



Military Review

THE PROFESSIONAL JOURNAL OF THE U.S. ARMY

MARCH-APRIL 2022

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March-April 2022, Vol. 102, No. 2

Professional Bulletin 100-22-03/04

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Military Review (US ISSN 0026-4148) (USPS 123-830) is published bimonthly by the Department of the Army, Army University Press, Fort Leavenworth, KS 66027-1293. Periodical postage paid at Leavenworth, KS, and additional mailing offices.

Yearly paid subscriptions are for \$42 US/APO/FPO and \$58.80 for foreign addresses and are available through the U.S. Government Publishing Office (GPO) at <https://bookstore.gpo.gov/products/military-review-professional-journal-united-states-army>.

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The Secretary of the Army has determined that the publication of this periodical is necessary in the transaction of the public business as required by law of the department. Funds for printing this publication were approved by the Secretary of the Army in accordance with the provisions of Army Regulation 25-30.

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Chief of Staff



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2204710



Cover photo: Russian service members gather 27 January 2022 near armored vehicles during drills held by the armed forces of the Southern Military District at the Kadamovsky Range in the Rostov region, Russia. (Photo by Sergey Pivovarov, Reuters/Alamy Stock Photo)

Next page: 1st Lt. Ryan Harakel, an Army Reserve medical service officer from Des Moines, Iowa, is tested on night land navigation skills while Spc. Heather Fitzwater, a Reserve dental technician from Lubbock, Texas, observes during an Expert Field Medical Badge (EFMB) event held 16–22 May 2021 at Fort McCoy, Wisconsin. This EFMB event is the first hosted by the Army Reserve and offers an opportunity for soldiers in the medical field to earn the special skill award by demonstrating exceptional competence and outstanding performance in soldier and medical tasks. Less than 20 percent of candidates pass the challenging test. (Photo by Sgt. 1st Class Kenneth Scott, U.S. Army)



2022 General William E. DePuy

Special Topics Writing Competition

This year's theme is "Insights from Two Decades in Afghanistan"

The intent of this year's DePuy competition is to highlight from a "boots on the ground" perspective what specifically the U.S. Army should learn from its twenty-year experience in Afghanistan. Possible topics might include the following: What faulty assumptions did leaders at all levels make that should be avoided in the future? What lessons should future

senior military leaders learn from Afghanistan? How did the perception of success affect operational planning and assessments of progress? To what degree was Afghanistan a failure of mission-command or counterinsurgency doctrine? Any other salient topics that might be gleaned from an individual's experience and point of view.

Cautionary note: Over the course of the next several years, the topic of U.S. military involvement in Afghanistan will likely be intensely examined, debated, and heatedly argued; primarily at the strategic level and among a host of entities both in and out of the military. In contrast, while *Military Review* (MR) will consider all submissions received, the DePuy contest has historically been a venue that places a premium on careful, impartial, and scholarly work in the practical pursuit of applicable lessons learned. MR has selected the 2022 topic specifically to take advantage of the wealth of relatively recent experience still resident in the active-duty or just-retired force for the purposes of practical learning. Consequently, the judges will be advised that preference will be given to articles where authors primarily discuss issues that outline lessons learned salient to the operational and tactical levels of conflict. Authors are advised to avoid attempting to use the contest as a forum for partisan/political-oriented assignment of credit and liability for the outcome of the Afghanistan Campaign.

Contest opens 1 January 2022 and closes 18 July 2022

1st Place	\$1,000 and publication in <i>Military Review</i>
2nd Place	\$750 and consideration for publication in <i>Military Review</i>
3rd Place	\$500 and consideration for publication in <i>Military Review</i>

For information on how to submit an entry, please visit <https://www.armyupress.army.mil/DePuy-Writing-Competition/>.

Articles will be comparatively judged by a panel of senior Army leaders on how well authors have clearly identified issues requiring solutions relevant to the Army in general and/or to a significant portion of the Army; how effectively detailed and feasible solutions to the problems identified are presented; and, the level of expository skill the author demonstrates in developing a well-organized article using professional standards of grammar, usage, critical thinking, original insights, and evidence of thorough research in the sources provided.

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And How We Should See China

Lt. Gen. H. R. McMaster, U.S. Army, Retired

The former White House national security adviser offers his unique insight into the United States' foremost adversary in this excerpt from McMaster's book Battlegrounds: The Fight to Defend the Free World.

14 Decentralized Deterrence

Reinvigorating the Army's Deterrence Impact in the Face of a Modernized People's Liberation Army

Frank Hoffman

Decentralizing the U.S. forces in the U.S. Indo-Pacific region would mitigate China's first-strike capabilities and enhance deterrence of foreign aggression in the region. This article won third place in Military Review's 2021 Gen. William E. DePuy Special Topics Writing Competition.

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A Tale of Two Doctrines

Maj. Justin K. Bateman, U.S. Air Force

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Modern Insight on Mission Command Pitfalls from German Leadership at the First Battle of the Marne

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41 Preventing a Short Jump across a Wide Ditch

Fully Embracing Mission Command to Avoid a Multi-Domain Disaster

Maj. Robert Rose, U.S. Army

The Army must fully embrace mission command through organizational, doctrinal, and training changes to avoid a military disaster by entering a peer fight with a high-risk concept of warfare that is not supported by its decision-making capabilities.

