Kroesen: Confidence Is What Creates a Good Command Climate Page 9

The Magazine of the Association of the United States Army

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Boosting Global Support

Rethinking Air Defense in the Face of Expanding UAS Threats Page 45

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The Magazine of the Association of the United States Army

March 2017 www.ausa.org Vol. 67, No. 3

DEPARTMENTS

ON THE COVER

Boosting Global Support

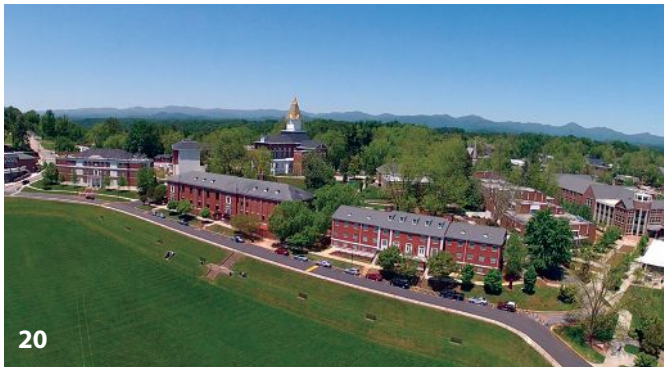
Operationalizing Materiel Support to the Army
By Gen. Gus Perna
Together with the U.S. Army Forces Command and the U.S. Army Training and Doctrine Command, the U.S. Army Materiel Command rounds out the triad that ensures our Army remains the best-staffed, best-trained and best-equipped fighting force in the world. ***Page 36***

Reinforcing a Globally Engaged Army
By Rick Maze, Editor-in-Chief
With promises of more troops, more modernization and more money, the U.S. Army may be at a critical turning point. More commitments might also be coming as a new Trump-era foreign policy takes shape. ***Page 41***

Cover Photo: *Soldiers with the 2nd Brigade Combat Team, 101st Airborne Division fire a howitzer in Iraq.*
U.S. Army/Spc. Christopher Brecht

FEATURES

Cyber Mission: To Boldly Go Where No One Has Gone Before
By Chuck Vinch
Even as cyber gains an increasingly prominent role in military operations, the most significant challenge is how much of the warfare domain is still uncharted. The Mad Scientist conference at the U.S. Military Academy brought together numerous experts to envision what the cyberwarfare domain may look like in 2050, and how the Army should plan for that future. ***Page 16***



Mining a Different Kind of Gold: University of North Georgia Expanding ROTC Studies

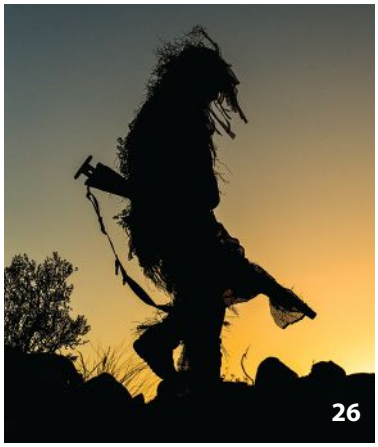
Staff Report

The University of North Georgia was originally located in a former U.S. Mint in a town that experienced one of America's first gold rushes. It's fitting, then, that the university is creating a different sort of enrichment by expanding its year-old Institute for Leadership and Strategic Studies into more than just a place that shapes future Army officers. ***Page 20***

Unified Quest's 5 Ideas For Future Success

By Chief Warrant Officer 2 Tony Hoffman and *Col. Ketti Davison*

Participants in Army Chief of Staff Gen. Mark A. Milley's ongoing initiative Unified Quest 2016 identified five primary components that are most critical to the success of land forces in future conflicts. ***Page 26***



Trust, Risk and Failure: Creating and Sustaining Innovation in Army Culture

By Col. Gregg Thompson and *Col. Charles D. Allen, USA Ret.*

Changing Army culture and sustaining a competitive advantage will require skilled professionals who know how to promote and protect innovation within the ranks. How should leaders address the need for innovation, a notion that inherently conflicts with the larger cultural factors that contribute to the Army's success as a military force? ***Page 31***

The New Threat: Air and Missile Defense for Brigade Combat Teams

By Brig. Gen. Christopher L. Spillman and *Lt. Col. Glenn A. Henke*

American air supremacy is no longer a given, and emerging technologies demonstrate the potential to operate outside the detection capabilities of U.S. platforms even when we retain air superiority. The Army's challenge is to adapt to this operating environment. ***Page 45***

WWI's 'Fighting Chaplain' Wielded Prayer

By Daniel J. Demers

The Rev. Francis Patrick Duffy is perhaps the best-known and most highly decorated chaplain of World War I. As one young officer who served with Duffy in the French trenches noted, the chaplain "forgot personal danger to serve his lads." ***Page 49***

Photo Essay: Army Fighting Phobia With Real Fire

By Spc. Adeline Witherspoon

Page 52

Family Readiness Groups Remain Essential

By Rebecca Alwine

As the service has transitioned over the last 20 years from training to deployment and back to training again, the Family Readiness Group has transitioned as well. Senior leaders who have seen the ebb and flow of involvement say these groups remain necessary. ***Page 54***

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Letters

Test AMPV to Prove Its Worth

■ Scott R. Gourley's December Soldier Armed article, "Army Receiving Its First AMPV," highlights an enhancement opportunity that may allow more soldiers to survive future conflicts. Please pursue coverage of the Armored Multi-Purpose Vehicle's developmental testing progress, particularly live-fire testing. Only live-fire testing will show how AMPVs fare against IEDs. Bradley Urban Survival Kit III survivability against blast threats benchmarked a new performance standard that AMPVs may build on, ensuring best-of-breed IED survivability for our soldiers.

Col. Tom Harrison, USA Ret.
Chandler, Ariz.

Don't Poke the Bear Next Door

■ I enjoyed the January Outpost article by retired Lt. Gen. Daniel P. Bolger about the flying machines of Igor Sikorsky, a true genius in the world of aviation ("Army's First Helicopter from Russian, With Love"). The U.S. Army and all other armies with aviation assets truly owe Sikorsky a debt of gratitude for his work.

As we consider contemporary Russian efforts to influence American politics, I think it's crucial that we understand Russian history, so I'd like to expand on what Bolger offered. Bolger correctly states that the Bolsheviks (communists) established their government after storming the Winter Palace in Petrograd in October 1917. In doing so they overthrew not the czar, but a government under Alexander Kerensky that had overthrown the czar that March. The Kerensky government made a crucial mistake in its efforts to retain power: It continued the disastrous Russian war against Germany and its allies.

Lenin and the Bolsheviks contested for power with the slogan "Peace, Bread, Land." They were successful in ousting the hapless Kerensky government, ultimately paving the way for the establishment of the Soviet Union in 1922.

Before this could happen, however, Russia was rent by a civil war in which the United States and allies, including the British, French and Japanese, joined revolutionaries in attempting to overthrow the communists. In a little-known episode in American military history, the U.S. sent approximately 13,000 soldiers to Murmansk and Archangel in Russia to support the Whites, who opposed the Reds. This effort was ultimately, of course, unsuccessful, and the Soviet Union was established and endured for almost 70 years.

None of this, of course, justifies any Russian efforts to influence the 2016 election in our country, but it does show just how intertwined the U.S. and Russia have been.

Col. James T. Currie, USA Ret.
Alexandria, Va.

U.S. Army

What's With the Chief's ACU?

■ The first issue of the year was instructive. I paid particular attention to Gen. Mark A. Milley's words in "Radical Change Is Coming." He counsels, perhaps properly: "Every assumption we hold, every claim, every assertion, every single one of them must be challenged."

After reading the article, I returned to the photo on Page 34. The Army chief of staff's uniform looked a little too stiff for ironing. Might that stiffness result from starch? If so, it is unsettling. It is now the standard of appearance for our Army just as we try and transform, husband resources, and prepare for fundamental change. It is vastly the wrong message.

I broke starch for years. Every week, I stood in the long olive-drab line queueing up to the post cleaner to deliver my seven sets of fatigues for extra-heavy starch. I could afford this out-of-pocket expense. Many soldiers could not and cannot today.

One assumption that must not be challenged: No starch for the Army combat uniform!

Lt. Col. Thomas J. Galli, USA Ret.
Rockwall, Texas

WWI Campaigns Remain Relevant

■ I read with great interest retired Brig. Gen. John Brown's December Historically Speaking article, "Yanbu a Minor Battle with Major Consequences." Such accounts highlight the fact that World War I campaigns in the Middle East set the stage for the territorial, religious and ethnic issues those nations still face today.

For those seeking a more detailed account of the Arab Revolt and its role in the British victory over the Ottoman Empire, I recommend a highly acclaimed book from the Yale University Press: Neil Faulkner's *Lawrence of Arabia's War: The Arabs, the British and the Remaking of the Middle East in WWI*.

Lt. Col. Don Slesnick, USA Ret.
Coral Gables, Fla.

Letters Inspire Letter

■ The January issue of *ARMY* magazine featured letters on two hot-button issues: football and airborne operations.

Size matters. The 2½-column length of Col. Wayne Green's letter ("Football Doesn't Eclipse Cadet's Military Obligation") indicates that retired Brig. Gen. John Brown's November article ("Should Army Football Get the Boot?") hit a nerve.

The reader guesses that Brown's point that he would rather not see the U.S. Military Academy become a football factory is grounded in observations from his days

Library of Congress/Bain News Service

as a cadet and faculty member. Green's point that a cadet is a cadet first and any extracurricular activity—even varsity football—is secondary deserves a hearing. Whether a cadet gets tapped by the pros or becomes a Rhodes Scholar, talk it up. If West Point starts recruiting 340-pound offensive linemen, the situation may require a relook.

Army capabilities always change. In living memory, the Army has eliminated coast artillery, tank destroyer and horse cavalry as separate branches. The capabilities of all three remain in other branches. While some airborne capability is a good idea, I agree with retired Col. Charles D. McFetridge's letter ("Drop Airborne IBCT From Army") that the days of a vertical assault on a defended drop zone are probably in the past. Troop-carrying aircraft are too large, required jump speeds are too slow, and the accuracy of shoulder-fired anti-aircraft missiles are too good to make mass tactical operations successful. Leave airborne operations to Rangers, special operations and a single airborne brigade. The Army will thrive without a full airborne division.

Those of us of a certain age will always believe that air assault training and the Air Assault Badge are the result of the Army feeling bad when it took the 101st Airborne Division off jump status. With few exceptions, air assault training requires getting on and off a helicopter. While attending Infantry Officer Candidate School in the first six months of 1968, I had air assault training—without helicopters. The UH-1 aircraft normally used for officer and NCO training at Fort Benning, Ga., were helping actor John Wayne make the movie *The Green Berets*. That lack of practical experience was remedied during 42 subsequent combat assaults in the Republic of Vietnam.

Lt. Col. Quentin W. Schillare, USA Ret.
Lenexa, Kan.

More on Junior Officer Proposals

■ As a 1967 graduate of Armor Officer Candidate School, I found interesting similarities in my own experience to the recommendations in retired Maj. Stephen W. Richey's December Front & Center article, "Proposals to Select and Train Junior Officers"—especially the value of having served a period in enlisted status before commissioning.

The majority of my future OCS classmates and I were college graduates or had some university experience. We had enlisted for OCS or been offered the opportunity after being drafted.

As enlisted men, we learned Army life from the bottom up, serving alongside drafted, volunteer and National Guard individuals of varying education levels and mental and physical abilities. Our drill sergeants and NCOs put those of us destined for OCS in squad leader positions whenever possible. It was a useful introduction to managing others, even though we and the other trainees were all still privates.

While we did not serve Richey's suggested full year in a line regiment, most of us spent at least four months together in basic and armor-specific Advanced Individual Training at Fort Knox, Ky., surrounded by the veterans, history and esprit de corps of the branch.

Upon arriving at OCS, we could already march and salute, read maps, operate radios and classify bridges. We had qualified with individual and vehicle weapons and could drive and pull maintenance on the M114 Command and Reconnaissance Carrier and the M151A1 quarter-ton jeep. In short, we were disciplined and technically proficient "hands-on" soldiers before beginning our training to be armor officers.

During the demanding 26-week-long OCS course, our training, advising and counseling officers had ample time to evaluate us. We had time to evaluate each other. About one-third of the class was eliminated or dropped out.

As OCS graduate second lieutenants, many of us believed—at least during the first year of commissioned duty—that we were better able to hit the ground run-

ning than the ROTC officers trained in the less-intense campus environment and officer basic courses. In our faded and starched fatigues, NCOs were less likely to consider us as confused newbies, respecting us instead as old soldiers who had earned our rank the hard way.

While I submit that nothing but the actual experience can make young officers fully "shock-of-battle-proof," enlisted service—even for four months with a further six months of OCS—was great preparation for understanding and leading troops and maintaining good relations with NCOs as well as senior officers.

Thomas B. O'Rourke
Frankfort, Ill.

Do the Right Awards Thing

■ Retired Col. Richard D. Hooker Jr.'s December Front & Center article, "Good Leaders Know Value of Recognizing the Deserving," caused me to reflect on how my early experiences shaped my perspective on awards. In 1973, I was a second lieutenant stationed at Fort Dix, N.J., as the deputy public information officer. I loved the work and accomplished the objectives my boss had established for me, and then some. I wanted to move on and spoke with my boss about my desire to go on a short tour. He agreed that it would be a great move and told me to call branch, which I did. Ninety days later, I was in the 2nd Infantry Division in Korea commanding a postal unit (I was an adjutant general officer).

As a means of recognizing my contributions, my boss put me in for an Army Commendation Medal. Those were the days before DA Form 638, or Recommendation for Award Instructions, so he wrote a number of pages that made me sound better then I thought I was, but that was the way it was done. It came back downgraded to a Fort Dix Certificate of Achievement. (The Army Achievement Medal did not yet exist.)

My boss, very upset at this action, called me in to his office to tell me that around the time my award was boarded at Fort Dix headquarters, then-Chief of Staff Gen. Creighton W. Abrams Jr. had sent out an Armywide message indicating that too many medals were being approved and that standards needed to be tightened during the review process. My boss said if my award recommendation had gone forth for approval several weeks earlier, it would have been approved. Timing is everything; frankly, I was OK with it.

But as I advanced in the Army and moved into positions with direct reports getting ready to PCS (or for impact awards), I really did everything I could to ensure they were fairly recognized, because it is the right thing to do and also because of my early experience. Where possible, I involved the soldier's family.

Enlisted soldiers and NCOs are our credentials and the worker bees that make the Army function day in and day out. It is the responsibility of every leader—commissioned, NCO or civilian—to provide the proper recognition for those in his or her chain, and to make sure young officers understand this so as they grow, this perspective is a foundation of that growth.

Col. Matt Segal, USA Ret.
Cary, N.C.

***ARMY* magazine welcomes letters to the editor. Short letters are more likely to be published, and all letters may be edited for reasons of style, accuracy or space limitations. Letters should be exclusive to ARMY magazine. Please send letters to Editor-in-Chief, ARMY magazine, AUSA, 2425 Wilson Blvd., Arlington, VA 22201. Letters may also be faxed to 703-841-3505 or sent via email to armymag@ausa.org.**

Clarification

The January Cover Story ("Radical Change Is Coming") described Gen. Mark A. Milley as the "second Army chief of staff to have an Ivy League education." Milley is the first to have an undergraduate degree from an Ivy League school, which in his case is Princeton University. Maj. Gen. Leonard Wood, who was selected as Army chief of staff in 1910, graduated from Harvard Medical School and was named an honorary member of Harvard University's undergraduate class of 1880.

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Washington Report

Army Vets Take Leadership Roles in Congress

Three Army veterans have assumed leadership positions in the House of Representatives that give them significant roles in shaping legislation affecting current and former soldiers.

Rep. Mike Coffman, R-Colo., who has served in Congress since 2008, is head of the House Armed Services Military Personnel Subcommittee, which has direct oversight of military personnel policy, pay and benefits. Coffman was born at Fort Leonard Wood, Mo., where his father was serving. He enlisted in the Army in 1972 at age 17, earning his high school diploma while in uniform.

Rep. Mike Coffman, R-Colo.

He transitioned to the Army Reserve in 1974 to attend the University of Colorado. Using the GI Bill, he earned a bachelor's degree in 1979 and then joined the Marine Corps. He left active duty in 1983 and served in the Marine Corps Reserve until 1994, when he retired from the military as a major.

Coffman returned to active duty in the Marine Corps in 2005 and deployed the following year to Iraq, making him the only member of Congress to have served in both the 1990–91 Persian Gulf War and the subsequent Iraq War.

Coffman previously was chairman of the House Veterans' Affairs Subcommittee on Oversight and Investigations, where he was a proponent of expanding government research into Gulf War illness and sponsored legislation to give the Research Advisory Committee on Gulf War Illnesses greater independence from the VA.

He spent Christmas in Afghanistan, leading a bipartisan congressional delegation to visit deployed U.S. troops. "Any opportunity I have to thank our deployed service members for their work, especially around the holidays, is very important to me," Coffman said.

Rep. Joe Wilson, R-S.C., who has served in Congress since 2001, is chairman of the House Armed Services Subcommittee on Readiness. The panel oversees military readiness, training, logistics and maintenance issues and programs, construction, installations and family housing issues, and the base closure process.

Rep. Joe Wilson, R-S.C.

Wilson's previous chairmanships include the panel Coffman is now heading, and the subcommittee on emerging threats and capabilities.

Wilson joined the Army Reserve in 1972, and then transitioned to the South Carolina National Guard three years later, where he served as a staff judge advocate. At the time of his retirement in 2003 as a colonel, Wilson was the only serving National Guard member in Congress.

As a lawmaker, Wilson has maintained an interest in strengthening offensive and defensive cyber capabilities, and promoting public-private partnerships to encourage innovation in the cyber arena.

Current legislation sponsored by Wilson includes a bill that would change the rules of engagement in Afghanistan to give U.S. military commanders greater freedom to target Taliban leaders for strikes.

He is also a sponsor of the Military Surviving Spouses Equity Act, which would eliminate the dollar-for-dollar reduction in DoD's Survivor Benefit Plan payments for beneficiaries who also receive Dependency and Indemnity Compensation from the VA.

Three of Wilson's four sons have Army service on their resumes, all with the South Carolina National Guard.

Rep. Tim Walz, D-Minn., a retired Minnesota Army National Guard command sergeant major, is the ranking Democrat on the House Committee on Veterans' Affairs. The highest-ranking enlisted soldier ever elected to Congress, Walz has served since 2006. He also sits on the House Armed Services Committee and co-chairs the House National Guard and Reserve Components Caucus. He will work with fellow Army veteran Rep. Phil Roe, R-Tenn., a former military doctor, who chairs the committee.

Rep. Tim Walz, D-Minn.

Walz joined the Army National Guard at age 17 and was in uniform for 24 years. He served in three NATO training missions to the Arctic and deployed to Italy in 2003 in support of Operation Enduring Freedom.

Among his legislative achievements is a provision of a 2016 bill to change the legal definition of "veteran" to include National Guard and Reserve members who served 20 years of military service but were never called to federal active duty.

"Guard and Reserve members make many of the same sacrifices as those in regular service, and their commitment should be commemorated," Walz said as the bill was signed into law in December. "Recognizing Guard-Reserve retirees as veterans is a small but important step we can take to honor their great service to our country."

Walz said he has been "extremely honored and humbled" to work on behalf of veterans and their families. "We owe it to our veterans to ensure that they are healthy, happy and employed when they return home."

—Chuck Vinch

Deepening the Command Climate Discussion

By Gen. Frederick J. Kroesen, U.S. Army retired

The January issue of *ARMY* carries a commentary headlined "Command Climate Guidance Falls Short." It is a well-written study of the intent of rules and regulations addressing serious command climate issues such as equal opportunity and Sexual Harassment/Assault Response & Prevention. The article also presents the Defense Equal Opportunity Management Institute's directions regarding "the official command climate survey tool," the regulatory requirements provided in Army Regulation 600-20: Army Command Policy, and the Army's Equal Opportunity Program. Collectively, these directives require Defense Institute surveys for which the preponderance of questions concern equal opportunity and SHARP and provide for the "feedback report" that identifies the "challenging leadership issues" to be dealt with.

The authors then identify the shortcomings of the program, the absence of attention to many other issues that affect command climate, and the overemphasis and selectivity on equal opportunity and SHARP. They call attention to the bureaucratic collection and management of data—to which I would add inaccuracies of the data in the first place. Such surveys obtain answers that range from fact to falsity and perhaps to fanciful, depending on each soldier's reaction concerning the validity and appropriateness of the questions.

It is at this point that I disagree with the authors' proposals for improving the effort, which I interpret as more of the same. They seek to increase the size of the surveys, generate more questions, pinpoint specific issues, develop a new instrument to assess command climate, provide more direction tools, and demand better results from commanders; all in all, bigger, better, and a greater administrative burden. In my opinion, this whole subject is a politically correct issue looking for the military services to test social theory and provide test beds concerned with interpersonal relationships.

Further in my opinion, command climate is determined by commanders and how they create confidence among their soldiers, squad and platoon leaders in their ability to successfully accomplish the mission. If every soldier knows that he or she can perform the role, believes that his or her squad and platoon mates can perform theirs and that this is the unit he or she is willing to go to war with, the fundamental command requirement is met.

The second requirement is an acceptance that the higher-echelon commanders are qualified and capable; and that they will make proper decisions, ensure adequate support, and take corrective action when mistakes have been made or problems are identified. Meeting those two requirements successfully results in a worthy and effective command climate.

There are uncounted numbers of issues that commanders must deal with, equal opportunity and SHARP among them, but they are no more or less demanding than an excessive deadline rate in the motor pool, marksmanship qualification scores, physical conditioning, or family dissatisfaction with their medical care or the inadequacies of the commissary. All issues have to be recognized and dealt with appropriately.

This is not to say that the Army does not have command climate problems. Not all commanders recognize the relative importance of each issue or make the best decisions dealing with them. Many issues are beyond their control because supplies, equipment, training facilities or money are not available to alleviate a problem. But as long as the command chain is aware of a problem and is taking what action it can, the command climate will remain satisfactory.

U.S. Army/Master Sgt. Kendra M. Owenby

This is also not to say that problems unattended or ignored or caused by higher echelons of decision-makers do not affect command climate. The presence of nondeployables in the ranks, the limitations on numbers committed to combat missions, excessive or inappropriate rules of engagement, a backlog of maintenance and repair, failure to routinely modernize equipment and yes, the demands for addressing such things as equal opportunity, SHARP and other social issues have a definite impact on command climate. The Army can do little more than identify these issues and hope that they will be remedied by a more concerned DoD or Congress. □

***Gen. Frederick J. Kroesen**, USA Ret., formerly served as vice chief of staff of the U.S. Army and commander in chief of U.S. Army Europe. He is a senior fellow of AUSA's Institute of Land Warfare.*

Above and Beyond the Green Notebook

By Maj. Joe Byerly

Walk into any organization in our Army and there is one thing I guarantee you will find on a desk or in a cargo pocket: a small, green, government-issued notebook. It doesn't matter whether a soldier is a sergeant or a general officer, odds are they will have one of these Army mainstays in their possession. Beyond their utility for taking notes, these notebooks also represent a greater ideal. They represent hard-won knowledge from intense training exercises. They represent ideas for improving our organizations and our warfighting capabilities. They represent our successes and our failures. They also represent the first step to leaving a legacy in our profession of arms.

Instead of keeping our ideas to ourselves in our green notebooks, we should share them. One way we can do this is to write for professional publications or military blogs. Unfortunately, many in uniform are reluctant to share their ideas for fear of backlash from their chains of command and peers, or for fear of being viewed as telling others what to think, or they do not believe their writing is even publishable.

Writing has several benefits that I believe outweigh the negatives. First, writing for an audience other than ourselves helps us to better solidify our thoughts. Second, in publishing our ideas, we start important conversations that may lead to changes across the Army or may lead to even better ideas from others. Third, we may contribute to our legacy in the military with an idea that will outlast our own terms of service. Finally, there are plenty of resources available to help those who need writing support, so there should be no fear of sounding unintelligent.

One of my favorite quotes, attributed to E.M. Forster, is: "How do I know what I think until I see what I say?" This speaks to this idea of the importance of writing for an audience. I believe that when we write for others to read, we challenge ourselves to be even clearer in our thoughts and arguments. As I've put pen to paper for my own blog or for other outlets, I have found that I achieve a greater level of clarity in my ideas and convictions because I can see my thoughts written out on paper or a screen. Also, by thinking through subjects from the point of view of a person who might be unfamiliar with an idea, we aid our own level of understanding on the topic we write about.

Many professionals do not want to write because they feel by doing so they are telling people how to think or that no one will even care what the author, regardless of rank, thinks about a subject. What I have learned over the years is that published ideas, both good and bad, serve as a fuel for workplace conversations. And these conversations, which are a form of professional development, can have positive second- and third-order effects that the author never intended. For example, an article about improving performance counseling could lead to leaders reassessing and eventually changing their counseling programs in a unit on the other side of the globe. The changes may not be exactly in line with the article, but it was the article that got that commander or first sergeant thinking and talking about counseling in the first place.

Published ideas can have major impacts across the formation. In a 1913 issue of the *Cavalry Journal*, then-Lt. George S. Patton Jr. wrote a short piece on the need for the Army to adopt a new saber and change methods in which the institution trained swordsmanship. His article, along with other efforts, served as a catalyst for the Army to do exactly as he suggested. The new saber was even named the Patton Saber.

In more recent history, the articles and message board discussions at *Small Wars Journal* and the military blog *Abu Muqawama* influenced major changes in the ways in which the Army approached the wars in Afghanistan and Iraq. Now-retired Gen. Stanley McChrystal eventually brought Andrew Exum, the editor of *Abu Muqawama*, onto his advisory team in Afghanistan. And finally, Benjamin Kohlmann's 2012 article, "The Military Needs More Disruptive Thinkers," eventually led to the creation of the nonprofit Defense Entrepreneurs Forum, which has played a major role in military innovation in the United States and Australia.

Today's operating environment provides similar opportunities to military professionals. There are plenty of nascent concepts that could use some fresh thought from practitioners across the Army. Drone and swarm employment and information operations on social media are just two examples of ideas that should be discussed and debated in our professional journals.

Another reason we should publish our ideas is that it allows us to create a legacy that will continue to give back long after we are gone. Tony Burgess and Nate Allen wrote the book *Taking the Guidon: Exceptional Leadership at the Company Level* 16 years ago, and even though the authors have since retired, their lessons continue to contribute to the profession of arms by shaping company-level leaders today. Additionally, most of the professional development sessions I have participated in over the years featured articles from *ARMY* magazine and other publications written decades ago. You never know how many times and in how many different venues an article you write today will be used to teach others who have not even entered the service yet.

Finally, because of the increase in the number of printed and online professional outlets, there are numerous places to share your thoughts. It has been my experience that most of these venues have excellent editorial staffs that will help clean up poor grammar and typos. The Military Writers Guild, an international network built around the sharing of ideas in the national security space, continually helps others with editorial support and links writers with publications.

