soldiers, officers, retirees, and Department of the Army Civilians this question, we found that, regardless of rank or occupation, 81 percent of the answers given are qualitative traits such as determination or respect, and the other 19 percent are quantitative skills such as the ability to shoot or move (see Figure 2). The qualitative answers can be categorized as either a value or behavior and are the two parts that make an individual's character. In other words, character equals values plus behaviors. Because the overwhelming percent of a Soldier is character, it becomes clear that this is the foundation of a Soldier — everything else must be built upon (see Figure 3). The other components which make a Soldier are, in order by precedence:

Character — an individual's values and behaviors

Move — an individual's health and fitness level

Shoot — an individual's basic and advanced marksmanship skills

Communicate — the Skill Level 1 tasks followed by occupation-specific tasks which facilitate the collective tasks

Leadership skills — an individual's ability, acquired over time and through experience, to inspire others and make appropriate decisions that accomplish the mission or improve the organization

The last detail splits these components into two sides: garrison and tactical. These sides provide the specificity required to conduct a comprehensive assessment and build actionable plans to standardize excellence. This hierarchal framework is the Soldier archetype and illustrates a Soldier's prioritized components, facilitating the finer details that stimulate growth by preserving the Soldier's core values and behaviors.

It's important to remember that these components must be fundamentally prioritized because nothing is a priority when everything is priority number one. Improper prioritization of these parts or their components leads to many problems. When these priorities become distorted or biased, leaders

Figure 2

Traits	Quantitative	Traits
• Disciplined	• Fit	• Disciplined
• Gritty	• Marksman	• Gritty
• Fit	• Skill Level 1 Tasks	• Fit
• Trustworthy		• Trustworthy
• Aggressive		• Aggressive
• Marksman		• Humble
• Humble		• Army Values
• Skill Level 1 Tasks		• Hard Worker
• Army Values		
• Hard Worker		
Character = Values + Behaviors		

Figure 3
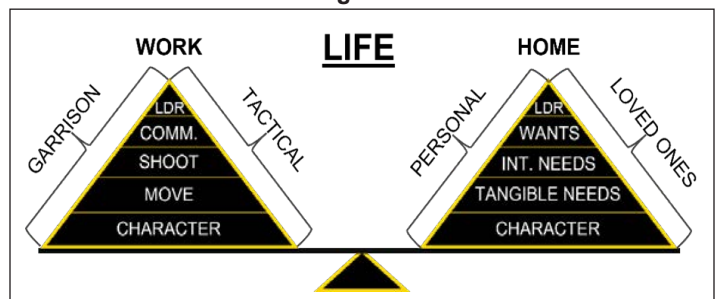
may wonder why their unit, which may score well on the quantifiable metrics, has all kinds of qualitative problems ranging from low morale to Soldiers being late to formation or doing drugs while training. None of these incidents happened because the Soldier couldn't shoot, move, or communicate. They occur because of either a lapse in character or an outright character flaw. Conversely, when a leader focuses on character development and embodies behaviors such as discipline, accountability, and perseverance, every other component is undoubtedly amplified. Put simply, better people make better Soldiers, and better Soldiers are more lethal.

The Culture

Like any team, the Army consists of individuals who work together to accomplish a collective goal. But what is it that makes these groups of individuals great or not? Is it the individual skills each person has? Let's say the two greatest basketball players of all time happened to be on the same team; does this automatically mean the team will be great? Are we confident that these players would even work well together? If these individuals were to value themselves more than the group or behave selfishly versus loyally, it would quickly turn toxic and cripple the team to mediocrity at best. What makes an excellent team of individuals has far less to do with the tangible or intangible skills they possess but rather the cultivated culture between them.

What is culture and how can we simplify it to be more actionable? We know that culture is not created by an individual but rather by a group of people. We know that culture is often expressed as the feelings between members of the group, making it intangible. "I feel like everyone in our squad trusts each other" and "It seems like everyone in that company hates it there" are a couple of examples of the language used when we talk about the culture of a particular group of people. These examples show a group, a generalization, and an expression of qualitative traits. When we frame culture this way, it becomes a clearer and more actionable equation. While an individual's character equals their values plus behaviors, culture equals the average character of a group of people.

The social by-products of culture are a sense of belonging and psychological safety. Together they act like magnets, either strengthening the bonds between people or keeping them separated and incohesive. The sense of belonging comes from a clear understanding of one's purpose within the group, feeling valued as a member, and how much reciprocal dependability exists between each other. Psychological safety comes from trusting each other and is built or degraded over time through interactions that generate positive or negative results. When psychological safety is present, this means that teams or individuals are more likely to hold each other accountable rather than tolerate substandard behaviors. One of the most prominent examples of an organization lacking psychological safety is when Soldiers are in a position where they should speak out on their own accord but won't for fear of ridicule or other retribution. These important by-products

can only be achieved through self-discipline, holding others accountable, and staying open to being held to account when we inevitably deviate from our own self-discipline. This sense of belonging, and feeling of psychological safety, is necessary for a team of individuals to become excellent.

Some other by-products of culture that greatly impact the connection between individuals are cultural artifacts. These artifacts embody a group's particular values and behaviors as well as serve as a reminder that its members belong together, connecting people with the culture's lineage. One of the most prominent cultural artifacts in the Army is the Infantry crossed-muskets insignia, which is, by itself, rooted in American history and is earned at the end of infantry training. These muskets remind every Infantry Soldier of a shared experience that ties together multiple generations of Infantry and solidifies their place amongst the Infantry Branch. Some intangible examples of cultural artifacts include mottos, maxims, colors, etc., all of which can have strong bonding effects so long as they represent the group's shared values and behaviors. One of the most notable is the American flag and its colors. The flag itself embodies the value of freedom, and the colors each represent different behaviors important to Americans, like hardiness and valor, to name a couple. We must remember the artifact itself, and its bond-strengthening qualities will only extend to those within that culture or to those with whom it resonates. To everyone else, it simply doesn't mean anything. The more artifacts created to appease smaller groups within the larger group to artificially bolster motivation, the more we unintentionally recreate a version of individualism, causing "they versus them" mentalities within the organization, which has a separating effect rather than a unifying one.

The last notable results stemming from a culture are the cultural elements that are woven into the fabric of daily life. These parts of life are guided by social norms that are derived from the group's collective values and behaviors, such as written or unwritten laws, formal or informal courtesies, and customs or traditions they have. It is important to note these cultural elements, and their extensive reach, because of their significant impacts on those within that culture.

We must understand that culture is the bonding agent between the individuals on a team. Without the right culture, any organization would become nothing more than a group of individuals beholden only to what they can accomplish on their own and nothing more. When we get the culture right, it forms an excellent team that can do more than exceptional individuals.

The Comprehensive Assessment

Soldiers who want to become excellent powerlifters will have to know what powerlifting is and improve within that specific framework. Once they understand that the components of powerlifting are the squat, bench, and deadlift, they can set the audacious goal of joining the 1,000-pound club. Now they must assess their strength in each component to find where they are relative to their goals; this is their starting point.

A Soldier in the 86th Infantry Brigade Combat Team (Mountain), Vermont Army National Guard, participates in a stress shoot at Camp Ethan Allen Training Site in Jericho, VT, on 13 August 2022. (Photo by SSG Barbara Pendl)

The pursuit of standardizing excellence is the same in that we must conduct comprehensive and honest assessments of each component within the Soldier archetype to find the starting point from which we can improve. Recognizing that the Army has great assessments for many of these components makes this process more manageable. These include fitness tests, marksmanship qualifications, progressive culminating training events, and leadership assessments. However, these assessments only measure the skills that Soldiers have. How do we assess someone's character or the team's culture so that we know where we're starting and build ways for improvement?

Some leaders will claim that we can evaluate an individual's character from their quantifiable data points. For instance, let's say we have Soldiers who scored 540 out of 600 on their fitness test with 90 percent in all six events. Can this score accurately depict the Soldiers' discipline when it comes to making the right decisions in other parts of their lives? What about Soldiers who shoot 40 out of 40 on their first attempt at rifle qualification? Does this accurately assess that they have the mental dominance to not quit on their team during the hardships of a deployment? Or that they have the maturity to make sound decisions and not drink and drive?

One example of a simple method we can use to measure someone's values is with "The Dog Dilemma." This is a scenario-based question that goes as follows:

"You're walking along the beach with your beloved dog. The dog runs into the water and starts drowning. At the same time, you notice a stranger is also drowning. They are far enough apart that you can only try to save one at a time. There's a chance you could save both and an equal chance you may save neither. Which do you try to save first?"

We can score this question fairly and objectively with a rubric that is created beforehand by the team's leaders based on what values they rank the highest. For instance, let's say our team's leaders have decided to use a one through five scale, and the following answers are given the corresponding score, and the lowest score is the type of answer the leaders ranked the highest.

1. Without hesitation, answered the stranger.
2. With little hesitation, answered the stranger.
3. With lots of hesitation, discussion, etc., answered the stranger.
4. With little hesitation, answered the dog.
5. Without hesitation, answered the dog.

We can use simple questions such as this that test a person's values or evaluate team events with objective rubrics geared towards quantifying a specific behavior to provide us with an actionable starting point. Another simple but effective individual assessment is an inspection of weapons, equipment, or living quarters, as this will tell us their level of attention to detail, amongst other behaviors.

Similarly, setting a high standard for close-order drills is an excellent assessment of a team's collective discipline, cohesiveness, and ability to hear and react appropriately to commands. Assessments such as these allow us to work towards strengthening specific character traits and the team's culture with accuracy. Then we can reassess later and continuously improve. When we don't find ways to quantify these intangible qualities or to be objective in our grading, we often end up with a skewed and biased assessment that won't give us the accuracy required to efficiently act on them. These methods do not have to be complex. They need to be systematic and not arbitrary, so we can take real action toward improvement. As we said before, it's essential to discuss with our teams and, without bias, break down precisely what values and behaviors are important to us and create ways to objectively quantify an individual's character and the team's culture. If we aren't measuring our culture, we're missing 81 percent of the details for our starting point toward standardizing excellence.

Development

Assessing each component gives us the details needed for improvement in each component. The more specific the assessments are, the more efficient we'll be. For example, let's say we have a Soldier who scored a 34 on rifle qualification and wants to get better. Many leaders will look at this and write it off as the Soldier just needs another repetition to try again. If the Soldier returns with the two extra points needed to qualify expert, that will be the end. But the actual increase in the Soldier's skill from one test to another would be marginal, if any.

Here's another simple way to look at this flawed method of development that leads to marginal improvement. Say we're taking a math test comprising addition, subtraction,

multiplication, and long-division problems. If we can't do long division, the best score we could hope for is just above 75 percent. Now imagine we're taking that same test, but we don't know how to subtract. The number of problems we'll get wrong compound because if we can't do subtraction, we can't do long division either. Then the best we can hope for is a catastrophic failure at 50 percent. If this was the case, would we keep taking the test repeatedly, hoping for better results? No, we would identify and practice our deficiencies until we were proficient. Failing to plan for an assessment properly will always lead to poor performance. For our shooter, whose audacious goal is to be consistently shooting 40 out of 40, if we can find the actionable details of the assessment and practice these specific deficiencies, we can increase the Soldier's skills to a level where he/she is no longer averaging 34 and simply hoping it changes with a second or third try.

Development in quantifiable skills is often straightforward, whereas developing character and creating culture are complex, daily, and never ending. This qualitative development should always be considered first in our planning because our units often come up short of potential or fail altogether when we lack good character and a strong culture. We can give Soldiers the best physical training plan in the world, but it doesn't matter how great the program is if they lack the discipline or desire to do it. When a leader is actioning towards character development and creating a culture within their unit, it is rarely done in the form of significant singular events. Instead, they are developed and produced by the everyday micro-actions in their lives. The three micro-actions we must use to help develop excellent Soldiers and create an excellent culture are:

1. How we influence others;
2. The example we set; and
3. The proper application of pressure.

Influence

Influence is the ability to affect someone's values or behaviors. The two ways to influence are manipulation or inspiration, which drive the phrase "compliance versus commitment." The critical difference between the two is that when people are manipulated to do something, they are doing it because they have to, versus if they are inspired to do something, they do it because they want to.

Some common types of manipulation are authority, deceit, coercion, blackmail, and physical. While the last four are obviously wrong ways to manipulate someone, authority is not necessarily bad and is common in the workplace. For instance, when the boss says "go there and do that," most of us will execute because the boss is in a position of authority, and it is our obligation to comply so long as it is not illegal, immoral, or unethical. However, authority only works and ensures compliance while the leader is around. Once the leader's gone, if the individual or the team lacks the commitment to do the right thing on their own, who knows what will happen.

Inspiration is rooted in trust, which is built over time through repeated interactions that expose both sides to the values and behaviors that strengthen the relationship. When Soldiers see their leaders always out front, making decisions that show their value in the team over themselves, or simply in the mud alongside their subordinates demonstrating excellent character, it builds trust. It tells both parties they can, without a doubt, rely on one another. When a team knows leaders are doing right by them, they will do right by the leader. It is a common understanding that having committed Soldiers is better than having blindly compliant Soldiers because this behavior produces a much higher-performing culture.

It's easy to see that service members who swear to defend the Constitution of the United States against all its enemies can possess some internal fire. Whether it's a massive inferno or a smaller flame, everyone has one, and the bigger it is, the better. Inspiring someone is like pouring gasoline on this fire, whereas manipulation is like an extinguisher that eventually snuffs out even the largest fires. So how can we make sure to pour gas in the right places, like individual character, and inspire a committed culture so that we don't rely only on authority?

Presence

The only way to genuinely inspire an exceptional character in someone else or create a culture of excellence is by setting an excellent example. Anything less will create a veneer that masquerades as excellence at best. Setting the example is defined as one's presence, and presence equals appearance plus demeanor plus actions plus words. Presence is the primary tool we must use as leaders to actively develop character and create a culture of excellence.

1. Appearance — visual cues that reflect our character:
• Does our appearance reflect the excellent leaders we are, or is it sloppy?
• What are we telling people with our facial expressions and body language?
• Are we physically there and engaging with those in our organization, or are we absent? Leadership is a contact sport.

2. Demeanor — the undertone of everything we do:
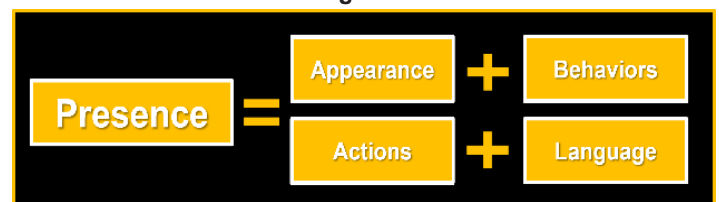• Are we approachable?
• Do we have a go-getter attitude, or are we too passive?
• Are we motivated or apathetic?
• Do we enrich the team or demoralize it?

3. Actions — the decisions we make and the execution of:
• Do we constantly strive to do what's right?
• Do we work hard or expect everyone else to?

Figure 4

Presence = Appearance + Behaviors + Actions + Language

• Are we disciplined?

• Do we hold others accountable?

• Do we stay open to criticism?

• Do we keep your decisions in line with your values?

• Do we provide purpose with every task?

• Do we work hard and smart? A good leader does both.

• Do we accomplish tasks to the standard that we expect of others?

• Are we consistent?

4. Words — what we say:

• Are we clear and concise?

• Do our words inspire others, or do they extinguish them?

• Do we choose our words carefully or carelessly?