54 Gaining the Advantage

How Patton's Unique Information Forces and Competitive Approach to Information Enabled Operational-Level Success in August 1944

Maj. Spencer L. French, U.S. Army

Generating an information advantage over the German forces allowed Patton's Third Army to gain and maintain the initiative, manage prudent risk, anticipate decisions, and extend its operational reach throughout the pursuit across France. This article is condensed from the author's thesis, which received the Command and General Staff Officer Course's Birrer-Brookes Award for outstanding Master of Military Arts and Sciences thesis.

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Can Army Medicine Negate the Peacetime Effect?

Col. Michael J. Tarpey, MD, U.S. Army

A medical expert explains how the Army's Medical Command must reorganize and refocus on establishing and sustaining a medical force that is completely prepared to treat casualties from large-scale combat operations on the first day of the next war.

81 The Lesson of the Security Force Assistance Brigade in Africa

Find the Authority to Compete and Win

Maj. Spencer D. Propst, U.S. Army

A foreign area officer posits that for the security force assistance brigade (SFAB) to fulfill its desired role in competition, crisis, and conflict, it is incumbent upon U.S. strategic leaders to develop and employ more appropriate authorities for SFAB activities globally.

90 Support the Fight!

The U.S. Army, the Joint Force, and the Indo-Pacific

1st Lt. Joshua Ratta, U.S. Army

To properly envision and articulate Army support for the joint force in the Indo-Pacific region, all Army Pacific efforts should be categorized into three distinct missions: set the joint force, sustain the joint force, and provide Army support to partner nations. This article won second place in Military Review's 2021 Gen. William E. DePuy Special Topics Writing Competition.

99 Speed versus Quality

A Cautionary Tale of the M-16 in Vietnam

Maj. Dallas Durham, U.S. Army

The author examines the history of the Army's flawed M-16 rifle acquisition process and provides valuable lessons from it for today's military professionals.

109 The Congressional Delegation

A Great Opportunity to Build Trust and Inform Strategic Decisions

Col. Nathan Cook, U.S. Army

Maj. Patrick W. Naughton, U.S. Army Reserve

Understanding the history and purpose of a congressional delegation, what it is, who the key organizations are, and the fundamentals of executing a successful visit will help Army leaders prepare to host congressional travel delegations to inform members of Congress as they enact policy as well as authorize and ultimately fund the military.

116 Advanced Strategic Leadership Studies Program

Barry M. Stentiford

The director of the Advanced Strategic Leadership Studies Program describes the program and explains the benefits of attendance for students and the Army.