I have learned that the art of writing does not come naturally to most people and that the only way to get better at writing is to do it. I learn something every time a manuscript gets rejected or a peer or mentor sends me back an article with more corrections than I thought possible.

Taking a quickly written thought from our green notebooks, developing it and sharing it for all to read is nerve-wracking, but the payoff is worth it. We improve ourselves as military professionals by seeking clarity in our thoughts. We start conversations in offices across the Army that can improve organizations. We set the stage for potential changes in our institution and improvements in our warfighting capabilities. And finally, we

leave a legacy that will outlive any PowerPoint slide we design.

If you have already taken the first step by writing some ideas down in your notebook, go ahead and take one more and make our profession stronger. □

Maj. Joe Byerly *is an armor officer and executive officer for the 2nd Squadron, 1st Cavalry Regiment, 1st Stryker Brigade Combat Team, 4th Infantry Division, Fort Carson, Colo. His blog is called* From the Green Notebook. *He holds a bachelor's degree from North Georgia College and State University, now the University of North Georgia; and a master's degree from the U.S. Naval War College.*

An ROTC Cadet Reads Machiavelli

By Alexander Amoroso

Niccolò Machiavelli, a politician and writer who lived 500 years ago, has given me invaluable insight into how I govern myself as an ROTC cadet and as a future officer in the U.S. Army. His treatise *The Art of War* taught me that anyone can be a follower, but it takes a person with a strong desire, a will to learn, and a dedication to goodness to become a leader of people.

Intellectual and creative thought improves an army, a people, an organization and a society. I will make sure that all people who come under my leadership understand these vital qualities and come to love and understand *The Art of War* as I have.

Machiavelli promoted the value of the civilian perspective alongside the soldier's when regarding war. He said: "Although treating an art which I never professed may perhaps seem a presumptuous undertaking, I cannot help thinking myself more excusable than some other people who have taken its actual exercise upon themselves. For an error in my writings may easily be corrected without harming anybody, but an error in their practice may ruin a whole state."

ROTC cadets and all future officers have a duty to their troops and the nation to couple their global views as intelligent civilians with their trained skills as military leaders so their soldiers don't die in unwarranted, unnecessary conflicts. I intend to value the words, as well as the actions, of the civilians I work with because their ideas will help me better keep my soldiers alive.

The next idea Machiavelli presented was the importance of keeping and having an army to defend what you hold dear. Machiavelli stated: "The best ordinances in the world will be despised and trampled underfoot when they are not supported, as they ought to be, by a military power; they are like a magnificent, roofless palace which, though full of jewels and costly furniture, must soon

molder into ruin since it has nothing but its splendor and riches to defend it from the ravages of the weather." This plainly says to me that if you have great things worth fighting for, fight for them.

This nation has an extraordinary history, people and legacy that require defense. I refuse to be a sideline pacifist who enjoys the benefits and comforts of this country but is in fear of being conquered because I don't know how to defend myself. I have instead taken it upon myself to fulfill my duty and assist in building a roof to protect my people from the rain. As a future officer, I look forward to leading a team of people against anyone who might seek the destruction of my country, my people, my culture and my life.

To follow up on that resolve, Machiavelli also taught the how and the why behind the practice of war. I especially like his thoughts on the practice of war. He does not promote violence of arms, but how to maintain a powerful force; the same knowledge we promulgate in the United States. He said: "Every well-governed commonwealth … should take care that this art of war should be practiced in time of peace only as an exercise and in time of war, only out of necessity and for the acquisition of glory, and that it should be practiced, as in Rome, by the state alone." This clearly says that soldiers should train during peace, fight powerfully during war and make sure the governing state, with the national army, runs the war.

In ROTC, I have participated in training exercises that I believe emulate that grand vision of practice before conflict. My resolve as a future leader is to make sure my soldiers do not serve, and perhaps die, in a fight that is unnecessary and will mean nothing. On the other hand, if there is a fight that is necessary, we will achieve glorious victory as per our creed.

The government of the United States (the state) has command over the business of declaring war and making peace, but we must always protect against the business of war being governed by a non-nationalized organization. I would not want to be a soldier, let alone a commander, in an army that promotes its own interests over the safety and success of others.

Finally, and most importantly, Machiavelli went into detail about the values and mentality of dedicated soldiers, discussing values that all modern and past warriors can surely agree on:

"Who ought to be more faithful than a man entrusted with the safety of his country and sworn to defend it with the last drop of his blood? Who ought to be fonder of peace than those suffering from nothing but war? Who are under greater obligations to worship God than soldiers, daily exposed to innumerable dangers, men who have the most occasion for his protection?"

As I progress through my training into becoming an officer in the adjutant general's corps of the U.S. Army, I further conclude that there is a high level of intelligence and love of knowledge one must possess to be the best leader possible. *The Art of War* has inspired me to strive to become a wise and thoughtful commander. □

Alexander Amoroso *is a U.S. Army ROTC cadet at Santa Clara University, Calif. He is the recipient of a history scholarship and an award from the Veterans of Foreign Wars. He has been published in the webzines* Thought Notebook, Ash & Bones *and* The Strategy Bridge, *and is an associate member of the Military Writers Guild.*

In Praise of a More War-Relevant Curriculum

By Maj. Stephen W. Richey, U.S. Army retired

A popular adage in the U.S. Army is, "If it ain't broke, don't fix it." I do not consider the current academic curriculums for U.S. Military Academy and ROTC cadets to be "broke." But I do assert that much can be done to make these academic programs better than they are.

The whole reason West Point and ROTC exist is to produce military leaders whose sole purpose is to fight and win our nation's battles and wars. West Point and ROTC do not exist to provide America with more doctors, lawyers, technicians in abstract scientific fields, business executives in major civilian corporations, Hollywood movie directors, and so forth ad infinitum.

There are plenty of other superb academic institutions in our country that are doing fine jobs providing the next generation of fresh blood for all those diverse fields. But it is West Point and ROTC, and only West Point and ROTC, that have the mission of developing the next generations of military leaders who will lead our soldiers into battle. The academic curriculums must reflect that singular mission.

I propose changes to the academic curriculums at West Point and ROTC in order to make those curriculums more relevant to war than they currently are. But first, I must acknowledge the constraints of reality. The war-specific academic curriculum I propose places heavy demands on the resources of any college or university, particularly in terms of having enough professors with the qualifications required to implement this curriculum. West Point is already richly blessed with professors and other resources needed to make my proposed curriculum work. Sadly, the great majority of our ROTC programs lack the resources to implement my proposed curriculum to the same high standard as West Point. Therefore, I will focus specifically on West Point.

At present, West Point offers 39 academic majors ranging from American politics to systems engineering by way of environmental engineering and kinesiology. These are all worthy bodies of knowledge, but how relevant are they to leading soldiers into battle? When I was a West Point cadet, I learned many things in many fields. In calculus, for example, I learned that any real-valued differentiable function that attains equal values at two distinct points must have a stationary point somewhere between them—that is, a point where the first derivative (the slope of the tangent line to the graph of the function) is zero. In chemistry, I learned that a mole is a chemical mass unit, defined to be 6.022 x 1023 molecules, atoms or some other unit. In my subsequent ca-

reer as an officer, how many times did I apply these pieces of information to leading my soldiers? Precisely zero.

West Point should have one academic major. That single academic major would be called the art of war, or military leadership, or the art of command in battle, or whatever similar phrase those in charge think best conveys the idea. The study of military history would assume the dominant position that engineering had at West Point decades ago.

Currently, there is only one military history course that is mandatory for all cadets. This 300-level course is named "History of the Military Art," also known as "Military Art," and is taught junior or senior year depending on a cadet's major. It should be taught sophomore year in order to more quickly serve as the foundation course for subsequent, more advanced study in military history as part of the West Point cadet experience.

U.S. Army/Master Sgt. Michel Sauret

The required reading list for cadets should match what is required at the U.S. Army Command and General Staff College or the U.S. Army War College. No one should graduate from West Point, for example, without having read and thoroughly discussed *The Iliad* by Homer and *On War* by Carl von Clausewitz.

Most readers of *ARMY* magazine are familiar with the professional reading lists that our Army promulgates and updates from time to time. There is a corpus of classic military books that professional soldiers agree are essential to intellectual growth, including *The Art of War*, by Sun Tzu; *The American Way of War*, by Russell Weigley; *Command Decisions*, edited by Kent Roberts Greenfield; *Storm of Steel*, by Ernst Jünger; *Company Commander*, by Charles B. MacDonald; *The Forgotten Soldier*, by Guy Sajer; and *Under Fire*, by Henri Barbusse.

Currently, officers are not expected to have read these or similar classics in the genre until they are well up in rank and attending the Command and General Staff College or the War College. In my proposed war-centric curriculum for West Point, all cadets would read and talk about the classic military books throughout their four years at the academy. Upon graduating, they would already possess the level of academic sophistication about waging war that, under the current system, is reserved for graduates of the Command and General Staff College and the War College. At present, the only West Point cadets required to read the military classics are the few who major in military history. These cadets form a self-selecting elite of military history devotees. The large majority of cadets who choose academic majors other than military history can graduate from West Point without having more than the vaguest idea who Clausewitz was and what he wrote. This situation is unconscionable.

Many readers will object that my proposed curriculum is too narrow and will lead to disaster when our future military leaders are unable to think outside the furrow of battle and only battle. I am fully cognizant of this danger. I know how an excessively narrow intellectual focus in the German high command doomed that country to defeat in two world wars. Therefore, included in my proposed curriculum for West Point would be mandatory courses in foreign languages, world geography, foreign cultures and civil-military relations. These topics are essential supporting bodies of knowledge to the overall study of military leadership.

In my proposed curriculum for West Point, I also envision cadets spending much more time than they currently do engaged in the practical application of military theory. Cadets would spend as much time reading the current doctrinal field manuals as they would reading the classics of military history. Participating in all manner of tactical training exercises and war games would become a routine part of almost every day they spend at West Point.

My proposed curriculum not only would provide the Army with superlatively trained young officers, it also would have a cost-effectiveness benefit. The cost to the taxpayer to produce each West Point graduate is enormous; likewise for those who receive ROTC scholarships. Given their high price tag, the number of officers who choose to bail out of the Army when their initial commitment has been served is too high. It is simply economic common sense to ensure that the officers we create at such great expense stay in the Army for the longest careers possible.

As I have kept informal track of my classmates over the years, the pattern I see is that those of us who were passionate about military history are the ones who strove to stay in the Army as long as we could. Those who were in a hurry to toss their history books in the trash are the ones who got out of the Army as fast as they could to join civilian corporate America.

As soon as it becomes widely known that West Point has embraced the single war-centric academic curriculum I have described, perhaps those young people who are selecting where to go for college, but are uncertain about spending their whole lives as soldiers, will feel encouraged to take their talents elsewhere. Those who are passionate about making full careers in the Army will see all the more clearly that West Point is where they belong. □

***Maj. Stephen W. Richey**, USA Ret., served as an enlisted armor crewman from 1977 to 1979 and graduated from West Point as an armor officer in 1984. He served in various assignments in Germany, Ethiopia, Iraq and the continental U.S. He holds a master's degree in history from Central Washington University and is the author of* Joan of Arc: The Warrior Saint.

He's the Army

First a U.S. Soldier, Then an American Citizen

It might be difficult to find someone more aware of the significance of the Soldier's Creed than Army National Guard Sgt. Abbas Mousa, who has been a U.S. soldier longer than he has been a U.S. citizen.

"America gave me peace, opportunities, freedom and dignity," Mousa said. "I wanted to be part of this country. I wanted to learn how to fight because I was afraid of losing my new, safe home—America—like I lost Baghdad."

Mousa was born and raised in Iraq's capital city. His connection with the U.S. Army began in March 2007, about a year after he graduated from Al-Mamon University with a computer science degree. Mousa moved to Contingency Operating Base Q-West in Northern Iraq, where he worked for nine months for a company that supplied sandbags to the base.

"Before I accepted the job, I was very nervous because we had heard bad things about the American soldiers from the media, especially after the Abu Ghraib prison scandal," he said. "I was afraid that the soldiers might hurt me. But I was surprised. They were normal people, not evil."

English is taught in Iraqi elementary and secondary schools, and Mousa's college courses were taught in English. When soldiers discovered how fluent he was, he was tapped to become an interpreter and translator.

The soldiers "were like one big family," he said. "They took me in like one of their own."

Neal Fillion

Army National Guard Sgt. Abbas Mousa

His family in Baghdad knew what he was doing, but they kept it a secret. "Once you work for the U.S. military, you will forever be an al-Qaida target," he said.

Mousa's mother is Lebanese and Argentinean, and the family had already faced threats. "My family wanted to leave Iraq so bad since 2006," he said. Two of his siblings had immigrated to the U.S. in 2007 and 2008 and after a kidnapping attempt, Mousa knew he had to leave, too.

Through a special immigrant visa for translators and interpreters, Mousa arrived in the U.S. in July 2009. (A sister came with him; his parents and four remaining siblings emigrated in 2013 and 2014.) He settled in Oak Creek, Wis., where his siblings lived, and began working on a master's degree in economics at the University of Wisconsin-Milwaukee. He also worked full time for an internet retailer, but something seemed off.

"Living on a military base for 2½ years made me learn about the military culture before the American culture," he said. "I missed working with the military."

Mousa enlisted in the Wisconsin Army National Guard in June 2011. In May 2012, he became a U.S. citizen. He finished his master's degree in 2015 and, eager to escape the Midwestern winters, focused his job search on the Washington, D.C., area.

"I visited D.C. for the first time back in 2010 and fell in love with the city," he said. "I was fascinated with all the history that I learned just from visiting the sites and museums."

He was offered a position with the Bureau of Economic Analysis in the U.S. Department of Commerce and moved to the D.C. area about a year ago. He is a human resources specialist with the D.C. Army National Guard.

Mousa is writing his memoirs and has told an abbreviated version of his life story through The Moth, a nonprofit group that holds storytelling events in U.S. cities that are broadcast on National Public Radio. He said there are some things he misses about Iraq, including "sitting on the banks of the Tigris River and throwing little rocks with my friend, talking about what we wanted to be when we grow up.

"But I do not miss anything from the period when the terrorists entered Baghdad and started bombing us left and right," he said. "I also don't miss living on the edge and being worried that I might be killed. I know how it feels living under terrorism, and I never want to experience that again."

As for his adopted country, "So far I have been to 24 states, not counting layovers or drive-throughs," he said. "I love how you can be at minus-20 weather in Wisconsin in January, yet you're only a five-hour flight from 80 degrees in Miami. I love how different our big cities are. And American people in general are good people. They are smiley, and nice."

Mousa wants to assure his fellow Americans that citizens like him "share the same hopes, dreams and goals your great-great grandparents had when they came here; hopes, dreams and goals that we want to reach in the land of opportunities.

"Today, I'm reaching mine," he said, "and I hope you're reaching yours."

—Laura Stassi

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Cyber Mission:

To Boldly Go Where No One Has Gone Before

By Chuck Vinch, Senior Staff Writer

Even as cyber gains an increasingly prominent role in military operations, the most significant challenge for Army planners is how much of the newest and evolving warfare domain is still uncharted.

That theme runs through the 127-page final report from the Army's Mad Scientist conference last fall at the U.S. Military Academy in West Point, N.Y. The conference brought together numerous experts to envision what the cyberwarfare domain may look like in 2050, and how the Army should plan for that future.

"As the newest warfighting domain and the first declared domain to be totally man-made, cyberspace poses multiple domain dilemmas for those who would characterize its role in military operations," the report says.

Because of the broad, worldwide interconnectivity of cyber infrastructure, the domain "features tactical and operational effects at global distances [that] effortlessly cross geographic boundaries, altering our normal perceptions of distance, proximity and sovereignty."

iStock/i3D_VR

And the physics of time and space in the cyber domain can generate unique and distinct perspectives and considerations regarding range, location and speed, the report says.

The notion of position, which is central to maneuver, "is mostly metaphorical in the cyber domain," the report notes, adding that collectively, cyber challenges generate an alternative domain experience "that alters our normal expectations with respect to every component" of accepted warfighting doctrine.

Three Major Challenges

It's hardly surprising, then, that the first major challenge to the Army's efforts to craft a cyberspace strategy for land warfare operations is simply to predict what the cyber environment will look like a few decades from now. How will cyber influence the environment and society? What will connecting look like, and how will people do it? And what drivers will influence that evolution?

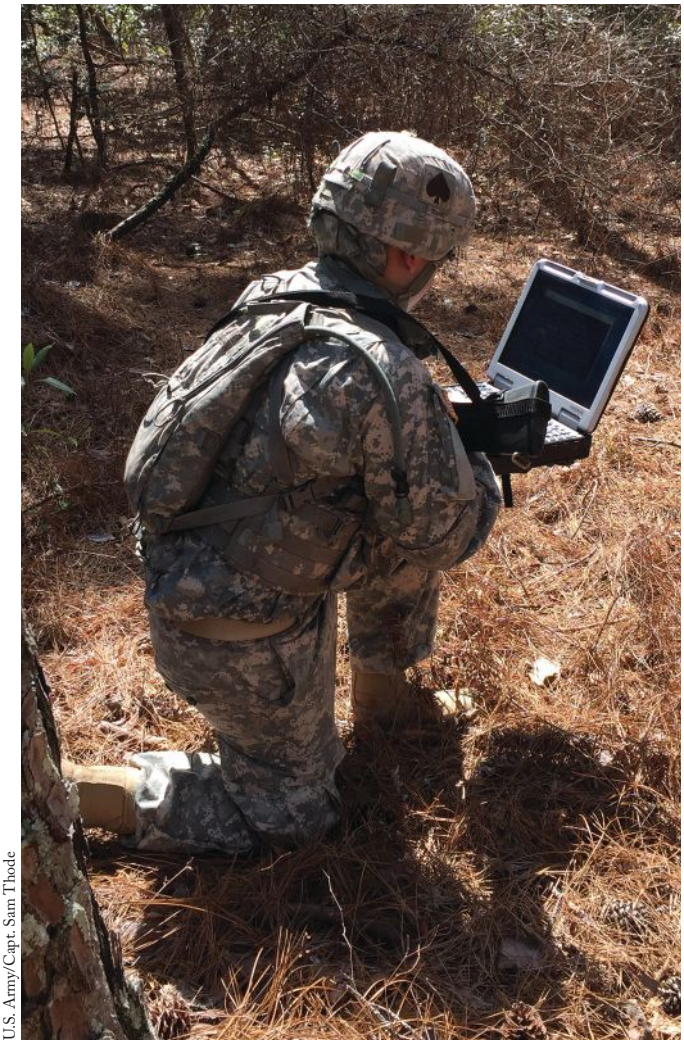
The second challenge, the report says, is to use the theoretical answers to those questions to build an Army cyber force that can dominate the Multi-Domain Battle concept. And that leads directly into the third challenge: What new ideas should the Army be considering?

The hurdles to conquering these challenges start with the simple fact that cyberspace is difficult to visualize, since only about 4 percent of it is readily accessible—the surface web that people commonly interact with. The rest is comprised of the far bigger deep web and dark web whose contents are not indexed by standard search engines.

That forces military planners to treat cyber terrain metaphorically, as "fundamental doctrinal ideas such as 'levels of war' and 'maneuver' struggle to migrate to the cyber domain," the report says. "There is little consensus about how the laws of war may apply in cyberspace, and the development of international norms, standards and laws will take decades."

Within these broad areas of uncertainty are more specific concerns. For example, the role of deterrence in the cyber domain is "already a pressing strategic consideration," the report says. With no real rules to constrain cyber conflict, "the role of deterrence is not yet conclusively demonstrated in the cyber domain."

The report notes that cyber attackers are difficult to identify



U.S. Army/Capt. Sam Thode

Probing for a signal in the field

with certainty and even if they are identified, the evidence often can't be made public. A counterstrike—if there is one—is just as hard to discern. And if that counterstrike is covert, it has "limited impact as a publicized, future deterrent."

The pace of cyber evolution exacerbates all these challenges. "The ever-accelerating rate of change in the cyber domain makes 'cyber-casting' daunting indeed. In an environment where battle results are indirect and difficult to observe and quantify, predicting cyber outcomes is problematic even in the near term," much less a few decades out, the report says.

Building Cyber Warriors

With so much uncertainty still surrounding cyberwarfare, designing training and personnel policies for the soldiers who will fight in this domain is yet another pressing concern, the report says. It calls cyber warriors knowledge workers who will need more than simply training. "They need a strong education in cyber fundamentals in order to deal with the dynamic complexities of the cyber domain," according to the report.

The rapid evolution of cyber means a technical degree in this field has an effective lifespan of only about three years. That means future cyber training and education will be "significantly self-directed, modular, open-loop and lifelong."

The report says future cyber commanders will have to be "as adept at deploying cyber effects as they are at delivering physical effects. Their leadership and education must address desirable attributes and skills, and be broad enough to enable their ability to conceptualize rapidly and develop creative, feasible solutions to complex challenges."

But with cyber growing just as fast in the private and commercial sectors as in the military, the Defense Department, originally a key driver in the development of cyber capabilities, "no longer has a dominant technology development role in shaping the architecture of cyber space."

That portends competition for future cyber talent that will be "fierce, and promises to upend our most cherished personnel assumptions about recruitment and retention," the report says.

Attendees at the Mad Scientist conference generally agreed that to get ready for 2050, "the Army needs to stop recruiting at shopping malls." Instead, the service should recruit from so-called STEM—science, technology, engineering and math—programs, seeking out young people with cyber aptitude in middle and high school and supporting and encouraging them to serve their country in the Army after they graduate.

The report suggests that alternative career models also may help in attracting and retaining cyber talent. Noting that the Army offers direct commissions to dentists and doctors, the report raises the possibility of doing the same for cyber talent.

"There could be a revolving door that works in both directions," the report says, adding that enabling cyber professionals to routinely transfer between DoD and private industry could benefit both employers.

Charting the Future

While again driving home the point that "cyber-casting" is highly problematic, the report offers five potential alternative cyber futures that may define the range of domain environments out to 2050:

- Status quo: "Cyberspace conflict tomorrow looks like that of today," which includes high levels of crime and espionage, but no massive interstate cyber warfare.
- Conflict domain: "Cyberspace has a range of human conflict, just like air, land, space and maritime domains."
- Balkanization: "Cyberspace breaks down into national fiefdoms," with no single internet but instead a collection of "closely guarded and poorly interconnected national internets."
- Paradise: Cyberspace is an "overwhelmingly secure place, where espionage, warfare and crime are extremely difficult."
- Cybergeddon: "Cyberspace, always un-ruled and unruly," becomes a failed state "in a near-permanent state of disruption."

Regardless of which—if any—of these potential futures becomes reality, the report says as the Army works toward creating a cyber workforce that understands the military implications of cyberspace, it must keep in mind the need to address the distinct and disparate learning requirements, values and biases of generational cohorts such as millennials, Generation X, and those who follow.

Along the way, a sense of ownership and urgency will be essential to successfully managing the transformation, the report says.

Successful cyber leaders "will be the ones who create and sustain that sense of urgency, and are willing to own and address the responsibilities of a new dimension of the battlefield." ★

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Mining a Different

University of North Georgia Expanding

University of North Georgia

It is fitting that a Georgia school originally located in a former U.S. Mint in a town that experienced one of America's first gold rushes is trying to capture a different kind of treasure.

While embracing its golden past, the University of North Georgia in Dahlonega is creating a different sort of enrichment by expanding its year-old Institute for Leadership and Strategic Studies into more than just a place that shapes future Army officers. It wants to mold leaders for intelligence, cyberwarfare and global engagement as part of a wide expansion into national security topics.

Dahlonega was on the nation's map after the discovery of gold in 1828—two decades before the California gold rush—led to waves of miners arriving with dreams of securing their future. A university often overshadowed by bigger-name military institutions such as The Citadel, S.C., and the Virginia Military Institute is hoping to be in the nation's spotlight again as a promising destination for future generations of ROTC cadets.

It is an ambitious goal, but the university is already ranked among the top 25 universities in the South and the top five public universities in the state, and North Georgia leaders see the opportunity for graduates to contribute to national security in the Army, government or business.

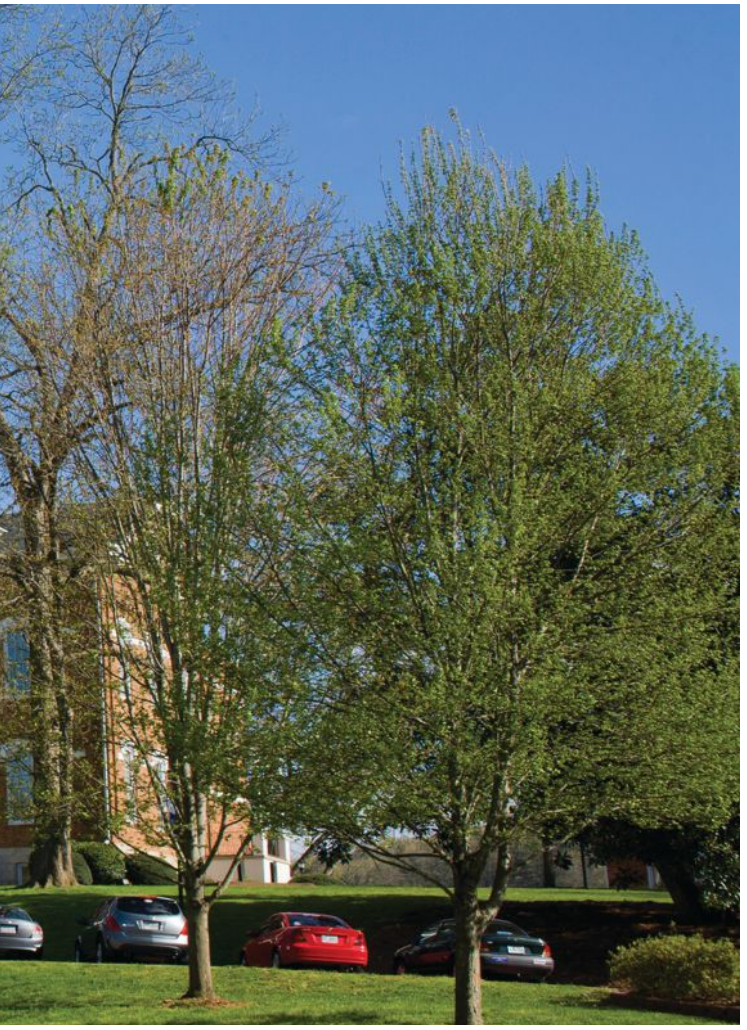
"We want our cadets to be highly successful in whatever they do in national security," said retired Army Lt. Col. Keith P. Antonia, associate vice president for military programs at the Institute for Leadership and Strategic Studies (ILSS).