• Do we talk to talk, or is it productive?

The degree to which we set the example, good or bad, will be passed on to those around us at a respective rate. The higher the degree, the harder and faster the impression is left on another. Degenerative types of presence, such as toxic, tyrannical, unappeasable, hypocritical, and absent, will undermine the culture of a group and can only instill a sense of depreciation, resentment towards the leader or team, and worse, reproduce more of the same. We must actively take control of these aspects of presence rather than passively assume they will take care of themselves.

When an excellent football team is not playing to its normal high standard and goes into halftime down by 21 points, we can all agree that the coach is just as upset as the rest of the players. He may be furious or depressed and want to cuss out his players till he's blue in the face. He may even want to break things or walk out on the team because he feels they aren't working as hard as he is. But if the coach exudes these aspects of a degenerative presence, the team will stand no chance of rallying back in the second half. This coach needs to keep it together and set an inspiring presence for his players. It's about always being in control of our presence so we can be the leader our teams need, not the one we want to be in the moment.

Pressure

In its original design, the golf ball was round and smooth, and every time it was hit, it would leave a dent in the ball, and when it seemed too damaged, the golfer replaced it. However, over time, golfers learned that the more a ball was used, the better it flew. This discovery led to the design of the modern-day golf ball as we know it with 363 intentionally placed dimples. Like the smooth golf ball, we become better after every challenge we overcome. However, growth comes from being put under the right amount of pressure, and just like the golf ball, too much pressure can cause us to break in one way or another. Too little pressure and there is no longer adversity to overcome. To standardize excellence means consistently applying the appropriate amount of pressure for continuous improvement.
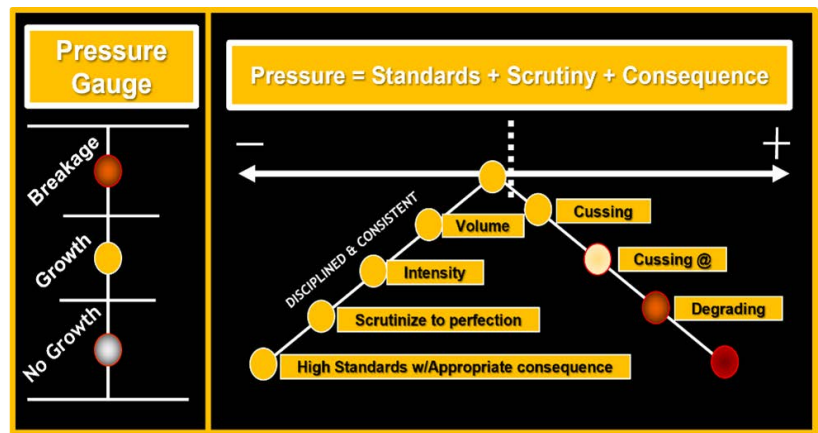

Figure 5

Every challenge we undertake has a predetermined amount of pressure built into it; some are higher than others. For example, a wall-locker inspection has a naturally low-pressure level, whereas a combat deployment has a naturally high-pressure level. The pressure gauge is a visual representation of how much pressure is applied during any given challenge. This means we need to take control of all the actionable details that can adjust the pressure level as necessary to promote the growth of ourselves and those around us. So how do we create pressure, and what are these actionable details? **Pressure equals standards plus scrutiny plus consequence.**

Manipulating any of these details will undoubtedly increase or decrease the pressure. However, when the details are significantly out of balance, it will always result in some form of diminishing returns. For instance, if a leader gives a standard to be met but never appropriately scrutinizes Soldiers' work and an appropriate consequence is never administered, the pressure level is too low and will stunt growth. This lack of pressure often has cascading effects on negative behaviors such as becoming complacent or lazy. Conversely, if these same details are too high, an individual undergoing the pressure can quickly end up in the breakage zone. The adverse effects of being in this zone for too long inevitably result in other harmful behaviors such as indifference, animosity, and mistrust. We must take a properly balanced approach to produce the right amount of pressure.

Whether we're getting smarter, faster, or generally better, when we are in the growth zone for prolonged periods, it eventually becomes the new norm and demands that we increase the pressure for continued growth. The recommended method to gradually increase the pressure is to raise the standard, then the scrutiny, then the consequence, at the right times and with the right intensity. The recurring and progressive application of pressure is the essence of what it means to standardize excellence.

Actively Creating the Culture

To actively create culture means we are principally using the same tools to develop an individual's character, now with multiple people and emphasizing the specific traits that drive

Soldiers from the 2nd Brigade Combat Team, 82nd Airborne Division learn ambush techniques and teamwork during training in Hawaii on 23 February 2023. (Photo by PFC Mariah Aguilar)

cohesion and accountability towards others. Creating culture, like developing character, is about setting an example and being an honest and transparent team player, demonstrating your value to others, and providing clear and concise tasks while providing a team-oriented purpose. This doesn't mean we must be perfect but that we must always strive to improve. Providing ourselves with these detailed blueprints for each component of our life helps bring all the members of a team on the same page. It tells us precisely what is expected of us with as little room for subjectivity as possible and provides clarity and a shared understanding.

Even with seemingly mundane tasks, we must remind our Soldiers of their importance and provide them with an inspiring purpose. For instance, Soldiers are not just sweeping because we say to and to keep them busy. We are sweeping the barracks because without a clean place to live and work, training can't be done, and if training can't be done, we can't deploy and fight. We clean to a high standard because high standards become high levels of accomplishment, which turn into self or team value, pride, and discipline. If we cannot provide a purpose for the given task, then the task is pointless and shouldn't be done. Giving tasks with no purpose creates nothing more than a culture of resentment.

We can create a specific culture at an exponential rate by focusing on the language we use. The language we use shapes the perception of the given circumstances. This perception then conditions our behaviors, which directly impacts our performance. Our performance, good or bad,

then generates more of the same language, perpetuating the cycle and spreading to those around us, starting new cycles. This process can cause language to spread like wildfire through any organization. As leaders, we can use this process to promote a particular set of words or language that actively reinforces the values and behaviors of a disciplined or accountable culture and strengthen cohesiveness. The correct language, timed well, also has an amplified effect when it follows an accomplishment or a failure, and the leader not only acknowledges the performance but puts a stronger emphasis on the behaviors or values that led to it. Another example is using unifying languages, such as using "we" or "us" instead of "I" or "you" in our daily rhetoric, which subtly instills a sense of togetherness and belonging.

Another method to actively promulgate culture is to adopt a mindset similar to the law of diffusion of innovation. In short, if we focus the bulk of our energy on inspiring the few members of our organization who believe in and have adopted the cultural values we are imposing, they will begin inspiring others to adopt these characteristics.

As we continue to develop an excellent Army, the next question is how do we ensure it is a self-perpetuating culture of excellence so that we never lose it? In short, we must demonstrate and educate. We must constantly teach why character is so important, and we must present the same as this is the only way to impose character traits onto another. We cannot expect things to magically happen. When leaders idly sit by hoping things get better and mindlessly complain about how bad others are, they only perpetuate the problem rather than become the solution.

Conclusion

In the pursuit of excellence, we've set the bar high, created detailed plans on how to get there, worked hard, stayed disciplined, and held each other accountable for so long that we have finally accomplished our goal. Now it's time to relax and maintain the status quo. After all, we made it to the end, right?

Wrong. Trying to "maintain" a certain level of excellence in anything across generations during a time of comfort and abundance inevitably leads to a degraded standard. This finite mindset is the antithesis of standardizing excellence. For powerlifters, this means not stopping once they have made it into the 1,000-pound club. It means that what was once perceived as excellent by individuals is now the norm, and a new audacious goal must be set. Maybe this means getting stronger and being able to lift more weight. Or perhaps they want to maintain this aspect while excelling in another. Maybe their new goal is to lift the same weight, do 30 consecutive pull-ups, and run a half marathon, all within a five-hour time limit. It doesn't matter how big or complex the goal is, so long as we define it and let the correct values and behaviors keep us on azimuth and moving forward.

Leaders who express to their unit that the endpoint or goal is for Soldiers to barely pass the physical fitness test and that it's okay to meet the minimum requirements are ultimately

setting them up for failure. This mentality can inspire nothing more than mediocrity at best, and when we set the bar to a minimum and then fail to achieve it, the outcomes are far worse than if the bar had been set high and we had come up short. Another point of failure for us as leaders is having real expectation management skills. This means meeting teams or individuals where they're at when they come up short in their attempt to achieve a goal while seeing it for what it is truly worth. For example, leaders may encourage Soldiers to max their score on the fitness test but then degrade or downplay their efforts when they score objectively high but not perfectly. We need to recognize the hard work and continue inspiring or helping them improve rather than become yet another hindrance on Soldiers' roads to excellence.

Standardizing excellence across the Army is an audacious and vastly complex goal. But it's our job as leaders to define what this means so we can develop detailed plans with our Soldiers on how to achieve it. And if the character of the individual and the culture of the group stays at the forefront of our decisions in planning or execution, almost any goal we set will be achievable. Imagine setting goals for the Army, such as wanting all Soldiers to earn their expert skills badge. With the right people, a simple plan, and a lot of hard work, this goal is surely not impossible. If we were to pursue this level of excellence and success-fully normalize these expert assessments, we would be forced to raise the standard or even make the current test a graduation requirement for initial entry training.

Standardizing excellence is not finite. By its nature, this principle is just the opposite — it's never ending. Standardizing excellence requires a culture of accountability and trust in which leaders inspire our core values and behaviors in others.

I refuse to believe that size matters. The high level of excellence, the greater culture, and what it means to be a better Soldier that we just discussed are undoubtedly achiev-able in an organization as large as the Army. With a little bit of self-discipline, accountability, and inspirational presence from leaders, the size of the Army becomes just another worthless argument.

Standardizing excellence is a timeless principle focused on inspiring a culture that self-generates Soldiers of excel-lent character on the belief that better people make better Soldiers, and better Soldiers are more lethal. This principle applies broadly to all Soldiers in the Army and reinforces the simple idea that we as leaders must embody this principle as well as educate Soldiers on it so it is never lost. May we never be better Soldiers than we are people.

Suggestions for Further Reading

My hope is that this article has been packaged in a simple, relatable, and practical manner for leaders to understand and use to improve themselves and their units. The following is a list of books that inspired this piece that I also highly recommend for further reading:

Character Focused
- Ryan Holiday, *Discipline Is Destiny*, 2022, Portfolio
- Angela Duckworth, *Grit*, 2018, Scribner
- Jon Gordon and Damon West, *The Coffee Bean: A Simple Lesson to Create Positive Change*, 2019, Wiley
- Jon Gordon, *The No Complaining Rule*, 2008, Wiley
- Jon Gordon, *The Energy Bus*, 2022, independently published
- Jon Gordon, *Training Camp*, 2009, Wiley
- Jocko Willink and Leif Babin, *The Dichotomy of Leadership*, 2018, St. Martin's Press
- Jocko Willink and Leif Babin, *Extreme Ownership*, 2017, St. Martin's Press
- Steven Pressfield, *The Warrior Ethos*, 2011

Culture Focused
- Daniel Coyle, *The Culture Code*, 2018, Bantam
- James Kerr, *Legacy*, 2013, Constable & Robinson
- Sebastian Junger, *Tribe*, 2016, Twelve
- Simon Sinek, *Start With Why*, 2011, Portfolio
- Simon Sinek, *Leaders Eat Last*, 2017, Portfolio
- Simon Sinek, *The Infinite Game*, 2019, Portfolio
- Simon Sinek, David Mead, and Peter Docker, *Find Your Why*, 2017, Portfolio
- Steven Pressfield, *Gates of Fire*, 2005, Bantam
- Jon Gordon and Mike Smith, *You Win in the Locker Room First*, 2015, Wiley
- Dave Logan, John King, and Halee Fischer-Wright, *Tribal Leadership*, 2011, Harper Business

Development Focused
- Steve Magness, *Do Hard Things*, 2022, HarperOne
- Jim Collins, *Built to Last*, 1994, Harper Business
- Jim Collins, *Good to Great*, 2001, Harper Business
- James Clear, *Atomic Habits*, 2018, Avery
- Charles Duhigg, *Smarter Faster Better*, 2017, Random House Trade Paperbacks
- Daniel Coyle, *The Culture Playbook*, 2022, Bantam
- Steve Zaffron and Dave Logan, *The Three Laws of Performance*, 2011, Jossey-Bass
- Malcolm Gladwell, *The Tipping Point*, 2002, Back Bay Books

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This article is intended to be the foundation for a "Standardizing Excellence" series. With this series, anyone who feels driven to contribute is invited to do so. It is designed to be continued and written by others as a collection of tools and paralleling or contrasting thoughts in support of or in opposition to this idea that the Army can only effectively pursue excellence by preserving its core values and behaviors.

The 2022 Russo-Ukrainian War:
Current and Future Employment of Unmanned Platforms Supporting Infantry Operations

DONALD WILKINS

The Russo-Ukrainian War of 2022 (the third war between the two nations in 10 years) may be the final conflict of Vladimir Putin's wars.[1] Initially planned as a 10-day operation, the Russian invasion has bogged down into a months-long slog, reminiscent of the worst battles of World War I. Part of the reason for the unsettling of Russian plans has been the use and misuse of unmanned vehicles, largely air vehicles and boats. Unmanned ground vehicles do not appear to play a significant role in the fighting to date.

Russia has demonstrated varied and sophisticated drone and drone-related technologies in previous wars. In the Donbas War, the RB-341V Leer-3 electronic warfare system integrated a cell site simulator with a drone, capable of hijacking 6,000 phone conversations over an area with 6-kilometer diameter.[2] The Syrian War saw the deployment of the Orlan-10, a drone producing real-time video. Granat-1 and -2, the Forpost, the Eleron 3SV, the Zastava and the hand-launched Zala-421-08 constitute a family of drones available for targeting and reconnaissance. One variant, the Zala KUB, exhibits poor accuracy and is incapable of carrying significant ordnance. The Geran-2, the Iranian-built Shahed-136, is credited with destroying four self-propelled howitzers and two armored infantry vehicles.[3]

Zala-421-08

Forpost UAV

To supplement Uran-6 demining vehicles, Russia uses the remote-controlled 45-ton Prokhod-1 unmanned ground vehicle (UGV), a disarmed T-90A tank equipped with KTM-7 or -8 mine-rollers. The 3-ton Marker 2 UGV may be deployed in Ukraine, although with what capabilities, weapons, and sensors is not known. Uran-9, an unmanned tank, performed so poorly in Syria that it may not be deployed to the war.[4]

While Western economic sanctions impact Russia's ability to manufacture drones, some shortages may have been filled by Iran, although the reported costs are exorbitant. The Iranian UAVs appear to be largely used to attack civilian targets, although a large number, according to Ukrainian sources, are shot down before reaching the objectives.

Counter-drone activities include electronic warfare (EW) as well as more kinetic methods. The R-30Zh Zhitel blanks GPS signals needed for drone navigation, and a handheld jammer, the Pishchal "rifle," is available. Tactical jammers on the Repellent-1 truck are estimated to have a range of 1.6 miles. Another truck-mounted Shipovnik-Aero tactical jammer can reportedly attack two drones simultaneously. The system is fast. In approximately 25 seconds, it identifies the UAV, interrupts the drone's command link, and if the parameters align, assumes control of the UAV's flight path.