REVIEW ESSAY

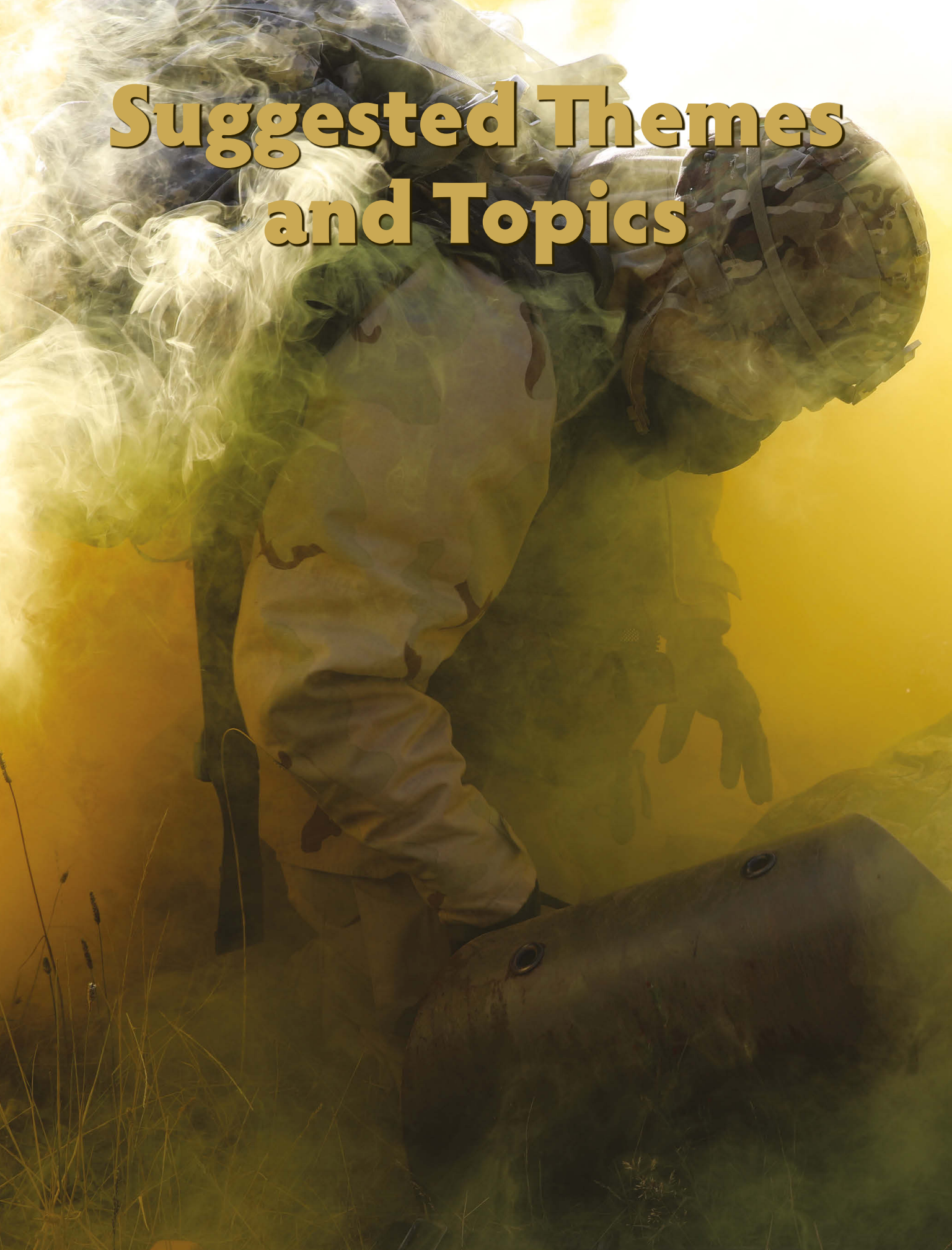
123 An Impeccable Spy

Richard Sorge, Stalin's Master Agent

Lt. Col. John H. Modinger, PhD, U.S. Air Force, Retired

The author critiques a book by Owen Matthews that provides an amazing tale of espionage by a master Russian spy.

Suggested Themes and Topics



Large-Scale Combat Operations/ Multi-Domain Operations

- Division as a formation
- Air and antimissile defense
- Deep operations
- Information advantage/military deception
- Field Manual 3-0—competition continuum (competition, crisis, conflict)
- Multi-domain task force
- Recon and security/cavalry operations
- Protection and security (air defense artillery, engineer, chemical, biological, radiological, nuclear, cavalry)

Joint Operations

- Air/sea/land integration
- Joint/long-range precision fires
- Air and antimissile defense
- Joint forcible entry

Europe/Central Command/ Indo-Pacific Command

- Contiguous and noncontiguous operations
- New operational environment: adversaries operating in their “near abroad” (close proximity to own borders)
- Peer and near-peer adversaries contesting U.S. joint force in all domains

Other Topics

- Military role within interagency responses to the COVID-19 pandemic and other natural or humanitarian disasters
- What is the role for the Army/Reserve components in homeland security operations? What must the Army be prepared to do in support of internal security? Along our borders?
- Role of security force assistance brigades (SFAB) in the gray-zone competition phase drawn from experience of an SFAB in Africa or Europe
- What must be done to adjust junior leader development to the modern operational environment?
- What logistical challenges does the U.S. military foresee due to infrastructure limitations in potential foreign areas of operation, and how can it mitigate them?
- Defending against biological warfare—examination of the war waged by other than conventional military weapons

Army Sgt. 1st Class Christopher Moore, a combat medic assigned to Landstuhl Regional Medical Center, Regional Health Command-Europe, secures a simulated casualty on a sked while under a simulated chemical attack during the 21st Theater Sustainment Command Best Medic Competition in Baumholder, Germany, 22 August 2019. The top winners of this competition formed a team and moved on to compete in the CSM Jack L. Clark Jr. Army Best Medic Competition. (Photo by Sgt. Jesse Pilgrim, U.S. Army)



The World Political Parties Summit at the Diaoyutai State Guesthouse was held 6 July 2021 in Beijing. More than a five hundred participants from political parties across 160 nations attended, many participating via video link. Sponsored by the Communist Chinese Party (CCP), it was held in conjunction with the one hundredth anniversary of the CCP. The summit was part of a sustained synchronized campaign of economic, diplomatic, and propaganda/information operations initiatives orchestrated by Chinese communist dictator Xi Jinping aimed at undermining the Western orientation of the current economic, political, social, and cultural capitalist/libertarian global order and supplanting it with the authoritarian model presented by the People's Republic of China with China as the leading centripetal force. (Photo by Xinhua/Jiang Kehong)

How China Sees the World And How We Should See China

Lt. Gen. H. R. McMaster, U.S. Army, Retired

Editor's note: This article by Lt. Gen. H. R. McMaster (ret.), former National Security Advisor to the White House during the Trump administration, was originally published in the May 2020 print edition of *The Atlantic* magazine. It is an abridgment of book chapters discussing his experiences with Chinese government officials in his book *Battlegrounds: The Fight to Defend the Free World*, published by HarperCollins also in May 2020. It is published in *Military Review* with permission of *The Atlantic* and the Hoover Institution at Stanford University, California, where he currently is the Fouad and Michelle Ajami Senior Fellow and lecturer in Stanford's Graduate School of Business.

I. The Forbidden City

On November 8, 2017, Air Force One touched down in Beijing, marking the start of a state visit hosted by China's president and Communist Party chairman, Xi Jinping. From my first day on the job as President

Chinese Communist Party's military and economic strategies is what makes it particularly dangerous to the United States and other free and open societies.

John King Fairbank, the Harvard historian and godfather of American sinology, noted in 1948 that to



During our state visit, Xi and his advisers relied heavily on history to convey their message—emphasizing certain subjects and avoiding others.



Donald Trump's national security adviser, China had been a top priority. The country figured prominently in what President Barack Obama had identified for his successor as the biggest immediate problem the new administration would face—what to do about North Korea's nuclear and missile programs. But many other questions about the nature and future of the relationship between China and the United States had also emerged, reflecting China's fundamentally different perception of the world.