A Natural Development

Formation of the institute in 2015 was a natural development of efforts to improve the university, said retired Army Col. Billy

Kind of Gold

ROTC Studies



The University of North Georgia is one of the top 25 public universities in the South; Captain of Cadets Bryton Wenzel

ARMY magazine

Wells, the University of North Georgia's senior vice president for leadership and global engagement. Under federal law, North Georgia is one of the nation's senior military colleges, he said, and the Board of Regents of the University System of Georgia, which oversees public colleges and universities, has designated the institution to be The Military College of Georgia.

"The university strategic plan called for examining the feasibility of new organizational structures that support academic excellence and innovation," Wells said. "The idea of the ILSS arose from that planning process and was implemented to fully synchronize all systems to accomplish the military mission."

Wells is pleased with the results. "After a year of mission-based functional realignment, recruiting, academic performance, cadet internships, study abroad, and selection for nationally competitive scholarships have all set new records, well above the norm for the university as a whole," he said. "Additionally, performance of North Georgia cadets at the Cadet Leaders Course—always outstanding—has set new records with 32 percent of our cadets ranked in the top 15 percent of the nation."

The university has produced 51 general and flag officers, and its cadet alumni include college presidents, politicians, writers and CEOs. Seventy-five percent of graduating cadets become commissioned officers, and many cadets are members of the Georgia Army National Guard while they attend the university. "We are kind of like the West Point for the Georgia National Guard," Antonia said.

For example, Captain of Cadets Bryton Wenzel is a National Guard plumber and a nursing major working on a five-year degree. A sergeant in the Guard, the native of Killeen, Texas, picked his military specialty partly on the availability of an enlistment bonus.

Innovation and Drive Still Visible

The U.S. Mint, which made gold coins from 1838 until it was seized by Confederates in 1861 at the start of the Civil War, was the administrative and academic building for North Georgia Agricultural College when it was founded in 1873. The building was destroyed in an 1878 fire, with most of its donated textbooks saved when they were tossed out the windows by students trying to save as much as they could of their

University of North Georgia

University of North Georgia ROTC cadet Elisha Weber; opposite page: On-campus military activities include corps reviews and field training exercises.

school. A new facility, still in use today, was built on the mint's foundation, an act that was an early demonstration of the innovation and drive that are still visible today.

Like at other land-grant institutions created by the Morrill Act of 1862, military training was part of college life. The university has come a long way from the Civil War muskets used in the beginning.

The college had a small cadet corps, led by a junior officer, before Congress created the Reserve Officers' Training Corps. While Norwich University in Northfield, Vt., is the nation's oldest senior military college and was the first to have ROTC, North Georgia University has the distinction of having the oldest Army-only ROTC program. It was also the first senior military college to accept women into the Corps of Cadets.

Its ROTC program is now much bigger, and so is the university. The university has five campuses for its colleges of health, business, education, science and mathematics. There also is an institute of environmental and spatial analysis.

The Corps of Cadets for the Boar's Head Brigade had 775 students in 2016, with the number expected to increase to 850 this year in support of the Army's mission to increase the number of newly commissioned officers. Women make up about 17 percent of the corps, and minorities make up about 24 percent. The program has exceeded its goal for women, and has a goal of achieving 27 percent ethnic minorities in the corps by 2019.

The GPA for students averaged 3.17 last year, with 62 cadets earning 4.0 during the fall semester.

A prime example of what University of North Georgia graduates can achieve can be seen in the accomplishments of 2nd Lt. William Putt, who graduated in December with three undergraduate degrees—history, international affairs and Arabic—achieved during studies that included living in Italy, Oman, Romania and Poland. "Graduation was pure bliss," he told the *Forsyth County News* in an interview published in December. In that interview, he said he wanted to be an Army officer since he was 7 years old.

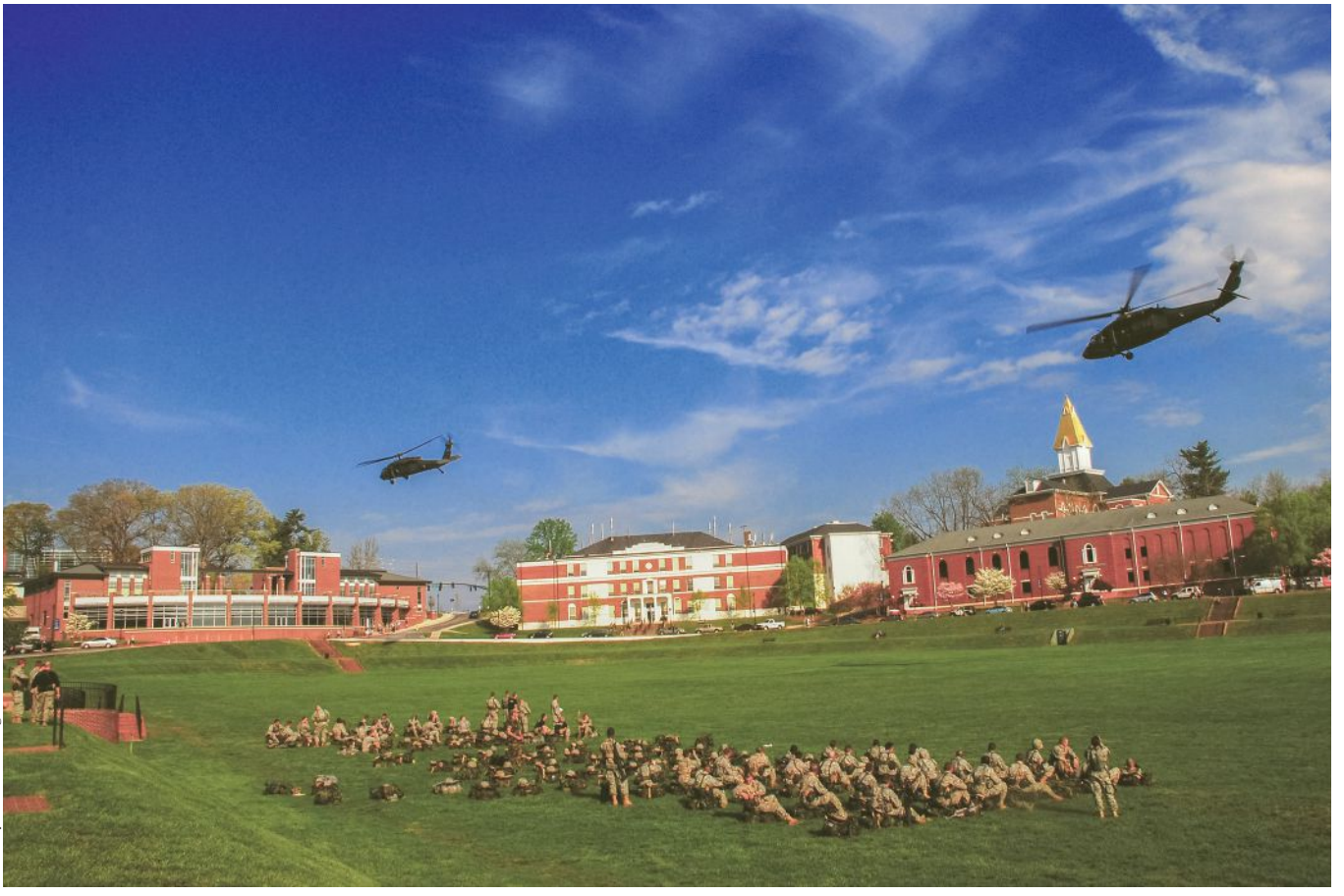
Expanding Educational Partnerships

His experience isn't that unusual for University of North Georgia cadets in the new era of strategic education. Fifteen cadets were part of the institution's three-week cultural programs last summer, and efforts are underway to expand educational partnerships with internships, military exchanges and study abroad programs, Wells said. The university is helping create a similar program for the U.S. Army Cadet Command, which oversees the eight ROTC brigades.

"We have a pretty unique product," Wells said. In addition to degrees in military science, history, international affairs and cyber security, the school will be adding a degree in intelligence next year, expanding global partnerships, and expanding a Center for Cyber Operations Education that will include focusing on cyber defense, mathematics, strategic languages and leadership. "We have been making a lot of headway in cyber," Wells said.

In some ways, the cadets' lifestyle is comparable to that of

University of North Georgia



University of North Georgia

their peers at the U.S. Military Academy. They attend classes in uniform, live in dormitories much like barracks, and have physical training anywhere from three to five days a week. But there are some differences. Jesse Henderson, the cadet command sergeant major, said one of the big differences is that "you still have a civilian life" after hours.

Some military schools have a reputation as being a place for troubled youth who are just a few steps ahead of the law, but the University of North Georgia isn't one of those places and doesn't want to become one. "We are not looking for young men and women who need discipline," Antonia said. "We want people who want to be Army officers."

ARMY magazine

Jesse Henderson is the cadet command sergeant major; below: Cadets live in dorms that are much like barracks.

Confederate veterans didn't pay the $10 per term tuition when North Georgia first opened. That is a tradition the university is trying to continue. The majority of cadets receive financial assistance to attend the university, the result of a policy that ROTC students pay in-state tuition even if they are not Georgia residents, and also because of $10 million spent on scholarships and grants.

Among the university's many ambitious goals is to raise $93 million through an initiative called Georgia Gold-American Treasure to aid in attracting and retaining the best students. The university is hunting for a major donor who might contribute $5 million to $10 million to get the fundraising rolling.

'An Exceptional Value'

"Cadets are in a special category with regard to tuition," Wells said. "While the university can provide an out-of-state waiver for up to 2 percent of the institution's total enrollment, all out-of-state cadets, including international cadets, are authorized an out-of-state waiver, making North Georgia an exceptional value, especially to military families."

The university would like to do more, Wells said. "The military program at the University of North Georgia is intense. Cadets have limited time for programs like work-study during the semester, and summers are usually taken up by professional military education opportunities, study abroad, language immersion or international internships.

"Our goal is to ensure that every cadet has adequate fiscal resources to maximize their professional education opportunities in and out of the classroom without financial concerns," Wells said. "We seek to eliminate any economic filter to opportunity for the talent we recruit. A significant part of that effort is fundraising for scholarships for those who need them." ★

—Staff Report

University of North Georgia

ASSOCIATION OF THE UNITED STATES ARMY

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Monthly Benefit Highlight

AUSA Mastercare Group Insurance Plans

Is Life Insurance Right For You?

AGIA AFFINITY SERVICES

Life insurance is an important consideration for everyone. AUSA is here to help you make sense of what is available to find the best product for you. It's never a fun topic, but AUSA makes life insurance easy with their group insurance options.

If you have already set up an individual life insurance policy, additional coverage to allow for life events (like a new baby, bigger mortgage) might make sense. Supplementing your existing policy with group term life insurance through AUSA will help ensure that you and your loved ones are secure.

Here are 4 reasons why you should consider group term life insurance:

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To learn more about group term life insurance and other products offered as AUSA member benefits, visit https://www.ausainsurance. org/home**.

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Unified Quest's Five Ideas

By Chief Warrant Officer 2 Tony Hoffman and **Col. Ketti Davison**

In 2013, Gen. Valery Gerasimov of the Russian General Staff published an article with the weighty title: "The Value of Science is in the Foresight: New Challenges Demand Rethinking the Forms and Methods of Carrying out Combat Operations."

In it, Gerasimov described his analysis of the future character of warfare, observing that military actions are becoming more dynamic and that differences among strategic, operational and tactical levels, as well as between offensive and defensive operations, are being erased. He also noted that the U.S. is embracing and refining a doctrine of global integration of operations.

He's right. Last year, Army Chief of Staff Gen. Mark A. Milley commissioned participants in his ongoing initiative Unified Quest 2016 to identify issues and propose solutions critical to current and future force development; visualize and describe the operational environment in 2050; and make recommendations on future capabilities the Army will need to fight and win our nation's future wars.

As Unified Quest explored the future operational environment, participants identified opportunities to actively shape that environment to create more favorable outcomes. That starts with a deceptively simple premise: We cannot simply train and develop a force for yesterday's wars. The Army, and DoD, are developing many of the capabilities needed to "shape, fight and win," but these efforts are largely disparate and not properly synchronized.

To get there, Unified Quest 2016 participants identified five primary components that we believe will be most critical to the success of land forces in future conflicts: an advise and assist force, an adaptation and experimentation center, a multipurpose force, special operations forces and conventional forces.

Advise and Assist Force

A global sensor array would integrate the collection efforts of both humans and systems to refine the scale, scope and accuracy of information available to the intelligence community.

An advise and assist force would serve as

for Future Success

A Black Hawk helicopter flies over 2nd Cavalry Regiment Strykers in Germany.

U.S. Army/1st Lt. Henry Chan

the human element—the deliberate shaping element—of this array. The primary task of this force would be to support theater campaign plans through security cooperation and security force assistance, build partner capacity, and mentor less-developed countries to build sustainable defense institutions globally.

Adaptation and Experimentation Center

Ideally, units in an advise and assist force would provide strategically astute observations and insights that would afford localized understanding of culture, politics, and host-nation military capability and capacity on a greater scale than could be obtained through technological sensors and open-source reporting. Their observations also should be key to informing a DoD center for adaptation and experimentation.

A DoD center for adaptation and experimentation would analyze, train and prepare U.S. forces to operate globally. It would bring together the intelligence community, academics, and government and industry scientists to catalog observations and broaden understanding of the current and future operational environment.

The center would serve as the foundational element for replicating the operational environment, with a specific mission to develop rapid solutions to known and perceived capability gaps of both U.S. and allied forces—similar to annual Army Warfighting Assessments.

These experimentations should not be limited to creating a proof of concept or doctrine, and the mantra of these experimentations should be to "fail early, fail small, fail cheap." The expectation is that by 2050, intelligence estimates shaped by this center would describe the future operational environment with much more accuracy and fidelity than is the case today.

The body of knowledge that would reside in this center also would give leaders and policymakers the ability to conduct the kind of legitimate, long-term—20-plus years—planning and foreign policy strategy that arguably has not been seen since the end of World War II.

Moreover, as a joint and interagency endeavor, the center would provide optimal strategic and operational situational understanding to multipurpose and conventional forces before combat deployments.

Multipurpose Force

The foundation of a multipurpose force would be similar to the Global Response Force mission and would follow some of the principles developed for Stryker brigade combat teams, with some key distinctions.

The force would be the Army's primary first responder to global crises, setting favorable conditions for follow-on major combat operations. The forward presence of the advise and assist force in shaping the operational environment in favorable ways long before combat elements receive their mission would enable achievable and sustainable success for the multipurpose force as well as for conventional forces.

We propose that the multipurpose force also have the ability by 2050 to augment and support the missions and operations of other elements of the force as necessary, especially in asymmetric and conventional warfare.

U.S. Army/Sgt. Angela Lorden

In Kuwait, 1st Armored Division soldiers fire a mortar round during an exercise.

U.S. Army/Gertrud Zach

U.S., British and Italian paratroopers conduct airborne operations during Exercise Saber Junction 16 in Germany.

The multipurpose force also should have the ability to support security cooperation and multinational exercises, building and strengthening the capacity and capability of future U.S. coalitions. Combat deployments should not be the only environment in which soldiers, sailors, airmen and Marines operate with coalition partners.

In October, Milley commented: "We are most successful when we fight as part of a combined multinational team." Regional alignment and security cooperation help the Army reinforce its emphasis on coalition building, but 2050 will require multinational cooperation to underpin nearly every operation abroad.

Conventional and Special Ops Forces

In 2050, the Army and DoD will still require the capabilities that are organic to conventional and special operations forces. Our conventional capabilities and capacity will, and should, remain the most feared of any military in the world, with significant emphasis on combined arms maneuver and long-range fires. Special operations forces will still need to sustain their unconventional warfare and decisive action skills to enable successful multidomain battle operations.

One key distinction between the conventional forces of today and those of 2050 is the level of engagement, both at home and abroad, that those forces routinely conduct. The very nature of the Multi-Domain Battle concept describes an inherently joint fight, which will require more integration with the other services at home and abroad.

Soldiers should train with other services regularly to build trust and understanding of both organic and external capabilities that will enable their success on the battlefield. Joint qualification should become less of the individual, policy-driven career objective that it is today as soldiers become increasingly exposed to joint operations earlier and more often throughout their careers.

Integration of special operations and conventional forces also remains necessary for the future force. Additionally, special operations forces should coordinate and collaborate with the advise and assist force and the adaptation and experimentation center to reinforce the knowledge and reliability of reporting, analysis and solution development from those entities. That coordination and collaboration also would support conventional forces commanders in reinforcing and incorporating locally established relationships with host nations.

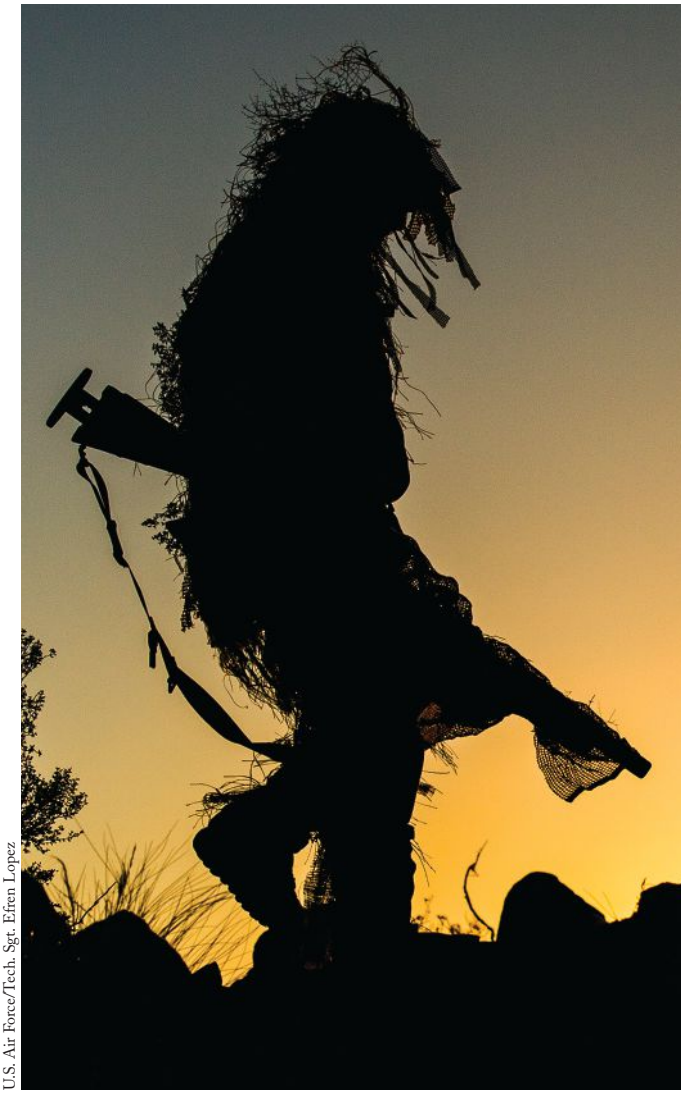
Why Synchronization Matters

Our adversaries believe their advantage lies in an ability to synchronize elements of national power more efficiently than we do because of a lack of bureaucracy. Their concentration on thoughtful, unified planning and action can grow to become a legitimate threat to U.S. and allied national security and interest.

But our forces possess the capability to succeed in and dominate this space—and have the capacity to improve planning, strategic and operational processes to overwhelm an adversary and cause the fog in the "fog of war."

Gen. David G. Perkins, commander of the U.S. Army Train-

U.S. Army/Sgt. Steven Galimore



U.S. Air Force/Tech. Sgt. Efren Lopez

Soldiers attach a load to a Black Hawk helicopter at Fort Bragg, N.C.; an Army sniper conducts reconnaissance during training at Marine Corps Air Ground Combat Center, Twentynine Palms, Calif.

ing and Doctrine Command, has said multidomain battles require "flexible and resilient ground formations that project combat power from land into other domains to enable joint force freedom of action, as well as seize positions of relative advantage and control key terrain to consolidate gains."

The inherent challenge in creating joint freedom of action in multidomain battles is to assimilate key joint enablers and multinational forces into future operations while maintaining a keen eye on the evolution of the operational environment and the character of future warfare.

A coherent, cohesive and active approach utilizing these five pillars—an advise and assist force, an adaptation and experimentation center, a multipurpose force, and special operations and conventional forces—can enable the joint force and the Army to shape the environment that defines the future character of war in ways that ensure favorable outcomes for our team. ★

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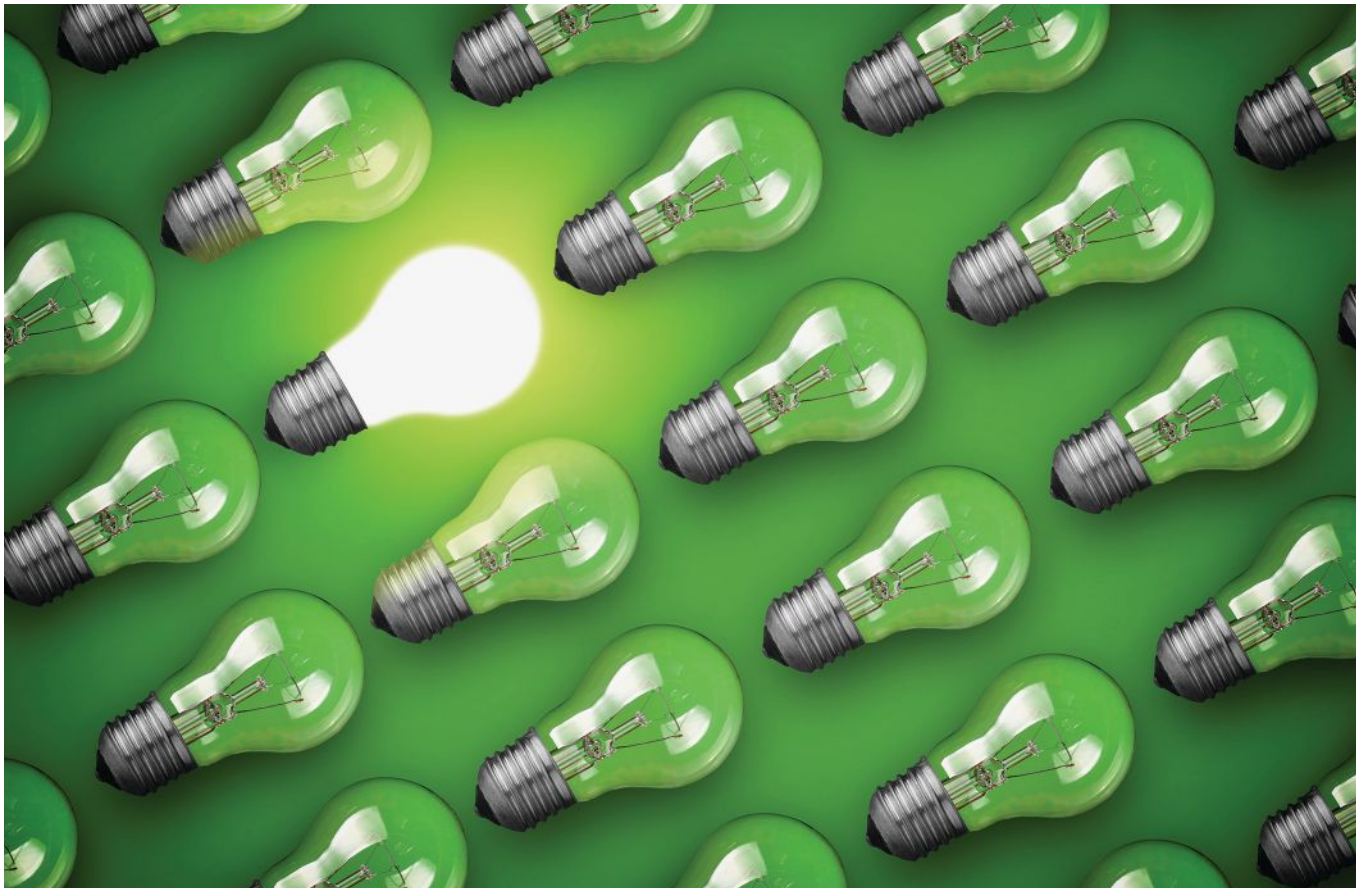
Trust, Risk and Failure

Creating and Sustaining Innovation in Army Culture



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By Col. Gregg Thompson and **Col. Charles D. Allen,** U.S. Army retired

While the Army is touted as the world's best-trained and best-equipped land force, it must learn and adapt or risk failure in providing national security for an uncertain future. Changing culture and sustaining our competitive advantage will require skilled professionals who know how to promote and protect innovation within the ranks.

The core issue may be sustaining innovation in Army organizations, not simply becoming more innovative. Specifically, how should Army leaders address the need for innovation—a notion that inherently conflicts with the larger cultural factors that contribute to the Army's success as a military force?

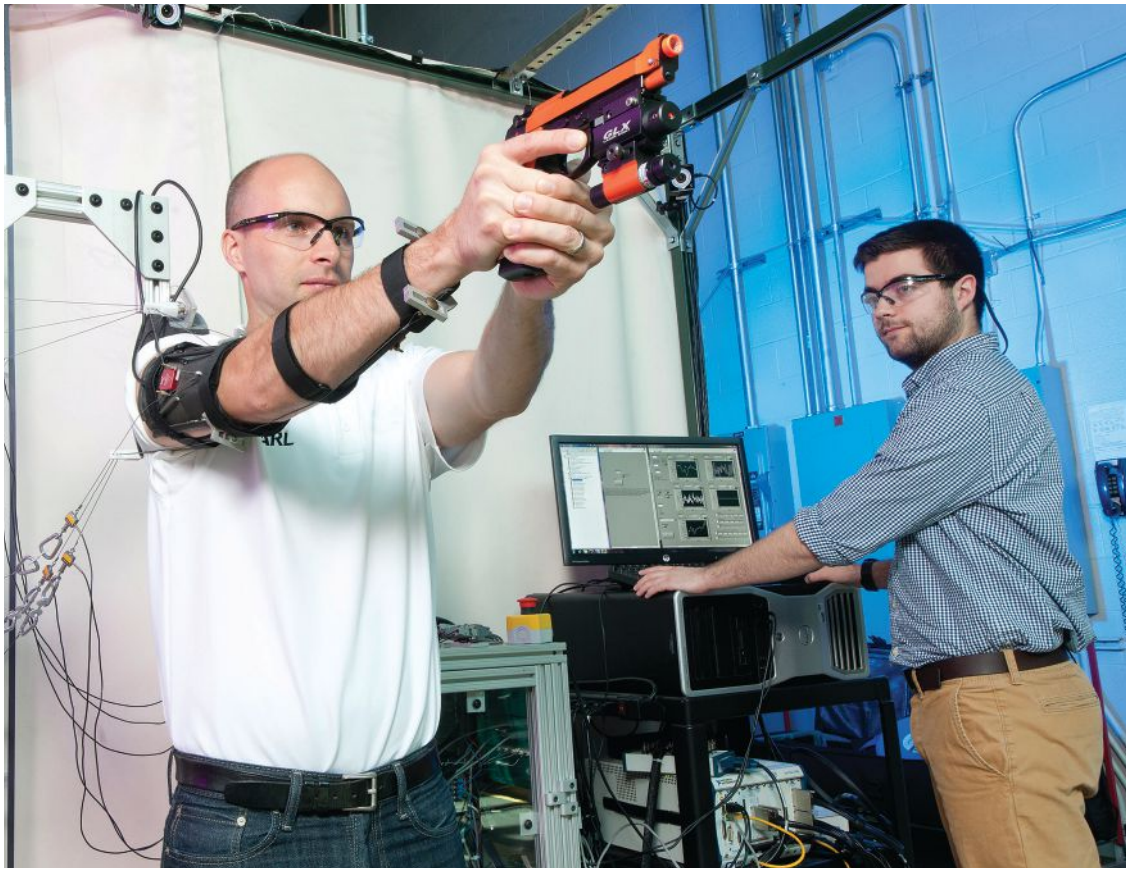
In the professional dialogue on the future of the Army, few topics are discussed more than the need to foster innovation. In November 2014, then-Secretary of Defense Chuck Hagel announced the Defense Innovation Initiative to develop capabilities and capacities for the force of the future. Previous secretaries introduced similar efforts. DoD is consistent in its approach, most recently with the introduction of the Defense Innovation Unit Experimental (DIUx).