The Ukrainians use a mix of commercially available, acquisitions from foreign sources, and local manufactured drones. Turkish Bayraktar TB2 combat drones were employed to scout the battlefield until electronic warfare and kinetic countermeasures negated their utility. Videos of inexpensive commercial quadcopters providing targeting information or dropping grenades on targets are numerous on the internet. Unmanned naval boats, probably home brewed, reportedly struck ships in Sevastopol, causing the Russian military vessels to abandon the port. Other strikes on airbases in Russia may have been conducted using long-range aerial drones.

Ukraine has the Temerland GNOM (pronounced as gnome) kamikaze UGV. Directed via a quadcopter, the machine carries a TM-62 anti-tank mine. Equipped with a quiet 5-horsepower electric motor and a reel of fiber-optic cable for control and video, the UGV has a range of 2,000

Leer-3 electronic warfare system　　　*Uran-6 demining vehicle*　　　*Repellent-1 anti-drone warfare complex*

(Photos from OE Data Integration Network, https://odin.tradoc.army.mil/)

meters (1.25 miles) and is immune to jamming. If the cable is severed, the vehicle has enough intelligence to return to base if the cable is severed. A GNOM carrying a machine-gun is pending.[5]

Both sides use unmanned combat aerial vehicles (UCAVs), large aircraft capable of greater ranges, longer loiter times, and carrying heavier payloads. Ukraine reportedly had more tactical success using UCAVs in the liberation of Snake Island and in attacks into Crimea. The attacks have been destructive of material and Putin's political support. Strong air defenses limit the roles UCAVs can play for either side.

Operations in the Russo-Ukrainian War have made it clear, even in these early stages, that infantry will need unmanned aerial and ground vehicles as well as methods to counter the machines to survive and fight on future battlefields. Several issues must be addressed before unmanned vehicles can be successfully integrated with an infantry unit.

Doctrine on manned-unmanned coordination and operation is critical. The U.S. Army must decide how unmanned vehicles, airborne and ground, will be deployed in offensive and defensive operations. Rules of engagement must be elaborated. Doctrine will also establish the mix of soldier-portable and vehicle-carried drones and UGVs, along with weapons and sensors. Establishing the requirements will allow the infantry users to work with the engineers to design appropriate vehicles at reasonable cost, rather than expensive machines capable of many tasks but poor at all of them.

Ethics concerns must be addressed. Improved situational awareness of the operational environment will allow better decision making, reducing risks to friendlies and reducing collateral damage. However, no good is ever unalloyed. Wide bandwidth data links allow staff and higher command echelons to look over the shoulder of the combatant commander.

Personnel remote from the immediacy of the battlefield will opt for a slower pace of operations than will the soldiers in contact with a hostile force. In one discussion, one of the participants asked if killing an opponent at a distance was moral — as if indirect fires and aerial bombardment were not already employed in combat.[6-7]

Unmanned vehicle survivability appears to be a significant problem in the Ukraine conflict. One analysis puts a drone's average lifetime at seven days.[8] Only 10 percent of those are believed to complete assigned missions. Some operators reportedly opt to hover the UAV over friendly territory in hopes of recovering the drone if the command link is lost. GPS jamming causes the majority of losses. A reliable, effective inertial navigation systems (INS) is needed to guide the attacks.

Inexpensive drones are one answer to EW attacks. Overcoming defenses with numbers is a time-honored but costly tactic. However, attributable platforms cannot incorporate expensive sensors capable of finding hidden foes or high bandwidth links needed for video transmissions in contested environments.

Operations in the Russo-Ukrainian War have made it clear, even in these early stages, that infantry will need unmanned aerial and ground vehicles as well as methods to counter the machines to survive and fight on the future battlefield.

The ability to avoid kinetic air defenses helps survivability. A simple sound sensor would change the aerial vehicle's flight path, making it more difficult to hit the drone. Quieter drones would reduce the ability to detect and locate the vehicle, lessening the chances it will be shot down. Enemy troops will also not know when they are under observation or how imminent an attack is. This can have significant psychological effects on soldiers.

Wide bandwidth, encrypted, frequency-hopping data links will lessen the opportunity to seize control and capture drones. High-resolution, multiple-frequency sensors will avoid the embarrassment of striking wooden decoys as the Russians reportedly have.

Real-time transmission of intelligence will reduce kill-cycle times. Accuracy of targeting systems must increase, allowing smaller munitions to destroy high-value targets, such as artillery, or drop ordnance into openings. The need to increase accuracy is exacerbated by the nature of the current battlefield. Open trenches are replaced by earthen structures where the overhead cover is difficult for small explosives. The ability to accurately place munitions into the structures' openings will reduce the defensive positions without placing soldiers in danger.

Counter and counter-countermeasures will continue their dance as the importance of unmanned vehicles on the battlefield grows and technology improves. Detection of quiet machines will require sensors operating in the infrared and radar frequencies, which in turn accelerate the development of camouflage techniques in those wavelengths.

Increasing operational space is vital. Both sides employ drones to locate and attack troops and vehicles, but operations can be limited by trees screening targets. The capability to fly at speed through densely forested areas has already been demonstrated.[9-10]

Artificial intelligence (AI) can play numerous roles. Offloading route identification and target detection/recognition to the drone significantly lowers bandwidth requirements and enhances the survivability of the platform. Operator workload lowers as an analyst does not have to look through large video files largely depicting countryside to locate targets. Attack cycles are reduced as target detection and recognition move to the edge of the network.

Sensor fusion, the blending of images at multiple frequencies, lessens the possibility of striking a dummy target.

Logistics pipelines and training must be revised to incorporate the drones and counter-drone equipment into the tail of the combat units. Soldiers should be trained in operating unmanned vehicles, taking into account vehicle operations in a range of tactical situations. Maintenance personnel must be trained in keeping the vehicles operational in a variety of environments.

Soldiers need the proper equipment to safely and effectively complete missions. This equipment will, in future conflicts, include short-range UAVs, medium-range UAVs, and UGVs. Long-range, heavy-payload UAVs are expected to be retained as strategic assets and not available below the brigade level.

Automated systems will provide a picture of what is around the next corner or over the hill. Machines will lessen risk by tripping ambushes before units enter kill zones, assaulting well-defended locations and misdirecting the enemy. Logistics for small units can be simplified and wounded evacuated by unmanned vehicles, shortening the length of the tail and reducing the number of personnel dedicated to the operation of logistics chains.

The Future — A Possible Scenario

An infantry fighting vehicle (IFV) approaches a potential enemy strongpoint. Its upper deck is empty as its mid-range UAV is the lead, probing the area to the IFV's front. Two unmanned IFVs ride on its flanks, watching for any enemy turning maneuvers. Artificial intelligences guide the robots' trek, only bothering humans if something of interest pops into view.

A village appears. The IFV stops. Minefields are detected by infrared sensors and projected onto screens carried by the infantry. As the soldiers dismount, a swarm of small UAVs also leave the vehicle. The UAVs rapidly enter the village and open doors and windows. Images show civilians hiding and other figures holding objects suspiciously resembling weapons. Loudspeakers, using the local language, demand those holding the objects place them on the ground.

The defenders radio other units, detailing their situation. The small UAVs triangulate on the responses. Other friendly forces will search those locations for hostile units.

Some comply with the verbal warnings; others do not. A few of the small UAVs sprinkle tracking devices that cling to clothes of the retreating forces. As the forces scatter, they will inadvertently betray the location of other forces.

After the infantry secures the village, resupply and support aerial drones, large cargo-carrying vehicles, arrive. The IFVs are refueled, and a malfunctioning computer is replaced. A remotely operated medical system checks the villagers. Amoebic dysentery is uncovered. Painkillers and antibiotics are given to the ill, and a lecture on techniques to avoid the disease is given to all. A boy with a broken arm turning gangrenous is evacuated for treatment at a hospital.

After the infantry moves on to the next phase of the mission, a high-altitude, long-endurance unmanned drone places the village under its protective watch. Its cameras will monitor the inhabitants while its systems will send images of newcomers, particularly ones bearing weapons, for analysis and, if required, another visit to the village.

Conclusion

Despite wishful thinking of many strategists, the demise of infantry is highly improbable. Infantry will be needed to pry stubborn enemies from strongholds. The fog of war will remain; the advent of robots, even those equipped with advanced AI, will never totally dissipate the uncertainties and confusion of battle. The mechanical aides will, however, help lift this fog.

The lessons of the recent Russo-Ukrainian War, aptly and imaginatively applied, will usher in a new method of warfare which uses the strengths of both machines and soldiers to accomplish the mission. Combinations of robots and humans will more effectively complete missions with lower risk to both combatants and civilians.

Notes

[1] Mark Galeotti, *Putin's Wars: From Chechnya to Ukraine* (Oxford, UK: Osprey Publishing, 2022).

[2] Ibid.

[3] David Hambling, "How Can Ukraine Counter Russia's 'Swarm' Drone Offensive, *Forbes* (28 September 2022), accessed from https://www.forbes.com/sites/davidhambling/2022/09/28/how-can-ukraine-counter-russias-swarm-drone-offensive.

[4] Daniel Brown, "Russia's Uran-9 Robot Tank Reportedly Performed Horribly in Syria," *Business Insider* (9 July 2019), accessed on 13 December 2022 from https://www.businessinsider.com/russias-uran-9-robot-tank-performed-horribly-in-syria-2018-7?r=US&IR=T.

[5] David Hambling, "Ukrainian Combat Robots Join Fight Against Russian Invasion," *Forbes* (16 June 2022), accessed from https://www.forbes.com/sites/davidhambling/2022/06/16/ukrainian-combat-robots-join-fight-against-russian-invasion/?sh=5f7a0e703678.

[6] Paul Scharre, *Army of None: Autonomous Weapons and the Future of War* (NY: W.W. Norton Company, 2018).

[7] Joseph Chapa, *Is Remote Warfare Moral? Weighing Issues of Life and Death from 7,000 Miles* (NY: PublicAffairs Hatchette Book Group, 2022).

[8] Dr. Jack Watling and Nick Reynolds, "Ukraine at War Paving the Road from Survival to Victory," special report from Royal United Services Institute for Defence and Security Studies, 4 July 2022, accessed from https://rusi.org/explore-our-research/publications/special-resources/ukraine-war-paving-road-survival-victory.

[9] *South China Morning Post*, "Autonomous Drones Fly through Chinese Bamboo Forest," video accessed from https://www.youtube.com/watch?v=rPul9WKQ6oQ.

[10] Edd Gent, "Watch a Swarm of Drones Fly through Heavy Forest — While Staying in Formation," *Science* (16 December 2020), accessed from https://www.science.org/content/article/watch-swarm-drones-fly-through-heavy-forest-while-staying-formation.

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Cottonbalers in the Wood:
The Forgotten Role of the 7th Infantry Regiment at Belleau Wood

JAMES P. GREGORY JR.

From 16-24 June 1918, the Soldiers of the 7th Infantry Regiment, 5th Brigade, 3rd Division, bravely fought during the Battle of Belleau Wood in relief of the 5th Regiment of Marines, 4th Brigade (Marine), 2nd Division.[1] Although they suffered heavy losses, 7th Infantry units did not receive recognition for their role in the battle at the time. Reports of their actions faded away as stories of Marines filled newspapers across the country. After the war, the 7th Infantry did not find representation in some histories of the battle. So, how did the unit lose this part of its legacy? This article will examine the 7th Infantry Regiment's contributions to the battle and reasons why their actions may have been overlooked, which include a failure of leadership, a censor mistake from General Headquarters of the American Expeditionary Forces (AEF), and the actions of an overzealous press.

The bulk of the Battle of Belleau Wood occurred during the month of June 1918 about five miles west of the town of Château-Thierry, France. Despite being a small part of the Allied campaign in the area to stop the German spring offensive, it became one of the most significant battles for the AEF. The faltering German offensive was finally halted by the Americans around Château-Thierry. The 2nd Division held the woods and towns west of the city while the 3rd Division held the city and banks of the Marne River. Marines only made up a quarter of the 2nd Division, yet they received the lion's share of the glory for the fighting in the region. The French government renamed Belleau Wood to Bois de la Brigade de Marine (Wood of the Marine Brigade). Suffering almost 1,000 killed in action and around 3,000 wounded or gassed, the Marine Corps certainly deserve the credit they have received.[2] However, the 7th Infantry's actions also merit recognition.

After almost 10 days of constant, heavy fighting in the wood, the Marine battalions, reduced in numbers by the severe fighting and thoroughly exhausted, needed relief in order to rest and receive replacements.[3] On 15 June, COL Thomas M. Anderson, commander of the 7th Infantry Regiment, received an order from BG Omar Bundy, commanding general of the 2nd Division, stating that the 7th Infantry had been placed at the disposal of his division by French General Denis Auguste Duchêne, commanding general of the Sixth French Army. That night, the 1st Battalion, 7th Infantry relieved the 2nd Battalion, 5th Regiment and 2nd Battalion, 6th Regiment in the northernmost point of Belleau Wood. The following night,

Soldiers from the 7th Infantry rest on a roadside, 21 May 1918. (Signal Corps photograph)
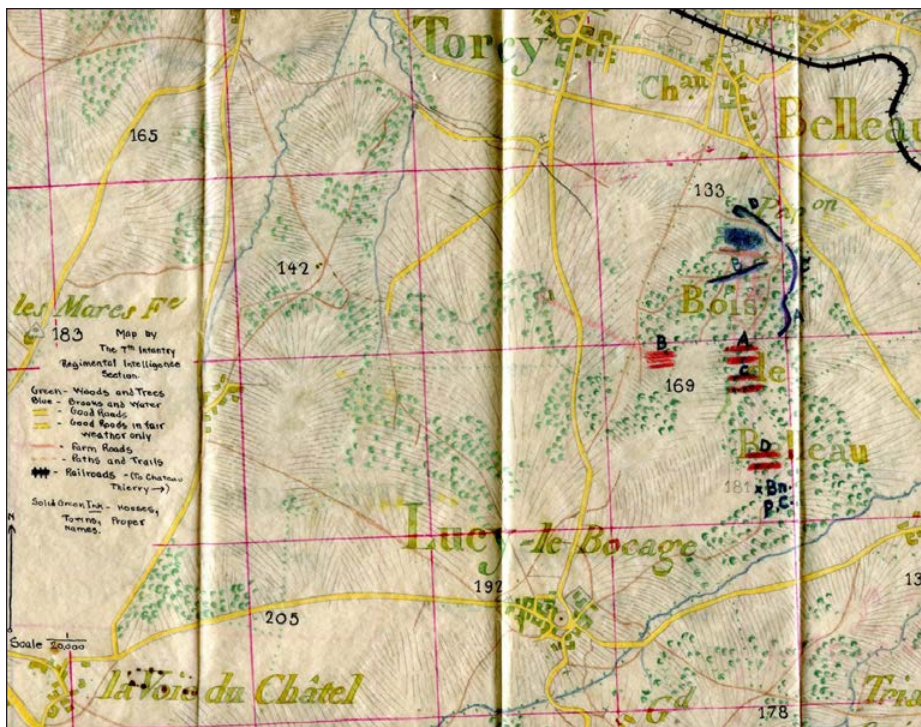
Map 1 — 1st Battalion's Positions within Belleau Wood (National Archives)

the 2nd Battalion, 7th Infantry relieved the Marines holding the sector between 1st Battalion's position and the town of Bouresches. On the night of 17 June, the 3rd Battalion, 7th Infantry set up on the left of the 1st Battalion. This put all three battalions of the 7th Infantry on the frontline within Belleau Wood. Since they were loaned to the 2nd Division, they fell under the command of Marine Col Wendell C. Neville, commander of the 5th Regiment.