Since the heady days of Deng Xiaoping, in the late 1970s, the assumptions that had governed the American approach to our relationship with China were these: After being welcomed into the international political and economic order, China would play by the rules, open its markets, and privatize its economy. As the country became more prosperous, the Chinese government would respect the rights of its people and liberalize politically. But those assumptions were proving to be wrong.

China has become a threat because its leaders are promoting a closed, authoritarian model as an alternative to democratic governance and free-market economics. The Chinese Communist Party is not only strengthening an internal system that stifles human freedom and extends its authoritarian control; it is also exporting that model and leading the development of new rules and a new international order that would make the world less free and less safe. China's effort to extend its influence is obvious in the militarization of man-made islands in the South China Sea and the deployment of military capabilities near Taiwan and in the East China Sea. But the integrated nature of the

understand the policies and actions of Chinese leaders, historical perspective is “not a luxury, but a necessity.” During our state visit, Xi and his advisers relied heavily on history to convey their intended message. They emphasized certain historical subjects. They avoided others.

The American delegation—which included President Trump and the first lady, Secretary of State Rex Tillerson, and the U.S. ambassador to China, Terry Branstad—received its first history lesson as it toured the Forbidden City, the seat of Chinese emperors for five centuries. We were accompanied by Xi, his wife, and several other senior Chinese leaders. The message—conveyed in private conversations and public statements, as well as in official TV coverage and by the very nature of the tour—was consistent with Xi's speech three weeks earlier at the 19th National Congress: The Chinese Communist Party was relentlessly pursuing the “great rejuvenation of the Chinese nation.” As Xi described it, “rejuvenation” encompassed prosperity, collective effort, socialism, and national glory—the “China dream.” The Forbidden City was the perfect backdrop for Xi to showcase his determination to “move closer to the center of the world stage and to make a greater contribution to humankind.”

The Forbidden City was built during the Ming dynasty, which ruled China from 1368 to 1644—a period considered to be a golden age in terms of China's economic might, territorial control, and cultural achievements. It was during this dynasty that Zheng He, an admiral in the Ming fleet, embarked on seven voyages around the Western Pacific and Indian Oceans, more than half a century before Christopher Columbus set sail. His “treasure ships,” among the largest wooden vessels ever built,

brought back tribute from all parts of the known world. But despite the success of the seven voyages, the emperor concluded that the world had nothing to offer China. He ordered the treasure ships scuttled and Chinese ports closed. The period that followed—the 19th and

only to impress, but also to defend from threats that might come from both outside and inside the city's walls. After the end of the Han dynasty, in A.D. 220, China's core provinces were ruled only half the time by a strong central authority. And even then, China was

“China's leaders believe they have a narrow window of opportunity to strengthen their rule and revise the international order in their favor.”

20th centuries in particular—is seen by Xi and others in the leadership as an aberrational period during which European nations and, later, the United States achieved economic and military dominance.

Like the closing show of the 2008 Beijing Olympics, which placed modern technological innovation in the context of 5,000 years of Chinese history, the tour of the Forbidden City was meant, it seemed, as a reminder that Chinese dynasties had long stood at the center of the Earth. The art and architectural style of the buildings reflected the Confucian social creed: that hierarchy and harmony fit together and are interdependent. The emperor held court in the Hall of Supreme Harmony, the largest building in the Forbidden City. The grand throne is surrounded by six golden pillars, engraved with dragons to evoke the power of an emperor whose state ruled over *tianxia*—over “everything beneath heaven.”

While the images broadcast to China and the rest of the world from the Forbidden City during our visit were meant to project confidence in the Chinese

subject to foreign invasion and domestic turmoil. The Yongle emperor, Zhu Di, who built the Forbidden City, was more concerned about internal dangers than he was about the possibilities of another Mongol invasion. To identify and eliminate opponents, the emperor set up an elaborate spy network. To preempt opposition from scholars and bureaucrats, he directed the executions of not only those suspected of disloyalty, but also their entire families. The Chinese Communist Party used similar tactics centuries later. Like Xi, the emperors who sat on the elaborate throne in the heart of the Forbidden City practiced a remote and autocratic style of rule vulnerable to corruption and internal threats.

Our guide showed us where the last royal occupant of the Forbidden City, Emperor Puyi, was stripped of power in 1911, at the age of 5, during China's republican revolution. Puyi abdicated in the midst of the “century of humiliation,” a period of Chinese history that Xi had described to Trump when the two leaders met for dinner at Mar-a-Lago, seven months before our tour. The century of humiliation was the unhappy era during which China experienced internal fragmentation, suffered defeat in wars, made major concessions to foreign powers, and endured brutal occupation. The humiliation began with Great Britain's defeat of China in the First Opium War, in 1842. It ended with the Allied and Chinese defeat of imperial Japan in 1945 and the Communist victory in the Chinese Civil War in 1949.

Our last meeting of the state visit, in the Great Hall of the People, was with Li Keqiang, the premier of the State Council and the titular head of China's government. If anyone in the American group had any doubts about China's view of its relationship with the United

Lt. Gen. H. R. McMaster, U.S. Army, retired, is a former White House national security adviser and the author of *Battlegrounds: The Fight to Defend the Free World* and *Dereliction of Duty: Lyndon Johnson, Robert McNamara, the Joint Chiefs of Staff, and the Lies That Led to Vietnam*.