In practice, innovation can be organizational, including the introduction of a new doctrine, process, or agency such as DIUx; and/or institutional, with an intentional effort to change culture. Through innovation, targeted change may result in the creation of adaptable leaders as well as agile teams and organizations that align to meet the demands of a volatile and uncertain operating environment.

Resilient Military Cultures

Accordingly, discussions about organizations are fundamentally conversations about culture. Defense critics inside and outside of the profession debate whether the Army can become more innovative. It follows that Army efforts to become more innovative must begin with deliberate introspection of its culture. However, actions to enact desired change are often inhibited by existing practices and structures that are the essence of very resilient military cultures across DoD.

One can easily envision an out-brief session of an Army conference. Briefers present their PowerPoint presentations in a prescribed format, with a specific number of slides and a time limit to discuss creative approaches to strategic issues. Of course, the large Army conference room is arranged with senior



U.S. Army/Doug LaFon

Dan Baechle, left, a mechanical engineer at the U.S. Army Research Laboratory, tests a prototype of a device he designed to reduce arm tremors for marksmanship training.

leaders at the front table and subordinates arrayed behind them, organized in rows by rank and position.

This common picture is an example of the Army's strong hierarchical culture and demonstrates a dimension of organizational culture that social psychologist Geert Hofstede calls power distance. Hofstede identified cultures with high power distance as centralized, authoritative and hierarchical, with large supervisory staffs.

Members of high power distance cultures typically expect power and authority to be concentrated at the top of the hierarchy and distributed unequally among members. High power distance combined with the presence of cultural in-groups, another of Hofstede's organizational dimensions, influence how organizations develop, operate and ultimately innovate.

In-group collectivism reflects the degree of cohesiveness within an organization. Thus, the presence of in- and out-groups in high power distance cultures reinforces cultural norms contrary to those typically exhibited in highly innovative organizations. How often do Army leaders conclude their statements followed by "Hoo-ah," to which the collective response is a hearty, "HOO-AH!"? This happens reflexively and without challenge to the perceived consensus.

As organizational members seek to become part of in-groups, they often embrace established norms and accept unquestioningly the framing, problem definition and solutions to organizational challenges expressed by senior members of the hierarchy. All members understand it is important to "stay on message" and be team players. It's not surprising that traditional Army culture is often described as incongruous with the characteristics of innovative organizations.

In the institutional setting, highly cohesive cultures can inhibit the exercise of creative thinking principles. In a learning organization, subordinates should expect to appropriately challenge the assumptions, judgments and guidance of their senior leaders. For senior military leaders, managing the tension between these two cultural aspects can be more art than science. Army leaders can have the greatest influence in changing culture by shaping the climate at their specific location and level.

Trust and Openness, Risk-Taking

Swedish researcher Goran Ekvall's dimensions of climates for innovation in organizations provide a useful framework for military leaders. Two of these dimensions in particular—trust and openness, and risk-taking—illustrate items of leverage for the Army.

The trust and openness dimension in an innovative climate

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challenges the norms of a traditional military culture and its high power distance hierarchy. Members of organizations fostering innovation often thrive on a leader-member relationship that values open, critical dialogue. The climate is less dependent on compliance and centralized authority. It relies more on the expectation that every member of the team can and should challenge the ideas and directives of the organization. Every point of view is valued; members expect to be heard.

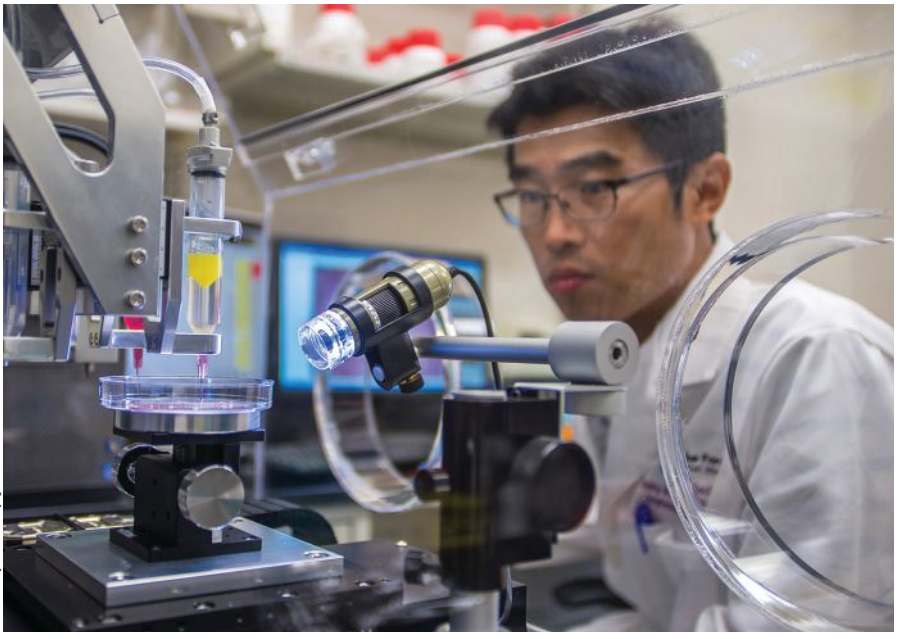
How amenable is Army culture to its members openly discussing institutional and organizational goals, and leader-determined ideas and outcomes? Do its members trust organizational leaders to value their contribution to the process? Imagine the organizational tensions if every member of a hierarchical bureaucracy expected their collective ideas to be considered equally. Local climates operate within the context of the more pervasive organizational culture. Thus, the dimension of trust and openness is an important component of the innovation climate within a creative organization.

The challenge for Army leaders is fostering this type of leader-member relationship within the parameters of its high power distance cultural norms. The problem is exacerbated by Army doctrine that is wholly commander-centric, with the untested assumption that commanders have knowledge and experience superior to that of all members within their commands.

Similarly, the risk-taking dimension of a climate for innovation describes organizations that are increasingly tolerant of and comfortable with failure. In fact, failure is an expected and valued outcome of innovation. The purposeful testing of ideas and prototypes to failure is fundamental to learning and innovative organizations—to make what decision theorist Paul J.H. Shoemaker calls "brilliant mistakes."

Candidly, the nature of the Army's underlying culture most likely will not fundamentally change but rather, continue to rely on high power distance and cohesiveness to accomplish its missions. The Army as an institution is too big and too anchored in the cultural dimensions that have brought it success. It is natural for an institution to seek stability and maintain success in its core competencies, so it will resist large-scale pressures to change the fundamental way that it gets things done.

U.S. Army/David Kamm



U.S. Army/Courtesy photo

Local Climates of Innovation

Perhaps one solution begins with an understanding of what the Army as an institution requires. Rather than attempting to make the entire Army and its basic culture more innovative, leaders should seek to create local climates of innovation within the existing culture.

By doing so, two approaches align to support the larger organizational goals. First, leaders throughout the Army must believe in the potential of their organization's ideas or new ways of doing things and therefore, be advocates for change. The Army aspires to be a learning organization and is openly seeking ideas and solutions through a number of initiatives and programs. Leaders who understand the value of innovative climates and are willing to underwrite the organizational risks inherently assume the responsibility to communicate the results to the larger

Top: An Army chemical engineer investigates biofermentation in gut bacteria; left: A research fellow works on a project to print experimental muscle tissue for reconstructive surgery.

U.S. Army/Kathryn Bailey

The Integrated Soldier Power and Data System, demonstrated here by an Army engineer, harvests energy to charge a battery that powers soldiers' wearable electronic equipment.

culture. Successful change requires advocates within the culture; most often, these champions must be leaders who fostered its outcome in the first place.

Second, a key recognition is that the Army can innovate within its existing culture. To do so requires leaders who understand and practice openness, build effective leader-member trust relationships, and accept risk-taking that will frequently result in failure for the sake of organizational learning and improvement. Learning and adaptation are the essence of Army leadership—officially defined as "the process of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization."

Thus, leaders throughout the force can create climates of innovation and pockets of innovation. The most impactful leaders may be the colonels and GS-15 civilian leaders. When organization and institution members see that new patterns of behavior are supported by local leaders and used to solve organizational problems, these patterns become part of the local subculture and have the possibility to change the existing organizational culture.

These "oil spots" of innovation will spread and connect with others. By aligning creative climates to the larger organization's purpose and objectives, the Army's culture will adjust to outcomes that provide value to those stakeholders whom the organization serves.

Military leaders naturally seek to understand the operational or strategic environment and their organization's role within it, and anticipate how the organization must adapt to changes in the environment. Innovation begins with Army leaders who seek opportunities to build teams and deliberately create an organizational climate that supports innovative culture norms—within existing organizations and subcultures.

Underwrite Risk, Empower Teams

Innovation within the organization is sustained by a climate where the leader is willing to underwrite risk and empower teams to challenge the norms, processes and assumptions of the status quo.

This coexistence of innovative climates within the Army's traditional culture requires leaders who understand the dynamics of both climate and culture, and who seek to exploit the value of each. This is the desired outcome of defense initiatives established by senior defense leaders over time—to establish pockets of innovative climates that work toward solutions unencumbered by the norms of the larger culture.

This concept is not new; examples abound in the Army's long history. From then-Lt. Col. George C. Marshall Jr.'s Benning Revolution in the late 1920s to the Rhino hedge-cutting device in Normandy, France, during World War II and the helicopter in the Korean and Vietnam wars, soldiers and units will organize quickly around ideas that improve the way that things get done.

Consider the onset of Operations Enduring Freedom and Iraqi Freedom. The rapid adaptation and synthesis of joint and interagency intelligence sources and processes, and development of improved sensors for threat detection and targeting, significantly changed how Army units employ lethal force today. People instinctively seek innovative ways to solve problems and will naturally adopt what works, provided organizational culture does not stifle or dismiss its unproven potential.

The Army can adopt this approach. Through the Army Warfighting Challenges, the Campaign of Learning and other initiatives to develop new solutions, the framework exists to identify needs and advocate the results. When done well, Army organizations can explore, find and produce the valued outcomes the force requires to sustain strategic advantage in the future operating environment. ★

This article reflects the opinions of the authors and not necessarily those of the U.S. Army War College, Department of the Army or DoD.

2017 ARMY Magazine
SFC Dennis Steele Photo Contest

Sponsored by the Association of the U.S. Army

The Association of the U.S. Army is pleased to announce our annual photo contest, named to honor the memory of *ARMY* senior staff writer and photographer Dennis Steele. Amateur and professional photographers are invited to enter.

The winning photographs will be published in *ARMY* magazine, and the photographers will be awarded cash prizes. First prize is $500; second prize is $300; third prize is $200. Those who are awarded an honorable mention will each receive $100.

'Prayer Before Mission' by Crystal Stupar was a 2016 SFC Dennis Steele Photo Contest honorable mention.

Entry Rules:

1. Each photograph must have a U.S. Army-related subject and must have been taken on or after July 1, 2016.
2. Entries must not have been published elsewhere.
3. Each contestant is limited to three entries.
4. Entries may be 300-dpi digital photos, black-and-white prints or color prints. Photographs must not be tinted or altered or have watermarks.
5. The minimum size for prints is 5 x 7 inches; the maximum is 8 x 10 inches (no mats or frames).
6. The following information must be provided with each photograph: the photographer's name, address and telephone number, and a brief description of the photograph.
7. Entries may be mailed to: Editor-in-Chief, *ARMY* magazine, 2425 Wilson Blvd., Arlington, VA 22201, ATTN: Photo Contest. Send digital photos to armymag@ausa.org.
8. Entries must be postmarked by Sept. 15, 2017. Winners will be notified by mail in October.
9. Entries will not be returned.
10. Employees of AUSA and their family members are not eligible to participate.
11. Prize-winning photographs may be published in *ARMY* magazine and other AUSA publications up to three times.
12. Photographic quality and subject matter will be the primary considerations in judging.

For more information, contact armymag@ausa.org • *ARMY* magazine, 2425 Wilson Blvd., Arlington, VA 22201

Operationalizing Materiel

Times change. The world evolves. Leadership transitions. Great organizations adapt. Such is the case with our U.S. Army. To address new threats and the security environment around the globe in support of the National Military Strategy, our Army leadership set priorities and aligned operations, shifting to the Sustainable Readiness Model and Multi-Domain Battle concept.

The U.S. Army Materiel Command, the Army's materiel integrator, is adapting alongside it, fully nested with the chief of staff of the Army's priorities. In conjunction with the U.S. Army Forces Command and the U.S. Army Training and Doctrine Command (TRADOC), Army Materiel Command rounds out the triad that ensures the Army remains the best-staffed, best-trained and best-equipped fighting force in the world.

The exceptional commanders before me assembled the modern Army Materiel Command and expanded our focus to be regionally aligned with forward-support units in support of combatant commanders. Now, as the Army adapts to the current environment to address today's threats and prepare for the future, we have the tremendous responsibility of ensuring that the enterprise continues to operate in a supporting role. Through three main priorities—strategic readiness, the future force, and soldiers and people—directly aligned with those of Army leadership, Army Materiel Command will synchronize, integrate and operationalize the capabilities of our nine major subordinate commands in support of Army requirements.

Vision, Time, Resources Required

Operationalizing the command is a process requiring vision, time and resources. It requires commanders across the materiel enterprise to think outside of, and bigger than, their own organization. It requires an understanding, knowledge and appreciation of the capabilities of organizations across the Army, and the best methods and approaches of synchronizing and coordinating across those capabilities to achieve objectives. It requires identifying and assessing risk, and providing decision space for senior leaders to maneuver and determine appropriate courses of action. It requires a total team effort—a humbleness and adeptness—to identify and reach out to the right organization to lead an effort, not just the organization that traditionally handled it. It requires focusing our efforts and the hard work of the total team on outputs and end states—not the ways and means to get there.

My counterpart at TRADOC, Gen. David G. Perkins, explained Multi-Domain Battle as a concept that "advances the proven idea of combined arms into the 21st-century operational environment

Support to the Army

By Gen. Gus Perna

Bradley Fighting Vehicles of the 3rd Armored Brigade Combat Team, 4th Infantry Division await shipping from Germany to Poland as part of Operation Atlantic Resolve.

U.S. Army/Staff Sgt. Micah VanDyke

by describing how future ground combat forces working as part of joint, interorganizational and multinational teams will provide commanders the multiple options across all domains that are required to deter and defeat highly capable peer enemies." By operationalizing Army Materiel Command in support of this concept, the materiel enterprise will do the same: Work across organizations to provide multiple options and solutions to equip and sustain our warfighters in support of mission success. We can accomplish anything together if there is no need to worry about who gets the credit.

Six strategic objectives chart the path to moving Army Materiel Command forward in support of the Army's priorities of readiness, the future force and people:

1 Sustainment Doctrine

As we look at doctrine, Army Materiel Command must be in a supporting role to TRADOC. Our materiel and sustainment doctrine must be aligned to reinforce and influence Army and joint doctrine. We will work across the materiel enterprise, with the Department of the Army G-4 and the assistant secretary of the Army for acquisition, logistics and technology, to truly see ourselves. We must ensure our sustainment doctrine is both current and adaptable, comprehensive while agile and ultimately, right. This will set the foundation for sustaining units to fight and win.

2 Sustainable Readiness

The Sustainable Readiness Model reduces readiness "peaks and valleys" in our formations and allows our forces to respond whenever, wherever needed. For the model to work, our soldiers and units must once again take responsibility for maintaining and sustaining their equipment; no longer can our forces rely on contractor support or field service representatives to provide sustainment in garrison or on the battlefield.

Our soldiers need a sense of pride and ownership of their equipment. To achieve sustainable readiness, leaders must enforce standards and discipline, be experts in our processes, and ensure soldiers across the formation are trained and equipped to sustain on the battlefield. We have the tools to meet this objective. This strategic objective drives us forward in making sustainable readiness a core function of our Army once again.

3 Materiel Readiness

As the Army's lead materiel integrator, Army Materiel Command manages the global supply chain, and synchronizes logistics activities across the Army. While automation and tools such as the Materiel Common Operating Picture have enabled com-

Tanks are moved from a rail classification yard to storage at Sierra Army Depot, Calif.

U.S. Army/Sgt. 1st Class Michael Zuk

U.S. Army/Sgt. Brian Calhoun

An AH-64D Apache is readied for an exercise.

manders to gain predictive readiness and an unmatched view of materiel across their units, we still have room to mature our systems and find efficiencies across the supply chain.

We can start by working closely with the Defense Logistics Agency to streamline our warehouses and stocks. We have equipment now to fill shortages across the Army's formations, but we must be able to identify it, maintain it in a ready state, process and move it to the appropriate units quickly and cost-efficiently. Doing so will also give us a better picture of, and allow us to divest, the excess on hand that is both a readiness distractor and resource drain.

We must also align workload in our depots, arsenals and ammunition plants to unit readiness, rapidly acquiring capabilities to meet materiel and sustainment needs while divesting those systems no longer required. Working toward a ready Army means we must get even better across our supply chain.

4 Force Projection

Our military's strategic advantage remains our ability to overcome the logistical difficulties inherent in projecting our forces forward and sustaining them. Yet no one organization or commander has full responsibility for the force projection process. Combatant commands determine requirements. Forces Command organizes forces for deployment. The U.S. Transportation Command coordinates and provides the means for movement. Army Materiel Command, meanwhile, owns the logistics readiness centers that manage the projection, providing the critical link to pulling it all together.

Our Army is better served and, more importantly, ready when we can synchronize force projection, including resourcing and prioritization, and effectively, efficiently and quickly deploy our forces forward to achieve Army objectives.

5 Battlefield Sustainment

Our Army needs the organic ability to deploy, execute missions, and sustain ourselves on the battlefield. We must plan, synchronize and integrate, and then be able to echelon sustainment and distribution in support of our maneuver formations.

Effective Mission Command enables Army Materiel Command to optimize battlefield sustainment and solidify a single "face-to-the-field" through the U.S. Army Sustainment Command. ASC is the materiel executor synchronizing, integrating and prioritizing readiness capabilities. Their Army field support brigades provide brigade combat team commanders with a single point of entry into Army Materiel Command's expansive

portfolio of capabilities, increasing responsiveness to warfighter needs and requirements, and our Army's ability to sustain at the point of need.

6 Materiel Development

From research and development to contracting, and sustainment to final disposition, Army Materiel Command touches every phase of the materiel life cycle. We are the primary executor of the Army's science and technology budget, with 12,000 scientists and engineers developing next-generation technologies that will equip our forces for years to come. Where we must improve is ensuring those technologies and developments match the true requirements on the battlefield and achieve an end state to defeat our adversaries. By aligning our science and technology investments and leveraging organic prototyping at our research, development and engineering centers, we save critical resources and, more importantly, deliver capabilities that our soldiers require.

Key to materiel development is factoring in sustainment costs that will add up over the course of equipment's life cycle up front in the acquisition process. The best opportunity to affect life cycle cost is in the design phase of the system; sustainment must be addressed in all materiel requirements documents and during all phases of development.

It has been said that nothing will ever be attempted if all possible objections must first be overcome. If we wait for 100 percent concurrence and consensus to move forward, progress will be slow and readiness will stall. The conditions are set to move now.

A focus on these strategic objectives ensures our output—the hard work of the 64,000 dedicated professionals who make up Army Materiel Command—is aligned to meet Army requirements. My intent for Army Materiel Command is to sustain the current-to-future force by utilizing state-of-the-art technologies, materiel life cycle support and integrated logistics while ensuring materiel and technological overmatch. These lines of effort help us achieve that goal.

Readiness is the Army's No. 1 priority, and materiel readiness is the reason Army Materiel Command exists. We will synchronize and integrate our total capabilities in support of Army requirements and objectives, and aligned with our partners at TRADOC and Forces Command. ★

Soldiers at Military Ocean Terminal Sunny Point, N.C., prepare to move a 45-vehicle convoy to McAlester Army Ammunition Plant, Okla., as part of Operation Patriot Bandoleer.

U.S. Army/Sgt. Eben Boothby

Gen. Gustave "Gus" Perna *assumed duties as the 19th commanding general of the U.S. Army Materiel Command in September. Before that, he was deputy chief of staff, G–4. Previous assignments include deputy chief of staff, G–3/4, U.S. Army Materiel Command; commander, Joint Munitions Command and Joint Munitions and Lethality Life Cycle Management Command; commander, Defense Supply Center Philadelphia, Defense Logistics Agency; and commander, 4th Sustainment Brigade. Key staff assignments include director of logistics, J4, U.S. Forces–Iraq, and Division Support Command executive officer and G–4, 1st Cavalry Division. He is a graduate of Valley Forge Military Academy, Pa., the University of Maryland and the Florida Institute of Technology.*

Reinforcing a Globally Engaged Army

U.S. Army/Maj. Randall Stillinger

An AH-64 Apache from the Texas Army National Guard's 36th Combat Aviation Brigade practices aerial gunnery at Fort Hood, Texas.

By Rick Maze, Editor-in-Chief

The U.S. Army may be at a critical turning point, with promises of more troops, more modernization and more money. More commitments might also be coming as a Trump-era foreign policy takes shape.

Already, the Army began 2017 with almost 182,000 soldiers deployed in 140 locations in support of eight named operations. Major operations include dismantling the Islamic State in Syria and Iraq; denying safe haven for Islamic extremists in Afghanistan; supporting NATO's collective security in Europe; expanding partnerships with allies in the Pacific; conducting security cooperation operations and working with partner armies in South America; and deterring transnational threats in Africa while promoting regional security and stability, and strengthening interagency and international partnerships.

Daniel Goure of the Lexington Institute, an Arlington, Va.-based nonprofit public policy research group focused on national security issues, uses the phrase "perfect storm" to describe the situation.

"Today, the U.S. Army faces the proverbial 'perfect storm' consisting of ever-increasing demands, ever-more capable threats, and a shrinking force structure and continuing budget strictures," Goure writes in a Lexington Institute research paper, "Near-Term U.S. Army Modernization: Buying What Is Available and Buying Time."

"In this new world, the U.S. Army is at a high risk of being outnumbered, outgunned and outmaneuvered by prospective adversaries."

The force structure may, for now, have ceased shrinking as a result of the 2017 National Defense Authorization Act that stopped and even slightly reversed the Army's troop drawdown.

Soldiers with the 3rd Cavalry Regiment conduct field artillery operations in Afghanistan.

U.S. Army/Capt. Grace Geiger

The Army might even grow, as the Trump administration has talked of ramping up the Regular Army to 540,000 soldiers instead of the 476,000 previously planned.

Troop numbers, though, aren't the full picture. Since the end of the Cold War, Goure writes, the Army has been reducing critical capabilities based on what was expected to be a reduced threat, improved technological superiority of U.S. weapons systems, and the belief there would be no serious challenge to U.S. naval and air superiority.

Things didn't work out as planned, however. Reductions left the Army with key capability gaps, and naval and air superiority has eroded because of improved military capabilities by other nations. The Army, Goure writes, has ended up with urgent operational needs and lacks funding for what he calls a "sensible modernization program."

Goure cautions that extra troops could add as much as $8 billion to the Army's annual costs. "Organizing, equipping and supporting the additional units could easily double this figure," he writes.

World 'Awash in Change'

Defense Secretary James Mattis, the retired Marine Corps general chosen by Trump to head the Pentagon, said at his January confirmation hearing that the world is filled with security challenges and is "awash in change."

"Our country is still at war in Afghanistan, and our troops are fighting against ISIS and other terrorist groups in the Middle East and elsewhere," said Mattis, who was sworn in as defense secretary on Jan. 20. "Russia is raising grave concerns on several fronts, and China is shredding trust along its periphery. Increasingly, we see islands of stability in our hemispheres, democracies here in Europe and Asia under attack by non-state actors and nations that mistakenly see their security in the insecurity of others. Our armed forces in this world must remain the best-led, the best-equipped and the most lethal in the world."

Retired Army Lt. Col. Andrew F. Krepinevich of the Center for Strategic and Budgetary Assessments similarly warns the U.S. is at "a strategic inflection point," facing challenges "on a scale not seen since the Cold War, and arguably not experienced over the past century." Writing in a January report "Preserving the Balance: A U.S. Eurasia Defense Strategy," Krepinevich, who is a distinguished senior fellow at the defense policy group he founded in 1993, says U.S. military dominance is being challenged, and the U.S. has lost its nuclear monopoly over countries in the developing world.

Further, the proliferation of advanced military-related tech-

nology produces what he calls the democratization of destruction "that finds even small groups with the potential to inflict damage far exceeding what comparably sized groups were able to do a generation ago."

A January national security report from the RAND Corp. says the U.S. "is in many ways in an enviable position compared with its rivals" because "the nation faces no certain existential threat." There are potential threats to the U.S.'s very existence from China and Russia, but both countries are "ambiguously both adversaries and partners—though recently, both appear to be moving more firmly into the adversary camp," RAND says in the report "Strategic Choices for a Turbulent World."

Still, "the only unalloyed U.S. adversaries are North Korea and violent jihadist movements, as expressed by ISIS, al-Qaida and related groups."

Large Deployments to Europe

Russian aggression in Eastern Europe has resulted in renewed discussion about committing more resources to Europe. Already, the pace of exercises and training has increased, with large rotational deployments. There is also talk, at least on the political level, of permanently basing more U.S. Army units in the theater, possibly in the Baltics.

Short of permanent basing, the U.S. has a commitment through 2020 to train and advise Ukrainian security forces and is engaged in rotating an armored brigade combat team through Europe.

Army Gen. Curtis M. Scaparrotti, U.S. European Command commander and Supreme Allied Commander Europe, said the January rotation of the 3rd Armored Brigade Combat Team of the 4th Infantry Division to Eastern Europe marked a historic moment.