When they took over their assigned sector, the Soldiers of 1st Battalion, 7th Infantry found a stronghold of German machine guns in the northern edge of the woods, which they believed was supported by a force some 400 strong. Previous attempts by the Marines to dislodge these machine-gun positions along the rocky ridges and within the trees proved unsuccessful. CPT Walter R. Flannery of Company M, 7th Infantry, recalled:

The Bois de Belleau was a mighty thick woods and it had been subjected to bombardment by the Germans and Allied forces as well. Trees twelve to fifteen inches in diameter were cut down like saplings and they made an almost impassable barrier where they had fallen. I never saw such shell work; a saw could not have done better work. When our bunch went over the top there were only tiny lanes between where these trees lay, through which our men could advance. The Germans had been there first, and they took advantage of the fact. They had machinegun nests trained down these lanes, and it was a darn tough job.[4]

BG James G. Harbord, commanding general of the 4th Brigade (Marine), understood the 7th Infantry's predicament:

The ground is exceedingly rough, ravine, covered with

dense underbrush and all trails and paths in the direction of this stronghold seem to be covered by machinegun fire and in one or two cases by 37mm.[5]

This was the reality that the 7th Infantry had been placed into. Relatively inexperienced, these Soldiers would sharpen their skills in the hell of Belleau Wood. During the next eight days, several attacks were carried out by the 7th Infantry in an attempt to dislodge the Germans in the woods. However, they all resulted in heavy losses with little ground gained. On the night of 18 June, Company B attempted to advance forward, but heavy machine-gun fire forced them to withdraw with a loss of 5 killed and 16 wounded.[6]

On the following morning, CPT Paul Cartter of Company C led an attack of about 60 volunteers from Companies A, B, and C, to dislodge the Germans. In their first attempt, they were inundated by "machine gun, rifle, and hand grenade fire which increased as they crawled towards the enemy." This push stalled and the men fell back. Undaunted, CPT Cartter took men from Company D and tried once more, but the Germans held their fortified position.[7] The casualties from this attack numbered 11 killed, 45 wounded, and 7 missing.[8]

One example of the sacrifice and strength of 7th Infantry Soldiers can be seen in the actions of one of those missing, PVT Ernest A. Rouch from Company A, 7th Infantry. During the raid, he "was struck by machine gun bullets at three places. One bullet cut a groove in his head, another passed through his shoulder and the third went through his right ankle." He attempted to find his way back to the American lines, but in a dazed state he walked into the German lines and was taken prisoner. He later claimed that a German officer offered him a chance to return to his lines if he would "promise never to fight against the Germans again." To this, Rouch reportedly replied "that the Germans could send him back to his comrades, but he was an American soldier and would fight to the end."[9]

After this second failed push, the 1st Battalion needed only to hold on until the night of 21 June when they would be relieved. However, BG Harbord sent an informal note to LTC Frank A. Adams, commander of 1st Battalion, 7th Infantry, advising him that they had "but one more opportunity to take the machine gun position and redeem themselves for the failure of the previous night."[10] Therefore, the 1st Battalion would make a final attempt to take the German position on the night of 20 June. Adams requested a heavy artillery concentration on the German positions, which was granted. In order to prepare for this bombardment, the battalion was ordered to withdraw one kilometer to avoid the danger of any short rounds.[11]

By 2200, the company commanders had withdrawn their companies and awaited the artillery barrage; however, the promised bombardment never came. Without any artillery support, the attack began at 0315. Company A led the attack followed by Company C, while Company D remained in reserve. Unfortunately, Company B drifted too far to the left and failed to reach the objective in the dark. Companies A and C advanced up the hill but were forced back by heavy German resistance.[12]

In some parts of the woods, the Germans allowed the units to push deep into their lines before opening fire. 1LT Carl C. Helm of Company A, 7th Infantry, recalled that they had advanced to the top of the rise without a single shot being fired. He "thought the Germans had retired;" however, this thought quickly faded as "we were fired upon from all sides and from trees. Machine guns on our both flanks and in our rear opened on us."[13] This confusion and carnage forced the men to retreat out of the ambush.

While pushing the attack, the Germans attempted to deceive the U.S. Soldiers by dressing in American uniforms and speaking in English. CPT Flannery recalled:

There were any number of boches dressed in American army uniforms, and I remember distinctly one of them jumping up on a rock and shouting in perfect English "Cease firing; you are killing your own men." There was some temporary confusion and in the pause they got busy with hand grenades. Those birds paid for that trick, you bet your life.[14]

BG Harbord also recorded:

The officers and several enlisted men questioned by me all said that the enemy they actually saw were... dressed in American uniforms; that certain of them mixed with our troops and attempted to interfere with the plan of attack, saying that the line should not advance as our own people were up there and we should not kill our own people. At one point in the attack when the line had engaged the enemy, a German in American uniform approached Lieut. Paysley of Company A saying to him: "My God, you are not going to fire on your own men out there in front, are you? You are not going to kill your own men." It being so apparent to Lt. Paysley that this officer was an enemy in our own uniform, that he immediately shot and killed him, in the excitement of the moment not obtaining insignia or identification from the body.[15]

This treachery, paired with the heavy resistance, forced the Americans to fall back to their original lines. Here, they waited until the Marines returned to relieve them. During their eight days in Belleau Wood, the 1st Battalion, 7th Infantry suffered 337 casualties (8 officers and 229 enlisted men, of which two officers and 34 enlisted were killed), which was 25 percent of its strength.[16]

During 1st Battalion's attack in the wood, 3rd Battalion executed an advance toward Torcy through the open fields outside of the woods. Taking almost no losses, this 1-kilometer push captured the crossroads south of the town. This would be the only forward progress made by 7th Infantry units during their time in Belleau Wood.

After eight days of constant bombardment and heavy combat, the 7th Infantry still held their original lines. Despite not loosening the Germans' grip on the wood, these American Soldiers fought valiantly, and it cost the Germans dearly. After being wounded and returning to the United States, PVT Frank Dallas of Company L, 7th Infantry, stated in an interview that in the Battle of Belleau Wood, "the United States Soldiers fought at night and there was not a night that some were not killed or wounded. However, for every ten Americans killed the Germans gave up thirty dead. The carnage was great."[17]

Beginning the night of 21 June, the Marines

Map 2 — 3rd Battalion's Positions (National Archives)
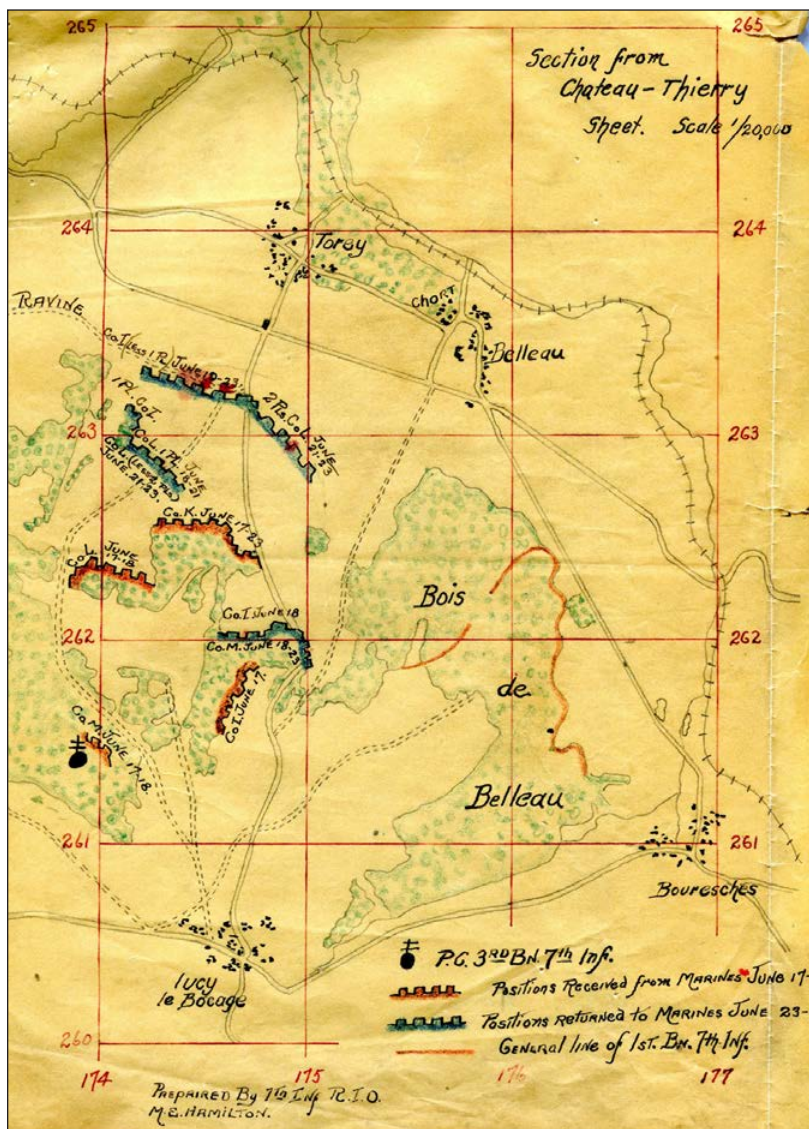
Belleau Woods, looking toward Belleau Torcy Hill 193 and the German lines, 1919. (Library of Congress Prints and Photographs Division)

began to replace the 7th Infantry's battalions throughout Belleau Wood. As the Marines returned, they found a ragged group of men who had held onto this piece of woods despite a fierce German resistance and complete lack of support from the 4th Brigade leadership. PVT Claude Romine, 82nd Company, 6th Regiment, later reported: "We went back to Belleau Wood and found the Seventh Infantry almost wiped out. They had no horses, no artillery, they didn't know where to go nor what to do, but they were still fighting the best they could."[18]

The Marines, rested, fed, and bolstered by new replacements, continued their attack into the northern section of the wood after relieving the 7th Infantry. As BG Bundy remarked after the war about the Marines: "This time they were favored with a terrific artillery preparation that searched with heavy shells every part of the wood still remaining in the enemy's hands, as well as the approaches from the north."[19] Perhaps the woods could have been taken if the 7th Infantry troops had been properly assisted by artillery and adequately supplied. This led to a great amount of animosity during and after their tour in Belleau Wood.

In his "Report of Action of First Battalion, 7th U.S. Infantry," LTC Adams revealed his frustrations with the 4th Brigade leadership stating:

The troops under my command were green men… They were under a terrific artillery fire, harassed by aeroplanes, and in direct observation. It was difficult to procure food and water, and the general conditions were such as to make the most experienced troops nervous.

Our line was thinly held — our supports were nil, and our ability to hold our line, should it be attacked in force, doubtful. Laboring under these handicaps, the attack was made, as ordered, and was a failure. Two days later another attack was ordered, with the promise of heavy artillery preparation. The battalion made the attempt, but the absolute lack of the promised artillery preparation
made the attempt abortive and caused heavy casualties without any military result.[20]

Without any supplies being transported to 7th Infantry Soldiers, they could not maintain an efficient state of combat readiness. Likewise, without any artillery support, their attacks were doomed to fail.

To the men of the 7th Infantry, this became a point of extreme contention. CPT P.J. Hurley, commanding officer of 2nd Battalion, 7th Infantry, wrote in his "Report on Occupation of Sector in Bois de Belleau" that the logistics between the 5th Regiment and 7th Infantry were nonexistent during their time in Belleau Wood. When he sent men to secure food for his battalion, CPT George K. Schuler, regimental adjutant for the 5th Regiment, directed them to kitchens about "500 yards west of the 4th Brigade HQ." The next night, his men were sent "some four kilometers from our P.C." but wandered in the dark for several hours "without being able to locate anyone in authority." Eventually, they were told that the supplies had been sent back to Lucy le Bocage several hours before. Even after finally finding the kitchens, they were only able to secure "some canned beef and forty loaves of bread." On top of the lack of food, no supply or ammunition dumps had been set up for the 7th Infantry.[21] These conditions continued through their entire time in Belleau Wood. Fortunately, "frequent showers aided matters as the men would catch rain in their shelter halves for drinking. This condition of affairs caused the condition of the men to become weak."[22]

The Army and Marine Corps leadership of the 4th Brigade failed to provide adequate support to 7th Infantry Soldiers during their entire time on the frontlines. This included a lack of coordination with the 2nd Field Artillery Brigade. Instead, they were continuously ordered to attack heavily fortified positions without the protection or assistance of artillery, leading to many casualties. CPT I.R. Williams of Company C, 7th Infantry, reported his concerns and feelings about the 7th Infantry leaving Belleau Woods:

To me who lost 24 out of the 47 men I took in that place, it is a sore point. We failed to take the hill, but we did not lose any ground. With a proper artillery preparation and a carefully planned attack, instead of an attack planned and executed in the darkness, the 250 casualties of the 1st Bn., 7th Infantry would not have been in vain.[23]

The lack of adequate leadership cost the 7th Infantry dearly. However, they suffered another insult to their service as American newspapers began to publish articles about Belleau Wood describing how the Marines had captured not only Belleau Wood but also the city of Château-Thierry on their own.

During the war, press correspondents could not identify any unit by name nor strength of numbers. They could not announce how many or which divisions were fighting in a particular sector or even say whether the Americans functioned as a separate division or if brigaded with the French. The only identifier they could publish was "American troops." They could, however, mention specifics to units such as "artillery, the medical corps, the engineers, or any other branch of the service." So, the correspondents, eager to give their stories some character, asked General Headquarters AEF: "Why not regard the Marines as a branch of the service and let us mention them in a general way?" Someone in charge of censorship at Chaumont, home of AEF General Headquarters, gave the go ahead. This censor's hasty decision resulted in the creation of the Marine Corps as the greatest fighting force within the AEF, at least to those reading the newspapers.[24]

The correspondents, eager to supply the latest stories from the front to the insatiable public in the states, quickly published articles about the Marines and their exploits in the Château-Thierry sector. This decision angered GEN John J. Pershing, commander of AEF, so much that he "immediately and personally relieved the officer responsible." Unfortunately, it was too late. "The damage had been done. The reputation had been made. The ball had started to roll. It never stopped. It never will." The Marine Corps filled all newspapers "just as a spoonful of ink will color a glass of water."[25] Their reputation had been made. They now received single credit for the capture of Belleau Wood and Château-Thierry, thus both the 3rd Division and the 3rd Brigade, 2nd Division were not acknowledged for their roles.

The first stories of the fight around Belleau Wood poured through the wires from France and were filled with the enthusiasm and pride as American troops pushed back the German army. The Marine Corps became a household name throughout the United States. Everyone read stories of the Marines and their valiant struggle against the German forces in the dark woods while the Army sat by and watched. Newspapers around the country ran articles with headlines such as "Marines Crush Prussian Line" and "Marines Use Up Three German Divisions in Week and Still Looking for More to Conquer."[26] Fortunately, despite newspaper headlines to the contrary, it was easy to correct the misinformation that the Marines captured Château-Thierry since the 3rd Division was the only American unit to fight in the city proper. Though, it would provide a source of annoyance for 3rd Division veterans until after the war. As SGT Alexander H. Woollcott, one of the creators and editors for the *Stars and Stripes*, remarked, "though the Marines did do the biggest job done in that area at that time, there were others. But you wouldn't have guessed it from the papers."[27] Dislodging the Marines' complete hold over Belleau Wood would prove much more difficult because they not only had the news coverage, but they had a correspondent hero to champion their story.