Communist Party, one could also sense a profound insecurity—a lesson of history that went unmentioned. In its very design, the Forbidden City seemed to reflect that contrast between outward confidence and inner apprehension. The three great halls at the city's center were meant not

States, Li's monologue would have removed them. He began with the observation that China, having already developed its industrial and technological base, no longer needed the United States. He dismissed U.S. concerns over unfair trade and economic practices, indicating that the U.S. role in the future global economy would merely be to provide China with raw materials, agricultural products, and energy to fuel its production of the world's cutting-edge industrial and consumer products.

Leaving China, I was even more convinced than I had been before that a dramatic shift in U.S. policy was overdue. The Forbidden City was supposed to convey confidence in China's national rejuvenation and its return to the world stage as the proud Middle Kingdom. But for me it exposed the fears as well as the ambitions that drive the Chinese Communist Party's efforts to extend China's influence along its frontiers and beyond, and to regain the honor lost during the century of humiliation. The fears and ambitions are inseparable. They explain why the Chinese Communist Party is obsessed with control—both internally and externally.

The party's leaders believe they have a narrow window of strategic opportunity to strengthen their rule and revise the international order in their favor—before China's economy sours, before the population grows old, before other countries realize that the party is pursuing national rejuvenation at their expense, and before unanticipated events such as the coronavirus pandemic expose the vulnerabilities the party created in the race to surpass the United States and realize the China dream. The party has no intention of playing by the rules associated with international law, trade, or commerce. China's overall strategy relies on co-option and coercion at home and abroad, as well as on concealing the nature of China's true intentions. What makes this strategy potent and dangerous

is the integrated nature of the party's efforts across government, industry, academia, and the military.

And, on balance, the Chinese Communist Party's goals run counter to American ideals and American interests.

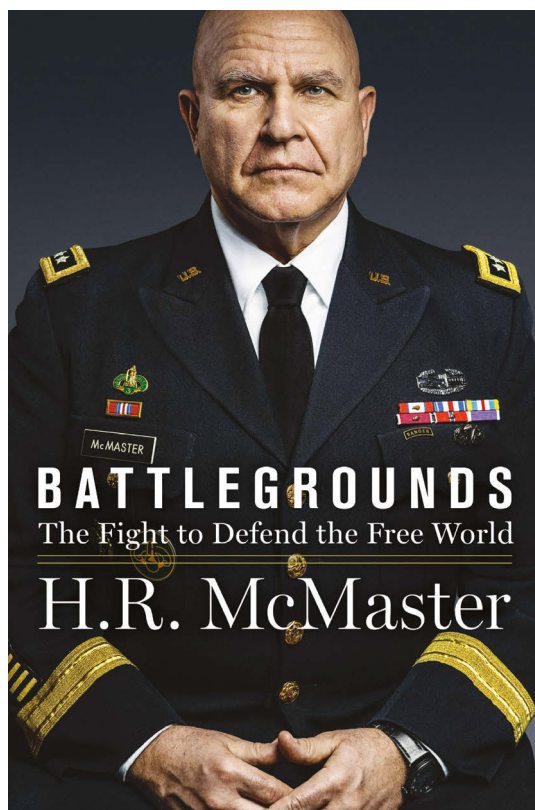
II. Three Prongs

As China pursues its strategy of co-option, coercion, and concealment, its authoritarian interventions have become ubiquitous. Inside China, the party's tolerance for free expression and dissent is minimal, to put it

mildly. The repressive and manipulative policies in Tibet, with its Buddhist majority, are well known. The Catholic Church and, in particular, the fast-growing Protestant religions are of deep concern to Xi and the party. Protestant Churches have proved difficult to control, because of their diversity and decentralization, and the party has forcefully removed crosses from the tops of church buildings and even demolished some buildings to set an example. Last year, Beijing's effort to tighten its grip on Hong Kong sparked sustained protests that continued into 2020—protests that Chinese leaders blamed on foreigners, as they typically do. In Xinjiang, in northwestern China, where ethnic Uighurs

mainly practice Islam, the party has forced at least 1 million people into concentration camps. (The government denies this, but last year *The New York Times* uncovered a cache of incriminating documents, including accounts of closed-door speeches by Xi directing officials to show “absolutely no mercy.”)

Party leaders have accelerated the construction of an unprecedented surveillance state. For the 1.4 billion Chinese people, government propaganda on television and elsewhere is a seamless part of everyday life. Universities have cracked down on teaching that explains “Western liberal” concepts of individual rights,



freedom of expression, representative government, and the rule of law. Students in universities and high schools must take lessons in “Xi Jinping Thought on Socialism With Chinese Characteristics for a New Era.” The chairman’s 14-point philosophy is the subject of the most popular app in China, which requires users to sign in with their cellphone number and real name before they can earn study points by reading articles, writing comments, and taking multiple-choice tests. A system of personal “social credit scores” is based on tracking people’s online and other activity to determine their friendliness to Chinese government priorities. Peoples’ scores determine eligibility for loans, government employment, housing, transportation benefits, and more.