"It is great to see our Army at the front, integrated with the combined and joint air and naval forces of the United States, our allies and partners," he said.

As the nine-month deployment began, Col. Christopher R. Norrie, the brigade commander, said the mission was deterring aggression. "No one wants a conflict in this part of the world, and we are looking forward to our role in helping prevent it," he said.

"The prospect of fighting a near-peer adversary today—not just here but anywhere in the world—is concerning," Norrie said, suggesting "increased access to technology, an emphasis on combined arms doctrine, and the ability to simultaneously exploit vulnerabilities across multiple domains offset our capabilities in ways that are difficult to anticipate."

The pace of deployments related to Joint Multinational Training Group-Ukraine's efforts to create and expand training capacity for Ukrainian forces is expected to increase in 2017. Initial focus has been on direct training by U.S. soldiers of

U.S. Army and Kuwaiti land forces engage targets during an exercise near Camp Buehring, Kuwait, that also involved air forces.

U.S. Army/Sgt. Aaron Ellerman

A U.S. soldier exits an armored vehicle during training in Yavoriv, Ukraine.

U.S. Army/Staff Sgt. Elizabeth Tarr

Ukrainian troops, but the long-term effort is to create a dedicated cadre for a combat training center at the International Peacekeeping and Security Center near Yavoriv.

Russia had been improving relations with the U.S. before its use of military might in Ukraine in 2014, but the country has been working against U.S. policies involving Syria, Iran and China and is forming a closer relationship with Turkey, a NATO member and onetime close ally of the U.S.

Krepinevich, of the Center for Strategic and Budgetary Assessments, warns that Russia is a major power. "Today Russian conventional forces, while modest in comparison with those of the Soviet era, are significantly more formidable than those of the early 2000s. Moscow now boasts a larger army than any European power, while its submarines deploy to areas where they had not been seen for a decade or more," he writes in his January report.

Army Lt. Gen. Stephen Townsend, Joint Task Force Operation Inherent Resolve commander, said while the situation is different in Iraq and Syria, it is also, in some regards, the same.

In a December teleconference, Townsend said the international coalition countering the Islamic State group made progress in 2016, but the battle is far from over. In 2014, the effort concentrated on "helping our partners halt ISIL's relentless onslaught," he said, referring to the Islamic State of Iraq and the Levant. In 2015, the coalition focused on "helping the government of Iraq and our partners in Syria defend, while they organized and built or rebuilt their forces and began to counterattack." In 2016, the campaign was "all about the counteroffensive, liberating terrain and the population in Iraq and Syria from the clutches of ISIL's brutal control."

Islamic State Degraded

The result, he said, is the Islamic State's military capacity is degraded. Its propaganda is less effective. The organization's capabilities are reduced while capabilities and resources of the Iraqi security forces and Syrian partner forces "continue to grow."

While not providing specific troop levels, Townsend said the U.S. will be sending additional teams in the future to advise, assist and train. In a subsequent interview with Kimberly Dozier for *The Daily Beast*, Townsend said it would take about two years for the coalition to defeat Islamic State forces in Iraq and Syria.

A complex and potentially dangerous situation remains, with reports that North Korea has intercontinental ballistic missiles capable of being fired from mobile launchers, a new wrinkle in facing the unpredictable Kim Jong Un. Mobile launched missiles are likely to have a shorter range than the ICBMs previously tested by the regime, but they require more careful monitoring. ★

The New Threat

Air and Missile Defense for Brigade Combat Teams

U.S. Army/Spc. Ken Scar

By Brig. Gen. Christopher L. Spillman and **Lt. Col. Glenn A. Henke**

A mechanized battalion task force secures a river crossing while engineers construct bridging sites. Meanwhile, an enemy unmanned aerial system hovers undetected just above the trees, sending video to a nearby control station. The enemy ground controller relays the information to a command node, which coordinates to launch two cruise missiles from a ship several hundred kilometers away. An enemy fighter aircraft also receives the target location and plots an attack route.

The battalion receives word from the brigade cavalry squadron that an unmanned aerial system is likely operating nearby, based on intelligence gathered from assigned Prophet signals intelligence teams. The battalion alerts Bradley sections assigned as air scouts to scan for aerial platforms. They then visually acquire and destroy the UAS with their 25 mm cannons. Meanwhile, cavalry scouts and Prophet teams fix the location of the ground control station at a named area of interest and call for fire from an M777 howitzer battery.

At the same time, an air defense artillery platoon engagement operations cell with the brigade tactical command post acquires two cruise missiles and the fixed-wing aircraft from Sentinel radars. A multimission launcher fires AIM-9X missiles over the river crossing and intercepts the cruise missiles several kilometers away. Another launcher, 15 kilometers from the engagement operations cell, engages and destroys the fixed-wing aircraft before it releases ordnance on the crossing site.

This scenario provides a snapshot of future threats against Army formations. American forces have operated free from fixed- and rotary-wing attack for decades. But technology proliferation, combined with doctrines intended to deny the full range of U.S. capabilities access to contested areas, challenge fundamental assumptions about the joint force. Air supremacy is no longer a given, and emerging technologies demonstrate the potential to operate outside the detection capabilities of U.S. platforms even when we retain air superiority. The Army's challenge is to adapt to this operating environment.

The Army has the ability today to mitigate the threat of small and medium Group 1 and 2 UAS through the application of Army doctrine and effective employment of current organic capabilities. In the future, we will have the capability to defeat the large through largest Group 3-5 UAS and cruise missiles. The joint counter-air framework in Joint Publication 3-01: Countering Air and Missile Threats provides the structure for adaptation by focusing efforts on active defense, passive defense and attack operations. Traditional security operations and electronic warfare, when combined with lessons learned defeating enemy networks, are directly applicable to the counter-UAS fight. Finally, the multimission launcher enabled by the Integrated Air and Missile Defense Battle Command System will provide the most capable short-range air defense in the Army's history.

The Current Situation

The new threat consists of traditional rotary- and fixed-wing aircraft, now equipped with weapons release ranges beyond the

reach of Stinger missiles. Additionally, cruise missile proliferation allows adversaries to target support areas and other force concentrations. Finally, UAS proliferation poses two distinct threats to the Army. Group 1 and 2 systems can be used as reconnaissance and airborne improvised explosive devices.

These systems are commercially available, and their small size with minimal heat signatures challenge radar detection and infrared acquisition. Despite their ubiquity, their main use will remain surveillance since their limited payload would have a comparable effect as a single mortar round, rendering them ineffective against an Army formation conducting offensive operations.

Groups 3-5 are comparable to U.S. systems in many respects for surveillance capabilities and lethal attacks. Recent operations in Iraq, Syria and Ukraine provide examples of how adversaries can employ these systems against ground forces.

U.S. Army short-range air defense capability in the active component consists of four Avenger batteries: two batteries organic to composite air defense artillery battalions; and two batteries assigned to the counter-rocket, artillery and mortar battalions. The Army National Guard has seven Avenger battalions, which execute the enduring national capital defense mission and support other homeland defense missions. Brigade combat teams and divisions maintain air defense and airspace management cells.

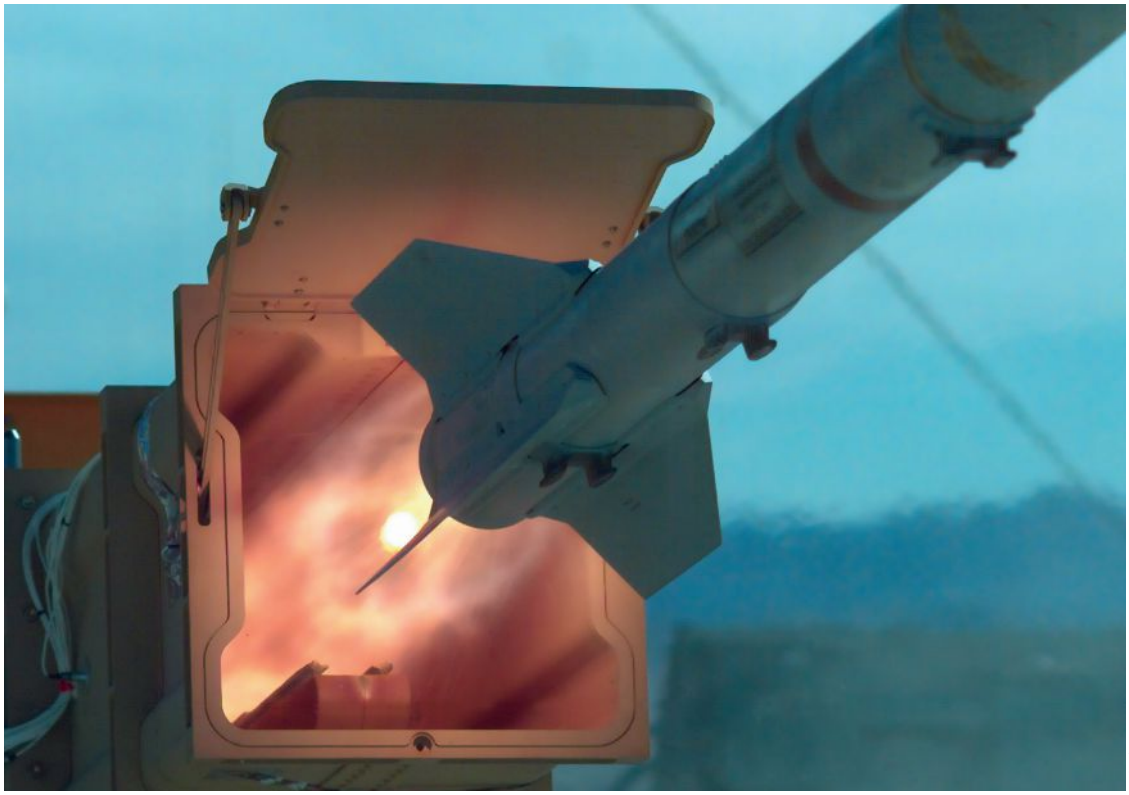
Four of the Army's 15 Patriot battalions are forward stationed, while the remaining 11 battalions execute three enduring U.S. Central Command deployments and Global Response Force missions. Although Patriot battalions have capability against cruise missiles and fixed-wing aircraft, this force has become primarily focused on the tactical ballistic missile threat.

The Army's challenge is to adapt and maintain advantages in light of the rapidly evolving air threat. The joint counter-air framework provides a structure for this adaptation with offensive and defensive counter-air operations, as outlined in Joint Publication 3-01. Offensive counter-air includes attack operations (most applicable to Army operations), along with suppression of enemy air defenses, fighter escorts and fighter sweeps. Defensive counter-air operations are divided into active and passive air and missile defense, both of which apply to Army operations.

Attack operations defeat threats before they launch. Brigade combat teams are uniquely qualified to execute these missions and are arguably the optimal formations to defeat Group 1 and 2 UAS. Security operations are the cornerstone of attack operations since the counter-UAS fight is a counter-reconnaissance fight.

Given the limited range of Group 1 and 2 UAS ground control stations, adversaries operating these systems must operate inside a brigade's area of operations. Brigades disrupt enemy UAS operations by developing named and targeted areas of interest, leveraging organic signals intelligence capabilities, and maintaining control of the area of operations through patrolling. Cavalry squadrons operating with the brigade military intelligence company, electronic warfare assets and field artillery battalions are ideally postured to win the offensive counter-air fight.

Defensive counter-air operations consist of active and passive defense. Passive defense measures include detection and warning (such as rocket, artillery, mortar-warn), camouflage, concealment, hardening, dispersion and mobility. While some of these skills have atrophied, they can be trained in home station and combat training centers. Most passive defense measures are the disciplined adherence to field standards. Reintroducing modern air threats to the training centers will serve



U.S. Army

The multimission launcher will dramatically increase short-range air defense capability against cruise missiles and larger unmanned aerial systems.

U.S. Army

Mounted on a medium tactical truck, the multimission launcher can rotate 360 degrees and elevate to 90 degrees.

as the forcing function for passive defense and provide commanders immediate feedback on effective implementation.

Active Defense

Joint Publication 3-01 defines active defense as "direct defensive action taken to destroy, nullify or reduce the effectiveness of air and missile threats." For short-range air defense operations, the Army divides this into non-dedicated air defense and dedicated air defense artillery assets. Non-dedicated air defense is also known as Combined Arms for Air Defense, as outlined in Army Techniques Publication 3-01.8.

Bradleys, tanks, Apaches and nearly every non-missile weapon can defeat Groups 1 and 2 UAS, which are unlikely to be acquired by Stinger missiles due to their low heat signature. While this requires additional training and development of specific aerial gunnery tables such as those conducted by divisional short-range air defense battalions prior to 2003, these simple solutions can be implemented immediately across the force.

For dedicated air defense artillery forces, the Army faces a dramatic force structure challenge. Geographic combatant commanders' demand for Patriots exceeds inventory, limiting the acceptability of shifting this force structure to short-range air defense. Since a full exploration of force structure exceeds the scope of this article, we will instead discuss emerging capabilities available to the Army for employment as determined in future iterations of the Total Army Analysis process.

The most significant of these emerging capabilities is the multimission launcher (MML), developed for the Indirect Fire Protection Capability program. The MML is part of Increment 2, Block 1, focused on defense against UAS and cruise missiles. (Enhanced counter-rocket, artillery and mortar capability is included in Block 2.)

The platoon is the MML unit of employment and consists of four launchers with a total of 60 missiles. The MML leverages existing Sentinel radars, existing interceptors (the AIM-9X Sidewinder in Block 1) and the Integrated Air and Missile Defense Battle Command System (IBCS) as the Mission Command system. This use of existing major end items provides significant risk reduction and allows the Army to "plug and play" MML units into existing formations. Brigade combat team air defense and airspace management cells will eventually receive IBCS engagement operations cells, enabling them to enter the joint kill chain and provide additional force employment options.

The MML provides unique employment opportunities in support of Army forces. During testing at White Sands Missile Range, N.M., in 2016, an MML firing AIM-9X missiles defeated cruise missile targets at distances nearly four times farther than a Stinger missile. The MML received its radar feed from

a Sentinel operating nearly 10 km away, while the platoon engagement operations cell was located at a comparable distance from both the radar and the launcher. The MML also fired a Longbow Hellfire missile to defeat a UAS, along with four other existing missiles (Tamir, Stinger, Stinger with proximity fuse and the Miniature Hit-to-Kill missile).

Concept of Operations

Earlier, we described how a counter-air fight might unfold for a river crossing. The concept of operations for this mission would need to address attack operations, passive defense and active. By applying the joint counter-air framework, the operation might be described as follows:

Attack operations are a subset of security operations, employing the cavalry squadron and Prophet teams to find, fix and defeat enemy UAS ground stations in conjunction with indirect fires. Passive air defense measures prescribe actions to reduce aerial observation (cover, camouflage, concealment and deception), reduce the effects of attack (harden key assets, disperse formations, establish redundancy for key nodes) and provide early warning to units.

Active defense measures outline hostile criteria, provide airspace deconfliction procedures to protect friendly systems, and outline engagement authorities deconflicted with the inherent authorities of the joint force air component commander.

For non-dedicated air defense, the plan tasks specific units as air guards and describes fire control measures to restrict weapons effects to enemy platforms.

Dedicated air defense artillery consists of a Sentinel section, brigade air defense and airspace management cell, and an MML platoon with four launchers arrayed. Two Sentinel radars provide early warning and fire control data for the MML platoon.

The Army has a proven ability to adapt in the face of new threats, and the current evolution of air threats is no different. The first step is to integrate counter-air attack operations into the ongoing revitalization of Army security operations in order to disrupt UAS operations. Next, the Army must develop and resource aerial gunnery to provide non-dedicated air defense against Group 1 and 2 UAS platforms. Simultaneous to these efforts, the combat training centers must replicate modern air threats to force passive air defense and provide a live threat for training offensive and active defense.

The Army's adaptation to aerial threats must address short-range air defense units in support of maneuver forces. The multimission launcher enabled by the Integrated Air and Missile Defense Battle Command System will provide a dramatic increase in short-range air defense capability within the next five years against cruise missiles and larger UAS. The Army should explore options to accelerate this program so this capability can be provided to maneuver commanders sooner. Finally, the future of short-range air defense must include comprehensive force structure reviews. ★

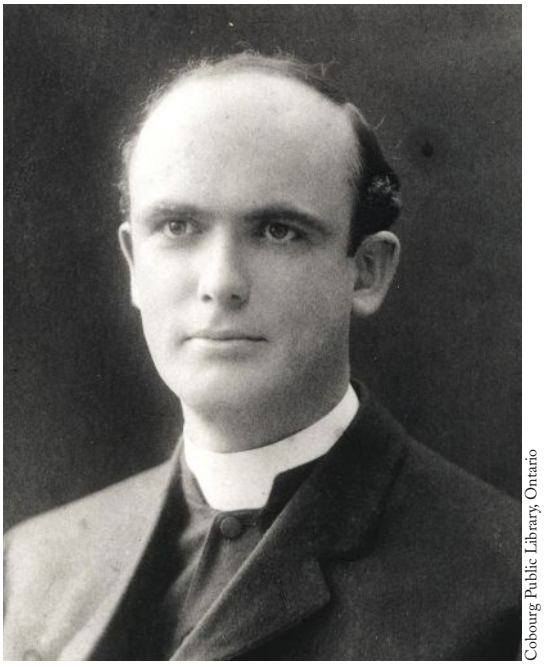
Brig. Gen. Christopher L. Spillman *is the commanding general of the 32nd Army Air and Missile Defense Command, Fort Bliss, Texas. He has served in divisional short-range air defense units in every officer leadership position from platoon leader to battalion commander, and commanded the 108th Air Defense Artillery Brigade, Fort Bragg, N.C. He holds a bachelor's degree from California State University; and master's degrees from the University of Saint Mary, Kan., and the U.S. Air War College.* ***Lt. Col. Glenn A. Henke*** *is the G-3 of the 32nd Army Air and Missile Defense Command. He has served in short-range air defense and Patriot units, most recently commanding the 1st Battalion, 43rd Air Defense Artillery Regiment, Fort Bliss. He holds a bachelor's degree from Seattle University; and master's degrees from Kansas State University and the U.S. Army Command and General Staff College's School of Advanced Military Studies.*

U.S. Army/John Andrew Hamilton

A Longbow Hellfire missile is fired at White Sands Missile Range, N.M., during testing of the multimission launcher.

WWI's 'Fighting Chaplain' Wielded Prayer

By Daniel J. Demers

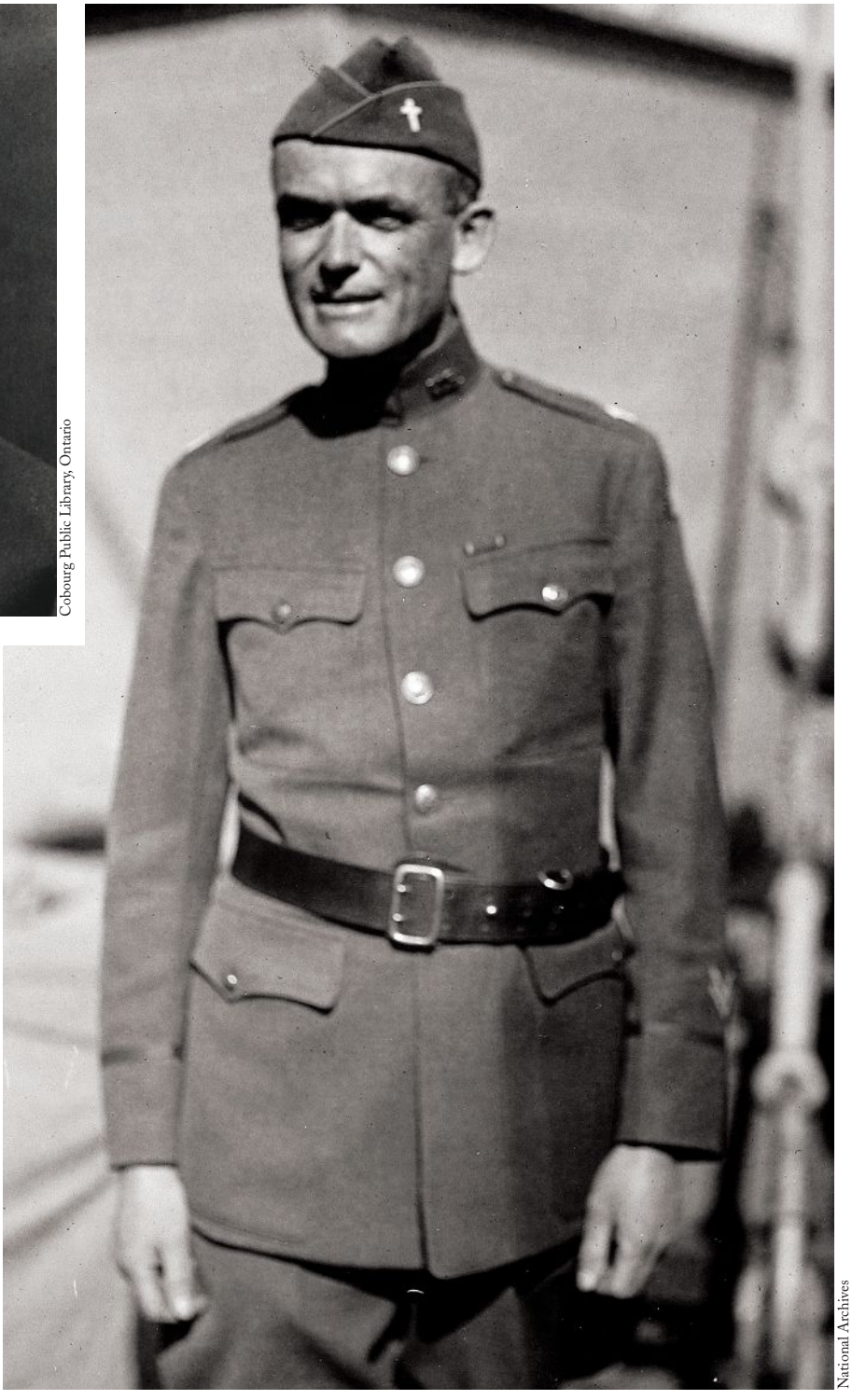


Cobourg Public Library, Ontario

The Rev. Francis Patrick Duffy is perhaps the best-known and most highly decorated chaplain of World War I. The Catholic priest and soldier served with the New York Army National Guard's "Fighting 69th" Infantry Regiment, putting himself into the thick of battle to minister to the injured and dying. As one young officer who served with Duffy in the French trenches noted, Duffy "forgot personal danger to serve his lads."

Duffy was born in Canada in 1871. Shortly after graduating from Toronto's St. Michael's College, he immigrated to New York City and taught at what is now Xavier High School before pursuing graduate studies at Catholic University in Washington, D.C. He was ordained in 1896.

His first military assignment was during the Spanish-American War. Duffy volunteered to serve as post chaplain at Camp Wikoff, located on Montauk Point, N.Y., because an outbreak of typhoid fever required a chaplain to tend to the spiritual needs of returning Catholic



National Archives

A Catholic priest, Francis Patrick Duffy served as an Army chaplain during the Spanish-American War and World War I.

soldiers. One historical account noted the duty was "dangerous and unglamorous," and Duffy "did not have a lot of competition for the slot." In fact, Duffy himself contracted the disease.

In 1898, at the conclusion of the war, Duffy was one of the first soldiers to welcome Col. Theodore Roosevelt and his Rough Riders home to New York.

Considered an Innovator

As a parish priest, Duffy was considered an innovator. In 1914 when he was pastor of New York City's Church of Our Savior, he established a nursery, or what was then called "a storeroom," to care for babies while their mothers attended church services, according to an article in *The Washington Herald*. That same year, Duffy, now a first lieutenant, was appointed chaplain to the New York Army National Guard's 69th Infantry Regiment, which was predominantly composed of Irish-Catholics.

In 1916, the unit was activated and deployed along the Mexican-American border to protect border towns from Mexican revolutionaries—especially Pancho Villa—who crossed into America and attacked Columbus, N.M. A year later, the regiment was called to duty as the 165th Infantry Regiment for service in World War I.

Within weeks of the U.S. declaring war against the Central Powers, Duffy was prominently mentioned in American newspapers. They reported that he was recruiting Catholics to join regiments that had Catholic chaplains. In a 1917 article in the *Kentucky Irish American*, Duffy expressed concern about a "haphazard distribution of recruits, without regard to religious" consideration, fearing "Catholic youths, torn entirely from Catholic surroundings, will drift away from the church."

A year later, the *New York Tribune* published a lengthy story extolling Duffy as a "heroic figure in the eyes of his men." One witness to his ministering said Duffy "appears to lead a charmed life" and when cautioned to be careful, he responds, "No Hun bullet can touch me." The article also said Duffy had given each soldier in the 69th a "metal cross about his neck." Just before the regiment left for France, someone gave Duffy several hundred dollars, and he used that money to buy the crosses.

'I Give Them Hell First'

The *Tribune* article also said to facilitate soldiers' confessions, Duffy had cards printed that contained French and English translations of various transgressions. He soon began to notice that a lot of soldiers preferred to go to French priests for confession rather than to Duffy. "All the French priests give is absolution," Duffy said. "I give them hell first."

First Lt. George Benz, who served with Duffy in the French trenches, recalled seeing the priest hearing the confession of "a little Irish private [while] the moan of the shells whizzing through the air furnished the doleful [background] music. … When men were facing and some meeting death every few minutes, you'd find Father Duffy. He was more than a father confessor to the men—he was their friend, their pal."

Benz also recalled seeing him "bending over a man who was gassed and lay in the mud struggling for air, frothing at the mouth. As the priest's hands closed over the fingers of the dying soldier, into the eyes soon to be closed to all worldly strife came a look of peace, of that great faith that sends a man smiling before his Maker."

National Archives

The Rev. Francis Patrick Duffy, center, returns home with the 165th Infantry Regiment after World War I.

National Archives

A statue of the Rev. Francis Patrick Duffy was erected in New York City's Times Square after his death in 1932.

Fellow chaplain Percy Edrop, who served with Duffy, wrote: "There was something in the manner of the man that bespoke his religious conviction. There was something in his frank smile and in his serenity that made one feel he would undergo any dangers, endure any hardships, give his life—if he could be of service."

He remembered Duffy's exploits in one 1918 battle: "Father Duffy spent the whole day on the battlefield. He bore men to shelter under a heavy machine gun fire. He cheered them by word and by example. He brought them comforts. He thrilled them by his disregard of danger."

During the war, the regiment fought in nine battles. More than 640 men died and another 2,000 were wounded. Duffy received the Distinguished Service Cross and Distinguished Service Medal from the U.S., and the Croix de Guerre and Légion d'honneur decorations from France. He retired as a lieutenant colonel.

The Soldiers' Hero

After the war, Edrop observed that Duffy was "the soldiers' hero" who had "caught the popular fancy." He "treated his job like a huge parish" and "took an interest in the families of all the men. He saw that the unemployed found work. He made the unruly behave." When men suffered from homesickness, he "went among them saying a cheery word here and there. He was at their service" and "succeeded in imparting to them his own buoyancy."