War correspondent Floyd Phillips Gibbons of the *Chicago Tribune* wanted to cover the American push at Belleau Wood. War correspondents on the frontlines needed to be escorted by an officer. On 6 June, Gibbons was with two Marine Corps officers — 1Lt Arthur Edmund Hartzell and Maj Benjamin Berry, commander of 3rd Battalion, 5th Regiment — as the Marines advanced on the first day of their push into Belleau Wood. While watching the drive, the Germans turned their machine guns on the detachment of men, wounding Gibbons in the process.[28] Though injured in the arm and losing his left eye, Gibbons survived

German machine gunners retreat from Belleau Woods, June 1918. (Joel T. Boone Papers, Library of Congress)

the ordeal and quickly sent dispatches back to the states. Newspapers around the country ran articles about this brave correspondent that endured the vicious fighting for his story. He became the topic of many articles such as "Floyd P. Gibbons Injured at Front by Foe Bullets."[29] An article titled "Plucky Floyd Gibbons Forgets His Wounds to Praise Marines," praised Gibbons and his enthusiasm for the Marines, stating, "those Marines are wonderful. Nothing could stop them."[30] His own article claimed that "in this fighting and struggle of the last three days, much credit redounds to the United States Marines who have been steadily in the first line."[31] While already prolific, the Marines now had a famous face to promote their feats.

Understandably, the misunderstanding in the press did not sit well with the veterans of the 7th Infantry who sacrificed so much in Belleau Wood. They attempted to straighten the record through official reports, letters, and news articles, but the legends persisted.

MAJ Paul C. Paschal, regimental staff officer for the 30th Infantry, 3rd Division, wrote home that "it was the 3d Division that stopped the German drive at Château-Thierry and not the Marines as some papers said. The Marines did the fighting in the Belleau Wood, but we sent the 7th Infantry up to help them."[32]

The Watch on the Rhine, a paper published by and for the Soldiers of the 3rd Division while on occupation duty in Andernach, Germany, contained a poignant statement as to the intentions of these veterans who spoke up about the truth:

The purpose of exposing the falsity of these stories that have recurred so frequently in the magazines and newspapers is certainly not to discredit the work of the Marines, for we know that they fought well. But it is important that this entanglement be straightened out before historians gather up these untrue, exaggerated, and often ludicrous records, and use them as a basis for a history of the part America played in the great war.[33]

Unfortunately, this is exactly what happened.

Today, Belleau Wood stands as a visible example of America's, in particular the Marine Corps', sacrifice in World War I. The battle could not have been won without the joint effort of the Army, Marine Corps, and Navy.

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[6] Frederic Vinton Hemenway, *History of the Third Division United States Army in the World War for the Period December 1, 1917 To January 1, 1919*. (Andernach-on-the-Rhine, Cologne: M. Dumont Schauberg, 1919), 89.

[7] CPT I.R. Williams, "Report on Operations of 1st Platoon, Co. C, 7th Infantry in Belleau Woods, June 15-21, 1918," provided to the author from the personal collection of Steven C. Girard, originally found in RG 120, NARA.

[8] Hemenway, *History of the Third Division United States Army*, 89.

[9] "Dazed by his Wounds Walked into Hun Line," *The York Dispatch* (York, PA, 20 March 1919): 8.

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[11] Ibid.

[12] Hemenway, *History of the Third Division United States Army*, 90.

[13] 1LT Carl C. Helm, "Report of Operations," 24 June 1918, 2, provided to the author from the personal collection of Steven C. Girard, originally found in RG 120, NARA.

[14] "Tub Flannery Tells of Hun Treachery and U.S. Valor of the Marne," *Salt Lake Tribune* (27 October 1918): 25.

[15] Harbord, "Supplementary to Report of 1 p.m. Today," 91.

[16] Hemenway, *History of the Third Division United States Army*, 91.

[17] "Frank Dallas, Wounded at Belleau Wood Fight, First to Return Home," *The Daily New Era* (Lancaster, PA, 24 September 1918): 12.

[18] "Graphic Story Told by Leflore County Hero," *The Daily Commonwealth* (Greenwood, MS, 9 April 1919): 5.

[19] Omar Bundy, "Gen. Bundy's Own Story of the Battle That Turned the Tide for the Allies," *Wisconsin State Journal* (22 February 1919): 4.

[20] LTC Frank H. Adams, "Report of Action of First Battalion, 7th U.S. Infantry in Belleau Woods," 21 June 1919, 1, provided to the author from the personal collection of Steven C. Girard, originally found in RG 120, NARA.

[21] P.J. Hurley, "Report on Occupation of Sector in Bois de Belleau," 24 June 1918, 1, provided to the author from the personal collection of Steven C. Girard, originally found in RG 120, NARA.

[22] I.R. William, "Report on Operations of 1st Platoon, Co. 'C,' 7th Infantry in Belleau Woods, June 15-21, 1918," 1, provided to the author from the personal collection of Steven C. Girard, originally found in RG 120, NARA.

[23] Ibid.

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[25] Ibid.

[26] "Marines Use Up Three German Divisions in Week and Still Looking for More to Conquer," *Los Angeles Times* (8 June 1918): 2; "Marines Crush the Prussian Line," *The Boston Globe* (8 June 1918): 2.

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[28] Kevin C. Seldon, *Among the Ranks of the Carrion Men, Volume II: The Epic Story of the Thirty-Six-Day Fight in and Around Belleau Wood*, (Self-published, 2019), 230-232.

[29] "Floyd P. Gibbons Injured at Front by Foe Bullets," *San Francisco Chronicle* (8 June 1918): 3.

[30] "Plucky Floyd Gibbons Forgets His Wounds to Praise Marines," *Pittsburgh Daily Post* (10 June 1918): 2.

[31] Floyd P. Gibbons, "American Troops on the Marne," *Pittsburgh Daily Post* (8 June 1918): 4.

[32] "Says Third Division Halted Germans at Chateau Thierry," *Evening Star* (Washington, D.C., 2 February 1919): 11.

[33] "Doughboys, Not Marines Stopped Huns at Thierry," *Honolulu Advertiser* (26 May 1919): 2.

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'Lick 'Em Tomorrow, Though:'
Grant's Use of Mission Command Principles at the Battle of Shiloh

CPT ANDREW WILHELM

Military commanders operating in complex and ever-changing environments cannot rely solely on their tactical or operational proficiency to achieve mission success. Commanders must also be able to communicate their intent to ensure shared understanding and empower subordinate leaders to develop and execute a plan appropriate to the situation. This concept forms the basis of the U.S. Army's modern mission command doctrine and the seven principles of mission command as outlined in Army Doctrine Publication (ADP) 6-0, *Mission Command: Command and Control of Army Forces*. A commander's ability to execute these seven principles often has a direct relationship with success on the battlefield.

The 1862 Battle of Shiloh demonstrates this relationship between a commander's successful use of the mission command principles and victory on the battlefield. Union General Ulysses S. Grant's effective use of mission command principles, specifically risk acceptance, shared understanding, commander's intent, and mutual trust, significantly contributed to the Union Army's successful counterattack and eventual victory over Confederate forces at Shiloh.

Background

When the American Civil War broke out in 1861, President Lincoln and the War Department developed a plan to defeat the rebelling states by choking off their military and economic resources through blockades.[1] Key to this plan was gaining control of the Mississippi River, a significant avenue for the movement of Confederate soldiers and commerce. Tasked by their higher headquarters, Grant and the Army of Tennessee were responsible for capturing strategic locations along the river.[2] Grant's previous victories at the Battles of Fort Henry and Fort Donelson resulted in the southward retreat of

Confederate General Albert Sidney Johnston and his army into northern Mississippi.

Anticipating the capture of Corinth, MS, as Grant's next objective, Johnston developed a plan to attack the Union forces at Pittsburgh Landing (Shiloh) before Grant's army could reach the city.[3] Johnston initiated his attack on 6 April 1862, targeting the southernmost part of the Union lines. Surprised by the attack, the Union defenders were unprepared. Johnston's army succeeded in bending Grant's line and inflicting heavy losses. Union General Lew Wallace and his regiment ruined Grant's attempt to counterattack when Wallace marched his forces to the wrong position, realized he was behind Confederate lines, and instead of attacking, returned to Grant's headquarters.[4] That afternoon, a stray bullet killed Johnston, and the command of Confederate forces passed to General Pierre G.T. Beauregard. Beauregard, believing his army victorious, ordered a halt to the attack.[5]

Map 1 — Shiloh Campaign – End of Day, 6 April 1862[6]
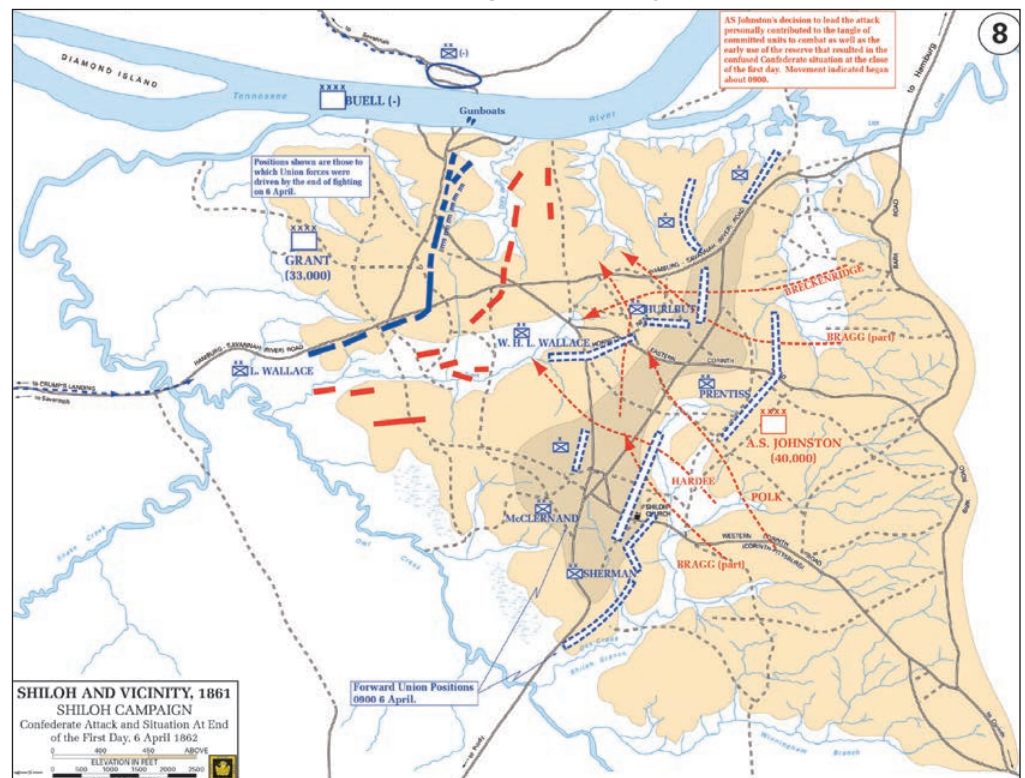
Grant used this halt and the hours of darkness to great advantage, developing and communicating a plan for a counterattack to turn the battle's tide. The goal was to surprise the Confederate forces with a frontal attack supplemented by reinforcements from General Don Carlos Buell's Army of the Ohio.[7] At 0600 on 7 April, Grant's forces launched their counterattack, successfully pushing Beauregard and his forces back past their previous day's gains. The next morning, under cover of a cavalry attack, rebel forces withdrew from Shiloh and provided a path for Grant's army to seize Corinth, Vicksburg, and ultimately the Mississippi River.[8]

Risk Acceptance

Risk, "exposure of someone or something valued to danger, harm, or loss," is inherent and unavoidable in combat.[9] Successful commanders understand that being overly cautious can be detrimental to mission accomplishment. Instead, commanders must analyze the anticipated cost to the force, weigh that cost against the importance of achieving their objective, and accept a level of risk that will allow them to achieve their objective.[10] During the Battle of Shiloh, Grant successfully executed the mission command principle of risk acceptance when he launched a counterattack despite the risk of additional losses to his depleted force.

Grant's army suffered unprecedented casualties on the first day of the battle. Of Grant's original 30,000 Soldiers, more than 7,000 perished during the day's fighting.[11] Facing the possibility of even more significant losses, Grant's peers, staff, and subordinate commanders counseled him to withdraw east. However, "even with dead bodies heaped up around him," Grant knew that failure to capture Corinth would mean continued use of the Mississippi River by the Confederates, which would prolong the war and harm the larger strategic objective.[12] Instead, Grant calculated that between his 15,000 available survivors and the additional 25,000 fresh troops arriving with General Buell's Army of the Ohio, he would be able to "dwarf the 25,000 able-bodied troops fielded by Beauregard."[13] Additionally, Grant deduced from his previous experience that "when both sides seem defeated in battle, the first to assume the offensive would surely win," and it was "always a great advantage to be the attacking party."[14] The influx of fresh troops and seizure of the initiative were enough to make Grant's risk of additional losses posed by the counterattack acceptable.

By identifying the risks, addressing the hazards, and accepting the residual risk to achieve the strategic objective, Grant changed the battle's outcome. Had Grant capitulated to those counseling him not to assume the risk of a counterattack, Union forces would have withdrawn from northern Mississippi, and President Lincoln would likely have relieved him of command. Instead, Grant's skilled use of risk acceptance reversed Confederate gains and opened a corridor leading to future victories.

Shared Understanding

Successful commanders communicate concepts and plans in a way that creates a "shared understanding of an

> **By identifying the risks, addressing the hazards, and accepting the residual risk to achieve the strategic objective, Grant changed the battle's outcome... Grant's skilled use of risk acceptance reversed Confederate gains and opened a corridor leading to future victories.**

operational environment, an operation's purpose, problems, and approaches to solving problems" among all echelons of their command.[15] Investing the time to ensure information flows to the lowest possible level "forms the basis for unity of effort" and provides insight into the commander's expectations.[16] Commanders can develop shared understanding by demonstrating a demeanor that reinforces their spoken message or using common perceptions of military problems such as previous engagements.[17] Following the setbacks of the first day of fighting, Grant effectively used the principle of shared understanding to communicate his plan of attack to all his subordinate commanders and prevent a recurrence of Wallace's failure to engage.