The party’s efforts to exert control inside China are far better known than its parallel efforts beyond China’s borders. Here again, insecurity and ambition are mutually reinforcing. Chinese leaders aim to put in place a modern-day version of the tributary system that Chinese emperors used to establish authority over vassal states. Under that system, kingdoms could trade and enjoy peace with the Chinese empire in return for submission. Chinese leaders are not shy about asserting this ambition. In 2010, China’s foreign minister matter-of-factly told his counterparts at a meeting of the Association of Southeast Asian Nations: “China is a big country, and you are small countries.” China intends to establish a new tributary system through a massive effort organized under three overlapping policies, carrying the names “Made in China 2025,” “Belt and Road Initiative,” and “Military-Civil Fusion.”

“Made in China 2025” is designed to help China become a largely independent scientific and technological power. To achieve that goal, the party is creating high-tech monopolies inside China and stripping foreign companies of their intellectual property by means of theft and forced technology transfer. In some cases, foreign companies are forced to enter into joint ventures with Chinese companies before they are permitted to sell their products in China. These Chinese companies mostly have close ties to the party, making routine the transfer of intellectual property and manufacturing techniques to the Chinese government.

The “Belt and Road Initiative” calls for more than \$1 trillion in new infrastructure investments across the Indo-Pacific region, Eurasia, and beyond. Its true purpose is to place China at the hub of trade routes and

communications networks. While the initiative at first received an enthusiastic reception from nations that saw opportunities for economic growth, many of those nations soon realized that Chinese investment came with strings attached.

The Belt and Road Initiative has created a common pattern of economic clientelism. Beijing first offers countries loans from Chinese banks for large-scale infrastructure projects. Once the countries are in debt, the party forces their leaders to align with China’s foreign-policy agenda and the goal of displacing the influence of the United States and its key partners. Although Chinese leaders often depict these deals as win-win, most of them have just one real winner.

For developing countries with fragile economies, Belt and Road sets a ruthless debt trap. When some countries are unable to service their loans, China trades debt for equity to gain control of their ports, airports, dams, power plants, and communications networks. As of 2018, the risk of debt distress was growing in 23 countries with Belt and Road financing. Eight poor countries with Belt and Road financing—Pakistan, Djibouti, the Maldives, Laos, Mongolia, Montenegro, Tajikistan, and Kyrgyzstan—already have unsustainable levels of debt.

China’s tactics vary based on the relative strength or weakness of the target states. When undertaking large-scale investment projects, many countries with weak political institutions succumb to corruption, making them even more vulnerable to Chinese tactics.

In Sri Lanka, the longtime president and current prime minister, Mahinda Rajapaksa, incurred debts far beyond what his nation could bear. He agreed to a series of high-interest loans to finance Chinese construction of a port, though there was no apparent need for one. Despite earlier assurances that the port would not be used for military purposes, a Chinese submarine docked there the same day as Japanese Prime Minister Shinzo Abe’s visit to Sri Lanka in 2014. In 2017, following the commercial failure of the port, Sri Lanka was forced to sign a 99-year lease to a Chinese state-owned enterprise in a debt-for-equity swap.

The new vanguard of the Chinese Communist Party is a delegation of bankers and party officials with duffel bags full of cash. Corruption enables a new form of colonial-like control that extends far beyond strategic shipping routes in the Indian Ocean and South China Sea, and elsewhere.

The Military-Civil Fusion policy is the most totalitarian of the three prongs. In 2014 and then again in 2017, the party declared that all Chinese companies must collaborate in gathering intelligence. “Any organization or citizen,” reads Article 7 of China’s National Intelligence Law, “shall support, assist with, and collaborate with the state intelligence work in accordance with the law, and keep the secrets of the national intelligence work known to the public.” Chinese companies work alongside universities and research arms of the People’s Liberation Army. Military-Civil Fusion encourages state-owned and private enterprises to acquire companies with advanced technologies, or a strong minority stake in those companies, so that the technologies can be applied for not only economic but also military and intelligence advantage. It fast-tracks stolen technologies

to the army in such areas as space, cyberspace, biology, artificial intelligence, and energy. In addition to espionage and cybertheft by the Ministry of State Security, the party tasks some Chinese students and scholars in the U.S. and at other foreign universities and research labs with extracting technology.

Sometimes U.S. defense funding supports China’s technology transfers. One of many examples is the Kuang-Chi Group, described in the Chinese media as “a military-civilian enterprise.” The Kuang-Chi Group was founded largely on the basis of U.S. Air Force-funded research into meta-materials at Duke University.

Chinese cybertheft is responsible for what General Keith Alexander, the former director of the National Security Agency, described as the “greatest transfer

of wealth in history.” The Chinese Ministry of State Security used a hacking squad known as APT10 to target U.S. companies in the finance, telecommunications, consumer-electronics, and medical industries as well as NASA and Department of Defense research laboratories, extracting intellectual property and sensitive data. For example, the hackers obtained personal information, including Social Security numbers, for more than 100,000 U.S. naval personnel.