"He came back [from the war] with the affection of every man in the outfit," Edrop said. "Most of them, he knew by name."

In May 1919, about 25,000 people turned out in the rain to honor Duffy in a parade and ceremony in the Bronx, N.Y., as "a token of the honor and affection" in which he was held. Duffy had not wanted all of this attention, but local authorities and the Catholic hierarchy insisted he participate.

In December 1921, Duffy was once again feted by thousands at New York's legendary Hippodrome Theater. It was a joyous party to celebrate his 25th anniversary as a priest. He was forced to sit blushing "to the top of his glistening bald head" as U.S. senators, the archbishop and other orators honored the "fighting chaplain."

Duffy served the remainder of his life as pastor of Holy Cross Church in New York City near Times Square. He died in 1932 at the age of 62 and in 1937, a massive statue of him was unveiled at the north end of Manhattan's Times Square.

In 1940, his inspiring life was honored once again when Warner Bros. released the film *The Fighting 69th*. Actor Pat O'Brien portrayed Duffy as the chaplain who attempts to reform a misfit private played by James Cagney. ★

***Daniel J. Demers**, who served in the Nevada National Guard in the 1970s, researches and writes about 19th- and 20th-century events and personalities. He also owns and operates a sports bar in Guerneville, Calif. He holds a bachelor's degree from George Washington University, Washington, D.C., and an MBA from Chapman University, Calif.*

Army Fighting Phobia

Soldiers with the 1st Squadron, 33rd Cavalry Regiment, 101st Airborne Division train with Portuguese military police during a "fire phobia" mission rehearsal exercise at the Joint Multinational Readiness Center, Hohenfels, Germany. The soldiers learned how to maintain a defensive position when confronted with home-made incendiary devices and how to extinguish themselves safely. The exercise was in preparation for the Army's support of the NATO-led Kosovo Force to maintain stability in that country.

With Real Fire

Photos by Spc. Adeline Witherspoon

Family Readiness Groups

A family celebrates a soldier's return to Joint Base Elmendorf-Richardson, Alaska, from Afghanistan in 2011.

U.S. Army/Sgt. Tamika Dillard

By Rebecca Alwine, Contributing Writer

There comes a time in every Army spouse's journey when it's time to connect with a Family Readiness Group. For some it's a welcoming experience, complete with baked goods and a tour of the installation. Some spouses go looking for the group and find it desperately seeking volunteers or rebuilding itself. And there are plenty of spouses who avoid such groups altogether based on rumors and recommendations.

As the Army has transitioned over the last 20 years from training to deployment and back to training again, the Family Readiness Group (FRG) has transitioned as well. Senior leaders who have seen the ebb and flow of involvement say these groups remain necessary. Spouses who rely on unofficial Facebook pages for information may be surprised to learn their unit actually has an FRG.

"The spouse-led, secret Facebook pages may be a great place

Remain Essential

to learn about schools and housing, but they aren't going to give official unit information," said Patty Barron, director of Family Readiness at the Association of the U.S. Army. FRGs are the place for that, and they are easy to find through an official website or via official social media sites.

According to the FRG Leaders' Handbook, the FRG is an official Army program that falls under Army Regulation 600-20. The purpose varies depending on the level at which it is organized. The group's mission includes acting as an extension of the unit in providing official command information, offering mutual support between the command and families, advocating for the efficient use of community resources, and helping families solve problems at the lowest, and easiest, level possible.

Commander's Program

The Family Readiness Group is ultimately a commander's program. So while it is run and supported by family members, the responsibility for it is managed by a unit commander. The company commander is the major supporter of the FRG. AR 600-20 requires that an FRG be maintained, with the caveat that its services be appropriate to the needs of the unit. This is why there are so many interpretations of the role such a group should play.

Units with high deployments generally have dynamic Family Readiness Groups, with monthly meetings, fundraisers, and active email and phone communication methods.

"The most important component of the FRG is to provide social and emotional support during family separations," said Heather Kline, a Navy veteran and the wife of Lt. Col. Sam Kline, who is stationed at NATO Supreme Headquarters Allied Powers Europe in Belgium. "The support of the FRG is invaluable for constant and consistent communication," she said, and also so families will feel comfortable reaching out.

Training units take a different approach. When some soldiers go into Initial Entry Training, family members are authorized to move with them. In those cases, FRGs teach these families about the Army lifestyle and the resources available to them.

"We have Army Community Services come once a quarter and present a program called Smooth Move to help these new spouses figure out their first move after training is completed," said Melanie Strate, a former FRG leader of a training company at Fort Huachuca, Ariz.

"We try to mentor the student spouses and explain all of the benefits that are available and all of the resources at their fingertips," she said. "It's a lot of information in a short period of time but hopefully, when they move they can find what they need."

Volunteer Involvement

Three years into her now 10-year marriage, Kline retired from the Navy as a lieutenant commander after more than 22 years of service and found herself with more time to devote to her community. She reached out to an FRG, volunteering as a group leader at the U.S. Army Special Forces Underwater Operations School in Key West, Fla., where her husband was in command. It's common for command spouses to take the leadership role in FRGs, but it is not required.

"I am eager to give back and share my leadership experience, and I care about military families," Kline said. "I feel it is my duty not only to myself, but to continue to serve our larger military family."

Involvement in an FRG is voluntary. A commander cannot force family members to attend anything or put their names on a distribution list. Some spouses may avoid FRG contact because of rumors of drama. Unfortunately, there is no way to dispel these rumors, especially with the proliferation of social media. Meanwhile, working spouses have a hard time attending activities during the day and struggle to balance attendance at an FRG event with family time in the evenings. There is no way to please everyone and when participation is down, a group can dissolve quickly.

"We were involved in the FRG and it was wonderful—very informative and fun," said Nicole Bushnell, the spouse of an NCO, about her family's post in Alaska.

"But when there was a leader change, conflict and drama began and my husband didn't want me involved with it anymore," she said. "It was so stressful to have that conflict during deployment."

'An Essential Backbone'

Drama notwithstanding, Kline said FRGs will always be needed. "They are an essential backbone to military service as a whole, and I'm truly honored to have served as an FRG leader and would gladly serve again," she said. "I will always remain close to the FRG and do my part as a family member. It's the nature of the FRG to keep us all connected, safe and secure while our service member is doing the hard work for our nation."

Lauren Riley, who lives with her husband, a staff sergeant, in Hawaii, agreed FRGs are important. While she admits that she hasn't been involved in an FRG recently because of personality conflicts and drama, she said the groups do serve a useful purpose.

"A good FRG can make a world of difference," Riley said. "They're essential for a deployment and nice to have in garrison. They are especially important for new families. The internet can't replace that."

"It would be unwise to think of FRGs as just a necessity of war," AUSA's Barron said. "The intent has always been to formalize what military family members do best: Connect with and support one another. A baseline of support must always exist, for it is from this baseline that you quickly ramp up the structure needed during a crisis.

"A commander who understands this is a wise commander indeed."

Seven Questions

Soldier of the Year Found Purpose in Uniform

Sgt. Robert Miller, an explosive ordnance disposal team member originally from Clarksville, Tenn., is the U.S. Army's Soldier of the Year. Miller is assigned to the 303rd Explosive Ordnance Battalion, 8th Military Police Brigade, 8th Theater Sustainment Command at Schofield Barracks, Hawaii. He is also a father and a college student, pursuing a degree in criminal justice from the University of Maryland University College.

1. Why did you join the Army?

I come from a military family and grew up around the Army. I saw how much purpose and direction it provided those around me, and I really craved that. I joined the Army because I thought it would be great to become part of our country's history, our country's story, and to make a difference. And so for me, it was a natural progression to try to provide that purpose in my life.

2. What have been some of your best and worst experiences in the Army?

Some of my best experiences have included being named the top soldier, but also just the day-to-day things with the soldiers in my unit. Getting to meet new people, building relationships, getting rained on during sleepless nights working together out in the field—for some people, those might sound like their worst experiences, but I really can't say I've had any. I just try to learn from all of them.

U.S. Army

Sgt. Robert Miller

3. How do you feel about all the attention you've received with the Soldier of the Year honor?

The attention isn't really the best part. For me, the best part has been getting to speak to people and hopefully encourage them to go out, challenge themselves and chase their dreams. Opportunities like being part of National Pearl Harbor Remembrance Day's 75th commemoration, meeting and shaking hands with all the veterans who helped lay the groundwork for the legacy of our military today, have been very humbling and inspiring.

4. Was there a point in the Best Warrior competition when you started to feel like you really could be the winner, or were you totally shocked that you won?

Throughout the competition, I thought I was doing OK, but we didn't get to see any of the other competitors in action. So you're basically judging yourself against yourself. I thought I was performing decently, but to see those nine other guys that I was competing against who are all the best of the best, you never know how well someone else is doing. I was totally shocked and honored to be named.

5. What was the hardest part of the competition, and what got you through it?

The hardest part was the 12-mile ruck march. The weather didn't cooperate; we got poured on the entire time from the moment we stepped outside through the entire process of completing it up and down those hills. But the most encouraging thing to me was that a group of us decided, you know what? This might not be our best time but we're going to do it together, and we're going to have a good time. That camaraderie and memories with those guys made it a great week.

6. All soldiers experience struggles at some point in their careers. What have you struggled with, and what helped you persevere?

Coming into the Army, I definitely wasn't good at PT. I saw the soldiers around me who were good at it and I thought, man, that seems like an unachievable thing, to get a 300 on a PT test. But you need to make it your sport. Decide that you're going be good at something, and start with that event. Become the best at that, and then choose something else and become the best at that, too. The next thing you know, you're very well-rounded.

Another thing I personally struggled with during the Best Warrior competition itself was looking so far ahead that I often forget what today holds. You set your sights so far ahead that you don't always appreciate the moments that are in front of you. I'd encourage people to just step back and take things day by day. It will all work itself out.

7. Who contributed the most to your success in the Best Warrior competition?

It was a collective effort; no one person can be named. From the people in my unit to my family back on the mainland, everyone has encouraged me, lifted me up when I didn't know if I could do this. From my platoon sergeant to my first sponsors taking me to these boards, everyone has just been so encouraging. I wouldn't be here without them.

—Maj. Lindsey Elder

More JLTVs Coming to Army; 4th Order Placed

Delivery of 409 additional Joint Light Tactical Vehicles and related kits, services and support will begin later this year after the Army placed a fourth order for the vehicles, which are designed to replace a significant portion of the Humvee fleet over the next couple of decades.

The Army's latest order to manufacturer Oshkosh Corp. is valued at $176 million. The vehicles and kits for this order are set to begin delivery late this year. The Marine Corps is also invested in the vehicle, known as the JLTV.

JLTVs will come in two basic variants: a four-seat Combat Tactical Vehicle with general purpose, heavy-guns carrier and close-combat weapons carrier variants; and a two-seat Combat Support Vehicle.

Oshkosh began delivering small numbers of production vehicles to the Army and Marine Corps in September for military testing in various environments around the U.S., including Yuma Proving Ground, Ariz. Since then, about 10 production vehicles per month are going to the Army and Marine Corps for testing, with a total of about 100 test vehicles planned for delivery.

The services are scheduled to make a full-rate production decision on the JLTV in fiscal 2018. Current Army plans call for equipping the first operational unit with the vehicles in 2019.

"It's on schedule," Scott Davis, the Army's program executive officer for combat support and combat service support, said about the JLTV program. "It's doing everything we ever expected it to. It's just incredible."

Oshkosh has touted a vehicle packed with performance enhancements, including greater versatility, improved fuel economy both when idling and when on the move, a power train that can adapt to different operating conditions, and better acceleration and mobility. It also will have improved maneuverability, transportability and maintainability, and enhanced connectivity to 21st-century battlefield networks.

The Army said the JLTV also will have enhanced speed capable of topping more than 70 mph. It will also feature improved protective armor as well as higher ground clearance to better withstand mines, improvised explosive devices and roadside bombs.

The Army also is considering putting more powerful weaponry on its JLTV platform. At the Association of the U.S. Army Meeting and Exposition last fall, Oshkosh rolled out a version of the JLTV equipped with a 30 mm chain gun.

Over the long term, the Army's acquisition objective is more than 49,000 JLTVs, with the fleet expected to last at least through the mid-2030s. The total value of the JLTV contract for both the Army and Marine Corps is more than $6.7 billion.

Army Museum Work, Funding on Pace

Site work continues at Fort Belvoir, Va., to prepare for construction of the National Museum of the United States Army. And according to the Army Historical Foundation, individual donations, stock gifts, foundation grants and corporate contributions totaled $10.7 million in 2016, including $1 million gifts from Honeywell, L3 Communications and the Pritzker Military Museum and Library.

To date, $139 million has been raised in cash and pledges. The foundation's goal is $200 million.

"We appreciate and are mindful of the trust and confidence that our loyal and

This rendering depicts the future National Museum of the United States Army.

Skidmore, Owings & Merrill

generous supporters have placed in us in this long-overdue tribute to our Army and its soldiers and their families," said retired Army Gen. Gordon R. Sullivan, chairman of the foundation and former president and CEO of the Association of the U.S. Army.

Ground was broken at the 80-acre museum site in September, with the goal of the museum doors opening in 2019. When completed, the facility will total about 185,000 square feet of exhibit space, showcasing selections from among over 630,000 Army artifacts, documents and images including more than 15,000 works of art in a collection at the U.S. Center of Military History. Many of these artifacts have never been seen by the public, officials said.

Outdoor features of the museum campus will include a memorial garden, amphitheater, parade ground and walking trail. About 500,000 to 700,000 visitors are expected to visit the museum each year.

Retention Enticements Offered

With Army end strength unexpectedly increasing this fiscal year, Army officials are looking at cash bonuses of up to $10,000 and other incentives to get some soldiers to stay in uniform longer.

Under previous plans, the Army had been on track to drop to a total end strength of 980,000 this year. But the final National Defense Authorization Act for fiscal 2017 put total Army personnel levels at slightly above 1 million soldiers, increasing end strength by 16,000 in the active force and by 12,000 in the reserve components.

That will double the Army's retention mission this year, Sgt. Maj. of the Army Daniel A. Dailey said during a recent town hall meeting at the Defense Information School.

"We're not in a drawdown anymore; we're in an increase situation," Dailey said. "The Army is going to get bigger. ... We need soldiers to stay in."

As a result, the Army is offering incentives for soldiers to extend their enlistments. Those who extend for 12 months may receive a cash bonus of up to $10,000, depending on their MOS, time in service and re-enlistment eligibility.

Other enticements, Dailey said, include offering soldiers a choice of duty

'SoldierSpeak'

On Building Swagger

"This is an inherently risky game. There has to be a little bit of swagger in what we do. But there can't be real swagger until there is competence," said **Chief Warrant Officer 2 Thomas K. Henderson**, a Black Hawk helicopter instructor pilot at Fort Rucker, Ala.

On Helping

"I stop and help at every accident I see. I don't think it's because I'm a medic. I think it's in our nature as soldiers to help," said **Staff Sgt. Sydney Norris**, a combat medic at Fort Irwin, Calif.

On Not Quitting

"This is my second time out here. I wanted to prove to myself that I could still do it, and to show my soldiers to never quit and always keep going. Quitting is not in my vocabulary," **Sgt. 1st Class Stephen Eisele** said after completing the 72-hour 2016 Army Best Medic Competition.

On Cyberhacking

"Our cyber professionals, they can do things in defense of our nation that they would get arrested for in the outside world," said **Army Vice Chief of Staff Gen. Daniel B. Allyn**.

On Animal Care

"This career isn't all puppies and rainbows," said **Staff Sgt. Valerie Garvin**, an animal care specialist at the veterinary treatment facility at Joint Base Andrews, Md. "My day can consist of urine, feces, scratches and bites. The job can be demanding and challenging, but can also be very rewarding."

On Teamwork

"The Army is not a scary place. For the most part, you rely on your team to get through some of those tough moments," said **Staff Sgt. Christopher Rivera** of the 25th Infantry Division during a visit to elementary school students in Hawaii.

On Going For It

"He knows me well enough that once I get an idea in my head, I'm probably not going to let go of it until I've given it my best shot," **New Hampshire National Guard 2nd Lt. Katrina Simpson** said of her husband's reaction to her decision to attend the Army's Infantry Basic Officer Leader Course. She became the first female Guard officer to graduate from the course.

On Volunteering

"We need to help out people when and where we can. If you have the time and ability to help others—and it doesn't matter whether it's something small or large—you should take action and help. Spread the love," said **Army Reserve Pfc. Joshua Anderson**, who participated in a volunteer mission with his church to Honduras.

location, extending service commitment rather than re-enlisting, and training and education courses.

"Go see your career counselor," Dailey said. "I guarantee you that they have some good news."

Briefs

ABCT Now Training in Europe

Approximately 4,000 soldiers of the 3rd Armored Brigade Combat Team, 4th Infantry Division from Fort Carson, Colo., have settled in at training sites across Europe for what will be a nine-month deployment, the largest ABCT deployment to the region since the end of the Cold War.

The team, which arrived in January with almost 90 Abrams tanks and about 3,000 other pieces of rolling stock, including artillery and Bradley Fighting Vehicles, is operating from deployment sites stretching from the Baltic Sea to the Black Sea in training exercises with host-nation forces.

The deployment is taking place under the umbrella of Operation Atlantic Resolve, which NATO launched in 2014 in response to Russia's annexation of Crimea and its ongoing aggression in Ukraine. Army officials said it marks the beginning of continuous nine-month heavy brigade rotations to Europe, a stepped-up pace from recent years.

Honoring Vietnam Vets Who Died Back Home

A program recognizing Vietnam War veterans who returned home and later died of service-connected illnesses and conditions is seeking honorees for 2017. The application deadline is April 14.

The program, In Memory, is an initiative of the Vietnam Veterans Memorial Fund, the nonprofit organization that championed the building of the Vietnam Veterans Memorial in Washington, D.C.

More than 2,800 veterans whose names are not on the wall have been honored since In Memory was established in 1999, according to Heidi Zimmerman, communications director for the memorial fund. Those veterans' lives were cut short as a result of their service in Vietnam, but their names were not eligible for inscription on the wall under DoD guidelines.

A ceremony for family members and friends of 2017 honorees to recite loved ones' names on the East Knoll of the Vietnam Veterans Memorial is scheduled for June. Each veteran will also have an online remembrance page.

For more information and to submit an application, go to www.vvmf.org/inmemory_apply.

Army Fatalities

Two U.S. Army soldiers died in January supporting Operation Inherent Resolve.

Jordan

Spc. Isiah L. Booker, 23

Kuwait

Spc. John P. Rodriguez, 23

Tests Gauge Strength for MOS

For more than 40 years, the Army has used the Armed Services Vocational Aptitude Battery to get a sense of recruits' mental acuity. Now, the Army is looking to gain a similar sense of physical prowess.

As of January, the gender- and age-neutral Occupational Physical Assessment Test is being administered to all new recruits to measure their fitness to handle physical tasks in specific MOSs.

It's a significant change; previously, Army recruits had to meet only height and weight standards and pass a basic physical exam to apply for even the physically toughest skill fields.

Brian Sutton, a spokesman for the U.S. Army Recruiting Command, said the test is not meant to turn away or weed people out but "put the right people in the right jobs and to ensure we keep our recruits safe while doing so."

The test also will be given to some soldiers who want to reclassify into an MOS that may be more physically demanding than their current one, officials said.

Training Aids Low-Income Texans

A private-public partnership between the Army Reserve and Texas A&M University aims to help economically distressed towns in the Lone Star State near the Mexican border. Soldiers will train in mission-essential tasks in the communities while also helping low-income residents.

GENERAL OFFICER CHANGES*

Major Generals: **B.A. Becker** from CG, MDW and Cmdr., JFHQ-NCR, Washington, D.C., to Chief, OSC-I, CENTCOM, Iraq; **R.A. George** from Dep. Dir. for Regional Ops. and Force Mgmt., J-35, Jt. Staff, Washington, D.C., to CG, 4th Inf. Div. and Fort Carson, Colo.; **R.F. Gonsalves** from CG, 4th Inf. Div. and Fort Carson, to Dep. CG, III Corps, Fort Hood, Texas; **M.L. Howard** from Dir., Force Mgmt., ODCoS, G-3/5/7, USA, Washington, D.C., to CG, MDW and Cmdr., JFHQ-NCR, Washington, D.C.; **W.E. Piatt** from Dir. of Ops. and Dir., REF, RCO, OASA (ALT), Washington, D.C., to CG, 10th Mt. Div. (Light) and Fort Drum, N.Y.; **L.A. Quintas Jr.** from DCoS, G-3/5/7, FORSCOM, Fort Bragg, N.C., to CG, 3rd Inf. Div. and Fort Stewart, Ga.; **J.E. Rainey** from CG, 3rd Inf. Div. and Fort Stewart, to Asst. DCoS, G-3/5/7, USA, Washington, D.C.

Brigadier Generals: **S.M. Jenkins(P)** from Dep. Dir. for Ops., CENTCOM, MacDill AFB, Fla., to Dep. CG for Ops. and CoS, IMCOM, JBSA; **J.S. Kolasheski** from Comdt., USAAS, MCoE, Fort Benning, Ga., to Dep. CoS, G-3/5/7, FORSCOM, Fort Bragg; **D.A. Lesperance** from Asst. CG-Spt., 1st Special Forces Cmd. (Airborne), Fort Bragg, to Cmdt., USAAS, MCoE, Fort Benning.

■ ***AFB**—Air Force Base; **ALT**—Acquisition, Logistics and Technology; **CENTCOM**—U.S. Central Command; **CG**—Commanding General; **CoS**—Chief of Staff; **DCoS**—Deputy Chief of Staff; **FORSCOM**—U.S. Army Forces Command; **IMCOM**—Installation Management Command; **JBSA**—Joint Base San Antonio; **JFHQ-NCR**—Joint Force Headquarters-National Capital Region; **MCoE**—U.S. Army Maneuver Center of Excellence; **MDW**—U.S. Army Military District of Washington; **OASA**—Office of the Assistant Secretary of the Army; **ODCoS**—Office of the Deputy Chief of Staff; **Ops.**—Operations; **OSC-I**—Office of Security Cooperation-Iraq; **P**—Promotable; **RCO**—U.S. Army Rapid Capabilities Office; **REF**—Rapid Equipment Fielding; **USA**—U.S. Army; **USAAS**—U.S. Army Armor School.*

**Assignments to general officer slots announced by the General Officer Management Office, Department of the Army. Some officers are listed at the grade to which they are nominated, promotable, or eligible to be frocked. The reporting dates for some officers may not yet be determined.*

The arrangement is part of DoD's Innovative Readiness Training, which focuses on civil-military partnerships that address local community needs while also meeting readiness training requirements of active, National Guard and Reserve units.

In June, for example, Army Reserve medical personnel will begin offering family health care, immunizations, dental exams and eye exams at four community centers in and around Laredo. They will be assisted by nurse practitioner students from the university. An active-duty Army detachment will craft eyeglasses for residents.

Free Help With Personal Finances

The Army has partnered with financial adviser and motivational speaker Suze Or-

COMMAND SERGEANTS MAJOR and SERGEANTS MAJOR CHANGES*

Sgt. Maj. S.J. Rice from CDID, Fort Lee, Va., to Command Sgt. Maj., QMS, Fort Lee; **Sgt. Maj. J.P. Willett** from HQ, AMC, RA, Ala., to Command Sgt. Maj., 1st TSC, Fort Bragg, N.C.

■ ***AMC**—U.S. Army Materiel Command; **CDID**—Capabilities, Development and Integration Directorate; **QMS**— U.S. Army Quartermaster School; **RA**—Redstone Arsenal; **TSC**—Theater Sustainment Command.*

**Command sergeants major and sergeants major positions assigned to general officer commands.*

man to offer soldiers and their families a free online course on managing their money.

"There comes a time in life when everybody has to serve their country," said Orman, who is not taking a fee from the Army under the agreement. "It's time for me to serve."

Orman's online course, at www.suzeu.com, consists of seven lesson plans that delve into various aspects of personal finances and usually costs $54. It's available to soldiers and family members for free when they use the gift code USA.

Also, each time a user completes a lesson, he or she can enter a sweepstakes drawing for a $5,000 prize.

New Rules for Religious Garb

Soldiers who follow the religious faiths of Islam or Sikhism may now wear head coverings while in uniform, under Army Directive 2017-03. Further, Sikhs may maintain beards no longer than 2 inches.

The recent directive notes that since 2009, religious accommodation requests that require a waiver for uniform wear and grooming have largely fallen into one of three faith practices: the wearing of a hijab, a head scarf, by Muslim women; and the wearing of a beard and turban by Sikh men.

The directive states that based on "successful examples of soldiers currently serving with these accommodations," brigade-level commanders may approve new requests for accommodations.

Soldiers approved for such exceptions still must wear the Advanced Combat Helmet when necessary for training or deployment. At other times, hijabs must be worn beneath berets or patrol caps and be made of "subdued" material in colors that are close to that of the uniform, such as black, brown or green. Turbans must follow the same color rules.

Making Better Use of Reserves

The Reserve Forces Policy Board has written a 141-page report offering 14 suggestions for improving the total force through better and smarter use of the National Guard and Reserve.

According to the report, the first near-term priority is simply to emphasize the role of the reserve components in the Total Force policy. Other near-term goals include simplifying and streamlining the 32 separate duty statuses used to manage the Guard and Reserve, and improving survivor benefits and GI Bill education benefits for reserve component members in some circumstances.

A top long-term recommendation is to prioritize and maintain reserve component readiness, with a call to the services to "plan for and program funding for recurring and routine operational deployment" of those components. Other long-term proposals include making better use of the more than 265,000-member Individual Ready Reserve.

The Reserve Forces Policy Board is an independent federal advisory committee within the Office of the Secretary of Defense. The report was published in the fall to assist the transition of the new administration. It can be found at http://rfpb.defense.gov/Reports/.

PX Online Shopping for Veterans

DoD plans to let all honorably discharged veterans shop at online military exchanges.

The move is still a long way off—it will not take effect until Nov. 11, Veterans Day—but when it does, honorably discharged vets will be able to purchase anything the online exchanges have to offer except uniform items and alcohol and tobacco products, DoD officials said.

Along with expanding online shopping options for veterans, officials said the move represents a "low-risk, low-cost opportunity" to enhance funding for military morale, welfare and recreation programs for currently serving troops and their families. A portion of exchange profits are used to support MWR programs.

SENIOR EXECUTIVE SERVICE ANNOUNCEMENTS

Tier 3: **K. Durham-Aguilera** from Dir., Contingency Ops./Chief, Homeland Security, USACE, Washington, D.C., to Exec. Dir., Army Natl. Cemeteries Prgm., OSA, Arlington, Va.; **J. Johnson Jr.** from Dir., FWC, USASMDC, RA, Ala., to Dep. to Cmdr., USASMDC; **A. Richards** from Asst. IG for Inspections and Evaluations, OIG, DHS, Washington, D.C., to Auditor Gen., USAAA, Fort Belvoir, Va.