On the night of 6 April, all three of Grant's divisions "were more or less shattered and depleted in numbers from the terrible battle of the day."[18] After accepting the risk associated with a counterattack and developing his plan, Grant left his headquarters to "visit each division commander in person" and communicate the concept of the operation to them.[19] Using the "story of the assault at Fort Donelson" as a frame of reference, Grant ordered his commanders to "throw out heavy lines of skirmishers in the morning as soon as they could see, and push them forward until they found the enemy, follow with their entire divisions in supporting distance, and to engage the enemy as soon as found."[20] General William Sherman, one of the division commanders Grant met with that night, would later comment that Grant retained his "equanimity and unwavering faith in victory."[21] When Sherman observed that their forces had "had the devil's own day," Grant calmly replied, "Yes, 'lick 'em tomorrow, though."[22]

Grant's decision to visit his commanders in the field laid the groundwork for the next day's victory. First, it allowed Grant to communicate his expectations directly to the individuals responsible for carrying them out and ensured that the confusion exhibited by Wallace that almost cost them the battle would not occur again. Second, it allowed Grant to compare his new plan to the example of the attack at Fort Donelson, an experience common to his entire army, to clarify the commanders' roles further. Finally, Grant's calm demeanor, rooted in his confidence, reinforced the soundness of his plan. Together, Grant's actions ensured a shared understanding among his subordinate commanders that would lead to the successful execution of the counterattack and victory over Beauregard's forces.
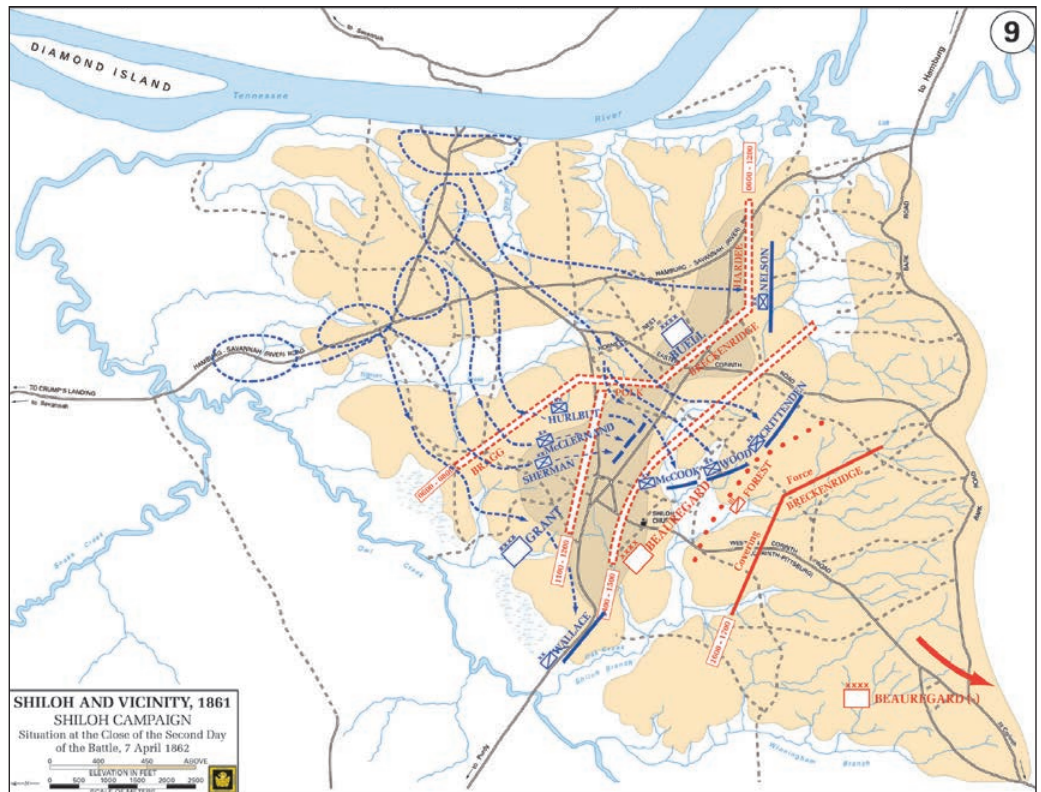
Commander's Intent

Mission command requires that subordinate leaders use their judgment to make decisions that further the purpose of the operation and achieve a specific end state. Commanders owe subordinate leaders a "clear and concise expression" of this purpose and end state.[23] Empowered by the intent provided by their commander, subordinate leaders can adapt and act decisively even when conditions around them change unexpectedly.[24] Grant excelled at not burdening his division commanders with detailed instructions and, in the hours before the second day of fighting, provided them with an intent that allowed them as much freedom of action as possible.[25]

Having expressed to his division commanders his intent that the Union forces surprise the Confederate forces at first light with a frontal attack and push them off the battlefield, Grant spent the hours before the operation inspecting the lines and issuing final guidance.[26] When Grant approached Wallace, whose indecisiveness on the first day nearly ended the battle, he studied the terrain and instructed Wallace to "[m]ove out that way, parallel to the river."[27] Wallace acknowledged the order and asked if "he was to take any special formation in the attack."[28] Despite ample reason to micromanage Wallace, Grant decided to "leave that to [Wallace's] discretion."[29] With Sherman, Grant's most capable division commander, Grant would later say "in perhaps his loftiest tribute," he "scarcely needed to give [Sherman] any advice."[30]

In an era where technology limited combat communication to runners, signal flags, and bugle calls, battlefield commanders had no efficient way to relay information or receive commands. Grant's decision to issue his broad intent and allow his division commanders to adapt to the circumstances unfolding was essential to maintaining pressure on the Confederate forces "in as many places as possible."[31] This pressure would ultimately convince Beauregard that he could not defeat Grant's force, resulting in his order to withdraw further south.

Mutual Trust

"Mutual trust is shared confidence between commanders, subordinates, and partners that they can be relied on and are competent in performing their assigned tasks."[32] Built over time and through shared experience, it must exist at all levels of the chain of command for any force to be successful.[33]

Map 2 — Shiloh Campaign – 7 April 1862

For example, commanders must trust that their subordinate leaders can execute their intent and make sound decisions. Likewise, individual Soldiers must trust that their leaders will take care of their welfare and see their leaders sharing in hardship and danger.[34] At Shiloh, the trust Grant cultivated among his peers, division commanders, and individual Soldiers was vital in achieving victory.

At Shiloh, trust permeated throughout the second day's engagement. Grant demonstrated trust in his subordinate commanders' tactical competence by giving them "a broad outline of his intent" and "freedom to be spontaneous."[35] Grant confirmed his trust in Buell, his adjacent commander, by "making a sound calculation" that Buell would arrive in time to provide the reinforcements needed to make his counterattack plan feasible.[36] Most significantly, in a war where "one in five soldiers on both sides would abandon their post," Grant's Soldiers proved their trust in him by willingly marching back into combat, an act made even after suffering losses that, in a single day, totaled more than the number of casualties in the U.S.'s three previous conflicts combined.[37-38] Grant further strengthened this trust when "at one point in the afternoon, he gathered two regiments, lined them up for battle, then personally led them forward."[39]

The trust Grant cultivated among his forces and the trust those forces placed in him significantly impacted the battle's outcome. Grant's ability to maintain his lines and rally them to victory, even in the face of overwhelming casualties, provided the mass needed to push back the Confederate forces. Had that trust not existed, the attack would likely have fallen apart

like engagements at the First Bull Run (1861). Instead, with Beauregard's forces defeated, the Union Army could continue its advance into the deep south.

Conclusion

The 1862 Battle of Shiloh demonstrates the relationship between a commander's successful use of the mission command principles and victory on the battlefield. General Grant's effective use of mission command principles, specifically risk acceptance, shared understanding, commander's intent, and mutual trust, significantly contributed to the Union Army's successful counterattack and eventual victory over Confederate forces at Shiloh.

Grant is a model of how the use of mission command principles directly correlates with success on the battlefield. Grant demonstrated risk acceptance by moving forward with a counterattack despite the previous day's overwhelming casualties because he knew his operation's strategic importance. Grant's mastery of shared understanding and clear commander's intent ensured his subordinate commanders understood the concept of their shared operation and what they must accomplish without limiting their ability to adapt to a complex and ever-changing situation. Finally, the mutual trust cultivated by Grant up and down the chain of command provided a foundation that held the force together. If General Grant had faltered in any of these principles, the result of the battle and the war could have been drastically different.

Notes

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[6] Maps courtesy of U.S. Military Academy Department of History.

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[14] Ibid.

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[20] Chernow, "A Glittering Lie."

[21] Ibid.

[22] Ibid.

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

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[25] Ibid.

[26] Chernow, "A Glittering Lie."

[27] Edward Cunningham, Gary D. Joiner, and Timothy B. Smith, *Shiloh and the Western Campaign of 1862* (NY: Savas Beatie, 2012).

[28] Ibid.

[29] Daniel, essay in *Shiloh*.

[30] Chernow, "A Glittering Lie."

[31] Ibid.

[32] ADP 6-0.

[33] Ibid.

[34] Ibid.

[35] Chernow, "A Glittering Lie."

[36] Ibid.

[37] Bowman, Fullenkamp, and Luvaas, "Union Counterattack," 187-204.

[38] Hess and Daniel, "Shiloh: The Battle That Changed the Civil War," 555.

[39] Chernow, "A Glittering Lie."

At the time this article was written, **CPT Andrew Wilhelm** was attending the Engineer Captain's Career Course at Fort Leonard Wood, MO. His previous assignments include serving as a platoon leader in the 530th Clearance Company, 92nd Engineer Battalion, Fort Stewart, GA; executive officer in Headquarters and Headquarters Company, 92nd Engineer Battalion; and engineer operations officer, Corps Engineer Section, XVIII Airborne Corps, Fort Bragg, NC. CPT Wilhelm is a graduate of the Sapper Leader Course, Airborne School, and Air Assault School He earned a bachelor's degree in public policy studies and political science from St. Mary's College of Maryland.

Reflections of a Just Cause

LTC (RETIRED) BRIAN D. BARHAM

Author's Note: *These are my personal reflections that I have not previously been shared with anyone. This is what I remember, the way I remember it. At the time I was called on to participate in Operation Just Cause, I was an Infantry captain with about eight years of experience in the Army. I had previously served in the 82nd Airborne Division, 8th Infantry Division (Mechanized), and had been with the 3rd Ranger Battalion a little over a year. I did not feel like an inexperienced Soldier; previous experience with the 82nd Airborne in the Sinai Desert and Operation Urgent Fury stood me in good stead. Experience commanding two companies in Germany provided me with plenty chances to grow. As the S3 Air with the 3rd Ranger Battalion, I understood my responsibilities, and I was not the exception. The battalion was made up of Rangers who had all the right experience, attitude, and confidence in each other.*

The first time my phone rang on 17 December 1989, it was just a routine telephonic practice alert. I passed the message to continue the chain. The next time the phone rang, the alert was not routine. My wife (Christie) and I were just getting ready for bed. The activity of the previous few days though caused me to have some uneasy feelings about this particular alert. I relayed the call and got ready to go into work.

Earlier in the day, my family and I attended the battalion's annual children's Christmas party. While there, I heard the battalion executive officer, MAJ Danny McKnight, say that an officer had been killed in Panama. U.S. Marine Corps 1stLt Robert Paz had been killed by some of General Manuel Noriega's soldiers. I was sad for 1stLt Paz's family. Heartache and holidays are a difficult combination. MAJ McKnight wasn't sure if we were going to "do anything" about Paz's murder or not. I thought that if we were the parents of 1stLt Paz, or if he could somehow make his own thoughts known to us, they would certainly want the U.S. government to "do something." It occurred to me that we were going to do something, and we'd better do a good job.

Christie and I had been dating when I got called out to Grenada for Operation Urgent Fury. As I was getting ready to leave the house, I thought about what I should say to her this time. When I left to go to Grenada, I woke her up with a long-distance phone call. This time, we'd been married over five years, had a 2-year-old daughter, and were expecting news about adopting a son at any time. I told Christie that I thought this alert was for real. She didn't reply at first. I told her to watch the news and that if we were deployed, the unit's rear detachment and the wives' chain of concern would contact her. Before I left, she said, "You guys kick a--!" It helps being married to a woman who understands me.

The drive into work seemed long. When I got there, the commanders and staff were assembling for a quick briefing. The word was that we were going to jump into combat at Rio Hato, Panama. Rio Hato was a large airfield and training area that housed several Panama Defense Force (PDF) units. The chief concerns were the 6th and 7th Infantry companies. These companies possessed mortars, small and heavy machine guns, recoilless rifles, antiarmor weapons, RPG-7 grenade launchers, and small arms. The airfield was defended by three ZPU-4 air defense guns. There was also an NCO academy, an ammunition storage facility, a motor pool with motorcycles and armored vehicles (V300 and V150s), and guards for the airport gates. Noriega maintained a beach house at Rio Hato, and there were also some Panamanian special forces elements that sometimes trained at Rio Hato. It was imperative that we catch them by surprise and overwhelm them before they could organize a coherent defense. We were to jump in the middle of all this at 0100 the morning of 20 December from 13 C-130 aircraft. Rangers would clear the runway for the follow-on equipment and fight in all directions at the same time. I marveled at the calm professionalism with which we dispatched our duties. All the alerts, rehearsals, training, missions, and real-world planning were paying off. We knew what to do and how to act. We were professionals.

I spent two days ensuring my responsibilities were met. As an assistant operations officer, with particular responsibility for air movement, I had a lot of coordinating to accomplish prior to take-off. As an air officer, getting this mission off to a good start was a challenge for several reasons. We had aircraft arriving from numerous locations. Not only was most of our battalion departing from Fort Benning's Lawson Army Airfield, but the entire 2nd Ranger Battalion and some of the regimental headquarters were leaving at the same time. Fortunately, the Air Force air planners were top notch. Also, the regimental S3 Air, my counterpart, was a solid guy. I had outloaded the 3rd Ranger Battalion from Lawson Airfield several times already. These guys knew their business, but I felt I was listened to and consulted because the others realized that I had some practical experience of doing this type of mission.

I also had an outstanding NCO as the Air NCO. He was everything a great NCO should be. When the chance for us to be jump-safeties came up, I didn't submit his name right away. I thought he might want to air-land. I wanted to make sure he was in the right frame of mind to jump. He was — the fact that I even had to ask made him angry. I should have known better. In Grenada as a specialist, he had been an M60 machine gunner with the 82nd Airborne. He had been awarded a medal for valor for attacking through enemy fire to save his lieutenant and some buddies who were pinned

down. At Rio Hato, he would be instrumental in assisting B Company after they took some horrible casualties.

I approached the HHC commander. At Rio Hato, he would be responsible for securing and safeguarding the prisoners at the battalion collection site. Now, I needed him to select my NCO and me as jump safeties. I told him that we wanted to jump and were good choices for this position. He knew how I felt about jumping. He looked up and smiled, "Okay."

The fact that this mission had previously been rehearsed cannot be overlooked. We were redoing the same activities that we had done just a few days prior as part of an exercise designated to simulate this exact mission.

Once the battalion was airborne, most of my responsibilities were accomplished. I did my part to plan this airborne operation. Jumpmasters were selected and briefed, manifests were accurately prepared, and bump plans (in case an aircraft becomes nonoperational on the ground) were developed to ensure we would have the right mix of people on the objective. The Air Force members of the operation were clued in on what the Rangers thought was important.

At the final air mission brief, the regimental S3 got up to speak. The brief was held in a large classroom in Building 4. There had been some chatter and the usual cutting up as we gathered, but we were all quiet now. Talking to the pilots, he said, "Men, you and your aircraft are going to get shot at over the target area, and you are going to hold it steady. Your aircraft might get hit. The plane in front of you might get blown out of the sky, and you will hold your plane steady and close up the gap. There will be no evasive flying after we are over the target area. You will hold your craft steady, and the Rangers will get out to do their mission on the ground. I congratulate you ahead of time for the outstanding job you are about to do."

Once again, I marveled at our professionalism. I did not get much sleep prior to take-off, but I felt we were ready as we were going to be. The only thing more time would have allowed for is second guessing… and maybe a nice nap.