China’s military has used stolen technologies to pursue advanced military capabilities of many kinds and drive U.S. defense companies out of the market. The Chinese drone manufacturer Dà-Jiāng Innovations (DJI) controlled more than 70 percent of the global market in 2017, thanks to its unmatched low prices. Its



WANTED BY THE FBI

APT 10 GROUP

Conspiracy to Commit Computer Intrusions; Conspiracy to Commit Wire Fraud;
Aggravated Identity Theft




ZHU HUA
ZHANG SHILONG

DETAILS

On December 17, 2018, a grand jury in the United States District Court for the Southern District of New York indicted ZHU HUA, aka “Afwar,” aka “CVNX,” aka “Alayos,” aka “Godkiller,” and ZHANG SHILONG, aka “Baobeilong,” aka “Zhang Jiaquo,” aka “Atreexp,” two members of a hacking group operating in China known in the cybersecurity community as Advanced Persistent Threat 10 (the “APT 10 Group”), with conspiracy to commit computer intrusion, conspiracy to commit wire fraud, and aggravated identity theft. The defendants worked for Huaying Haitai Science and Technology Development Company located in Tianjin, China, and they acted in association with the Chinese Ministry of State Security’s Tianjin State Security Bureau.

As alleged in the Indictment, from at least 2006 through 2018, the defendants conducted extensive campaigns of global intrusions into computer systems aiming to steal, among other data, intellectual property and confidential business and technological information from more than at least 45 commercial and defense technology companies in at least a dozen states, managed service providers (“MSP”), which are companies that remotely manage the information technology infrastructure of businesses and governments around the world, and U.S. government agencies. The victim companies targeted by ZHU HUA and ZHANG SHILONG were involved in a diverse array of commercial activity, industries, and technologies, including aviation, space and satellite technology, manufacturing technology, oil and gas exploration, production technology, communications technology, computer processor technology, and maritime technology. In addition, for example, the APT 10 Group’s campaign compromised the data of an MSP and certain of its clients located in at least 12 countries including Brazil, Canada, Finland, France, Germany, India, Japan, Sweden, Switzerland, the United Arab Emirates, the United Kingdom, and the United States. The APT 10 group also compromised computer systems containing information regarding the United States Department of the Navy and stole the personally identifiable information of more than 100,000 Navy personnel.

If you have any information concerning these individuals, please contact your local FBI office, or the nearest American Embassy or Consulate.

www.fbi.gov

Despite continual cynical and transparently false denials of official involvement in cyber theft, the Peoples’ Republic of China (PRC), with the support of its leader Xi Jinping, continues to organize and conduct massive hacking efforts against a wide variety of economic, academic, business, and administrative agencies in the United States to steal intellectual property as well as administrative and personal records. APT 10 is just one of many such organized cyber teams supported by the PRC and identified by the FBI. (Photo courtesy of the FBI)

unmanned systems even became the most frequently flown commercial drones by the U.S. Army until they were banned for security reasons.

Chinese espionage is successful in part because the party is able to induce cooperation, wittingly or unwittingly, from individuals, companies, and political leaders. Companies in the United States and other free-market economies often do not report theft of their technology, because they are afraid of losing access to the Chinese market, harming relationships with customers, or prompting federal investigations.

Co-option crosses over to coercion when the Chinese demand that companies adhere to the Communist Party's worldview and forgo criticism of its repressive and aggressive policies. When a Marriott employee using a company social-media account "liked" a pro-Tibet tweet in 2018, the hotel company's website and app were blocked in China for a week, and the employee was fired under pressure from the Chinese government. Last October, when Daryl Morey, the general manager of the Houston Rockets basketball team, tweeted his support of the Hong Kong protesters, Chinese state-run television canceled the broadcast of Rockets games.

The Chinese Communist Party has also pursued a broad range of influence efforts in order to manipulate political processes in target nations. Sophisticated Chinese efforts have been uncovered in Australia and New Zealand to buy influence within universities, bribe politicians, and harass the Chinese diaspora community into becoming advocates for Beijing.

III. Strategic Empathy

Americans, as Hans Morgenthau noted long ago, tend to view the world only in relation to the United States, and to assume that the future course of events depends primarily on U.S. decisions or plans, or on the acceptance by others of our way of thinking. The term for this tendency is strategic narcissism, and it underlies the long-held assumptions I mentioned earlier: about how greater integration of China into the international order would have a liberalizing effect on the country and alter its behavior in the world.

But there's another way of thinking about how countries behave: strategic empathy. According to the historian Zachary Shore, strategic empathy involves trying to understand how the world looks to others,

and how those perceptions, as well as emotions and aspirations, influence their policies and actions. An outlook of strategic empathy, taking into account history and experience, leads to a very different set of assumptions about China—one that is borne out by the facts.

The Chinese Communist Party is not going to liberalize its economy or its form of government. It is not going to play by commonly accepted international rules—rather, it will attempt to undermine and eventually replace them with rules more sympathetic to China's interests. China will continue to combine its form of economic aggression, including unfair trade practices, with a sustained campaign of industrial espionage. In terms of projecting power, China will continue to seek control of strategic geographic locations and establish exclusionary areas of primacy.

Any strategy to reduce the threat of China's aggressive policies must be based on a realistic appraisal of how much leverage the United States and other outside powers have on the internal evolution of China. The influence of those outside powers has structural limits, because the party will not abandon practices it deems crucial to maintaining control. But we do have important tools, quite apart from military power and trade policy.

For one thing, those "Western liberal" qualities that the Chinese see as weaknesses are actually strengths. The free exchange of information and ideas is an extraordinary competitive advantage, a great engine of innovation and prosperity. (One reason Taiwan is seen as such a threat to the People's Republic is because it provides a small-scale yet powerful example of a successful political and economic system that is free and open rather than autocratic and closed.)