Tier 2: **W. Brinkley** from Asst. DCoS, G-3/5/7, TRADOC, Fort Eustis, Va., to DCoS, G-1/4 (Personnel, Logistics and Engineering), TRADOC; **L. Gottardi** from DCoS, G-1, USAREUR, Wiesbaden, Germany, to Dir., CHRA, APG, Md.; **M. Ramsey** from Dir. of Invest., OASA (FMC), Washington, D.C., to Dir. of Resources/Dep. Dir., Force Dev., ODCoS, G-8, Washington, D.C.; **T. Russell** from Dir., ARL, Adelphi, Md., to DASA (R&T)/Chief Scientist, OASA (ALT), Washington, D.C.

Tier 1: **G. Blohm** from Dir. for CPI, CERDEC, RDECOM, AMC, APG, to Dir., I2WD, CERDEC, RDECOM, AMC, APG; **J. Bucci** to Dep. PEO, IEW&S, OASA (ALT), APG; **J. Carr** from Exec. Dir. for LOGCAP, ASC, AMC, Rock Island, Ill., to Exec. Dir., ACC-Rock Island, ACC, AMC, Rock Island; **C. Cartwright** from Exec. Dir. for Field Spt., ASC, AMC, Rock Island, to Exec. Dir. for LOGCAP, ASC, AMC, Rock Island; **R. Guckert** to Dep. PEO for CS&CSS, OASA (ALT), Warren, Mich.; **J. Hort** to Asst. DCoS for Ops., G-3/5/7, FORSCOM, Fort Bragg, N.C.; **M. Johnson** from Exec. Dir., ACC-Rock Island, ACC, AMC, Rock Island, to Dep. to the Cmdr., JMC, AMC, Rock Island; **K. Kelley** to Supt., ANC, Arlington, Va.; **G. Ludwig** to Principal Asst. for R&T, MEDCOM, Fort Detrick, Md.; **L. Miranda** to Dir., ILSC, CECOM, AMC, APG; **C. Peterson** to Div. Prgm. Dir. (South Pacific Div.), USACE, San Francisco; **J. Worm** to Dir., Resources and Analysis Directorate (J8), SOUTHCOM, Doral, Fla.

■ ***ACC**—Army Contracting Command; **ALT**—Acquisition, Logistics and Technology; **AMC**—U.S. Army Materiel Command; **ANC**—U.S. Army Arlington National Cemetery; **APG**—Aberdeen Proving Ground; **ARL**—U.S. Army Research Laboratory; **ASC**—U.S. Army Sustainment Command; **CECOM**—U.S. Army Communications-Electronics Command; **CERDEC**—U.S. Army Communications-Electronics Research, Development and Engineering Center; **CHRA**—Civilian Human Resources Agency; **CPI**—Command, Power and Integration; **CS&CSS**—Combat Support and Combat Service Support; **DASA**—Deputy Assistant Secretary of the Army; **DCoS**—Deputy Chief of Staff; **DHS**—Department of Homeland Security; **FMC**—Financial Management and Comptroller; **FORSCOM**—U.S. Army Forces Command; **FWC**—Future Warfare Center; **I2WD**—Intelligence and Information Warfare Directorate; **IEW&S**—Intelligence, Electronic Warfare and Sensor; **IG**—Inspector General; **ILSC**—Integrated Logistics Support Center; **JMC**—Joint Munitions Command; **LOGCAP**—Logistics Civil Augmentation Program; **MEDCOM**—U.S. Army Medical Command; **OASA**—Office of the Assistant Secretary of the Army; **ODCoS**—Office of the Deputy Chief of Staff; **OIG**—Office of Inspector General; **OSA**—Office of the Secretary of the Army; **PEO**—Program Executive Officer; **RA**—Redstone Arsenal; **R&T**—Research and Technology; **RDECOM**—U.S. Army Research, Development and Engineering Command; **SOUTHCOM**—U.S. Southern Command; **TRADOC**—U.S. Army Training and Doctrine Command; **USAAA**—U.S. Army Audit Agency; **USACE**—U.S. Army Corps of Engineers; **USAREUR**—U.S. Army Europe; **USASMDC**—U.S. Army Space and Missile Defense Command.*

AUSA Sustaining Member Profile

Soucy Group

Corporate Structure—President and Chief Operating Officer: Eric Côté. Headquarters: 5450 Saint-Roch St., Drummondville, Quebec, Canada. Telephone: 844-333-5564. Website: www.soucydefense.com.

The defense and security sectors demand rigor and standardization as well as ironclad reliability on all terrains and environments across the spectrum of conflict. Aware of these conditions, the Soucy Group produced its first defense rubber track in 1989. Today, Soucy is recognized for its global leadership in composite rubber track systems (CRTS) in addition to development and production of vehicle parts and accessories.

Founded in 1967, Soucy is also a complete solution supplier and a vertically integrated company with 1,500 employees and 11 subsidiaries around the world. Since receiving its first defense contract in 1988, Soucy has acquired substantial experience in the defense and security areas and has developed a keen expertise in CRTS solutions for defense applications in vehicles weighing up to and exceeding 40 tons.

Soucy's CRTS have proven their efficiency in battle conditions during domestic and expeditionary operations by meeting the highest requirements. Combining the skills and expertise of all Soucy Group subsidiaries, Soucy Defense now offers a wide array of possibilities in innovating, designing and manufacturing key components for defense vehicles.

Today, the Soucy Group has grown into a leading designer and manufacturer of plastic, rubber, metal and polyurethane components for power sports, industrial, agricultural and defense vehicles, making Soucy the ideal supplier for track system needs. Almost 30 years after producing the first defense CRTS, Soucy remains the only manufacturer of CRTS for defense and security purposes approved by defense forces around the world.

Composite rubber tracks originally were designed for the tough mobility demands of extreme snow and ice terrains. The main benefit of choosing composite rubber track instead of steel track in defense applications is weight savings. With track weight reduced by almost 50 percent, vehicle designers can add more mission-critical components such as armor and other protective equipment without impacting vehicle mobility and combat weight budgets. The added protection is critical to both the survival of the vehicle crews and the performance of the vehicle itself in hostile environments.

Over the past three decades, Soucy's composite rubber tracks have proven to be a key mobility system used by many fleets not only in extreme cold weather conditions, but also in blistering desert heat, rugged mountains, and swampy or muddy terrains across the globe. Composite rubber tracks are made from only top grade (grade 5) pure rubber, with reinforced Kevlar fiber and continuous robust steel cabling. A lightweight and nonflammable compound is also included to protect against high temperatures, and carbon nanotube technologies are used to provide twice the durability of steel tracks. Composite rubber tracks also drastically reduce the overall noise signature of the vehicle up to 13.5 dB, reducing the risk of detection by hostile forces.

One of the most important aspects for an armored vehicle to maintain is great mobility. To ensure operational availability and supportability of CRTS across the full spectrum of conflict, Soucy is proud to offer integrated logistics support to clients.

The development of this integration plan is a priority for the company. From the first steps of product design, the engineering team makes sure to always think about possible support needs, going through maintainability, integration, tools, equipment, training services and sustainment. Every customer maintenance concept is analyzed to easily integrate a logistics support package with the aim of implementing and supporting the CRTS.

Furthermore, CRTS must be maintained at the lowest tactical level in theater. This is why CRTS are designed with simplicity and are virtually maintenance-free. Almost all maintenance tasks can be executed by the vehicle crew. On average, rubber track installation can easily be handled by two or three crew members within very short time frames. On heavier vehicles, similar installation procedures are used with lightweight onboard tooling. There are no track pads to be replaced, nor end connectors or center guides to be torqued daily or replaced. This translates into major time savings for the crew.

Soucy Group President and Chief Operating Officer Eric Côté

Since its first steps in the defense and security sector, Soucy has developed strong business relationships with multiple government officials and original equipment manufacturers. Soucy signed a defense contract with Finland for Patria in 1989, which consisted of a CRTS for the NA-140 4-tracks articulated vehicle. In 1993, Soucy created a CRTS dedicated to the M113 vehicle and since then has been working on that project with many governments.

Starting in the mid-1990s, Soucy became the exclusive supplier of tracks, wheels and sprockets for the BV206, BVS10 articulated vehicles and the 2-tracks CV90 of BAE Systems Hagglunds. With this customer, Soucy proved its capacity to develop composite rubber tracks for light and heavyweight vehicles.

Today, among other worldwide projects in development, Soucy is also working with Singapore Technologies Kinetics, FFG, BAE Systems, Krauss-Maffei Wegmann, PALFINGER and General Dynamics European Land Systems as the exclusive supplier of tracks and related components.

Army's First Lady: She, Too, 'Came Through'

By Lt. Gen. Daniel P. Bolger, U.S. Army retired

Army football at the U.S. Military Academy goes through ups and downs. But not that long ago, in the 1980s, coach Jim Young led the Black Knights to a respectable 51-39-1 record that included three bowl games and, most notably, five victories over archrival Navy.

On autumn Saturdays in those glory years, as the crowd at Michie Stadium waited for kickoff, cadets and fans heard a stentorian voice boom over the loudspeakers: "Ladies and gentlemen, the superintendent and the Corps of Cadets are honored to welcome to today's game the first lady of the Army, Mrs. Jean MacArthur."

The first lady of the Army—it was a nice thing to say but not a real title, of course. It's unclear how many of the boisterous cadets or football-hungry Army backers, other than some older patrons, knew who that woman was, or why she merited such an honorific. And she certainly did. No one deserved it more than Jean Marie Faircloth MacArthur.

Some might say it's because she married well and indeed, she had. Her husband, Gen. Douglas MacArthur, was among the most famous Americans ever to wear the country's uniform. A general and commander in both world wars and Korea, MacArthur rose to five-star rank and earned the Medal of Honor, three Distinguished Service Crosses, and seven Silver Stars, along with two Wound Stripes, today known as Purple Hearts. He stands among the very few U.S. generals—George Washington, Ulysses S. Grant, Robert E. Lee, Dwight D. Eisenhower, George S. Patton—who might be considered among the great captains of history.

Yet when this illustrious general referred to "my best soldier," he spoke of his wife, Jean. Even coming from a man much given to purple prose, that simple salute said more than any flowery tribute could. While granting his courage and talent in battle, many detractors found the general overly calculating and devious. MacArthur was all about MacArthur. Yet his devotion to his wife was the real deal.

They met in 1935 on the literal slow boat to China, just before a brief scheduled stop in Manila, the Philippines. MacArthur was headed into retirement following five frustrating years as Army chief of staff during the depth of the Great Depression. He'd gotten a sinecure as the chief military adviser to the local government in the Philippines, then a U.S. possession. The general had been married briefly in the 1920s; that mismatch with a New York socialite had not ended well. Now, at age 55, MacArthur was sailing into the sunset.

Aboard the liner SS President Hoover, the general was accompanied by his mother, the formidable Mary Pinkney "Pinky" Hardy MacArthur of Norfolk, Va. The general's father may have worn Union blue, but his mother's family most certainly did not. She couldn't remedy the "lost cause" but as a general's wife, she could micromanage her son's career—and did so with relish. When her son attended West Point, Pinky established herself in the post hotel, keeping track of the lights in the barracks to be sure her son was hitting the books. As he went from post to post, Pinky went too. She was not above arm-twisting and letter-writing on behalf of her son. Among her regular correspondents was her old Army acquaintance Gen. John J. Pershing. Now, she would be her son's guest in Manila.

Pinky didn't think much of any of her son's lady friends and loathed his frivolous first wife. The implosion of that marriage gave Pinky grim satisfaction. Mother knew best. Aboard ship, Pinky nodded approvingly when her son took an active interest in a charming, well-spoken fellow passenger, Jean Faircloth of Murfreesboro, Tenn. Jean's grandfather was a Confederate captain who had opposed MacArthur's father at Missionary Ridge in 1863. By Pinky's reckoning, that marked Jean as the right one. Her son thought so as well.

Poor Pinky lasted only about a month in Manila before succumbing to cerebral thrombosis. Yet her will be done. The romance between her son and the Tennessee belle blossomed. By 1937, they were married. It had a May-December quality, as the bride was nearly two decades younger than the groom. But she was no trophy wife; the Imperial Japanese Army saw to that.

Tokyo's aggressive generals wanted control of China and the western Pacific Ocean. The American colony in the Philippines stood in the way. Thus, it must be taken. To oppose Japan's powerful, well-armed army, air force and navy, America counted on 31,000 U.S. troops, 120,000 Filipinos in uniform, 277 aircraft, and a dozen or so obsolescent cruisers and destroyers of the ramshackle Asiatic Fleet.

Brought back to the colors, MacArthur commanded the defenders. As war clouds gathered during the summer of 1941, the U.S. garrison's families were sent home—all except Jean MacArthur and the couple's young son, Arthur. Jean's husband told her not to worry. The man she idolized as "the General"—she always referred to him in the third person and apparently, he tended to think of himself that way, too—would sort it out. He knew what he was doing. He always knew. If the Japanese came, the Americans would win.

MacArthur got that all wrong. He had a lot of company in misreading the tea leaves. The prewar scheme, War Plan Orange, required MacArthur's forces to hold out for six months. Then the U.S. Navy would arrive in force and save the day, just like the cavalry column in a Western movie. It was a well-known, often-rehearsed plan. But the Japanese knew about it, too. They started the war their way, without warning, by smash-

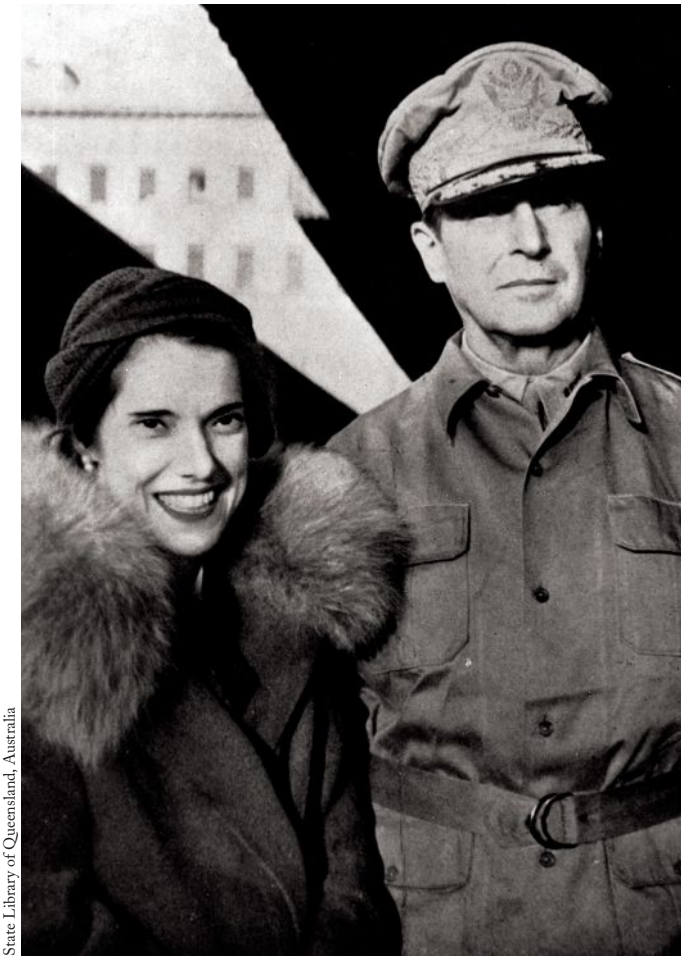
ing the U.S. fleet in its anchorage at Pearl Harbor, Hawaii, on Dec. 7, 1941. Then, hours later, they blew away much of MacArthur's air wing, catching the planes on the ground. The Japanese battered and scattered the ineffectual U.S. Asiatic Fleet.

MacArthur's American-Filipino forces defended with guts and skill, savaging the Japanese regiments that stormed ashore north of Manila. But without air cover, naval support, or hope of reinforcements, the defenders had no choice but to retreat into the rugged Bataan Peninsula overlooking Manila Bay. On half-rations, they'd hold out, as War Plan Orange provided. This time, though, the cavalry wouldn't come.

Just off the Bataan coast, on the fortified island of Corregidor, MacArthur made his headquarters in a steel-reinforced concrete corridor of the Malinta Tunnel. His wife and son set up a tiny living area in the recesses of one segment, Lateral 3. Japanese bombs shook the island daily. In the distance, the steady rumble of cannons along the Bataan front could be heard.

The limited food was bland, the water tepid, and wounded soldiers plentiful as overworked medical teams made use of every nook and cranny of the underground complex. MacArthur was often gone. When he saw his family, he tried to be calm and steady. Yet it was quite evident that this entire thing had gone upside down in the worst possible way. With considerable understatement, his wife later recalled: "Corregidor was the longest part of the war for me."

By March 1942, it became clear that the American-Filipino forces were doomed. The Japanese had been stalled and beaten up. But they were reinforcing daily. The gaunt, sickly defenders grew weaker. Bitter men mocked MacArthur on Corregidor as "Dugout Doug." The sobriquet stung the proud general. He assumed that when the Japanese mounted their final big push and the end came, he'd "share the fate of the garrison." He'd go down fighting. So would Jean and little Arthur.



State Library of Queensland, Australia

Jean and Gen. Douglas MacArthur in Australia in 1942

President Franklin D. Roosevelt would not hear of it. Knowing only a direct order would get MacArthur's attention, Roosevelt told the general to get off Corregidor, get to Australia, and organize a counteroffensive. That worked.

At 8 p.m. on a very dark night, MacArthur and his family joined Navy Lt. John D. Bulkeley, who would go on to become a vice admiral, and the crew of PT-41. Three other motor torpedo boats carried other key subordinates. The little flotilla had 600 miles to go, all through Japanese-dominated waters.

The wood-hulled PTs were fast, but the choppy water ensured a horrible ride. Jean vomited up everything in her stomach and then dry-heaved. Four-year-old Arthur whimpered, sick too. The general also suffered. A PT boat sailor, inured to the pounding waves, thought Jean the toughest of them all: "She didn't turn a hair." It took 34 hours in all: two nights of breakneck ocean passage split by 12 hot, sweaty daylight hours hidden under an islet's foliage. The escapade left the MacArthurs battered and drained. But they dodged the enemy.

When the escapees made it to an airfield at Mindanao, the beat-up B-17 bomber waiting there seemed like an improvement. It wasn't. Turbulent updrafts tossed the aircraft. Evasive maneuvers added to the discomfort. Eight hours later, when the MacArthurs finally made landfall in Australia, all looked like death warmed over. It had been an ordeal even without Japanese opposition. As the general later told the press, "I came through, and I shall return." His wife came through, too.

MacArthur would go on to victory in the Pacific, success in the occupation of prostrate Japan, and triumph and controversy in Korea. Every step of the way, Jean MacArthur was there. Following her 1937 marriage, she did not set foot in the continental U.S. for 14 years. Luckily, she never again faced the peril of that trip aboard PT-41. But if she had to do it, you had the sense she would. She sure had it in her until the day she died, at age 101, in 2000.

Like Army spouses then and now, Jean MacArthur never received a promotion, valor award or government paycheck. When he saluted her as the Army's first lady, the announcer at Michie Stadium knew the deal. Over its long history, our Army has benefited from the love, devotion and bravery of hundreds of thousands of first ladies. May it ever be so. ★

***Lt. Gen. Daniel P. Bolger**, USA Ret., was the commander of Combined Security Transition Command-Afghanistan and NATO Training Mission-Afghanistan. Previously, he served as the deputy chief of staff, G-3/5/7, and as the commanding general, 1st Cavalry Division/commanding general, Multinational Division-Baghdad, Operation Iraqi Freedom. He holds a doctorate from the University of Chicago and has published a number of books on military subjects. He is a senior fellow of the AUSA Institute of Land Warfare.*

Soldier Armed

Non-Standard Ammunition

By Scott R. Gourley, Contributing Writer

You might be surprised to learn that last year, the U.S. Army delivered close to 70 million rounds of ammunition—for the AK-47 rifle and PKM machine gun.

The fact is, many coalition partners around the world are equipped with an array of systems not found in standard U.S. inventories. And meeting the ammunition needs of many of those partners falls to the Army's Office of Product Director for Non-Standard Ammunition.

According to Lt. Col. Lawrence Dring III, who runs the product office under the Project Manager for Maneuver Ammunition Systems within the Program Executive Office (PEO) Ammunition, the product office was established in 2008 to give acquisition oversight to the purchase of "non-DoD" munitions, primarily in support of U.S. allies fighting in Afghanistan and Iraq.

"We are providing our allies with the tools—the munitions—they need to engage the enemy and help support U.S. forces that are fighting alongside them, and sometimes fighting in lieu of U.S. forces," Dring said, adding that munition needs range from small-arms bullets to mortars and artillery to helicopter rockets.

The nonstandard munitions are obtained through indefinite delivery/indefinite quantity contracts the Army has with Orbital ATK and Chemring Military Products, Dring said.

"They're the U.S. prime contractors," he said. "When we put in an order, they turn around and they go to their subcontractors to find their best value to meet our requirements. So we compete the delivery orders between the two primes."

Non-Standard Ammunition responsibilities cover acquisition of everything from 9 mm ammunition up to 122 mm rockets.

U.S. Air Force/Staff Sgt. Corey Hook

Afghan security personnel and U.S. 10th Mountain Division soldiers patrol outside Camp Fenty, Afghanistan.

Dring highlighted one recent project example involving S-8 80 mm rockets for the Afghan National Army. Originally developed to support Soviet forces, S-8 rockets can be fired by fixed-wing or rotary-wing aircraft.

"They needed the rockets to support their close air support missions," he said. "And we were able to quickly put a contract out, because there are new production S-8 missiles from Bulgaria. The Bulgarian company laid out a production schedule for us. We went over in November 2015 and saw the production; how they were going to do quality control and how they would produce all our missiles. They actually shot two missiles off the line for us to demonstrate their quality."

Dring's team returned to Bulgaria in January 2016 and conducted a "lot test" that included firing 72 S-8 rockets at hot, ambient and cold temperatures.

"We also conducted armor penetration testing; to make sure the rockets flew, hot, cold or ambient; to make sure they could penetrate the armor; and to make sure they would meet the user needs," he said. The missiles were shipped out two weeks after that successful testing.

Dring was also quick to highlight significant synergies between his product office and other service organizations co-located with his office at Picatinny Arsenal, N.J. One example can be found in the D-30 122 mm howitzer program that has provided towed field artillery systems to the Afghan National Army.

According to Greg Bader, an Armament Research, Development and Engineering Center employee supporting Project Manager for Towed Artillery Systems within PEO Ammunition, the program began in the 2010 time frame and involved the refurbishment and fielding of 204 D-30 weapon systems to Afghanistan. The refurbishment took place in Eastern Europe and modernized the howitzers by providing them with U.S. fire control systems, Bader said.

"This year, we contracted to provide spare parts for the D-30s," he said. "So we're providing spare cannon assemblies, breach assemblies and additional conversion kits."

"The D-30 is a real good story, because this PEO [Ammunition] offers a whole source solution, with Greg's guys in Project Manager Towed Artillery Systems providing the cannon while we provide the ammo," Dring said.

Another example of project synergies within PEO Ammunition can be found in mortars. Bob Ucci, chief of the weapons and fire control branch under the Office of the Product Manager, Guided Precision Munitions and Mortar Systems, Program Manager Combat Ammunition Systems, said the Army is re-equipping some allies with U.S. standard mortar systems—60

U.S. Air Force/Staff Sgt. Corey Hook

U.S. Army/Spc. Edward Bates

An Afghan National Army soldier carries a rocket-propelled grenade and rockets; right: An Afghan soldier fires a 122 mm round from a howitzer in Kunar Province, Afghanistan.

mm, 81 mm and 120 mm—with support from indefinite delivery/indefinite quantity contracts with Elbit Systems of America and Connectec Co. Inc.

While Dring's office supports only the mortar ammunition needs for allies utilizing non-standard mortar systems such as the 82 mm, co-location with Ucci's team brought significant benefits.

"At times, we've had questions on mortars," he said. "But we've got 'the standard guys' to come back to and answer our questions.

"And it's the same way with Greg Bader and his team," he said. "He works in the 'triple seven' [M777 155 mm towed howitzer] office. So when we have artillery questions about something like [meteorology] data or firing tables, we've got the experts right down the road.

"There's just a lot of synergy by having all of this non-standard ammunition activity co-located with the standard project managers," he said.

Dring also said that his team works "hand in hand" with the Project Manager for Soldier Weapons, which falls under the Program Executive Office Soldier.

"Those are the guys that buy the AK-47s," he said, adding that they also buy rocket-propelled grenades and the SPG-9 73 mm recoilless gun launchers. Then those in the Product Director Non-Standard Ammunition office buy rounds for both as well as armor-piercing ammunition and tracers.

Quantifying those non-standard ammunition efforts, he pointed to a recent annual delivery of approximately 70 million AK-47 and PKM rounds, which represents just a portion of the $1.3 billion worth of foreign military sales achieved since the office was established.

The office has also derived an impressive amount of contracting lessons learned over this period. As an example, he cited significant help and support from the U.S. Army Contracting Command, combined with the indefinite delivery/indefinite quantity contracts, in shortening the time from order receipt to contract award to 45 days.

"That's more or less normal," he said. "In a pinch, we can get it down to 19 days."

One of the challenges involves the use of overseas contingency operations funding and the inability to pool requirements or plan out buys far in advance. Another challenge comes from the changing nature of the international defense industry.

"We receive a lot of our munitions from Eastern Europe," he said. "But the Eastern Europeans are now joining NATO and switching over to NATO standards. Now, instead of just producing Warsaw Pact-style munitions, they're also branching out into NATO production, which cuts into their ability to support us."

He also pointed to close cooperation between his office and the State Department to ensure the use of approved production sources.

Dring said the activities performed by his office help U.S. warfighters "by helping other countries defend themselves. We're supplying the Iraqi army, the Afghan army and the Afghanistan police force with the tools that they need to defend themselves.

"Those forces are fighting alongside U.S. forces. They are not only becoming a force multiplier but in some cases, their new capabilities may be reducing the need to send people over there."

Like Other War Wounds, Moral Injury Will Scar

What Have We Done: The Moral Injury of Our Longest Wars. *David Wood. Little Brown and Co. 304 pages. $28*

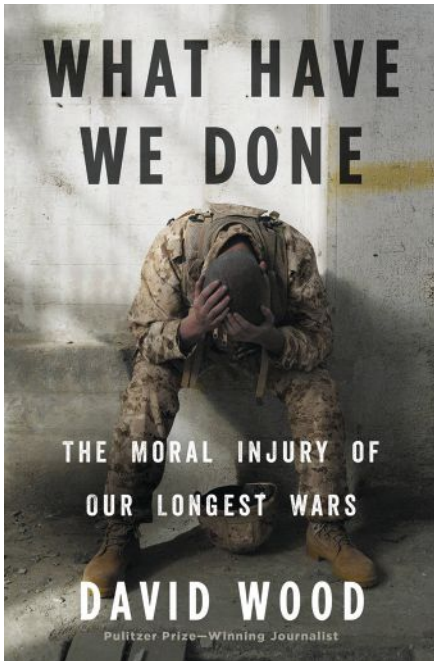
By Pauline Shanks Kaurin

David Wood is a Pulitzer Prize-winning journalist who has covered conflicts around the world for *Time Magazine*, the *Los Angeles Times* and other publications. His latest book, *What Have We Done: The Moral Injury of Our Longest Wars*, is part storytelling, part personal narrative, and part reporting on both conventional and new treatments for healing and managing moral injury, with a dash of philosophical and policy reflections on the causes. Overall, it is a readable and very engaging volume.