Finally, we were loading up. Rangers were breaking down ammunition and adding it to rucksacks that were already overloaded. I carried seven magazines of M16A2 ammunition. Six magazines went into my ammo pouches on my LBE (load-bearing equipment). I taped one magazine to the sling of my rifle. As soon as I landed, I would insert the magazine
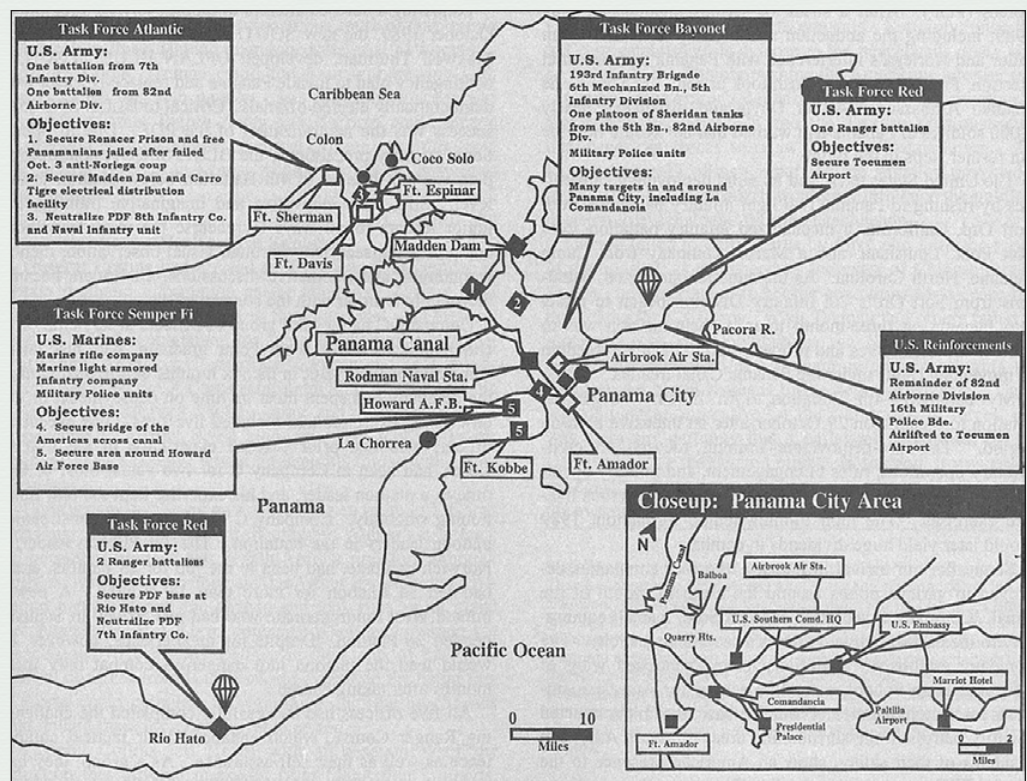
Map 1 — Operation Just Cause H-Hour Targets

from the sling into the magazine well. I grabbed some smoke grenades and a pin flare set. (I thought I might have to use these to signal aircraft from the ground.) I taped some fragmentation grenades down on my LBE and put a lightweight anti-armor weapon (LAW) sideways through my rucksack flap. I also carried weapon cleaning equipment, a poncho and poncho liner, extra t-shirt and socks, personal hygiene items (power, toothpaste and toothbrush, shaving cream, and razor), a towel, insect repellent, camouflage sticks, a small sewing kit, one copy of our battalion's finalized manifest, some paper, carbon paper, casualty collection cards, several plastic handcuffs (flexcuffs), a radio, and a New Testament Bible. Attached to my rucksack was a two-quart canteen and a folding E-tool. On my LBE, I had my ammo pouches, two 1-quart canteens, a compass, a medical bandage, flashlight, signal strobe light, radio, and bayonet. Maps, charts, and other accessories were in my pants' cargo pockets. I wore my dog tags and carried my ID card in my top right shirt pocket. I could only think of one other thing I wanted to carry — a night-vision device. However, they had all been issued while I was coordinating our departure. I was not that concerned. My night vision was average, but I did not expect to be the guy having to do much shooting. My load was considerably lighter than the average Ranger's. They carried heavier radios, batteries, more ammunition, and squad equipment.

Just before we went through our pre-jump procedures, we assembled for a mission "speech" from our regimental commander. It was cold; I did not wear any cold weather gear because I knew that I would soon be in more than 90-degree heat. Some Rangers draped blankets that had been provided for us over their shoulders; others just shivered. This was a

grand assembly of Soldiers. I cannot describe the feeling I got standing among these men. We were going to war; everyone of us knew it. We had planned and rehearsed our mission. We prepared in earnest; it seemed that all that remained was to do it. Together we felt confident. I remember the regimental commander, COL Buck Kernan, saying that some people study history — others participate in it. The Rangers were about to make history. Only Soldiers who are about to undertake an extraordinary mission can feel like that. It is not a pep rally or an athletic preparation ritual. It is the professional confidence of Soldiers united in anticipation of accomplishing their objective. It is an awesome, almost frightening feeling. But this aspect of America's fighting force is what sets us apart as the best. We truly fight for freedom. And we know — the way only Soldiers know — freedom isn't free.

The chaplain got us together for a very short service on the airfield. I was glad I knew him. He was my friend as well as my chaplain. He spoke to us from Ephesians 6. While I was in Grenada, Christie had sent me an excerpt from the same chapter. Most of us were concerned that we had to take care of Soldiers' lives; the chaplain was concerned for our souls. We looked into each other's eyes knowing we may never see each other again. He said, "Brian!" Quick seconds passed, "God bless you," we said at the same time. There was not time for anything else. As I moved back to my aircraft, I struggled to control my emotions.

My duties on the aircraft were those of the jump safety. I would be busy and was glad. I was on the last C-130 aircraft that would drop jumpers onto Rio Hato drop zone. There were also several aircraft that would air-land as soon as the runway was secure enough to get the planes in. These planes would bring more Rangers with jeeps and motorcycles to provide additional firepower, mobility, communications equipment, and a small resupply. As the battalion's S3 Air, I wanted to be one of the last aircraft that was to take off to ensure that we were properly loaded. However, I wanted to be sure to be on one of the jump aircraft — instead of the air-land aircraft. I did not think that I would inspire confidence in jumpers if they knew that their battalion S3 Air was not going to jump. At the same time, I had misgivings on being on lucky #13, but not because of its number. Being in the last aircraft over the drop zone would allow time for the enemy's air defense weapons (ZSU-4s) to react and pick our aircraft out as a target. Plus, the gunners could have used the first 12 as target practice before perfecting their skills on #13. As it turned out, every single aircraft was hit while flying over Rio Hato.

While on the aircraft, we had a seven-hour flight. I was already exhausted, and we were packed in like sardines. The Rangers already had their parachutes on, and their rucksacks were stashed close by. After I loaded my side of the aircraft, I tried to get some sleep.

Our pilot was a lieutenant colonel; he was friendly and professional at the same time. He came back to talk to us a couple of times. I had the feeling he really wanted to know us and that he cared. His crew passed out candy bars to the Rangers. I ate one; I wanted the energy it would give me. I felt good about this man at the controls. Two hours out, I woke up all the Rangers; it was time to get rigged to jump.

I prayed. I prayed that the pilots would hold steady while being fired at. I prayed that the Rangers would react with courage and aggressively pursue their missions. Mostly, I prayed for my family…

We erected the seats and I attached the Rangers' rucksacks, weapons containers, and made sure they fit properly in their parachute harness. It was really crowded. I was walking and stepping on some of the jumpers to get the job done, but there were no complaints… no chatter. I did my chore quickly, but I did not want to man-handle the jumpers. They all thanked me, and I heard some say, "See you on the objective." Some of the rucksacks were heavy, and I was concerned that some of the heavy-laden Rangers may have trouble getting out of the jump door. I need not have worried; these guys rushed out the door like scalded apes.

While I was rigging the jumpers, we got word that the mission had been compromised. Noriega's forces had been tipped off somehow. We didn't know if the units at Rio Hato were alerted or not, but this was not good news. The mission was still a go. I swallowed hard and looked into the eyes of the Ranger I was rigging. Everyone around me looked concerned. I said, "Well Rangers, what did you expect? This party is going to be one with plenty of rock and roll. And we get to choose the music!" Several of the Soldiers gave an enthusiastic "Hooah!" I paused and then continued, "These poor -------s are not going to know what hit them. We are the best in the world. There is no way they could ever get ready for us — no matter how much notice they got." I thought of what Chris said to me: "Hey, kick a--, Rangers!" That got them fired up.

Thirty minutes out, we stood together and recited the Ranger Creed. I listened to the words as I recited the creed from memory — from the heart. It occurred to me that Soldiers in other units did not have a creed to bind them together. We were fortunate. We had the spirit of our unit forged into words, and there was iron in those words. I led the entire aircraft in the forth stanza. I knew that this was a moment I would never forget:

Recognizing that I volunteered as a Ranger, fully knowing the hazards of my chosen profession, I will always endeavor to uphold the prestige, honor, and high esprit de corps of the Rangers.

Acknowledging the fact that a Ranger is a more elite Soldier who arrives at the cutting edge of battle by land, sea, or air, I accept the fact that as a Ranger my country expects me to move further, faster and fight harder than any other Soldier.

Never shall I fail my comrades. I will always keep myself mentally alert, physically strong and morally straight and I will shoulder more than my share of the task whatever it may be, 100 percent and then some.

Gallantly will I show the world that I am a specially

selected and well-trained Soldier. My courtesy to superior officers, neatness of dress and care of equipment shall set the example for others to follow.

Energetically will I meet the enemies of my country. I shall defeat them on the field of battle for I am better trained and will fight with all my might. Surrender is not a Ranger word. I will never leave a fallen comrade to fall into the hands of the enemy and under no circumstances will I ever embarrass my country.

Readily will I display the intestinal fortitude required to fight on to the Ranger objective and complete the mission though I be the lone survivor.

Rangers lead the way!

We went through the jump commands. I could hear someone saying the Lord's Prayer. The Rangers prepared themselves to jump. Jump into combat… jump into history… and for some, jump into the hereafter.

The aircraft jump doors came open, and a rush of warm air blew in. I slammed the platform and did a quick door check. I thrust my body outside the aircraft while hanging on with my hands to the inside of the door frame and looked toward the objective. We were approaching over water and were to jump at 500 feet. That is low for a jump, but the fewer seconds in the air the better. I was struck by the contrast; the peacefulness that appeared below would be enveloped in the chaos of a combat assault in three minutes. I could make out the shadows of the coast ahead. We headed toward our objective.

The pilots did an amazing job holding their course steady while taking fire. Their steady nerves allowed the Rangers to jump properly. On aircraft #10, we had a Ranger get shot while still inside the aircraft. A round came right through the belly of the plane and struck one of our NCOs in the chest underneath his flack vest as he was walking to exit the jump door.

I turned the jump door over to the primary jumpmaster. He assumed the first jumper's position in the door, and I gave him the nod. He would be the first jumper to exit our aircraft over the objective. I would be the last to exit from this side of the aircraft. The jump safety of the other door would be the last to exit from his side. It was okay with me if I got out before he did. My rucksack seemed incredibly heavy. Finally, we were over land; I could see the land race past. The jumpmaster in the door jumped.

I grabbed the static lines as the jumpers came toward the door to control their exit and interval. The Rangers were one behind the other pushing toward the door. I could see tracer rounds being fired up at us. I could see the faces of the Rangers as they approached the door. I could see what they were jumping into and I knew they couldn't not see it. I wanted to tell them something, but there was not time. I heard a loud crack above me in the roof of the plane (perhaps an enemy round?). I shouted, "Ground fire! Keep moving! Ground fire!" Their eyes got bigger. I wasn't sure if they understood me or not, but they seemed to move even faster. Finally, all the jumpers were out, and I leapt out of the door.

Map 2 — Rio Hato Airfield, 20 December 1989 (*The U.S. Military Intervention in Panama* by Lawrence A. Yates)

My parachute quickly inflated. Tracer rounds were still shooting up at the aircraft. I checked my chute to ensure it was properly inflated. I made sure that I was not going to run into any other jumpers. I lowered my rucksack to dangle beneath me, and I think this is when a round went through my rucksack. I tried to get oriented as to where I was over the objective. I made a mental note of the direction the aircraft were flying, and this gave me my cardinal directions. I'm sure that the ground came up fast, but I would have been happy to land sooner. It was dark.

I hit hard. My weapon jammed into my tricep so hard that at first I thought I'd broken my arm. Before I could get my M16A2 into action using my good arm, a man came running up to me. I jammed a magazine home and chambered a round. As I brought my weapon up to put the main in my sights, he was about 10 steps away. Over his shoulder, I saw a woman, and a small child was standing next to her. The man nearly fell down. I lowered my weapon; I'm sure that he wanted me to protect his family. I could not think of a word of Spanish. I pointed at the trees behind the small huts on this end of

the airfield (the direction that would take them away from the fighting). I yelled, "Go! Run!" He spun around, grabbed the child under one arm and the woman with the other. A few days later, it occurred to me that if I had not injured my tricep, I would have killed a man in front of his wife and child.

I got out of my parachute and strapped on the rest of my gear. Several other Rangers quickly seemed to find me. We all repeated our running password — "Bulldog." I must have heard that word a thousand times before the night was over. We teamed up, and I directed our movement south down the edge of the airstrip where I knew that we would eventually reach our various link-up points. Eventually, I had 17 Rangers moving with me. I had a machine-gun team, a medic, and several Rangers with night-vision goggles (NVGs). We moved together for security. I put the Rangers into two wedges and traveled in between the wedges with the M60 machine-gun team and the medic. We heard some shots in the distance. An AC-130 Spectre gunship was flying above ready to use its cannon or miniguns against hostile targets, and the AH-6 attack helicopters were buzzing around. In the distance, I could make out the shape of other Rangers hurrying to their link-up points.

A couple of PDF soldiers opened fire to our right; they were not shooting at us but at a couple of other Rangers. I hollered for a Ranger with NVGs to give them to me. They couldn't even rise to return fire. The muzzle blasts gave the PDF soldiers' positions away. I knew I had to do something, but I knew that it had to be the right thing. These men were Rangers, but we were all from different parts of the battalion and had not trained together. I had the Rangers get on line. The PDF soldiers were about 150 meters away. This was close enough; I did not want to waste time getting into a better position to shoot at the PDF. I also didn't want to shoot our own men; I wasn't sure how many of the Rangers had NVGs. I stood to a crouch and yelled loudly to the Rangers that there were other Rangers pinned down to our front. I would open fire on the enemy position, and then the M60 would open fire. All Rangers would be sure to keep their fire to the left of the M60 tracer rounds. I had loaded my magazines with a mix of rounds. The first round was a tracer, then three ball rounds followed by another tracer round. I repeated this process until I got to the last four rounds, which would all be tracer. I wanted this to remind me to prepare to load a fresh magazine. I opened fire, and then the M60 opened up right next to me. Then all of us were firing. I finished the magazine and jammed another one home. By this time, the PDF soldiers were no longer returning fire. I yelled for the Rangers to cease fire. I shouted to the Rangers that had been pinned down, "Rangers, are you okay?" I heard, "Yeah… thanks!" A few weeks later I learned that one of the Rangers that had been pinned down was a friend, the battalion communications officer.

The PDF soldiers were probably assigned to guard the ammunition storage area. They had deserted their post and tried to escape, but they didn't' get far. A couple of days later, I found the bodies of two PDF soldiers in the tall kunna grass. I helped put their remains into body bags, and then we sent the bodies to the collection site. I do not know if there were any more than these two, but I only recall seeing two muzzle flashes.