To begin, it is important to distinguish moral injury from post-traumatic stress disorder, as the two are often conflated or confused. According to Dr. Jonathan Shay, who coined the term, "Moral injury is an essential part of any combat trauma that leads to a lifelong psychological injury. Veterans can usually recover from horror, fear and grief once they return to civilian life, so long as 'what's right' has not also been violated." There are some overlapping elements with PTSD, so this distinction has been difficult and a long time in taking hold in the psychological community and popular press reporting.

In *What Have We Done*, Wood does a good job of continually coming back to the focus on moral injury and its distinct aspects in the stories—his own included—of those who struggle, as well as his portraits of the cutting-edge scholars and practitioners who are working on new methods of management and treatment with high potential impact, should they be adopted more broadly than the current conventional treatments. The idea is that moral injury is a wound like other wounds sustained in war and can be managed accordingly, even if the scar is always there.

Wood also ventures into discussions of the military-civilian culture gap as a factor in making moral injury worse, and also in holding potential for a remedy if it can be bridged. However, readers might get the impression that the military hasn't given any thought to the issue of moral injury, much less trained for it. As Wood writes: "They learn to kill, but nothing here or in their formal training prepares them for the acute moral dilemmas they will face in war."



As a military ethicist, I must point out that this is simply not true. Ethical and moral (values) training has occurred at all levels and in all kinds of formats since at least Vietnam; the recent focus on resiliency was designed in part to address concerns not just about PTSD, but moral injury as well. Much of the work here is done not only in formal training but also informal mentoring and counseling, especially by chaplains.

Perhaps Wood's intended meaning is that the military *inadequately* prepares people to deal with these issues. If so, that opens a different vein of discussion. What would it look like to adequately prepare people to manage moral injury? Is it even possible to do so? While this is certainly an important discussion, moral injury is as old as warfare itself, and the historical and literary traditions attest to human attempts to manage and come to terms with it. Every experience will be unique. There are some preparations possible: tools one can have in their kit; support from peers and society before, during and after. But the individual will have to manage this as an individual.

Why? Moral injury is fundamentally about finding and making meaning of experiences relative to one's own morals and that of the community—both military and civilian. It is a process of identity development and management: There is suffering and healing, progress and setbacks, isolation and intimacy, guilt and forgiveness. There are no checklists, templates or online training modules. It is complicated, and it should be. If warfare ceases to become morally difficult, we have lost an important part of the human experience.

If warfare ceases to become morally difficult, we have lost an important part of the human experience.

Pauline Shanks Kaurin *is associate professor of philosophy at Pacific Lutheran University, Wash., and teaches courses in military ethics, warfare, business ethics, and the history of philosophy. She holds a bachelor's degree from Concordia College, Minn.; a master's degree from the University of Manitoba, Canada; and a Ph.D. from Temple University, Pa.*

Confederate General Can Blame Himself for Woes

Braxton Bragg: The Most Hated Man of the Confederacy. *Earl J. Hess. The University of North Carolina Press. 368 pages. $35*

By Col. Cole C. Kingseed
U.S. Army retired

In the words of author Earl J. Hess, Confederate Gen. Braxton Bragg "has always been a controversial figure of the Civil War." In fact, Bragg's contemporaries labeled him "a fool, a bloodthirsty disciplinarian and an old-fashioned scapegoat, all wrapped up in one package."

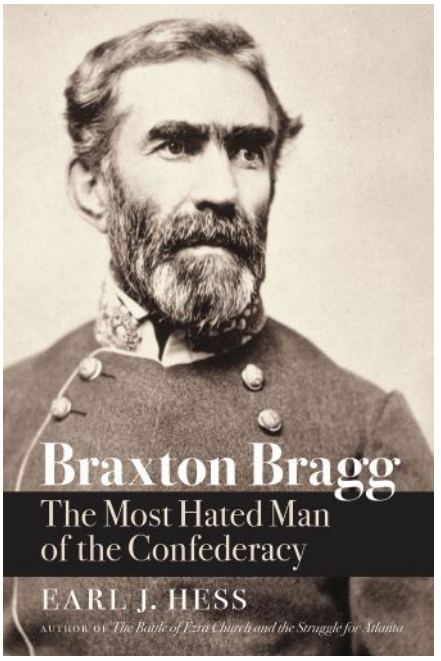
In the more recent forefront of Bragg's detractors was Thomas L. Connelly, whose magnificent two-volume history of the Army of Tennessee offered readers a largely negative view of the Confederate commander. In contrast, Hess presents a more balanced assessment and posits that Bragg's failures rested more "on the personal level than in the military sphere."

Hess is no stranger to Civil War history. He is the Stewart W. McClelland Chair in History at Lincoln Memorial University, Tenn., and the author of many books on the Civil War, including *Civil War Infantry Tactics, Pickett's Charge: The Last Attack at Gettysburg*, and four other volumes in the Civil War America series. As with the other volumes in this landmark series, *Braxton Bragg: The Most Hated Man of the Confederacy* broadly interprets the history and culture of the Civil War era.

Braxton Bragg is not a full-length biography. Hess devotes a single chapter to Bragg's antebellum career and two short chapters to Bragg's life following his resignation of command of the Army of Tennessee. The heart and soul of Hess' book is an examination of Bragg's Civil War career. "How Bragg handled his army in the field is important," Hess states, but "the reaction of a myriad of people to his success or failure as a general is even more important."

One of the most intriguing aspects of this book concerns Bragg's relationship with Confederate President Jefferson Davis. Though Davis and Bragg had served together in the Mexican-American War, they were hardly on friendly terms when the Civil War commenced. Future Union Gen. William T. Sherman said, "Bragg hated Davis bitterly," and Bragg resigned his commission in the old Army because of Davis' policies as secretary of war in the Franklin Pierce administration.

Hess breaks new ground, opining that friendship was not an issue because Bragg's administrative abilities endeared



him to Davis. Bragg had demonstrated to the Confederate chief executive that he was a disciplined trainer who clearly understood volunteer forces. In short, Davis supported Bragg because Davis "sincerely believed him to be a reliable and effective commander."

What was missing on Bragg's resume was combat, but that was about to change. In March 1862, Davis ordered Bragg to central Tennessee, where Bragg commanded a corps at Shiloh. In the ensuing battle, Bragg "rose to the occasion [and] fought the battle with passion, even with an air of desperation."

But Hess notes that "there were black marks on Bragg's record," such as his uncoordinated attacks against the Union position known as the Hornet's Nest, which resulted in over 2,400 Confederate casualties. In his own battle report, Bragg criticized his subordinate commanders for his own inept handling of his troops, beginning a pattern of a lack of personal accountability that characterized his future campaigns.

Hess is far too empathetic to his subject in stating that "Robert E. Lee ended his highly praised Seven Days campaign with his army conducting equally uncoordinated, piecemeal attacks against a strong Union position at Malvern Hill." Hess states, "Lee was never criticized for this costly exhibition of ineptness in the Army of Northern Virginia." The inference is that if Lee was not criticized, Bragg should not have been criticized.

As with Shiloh, Bragg's campaigns in Perryville, Ky., and Stones River, Tenn., and the battles around Chattanooga in 1863 resulted in initial victories. But in each case, the Confederate commander unexpectedly withdrew from the field. Hess correctly concludes that the post-Stones River controversy "marked the beginning of Bragg's decline as an effective leader."

Nine months later, the Battle of Chickamauga (Sept. 19–20, 1863) marked the zenith of Confederate fortunes in the West. Chickamauga was the Confederacy's single major victory in Tennessee. Despite repeated urgings from his corps and division commanders, Bragg again forfeited the South's gains through his haphazard pursuit of the Union Army of the Cumberland as it fled to Chattanooga.

Davis probably should have relieved Bragg of his command following Chickamauga, as the senior command of the Army of Tennessee was totally dysfunctional and most of Bragg's subordinate commanders were in open revolt. Bragg "had burned out as an effective commander by the fall of 1863," Hess writes, and his subsequent defeat at Chattanooga in November 1863 finally spelled the end of his tumultuous tour of command.

Does Bragg merit the condemnation of contemporary observers and modern historians? To Hess, the answer is a resounding no. Under Bragg's command, the Army of Tennessee achieved a higher standard of effectiveness than any of his predecessors or successors attained. Bragg won a few tactical victories, yet he never translated those tactical victories to strategic successes. It is probable that no

army commander had to deal with such insubordinate corps and divisions as did Bragg, but much of his troubles were of his own making. In the end, "Bragg was a fascinating mixture of good and bad qualities, [and] his impact on Confederate history was enormous."

__Col. Cole C. Kingseed__, USA Ret., is a writer and consultant. A 30-year infantry veteran, he commanded at the platoon, company and battalion levels and served in a variety of military assignments, culminating in his tenure as full professor of history and chief of military history at the U.S. Military Academy. He holds a bachelor's degree from the University of Dayton, Ohio; master's degrees from Ohio State University and the U.S. Naval War College; and a Ph.D. from Ohio State.

Battling the Elements in the Far North

81 Days Below Zero: The Incredible Survival Story of a World War II Pilot in Alaska's Frozen Wilderness. *Brian Murphy with Toula Vlahou. Da Capo Press. 264 pages. $24.99*

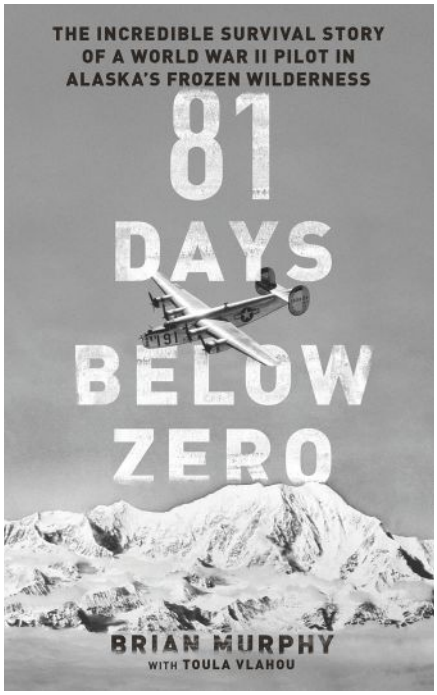
By Lt. Col. Gregory Banner
U.S. Army retired

Imagine bailing out of a crashing aircraft, with no supplies to speak of, in rural Alaska, in the winter, not knowing exactly where you are and likewise with others not knowing where to go. That is the start of the book *81 Days Below Zero*, which describes how Army Air Corps 1st Lt. Leon Crane managed to survive and walk out of the remote wilderness more than 11 weeks after his B-24 crashed in December 1943.

While the World War II European and Pacific theaters of war are comparatively well-known, there were a lot of supporting activities in other areas all over the globe. Canada, Alaska, Greenland and adjacent territories played a crucial role in wartime logistics as well as actual combat, and a lot of people passed through these areas during the war. But operations in the far north entailed not just combat against the enemy at times; they also required a constant battle against unforgiving elements.

Many individuals know what it is like to be uncomfortable in the cold, but very few understand the extreme environment well below zero. Exposed flesh freezes, metal breaks, and the simplest tasks become almost impossible. Crane was dropped into that environment, unprepared and ill-equipped, and forced to survive in temperatures that routinely reached into the 30- and 40-below-zero range.

Author Brian Murphy is a journalist at *The Washington Post* who joined the newspaper after more than 20 years as an award-winning foreign correspondent and bureau chief for The Associated Press in Europe and the Middle East. His book is an epic tale and one that will hold the attention of anyone interested in Alaska, World War II history, survival, or operations in the extreme cold. The story focuses naturally on Crane's journey out of the wilderness, but Murphy also provides some background on Alaska during the war and some of the critical missions there. The main character, in fact, was part of an aviation test unit based in Fairbanks, Alaska, as the Army Air Corps tried to learn to deal with cold-weather impacts on aircraft and equipment, a requirement that remains to this day as we continue to operate in those extreme environments.



Murphy also spends time discussing the continuing efforts of the U.S. government to locate, identify and bring home the remains of our servicemen from all conflicts, something in which Americans should take justifiable pride. In this story, one of Crane's crewmates was, in fact, finally located in 2006 and given a proper burial at Arlington National Cemetery, Va.

It would spoil the book to describe the details of Crane's survival and journey. In some ways, he was incredibly lucky; but he had to be, given the challenges he faced. There were numerous times he could have died, and he easily could still be among the many missing from the war. There is no doubt that he made good decisions and had a will to survive that carried him through and provided the framework for his ultimate deliverance.

Times have changed. The search and rescue system has evolved greatly; helicopters have revolutionized transportation; communications and location devices are now routinely used; clothing and equipment are much better; and survival training has come a long way. Most of that was in its infancy or nonexistent in World War II. This story's value lies in giving us an understanding of how it is possible to survive in the harshest conditions on almost nothing but wits, guts and determination.

__Lt. Col. Gregory Banner__, USA Ret., spent 21 years in the Army as an infantry and Special Forces officer. Among his assignments was instructor at the Northern Warfare Training Center, Fort Wainwright, Alaska. He continues to camp and teach in the mountains and cold weather, mostly with the National Ski Patrol Mountain Travel and Rescue Program. He has a bachelor's degree from the U.S. Military Academy; and master's degrees from Troy University, Ala., and the U.S. Army Command and General Staff College.

Fighting for U.S. Interests Half a World Away

The United States Army in China, 1900–1938: A History of the 9th, 14th, 15th and 31st Regiments in the East. *Alfred Emile Cornebise. McFarland. 296 pages. $45*

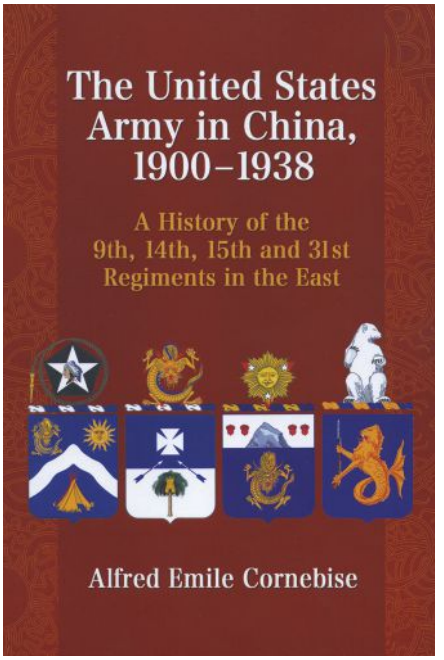
By Lt. Col. Timothy R. Stoy
U.S. Army retired

Alfred E. Cornebise follows his excellent *The United States 15th Infantry Regiment in China, 1912–1938* with this broad scholarly overview of the U.S. Army infantry regiments that served in China from the Boxer Rebellion in 1900 to the final withdrawal of the 15th Infantry Regiment in March 1938. He covers the political and social framework in which they served and discusses the U.S. impact on Chinese political, economic and social development in the first half of the 20th century. He documents how memories of that period of weakness continue to influence Chinese strategy and diplomacy today.

Cornebise is professor emeritus of history at the University of Northern Colorado and the author of 14 books. In his latest, *The United States Army in China, 1900–1938*, he analyzes China's weakness in the 19th and first half of the 20th century after millennia of being, in Asian eyes, the world's pre-eminent culture and power. Western economic exploitation and extraterritoriality after the Treaty of Nanking in 1842 caused major resentment in the Chinese ruling class and general populace.

The Boxer Uprising was the eventual result. The 9th and 14th Infantry Regiments deployed to China and suppressed the uprising along with the forces of other nations, including those of Japan, which through its early opening to the West and rapid modernization had eclipsed first Russia, then China as regional hegemon. The 15th Infantry Regiment arrived after the legations were relieved and conducted mopping-up operations for several months before departing for the Philippines. The 9th and 14th Infantry Regiments also departed shortly after the end of hostilities.

The Boxers' bloody defeat and depredations by military forces in the wake of the rebellion embittered many Chinese. This bitterness was deepened through greater international extraterritorial expansion and economic exploitation in the wake of the uprising. The inability of the degenerated ruling dynasty to protect Chinese interests led to its fall and the establishment of the Chinese Republic in 1911 and into 1912. The U.S. was concerned its economic interests would again be endangered and in early 1912 once again deployed the 15th Infantry Regiment from California to Tientsin, China, to protect the vital Peking-Tientsin railroad. For the next 26 years, American soldiers lived and operated in their Tientsin compound, mostly apart from the turmoil raging in northern China during the Warlord Era.



Cornebise illustrates that although the 15th was stationed in China, its contacts with and interest in the natives were limited to those who worked for U.S. forces. Some soldiers made an effort to explore China and get to know the Chinese, but the majority of the regiment remained focused on garrison life and annual marksmanship training in Chinwangtao. Cornebise also provides an illuminating review of numerous regimental officers who went on to become general officers and play major roles in World War II.

The rise of Japan and its military activities in China resulted in the 1932 deployment of the 31st Infantry Regiment to Shanghai to guard American interests in that city. The author describes the day-to-day life of soldiers in Shanghai as they protected American and international interests while trying to avoid engaging Japanese forces in combat. The Shanghai incident was actually a major military effort by both the Chinese and Japanese, and Cornebise does well to focus attention on that important historical event.

The final two chapters in which Cornebise analyzes the long-range impacts foreign activities had on China's development are thought-provoking. Missionary activity, extraterritoriality, economic exploitation, ruthless suppression of the natives, and the imposition of Western culture and dress alienated a proud people and built ever greater resentment against the interlopers. Cornebise asserts this so-called century of shame remains vivid in Chinese minds, and drives China's efforts to regain and retain its pre-eminence and rectify real and perceived past injustices.

This solid, scholarly and thought-provoking book is a good overview of the U.S. Army regiments that operated in China; provides an interesting and necessary review of U.S. and foreign involvement in China during a critical period; and analyzes how this involvement continues to shape Chinese political, diplomatic and military behavior. This book has relevance today as many ask what China wants and why, as it becomes an economically powerful nation and flexes its diplomatic and military muscle.

***Lt. Col. Timothy R. Stoy**, USA Ret., is the historian for the 15th Infantry Regiment Association. He has a bachelor's degree from the U.S. Military Academy and a master's degree from Georgetown University, Washington, D.C.*

Jackson: Metaphor for What Made America Great

By Brig. Gen. John S. Brown, U.S. Army retired

March 15 marks the 250th anniversary of the birth of Andrew Jackson, a War of 1812 hero and the seventh president of the United States. With his shock of unruly red hair, tall stature, piercing blue eyes and explosive temper, he cut a dominant figure in early 19th-century America.

As a military commander, Jackson won striking victories at Horseshoe Bend in present-day Alabama, at New Orleans, and in Florida. As a political leader he proved a colossus, even if characterized by critics as a populist demagogue unencumbered by policy or program beyond gut instinct. Dynamic, mercurial and belligerent, he is something of a metaphor for what made America great—and for what marred that greatness.

Jackson was born into a hardscrabble family of Scots-Irish immigrants living in a settlement along the border between North and South Carolina. His father had died before he was born, and his mother died when he was 14. He lost two brothers in the Revolutionary War, wherein he served as a courier and was captured by the British. He accumulated an education in fits and starts, and began the practice of rough-and-tumble frontier law in what became the state of Tennessee. He worked as a saddlemaker, speculated in land, participated in politics, served briefly as U.S. representative and then senator from Tennessee, and served as a judge on the Tennessee Supreme Court. He acquired a plantation, the Hermitage, near Nashville. With the benefit of slave labor, he rose to prosperity amid the planter elite.

Jackson was appointed to command the Tennessee Militia in 1801 and elected major general of the militia in 1802. When the War of 1812 broke out, restive Red Stick Creek Indians in northern Alabama and Georgia seized the opportunity to attack white settlements. A horrific massacre of settlers at Fort Mims, Ala., galvanized the frontier. Jackson reacted decisively, gathering about 2,500 militia, 600 Indian allies and the 39th Infantry Regiment, cornering the hostile Creeks at Horseshoe Bend and virtually annihilating them there. A subsequent treaty opened more than 22 million acres to white settlement.

The British threatened New Orleans, and Jackson sped to its defense. With a mixed force of about 5,000, he held off a British joint force of about 15,000 for weeks and then decisively defeated 7,500 in a Jan. 8, 1815, battle along the Rodriguez Canal. The British withdrew, leaving the Americans with a striking victory and a stirring affirmation of what could be accomplished with a well-led mix of militia and regulars. The mythos that emerged from the Battle of New Orleans included national hero status for "Old Hickory," a nickname afforded Jackson for his battlefield toughness.

Jackson's toughness was again tested when Indian resistance, British collusion and slave rebellion led to the First Seminole War. The Seminoles were aided and abetted by British supplies through Spanish-held Florida. Jackson invaded, captured Pensacola, deposed the Spanish governor, and summarily executed two British citizens accused of supplying the Seminoles. Understandably, a diplomatic row ensued, wherein Secretary of State John Quincy Adams artfully negotiated the Adams-Onis Treaty. The treaty ceded Florida to the U.S. in exchange for settling the U.S. western boundary more favorably for Spain, and U.S. assumption of up to $5 million in individual claims.

The Tennessee Legislature nominated Jackson for president. He lost the election of 1824 in a four-way wrangle that was finally resolved by the House of Representatives. Jackson characterized the results as a "corrupt bargain," and acquired a lifelong enmity for the Electoral College. His supporters characterized him as a "man of the people" who had been "robbed" by the "aristocrats of the east."

They prepared for a rematch in 1828, and organized and energized the new Democratic Party. Jackson handily beat Adams, the incumbent, in an election dominated by personality and innuendo and with little attention to policy per se. Jackson himself was not particularly ideological. His supporters saw in him a populist approach to advance their interests in Indian removal, national and economic expansion, tariff reduction, and the diminishment of federal governance.

Wars and treaties had left vast tracts of land under Indian control, surrounded by areas open to white settlement. Many tribes involved had been friendly to or come to terms with U.S. gov-

Library of Congress

Maj. Gen. Andrew Jackson

ernance. Settled agriculture was increasingly a norm, particularly in the South. The jigsaw of Indian holdings broke up the homogeneity of white settlement and withheld desirable lands from it.

With the Indian Removal Act of 1830, Jackson obtained authority to relocate Indians from within existing state borders to west of the Mississippi River, ostensibly through negotiation. The Cherokee obtained a decision against such encroachment from the Supreme Court, but Jackson ignored it. Pursuing a "benevolent policy" to preserve the Indians from violent extinction, Jackson bullied tens of thousands into moving west.

Library of Congress/D.M. Carter; T. Phillibrown

Engraving depicts Maj. Gen. Andrew Jackson, far right, during the Battle of New Orleans

The newly open Indian lands accorded with a vision of Manifest Destiny and considerably expanded the economic potential of the United States. Lands acquired in the South particularly advanced cotton plantation agriculture, wherein Jackson had a sizable personal stake. This, in turn, fueled the internal slave trade. Over 250,000 "excess" slaves from Virginia, Maryland and the Carolinas were resold farther west to reinforce the labor supply. In concert with industrial expansion in the Northeast, agricultural expansion in the Old Northwest, and increasing access to a global economy, the so-called Cotton Kingdom proved a pillar of U.S. economic growth.

Land sales and tariffs were principal sources of government revenue in 19th-century America. Jackson's supporters expected him, a Westerner, to favor cheap land sales and reduced tariffs. He pursued cheaper land sales but disappointed them on tariffs. Jackson recognized that the federal government needed money. He supported tariffs high enough to raise revenues, even if he did not particularly support tariffs to "protect" Northern industries.

The matter came to a head with the Nullification Crisis of 1832–33. South Carolina objected to the Tariff of 1832 and decided to nullify—ignore—it. Enraged at such presumption, Jackson threatened to invade and obtained a "force bill" enabling him to do so. Cooler heads negotiated an end to the crisis.

In addition to tariff reduction, for Jackson's supporters, diminished federal governance included reining in the bureaucracy and abolishing the Second Bank of the United States. To some, "reining in" simply meant exercising a spoils system and replacing Adams' appointees with their own. Jackson proved to actually be interested in good governance, however, and sought to eliminate fraud, embezzlement, tax evasion and mismanagement. He did believe in a "rotation" system, opining that government service was not particularly challenging and that entrenched bureaucrats were more likely to become lax or corrupt than to remain effective.

The Second Bank of the United States became a particular target. It was a public-private partnership that effectively marketed government bonds, held government funds, provided credit, and assured a sound currency. It did make profits for its investors, and also forced state banks to back their notes with adequate specie reserves. Critics accused it of influence peddling, but particularly wanted to escape its regulation of the money supply.

Jackson destroyed it without particularly understanding it, distributing its federal assets to scores of state banks. This recklessly expanded the money supply, fueling a period of wild speculation. Shortly after Jackson left office, this disarray in the financial system turned what could have been a market correction into the worst depression yet in American history.

The looming Panic (Depression) of 1837 notwithstanding, white Americans came to the end of Jackson's presidency better off than they had ever been. His battlefield victories had secured more territory for the United States than those of any man then living. His steadfast posture in the Nullification Crisis perhaps saved the Union then, and served as a good example when secession provoked a similar crisis 30 years later. Jackson was a man of his times, and his accretion of power, population and prosperity comported with what then was thought to make a nation great. ★

***Brig. Gen. John S. Brown**, USA Ret., was chief of military history at the U.S. Army Center of Military History from December 1998 to October 2005. He commanded the 2nd Battalion, 66th Armor in Iraq and Kuwait during the Gulf War and returned to Kuwait as commander of the 2nd Brigade, 1st Cavalry Division in 1995. Author of* Kevlar Legions: The Transformation of the U.S. Army, 1989–2005*, he has a doctorate in history from Indiana University.*

Additional Reading

Latner, Richard B., *The Presidency of Andrew Jackson* (Athens: University of Georgia Press, 1982)

Mahon, John K., *The War of 1812* (New York: Da Capo Press, 1991)

Remini, Robert V., *Andrew Jackson* (New York: Harper Perennial, 1999)

Final Shot

A CH-47 Chinook helicopter crew from Joint Base Lewis-McChord, Wash., retrieves a 14,000-pound buoy that washed ashore in Garibaldi, Ore. The beached buoy usually marks the navigable channel into Tillamook Bay.

U.S. Coast Guard/Petty Officer 1st Class Levi Read

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