We continued to move to our link-up points. As we moved closer to the road that bisected the north/south runway, I could see a convoy of vehicles approaching. I remembered from our intelligence briefing that PDF units could be returning from field training along this route. It was possible that these vehicles were bringing a reaction force. I had us break into a run and quickly put the Rangers down in a linear ambush position. I told them that I would fire a LAW, and then the M60 would hit the lead vehicle. Everyone else would shoot at the trail vehicle until it stops, then rake the kill zone. I told them, "Do not assault through the kill zone!" I threw my ruck down on the ground and grabbed the LAW. This was when I first saw that my rucksack had been hit by a bullet; it was a good thing the round didn't hit the LAW. I was just about to extend the LAW to put it into action when the entire other side of the jungle opened up. I hugged the ground and screamed, "Hold your fire, Rangers! Hold your fire!" I figured that B Company was in position and did not need our help. I was afraid that if we started shooting that the Rangers from B Company would think that we were PDF soldiers that had dismounted the vehicles. The last thing I wanted was to be responsible for starting a confused, two-way firefight between Rangers. To their credit, not a single Ranger on my side of the road returned fire. That's discipline; that's amazing.

Two PDF soldiers jumped out of one of the trucks and ran right at me. I knew that I did not want to open fire at these men. I did not want to risk B Company returning my fire, and I was also afraid that one of the Rangers close to me might decide to shoot. I came up off the ground and smashed the butt of my M16A2 into one of the men's shoulder. He crumbled to the ground. The other man just fell; I think he fainted. The other Rangers quickly pounced on the men and handcuffed them with the plastic handcuffs each of us carried.

We made contact with the Rangers on the other side of the road. This was as far as I needed to take the little band of Rangers that were traveling with me. I made sure each of them knew where they were and sent them on their way. They all had missions to perform; this was just the beginning. Before I sent them on their way, I told them they had already done a great job and to keep up the good work. The Ranger who carried the M60 gave me the highest compliment that I'll ever receive as a Soldier. He said, "Sir, I'll jump into combat with you anytime. You're hooah!" The others echoed, "Hooah!" Then we parted, and they hurried away in small groups to do what they had come to do.

The officer in charge of the ambush on the other side of the road was the B Company executive officer (XO). He had known this was an important road block and moved here as quickly as he could. The blocking position had not been set when he got there so he took charge and rushed Rangers into an ambush position. As we linked up, he had his men searching the vehicles. One of the vehicles was a fuel truck, which was leaking. He told me that he was going to move the

the blocking position further up the road. I asked him where B Company prisoner of war collection point was. I told him I would take the prisoners there for him because I could see he was shorthanded, but I would need at least one other Ranger to travel with me. He told me to take the prisoners to the third cluster of trees between the runway and the taxi way. About this time, the support platoon leader (PL) showed up. He said that he had seen the ambush and chased a one-armed man into the jungle but could not find him. He was enormously frustrated. The Rangers that searched the vehicles reported that there were no other survivors. (Later, several showed up and just gave themselves up to the Rangers at the roadblock.) The B Company XO told one Ranger to travel with me to make sure there was someone with B Company to turn the prisoners over to. The support PL and I had to get to the same link-up point so he said he'd travel with me. We were just about to leave the area when a vehicle ran the roadblock on the opposite side of the runway. The Rangers on that side opened fire. Once again, I found myself hugging the earth. I yelled for the PL to get down. The prisoners fell into each other as they tried to get down. One of them screamed a couple of times in a high shrill voice. As soon as the shooting ended, the PL jumped up and said, "Let's go!" As he began to race off toward the vehicle, I told him to stop. The Rangers on the other side of the runway would come over to check out the vehicle. The last thing we needed to do was spook them by running at them in the darkness with our weapons at the ready.

We moved out with the prisoners, and one of them suddenly began to speak English. He told us that he was not really a soldier. He said he was from Puerto Rico and just there visiting friends. He'd like us to let him go so that he could go tell them the wonderful news that the Americans had come. I told him that I could not let him go and that he would not be harmed as long as he did exactly what we told him to do. I had him tell the other prisoner in Spanish that I was going to take them to a holding area where they would be safe.

I then checked in with the B Company commander. I told him that his blocking position had moved further up the road, that the fuel truck was leaking diesel, and that I had two prisoners for him and one of them spoke English. He had his medics guard the prisoners until the prisoner of war area was operational. I did not want to get in the way, and I could not see a way for me to help him so I left and sent the Ranger that traveled with us back to the roadblock. The support PL and I then headed to our link-up point. As we neared the site, we ran into CSM Mariano R.C. Leon-Guerrero, the regimental sergeant major, and COL Kernan. The CSM was making sure that his commander was protected. It was good to know that they were on the ground, controlling the battle. I was even more confident than before.

When we finally reached our link-up site. We made contact with a captain from the S4 section and moved into the kunna grass to set up radios. The support PL put his gear down and immediately went back to help B Company. He ended

Rangers stand at the entryway to Rio Hato airfield after capturing a machine gun. (Photo from The U.S. Military Intervention in Panama, CMH Pub 55-3-1*)*

up assisting in the round up of more EPWs. The S4 captain and I worked with the Air Force tactical control party to make sure the aircraft that landed ended up in the right place. We wanted the Rangers that were about to off load to know where they were and what the situation was like. While trying to taxi prior to take-off, one C-130 hit a tree limb and lost an engine. It was still able to take off; I guess the crew didn't want to stick around.

I monitored the radios until most of the fighting was finished. All my commitments for the initial mission were complete. As the Air Force tactical control party had the last C-130 take off, I headed back to the radio site. The sun was about to rise and I was exhausted. I decided to get some sleep; I knew there would be plenty to do when I woke up. As I settled down on the ground at the logistical site, it occurred to me that I should take some time to gather my thoughts. I knew that we had taken some casualties (four dead, 18 wounded, 26 serious jump injuries), but that we had done well. We also captured an incredible number of small arms weapons, armored cars, V300s and V150s, three ZSU-4 anti-aircraft guns, mortars, machine guns, and ammunition.

But, I knew that I was alive! I knew that the Rangers had "kicked a--!" I knew that I should be careful to remember what this moment felt like. There was nothing romantic about this moment, but there was a certain satisfaction. There was concern for the Rangers, our families, and the families of our enemies. Rangers are a special breed, but we still are just men. I knew that we were all a combination of past personal histories, aspirations, fears, hopes, dreads, and ambitions. And yet, we put personal concerns aside. We were a team. We were the best America had to offer, and we were good enough to get the job done right.

LTC (Retired) Brian D. Barham served as the S3 Air for the 3rd Battalion, 75th Ranger Regiment during Operation Just Cause. He also participated in Operation Urgent Fury in Grenada with the 82nd Airborne Division. His other assignments include serving as a company executive officer in the 82nd Airborne Division; company commander in the 1st Battalion, 13th Infantry in Germany and 3rd Battalion, 75th Ranger Regiment; small group instructor at the U.S. Army Infantry School's captains course; S3 for 1st Brigade, 8th Infantry Division; G3 at 4th Infantry Division; and chief of plans for both Kuwait and Kosovo joint task forces. He also served on the staff for the Chairman of the Joint Chiefs of Staff. LTC Barham retired in 2001. He is a 1981 ROTC graduate of the University of South Alabama.
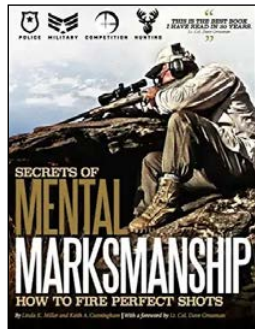
Book Reviews

Secrets of Mental Marksmanship: How to Fire Perfect Shots

By Linda K. Miller and Keith Cunningham

Mascoutah, IL: Killology Research Group, 2018

Reviewed by SFC (Retired) John C. Simpson

A lot of ink gets spilled extolling the virtues of the importance of the Soldier's mind as a weapon. Despite this, the usual priority is acquiring more things that either go "bang" or require batteries in order to assure victory. Tools to do the job are essential, but it was General George S. Patton in his memoir, *War As I Knew It,* who attributed a quote to General Ulysses S. Grant that went as follows: "In every battle there comes a time when both sides consider themselves beaten, then he who continues the attack wins." So apart from kicking slogans back and forth at each other, how can we train the mental side of something like marksmanship? That brings us to the book at hand.

Just for full disclosure before we go any further, I've known the authors for a number of years and contributed a section to their previous offering, *The Wind Book*. That said, although I didn't contribute anything to this latest book, they did a fantastic job addressing a tough subject.

Now one of my rules has always been to judge ideas on their merits rather than their pedigree. In this case, however, these writers are telling you how to succeed in shooting, and I think it would be useful to see how well these two have succeeded.

Keith Cunningham is a retired captain from the Canadian Defense Forces, having served with them and the U.S. Army in Vietnam. He has taught marksmanship courses at the Canadian Forces Infantry School and at several police forces in Ontario. He is an internationally certified shooting coach and has successfully coached teams to national and international excellence. Cunningham is also a renowned rifle and pistol competitor, having won honors at Bisley, the World Long Range Championships, and the Commonwealth Games. He is the 2008 and 2009 National Service Rifle and national 3-gun (pistol, service rifle, sniper rifle) champion.

Linda Miller has considerable experience in international smallbore target shooting as a member of Canada's Shooting Team. She won medals in the 1994 Commonwealth Games, 1995 Cuba World Cup, and 1993 Mexico World Cup. In 1999 she became the first woman to win the Ontario Lieutenant Governor's Medal for shooting. In 2002, she competed in F-Class and was the top female provincially, nationally, and at the world championships. Miller is the 2008 national sniper marksmanship champion

But you know what, my rule holds true because I've never cared what an instructor can do — it's always about what that instructor's students can do. The authors have coached 13 members of the military to a Queen's Medal, the top award for marksmanship within the Canadian Forces.

With the introductions out of the way, I want to discuss what you'll find in this book. First and foremost is the common thread through all of their work in the concept of "hits count," a famous abbreviation of the phrase "Only hits count, all else is burnt ammunition" that dates back to at least 1909. I emphasize this because this isn't just a book for snipers. The principles explained in this book also apply equally to Soldiers, competitive shooters, hunters, and law enforcement.

The text grew out of authors' six-hour mental marksmanship seminars that they conduct through their training company in Canada. The purpose of which is described as focusing "on the thought process for developing and maintaining a technical skill and applying it successfully under stress. It has been given to many organizations from Regional to Federal agencies, from Club to International competitors. This course is considered to have the mental 'secrets' needed for success."

While reading this book, I liked how the authors tell stories to make their point. In the right hands, this is a very powerful tool. I don't want to steal their thunder, but I have to tell you all that there is an example on page 144 entitled "Competition Story — Leo the Lion-Hearted" that is almost worth the price of the book. The book provides military, law enforcement, hunter, and competition examples in each chapter, and some of the examples are drawn from mistakes the authors have made.

Let me finish with a quote from Chapter 9: The Final Power – The Power of Perseverance: "The only unforgivable sin is to quit. We aren't talking about a tactical withdrawal. We're talking about bald-faced giving up. Whatever is happening to you on the firing point, in life, or on operations, always stay in the fight. The match, the hunt, or the mission is over only when the last shot is fired."

Many successful snipers, hunters, and competitors have used the principles in this book without being taught them or even having a name for them. Here in one package is a series of concrete examples drawn from experience that you can begin to apply to your life as a Soldier. Read this book; you'll be glad that you did.

One administrative note: This is the second edition of a book that was originally published by the now defunct Pala-

din Press. Don't confuse the current edition with the out-of-print first edition. Used copies of that book often go for exorbitant prices online, and some unscrupulous or confused booksellers may attempt to sell the current book at the same prices.

The War Journal: A Young Marine's Discovery of Critical Life Lessons From Desert Storm

By LCDR (Retired) James R. Sisco, USN

Triumph Press, 2023

Reviewed by Maj (Retired) Franz J. Gayl, USMC
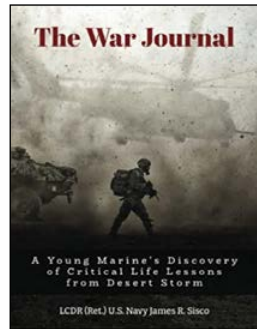
The War Journal is a timeless treasure. Service members of any rank will be personally and professionally enriched by James Sisco's unvarnished account of his experiences in Operation Desert Storm. The author's journal entries easily compare to handwritten diaries and bundles of letters that are sometimes found in the attics of Civil War Soldiers' descendants. The book has significant historical value and profound meaning in the present day by preparing service members for the challenges associated with combat operations. I recommend that it be added to leadership curriculums at the service academies and college ROTC programs as well as placed on commandants' reading lists.

The War Journal serves as a wake-up call to the physical, psychological, and emotional toll experienced during real-world combat operations that cannot be replicated in training. It delivers a vivid reminder of the need for leaders to recognize, understand, and mitigate the constant stress experienced by young Soldiers and Marines. This is especially true for emotions like frustration, anxiety, and fear caused by the inevitable boredom and constant anticipation of intense violence experienced in combat.

Unlike our more recent wars, Sisco's journal entries were written during a time when letters and occasional short phone calls were the only means of communication. Without the ability to communicate in near real-time, pauses between communication compounded fear and generated anxiety, especially in younger service members. In many cases, the absence of communication negatively impacted relations with friends, family, and partners back at home. The author's notes reveal the constant emotional battle that influenced his perceptions and impacted his morale during long periods of isolation exacerbated by the desert landscapes of Saudi Arabia and Kuwait.

The author uses his individual experiences to convey personal hardships and unimaginable tragedy. For example, he reveals the death of a fellow Marine and personal betrayal by a loved one. Sisco discovers the betrayal after his friend was killed in a non-combat-related incident. That deep personal tragedy, which the author candidly offers to his readers, is critical in understanding the fragility of a Marine's psyche under the stress of any deployment, especially those involving combat. Similar cases have led to permanent emotional trauma that can result in post-traumatic stress disorder (PTSD), mental health issues, depression, self-harm, addiction, violence, or suicide.

Sisco's emotions can be compared to those generated by well-known Dear John letters of previous wars. However, he possessed the strength to manage his emotions, effectively suck it up, and stay on task. He was clearly an outlier though as other Marines dealt with far less adversity in more destructive ways. Sisco's resilience is directly attributed to his character and loyalty to his teammates, which was forged through the rigors of reconnaissance training and honed throughout multiple deployments.

Other lessons that Sisco learned in Desert Storm have direct applicability to present-day operations. Sisco's journal reveals the frustration of waiting with little understanding of the mission and no commander's intent. The emotions that Sisco recorded in real-time reflect what all service men and women refer to as "hurry up and wait" in anticipation of action that frustratingly seems to never come to pass. The Corps' culture by design presses Marines to lean forward in anticipation of closing with and destroying an enemy in close combat. Long periods of inactivity and lack of clear guidance from superiors negatively impacted morale and failed to satisfy the sense of purpose for Corporal Sisco and many other Marines. In his own words, Sisco reaffirms the criticality of quality leadership, which was apparently lacking.

The War Journal is a guide to help leaders in today's armed forces better prepare themselves and their subordinates for the physical and psychological effects of combat operations. Time-tested methods that focus on tactics, training, and procedures have proven effective to conduct combat operations. Service members today, however, remain more vulnerable to personal trauma due to real-time communications, increased responsibility, and constantly changing missions. *The War Journal*'s unvarnished accounts of combat and critical life lessons can prepare young Soldiers and Marines for combat and for life.

Future Issue Themes:
Fall 2023 - Jungle Operations