Freedom of the press and freedom of expression, combined with robust application of the rule of law, have exposed China's predatory business tactics in country after country—and shown China to be an untrustworthy partner. Diversity and tolerance in free and open societies can be unruly, but they reflect our most basic human aspirations—and they make practical sense too. Many Chinese Americans who remained in the United States after the Tiananmen Square massacre were at the forefront of innovation in Silicon Valley.

Beyond a focus on strengths that the Chinese Communist Party regards as our weaknesses, there are explicit protective steps we must take. They include the following:

- ♦ Many universities, research labs, and companies in countries that value the rule of law and individual rights are witting or unwitting accomplices in China's use of technology to repress its people and improve the Chinese military's capabilities. For dual-use technologies, the private sector should seek new partnerships with those who share commitments to free-market economies, representative government, and the rule of law, not with those acting against these principles. Many companies are engaged in joint ventures or partnerships that help China develop technologies suited for internal security, such as surveillance, artificial intelligence, and biogenetics. In one of many examples, a Massachusetts-based company sold DNA-sampling equipment that has helped the Chinese government track Uighurs in Xinjiang. (The company has ended such sales.) Companies that knowingly collaborate with China's efforts to repress its own people or build threatening military capabilities should be penalized.
 - ♦ Many Chinese companies directly or indirectly involved in domestic human-rights abuses and violation of international treaties are listed on American stock exchanges. Those companies benefit from U.S. and other Western investors. Tougher screening of U.S., European, and Japanese capital markets would help restrict corporate and investor complicity in China's authoritarian agenda. Free-market economies like ours control the majority of the world's capital, and we have far more leverage than we are employing.
 - ♦ China's use of major telecommunications companies to control communications networks and the internet overseas must be countered. There should no longer be any dispute concerning the need to defend against the multinational technology company Huawei and its role in China's security apparatus. In 2019, a series of investigations revealed incontrovertible evidence of the grave national-security danger associated with a wide array of Huawei's telecommunications equipment. Many Huawei workers are simultaneously employed by China's Ministry of State Security and the intelligence arm of the People's Liberation Army. Huawei technicians have used intercepted cell data to help autocratic leaders in Africa spy on, locate, and silence political opponents. A priority area for multinational cooperation among free societies should be the development of infrastructure, particularly 5G communications, to form trusted networks that protect sensitive and proprietary data.
 - ♦ We must defend against Chinese agencies that coordinate influence operations abroad—such as the Ministry of State Security, the United Front Work Department, and the Chinese Students and Scholars Association. At the same time, we should try to maximize positive interactions and experiences with the Chinese people. The United States and other free and open societies should consider issuing more visas and providing paths to citizenship for more Chinese—with proper safeguards in place. Chinese who engage with citizens of free countries are the ones who are most likely to question their government's policies—whether from abroad or when they return home.
 - ♦ The U.S. and other free nations should view expatriate communities as a strength. Chinese abroad—if protected from the meddling and espionage of their government—can provide a significant counter to Beijing's propaganda and disinformation. Investigations and expulsions of Ministry of State Security and other agents should be oriented not only toward protecting the targeted country but also toward protecting the Chinese expatriates within it.
- Without effective pushback from the United States and like-minded nations, China will become even more aggressive in promoting its statist economy and authoritarian political model. For me, the state visit to Beijing—and exposure to China's powerful combination of insecurity and ambition—reinforced my belief that the United States and other nations must no longer adhere to a view of China based mainly on Western aspirations. If we compete aggressively, we have reason for confidence. China's behavior is galvanizing opposition among countries that do not want to be vassal states. Internally, the tightening of control is also eliciting opposition. The bravado of Li Keqiang and other officials may be intended to evoke the idea of China as sovereign of “everything beneath heaven,” but many beneath heaven do not, and must not, agree. ■

Decentralized Deterrence



Reinvigorating the Army's Deterrence Impact in the Face of a Modernized People's Liberation Army

Frank Hoffman

America's primary adversary in the Indo-Pacific is undeniably the People's Republic of China (PRC). While this adversarial relationship is not destined to result in war, the interests of the two states abut too closely for a potential near-future conflict not to be taken seriously.¹ The primary mission of the U.S. Indo-Pacific Command (USINDOPACOM) ground forces in the modern age has been to safeguard U.S. national interests through credible deterrence.² Credible deterrence is, in short, maintaining a force posture that renders any gains the PRC would make through military action too costly when weighed against the losses of engaging in conflict with regional U.S. forces. Credible deterrence has been a vital tool in the USINDOPACOM arsenal. Not only has it allowed Washington to avert a potentially devastating conflict with Beijing merely by making the prospect of such an engagement appear too costly to contemplate, but it has also enabled the U.S. Army at large to divert the bulk of its attention to other threats while leaving what amounts to a garrison force to maintain regional stability in the Indo-Pacific.³

In the past, USINDOPACOM's position in the region was virtually unassailable, making it a highly credible deterrent to any aggressive PRC impulses. However, the People's Liberation Army (PLA) has rapidly modernized in recent years and has become capable of incapacitating current U.S. positions in the Indo-Pacific with missiles and conventional air power. Accordingly, the USINDOPACOM ground forces' former credible deterrence has dramatically been reduced since the PLA can now challenge the U.S. regional presence and reasonably expect to emerge from a limited-scope conflict without incurring a Pyrrhic victory.⁴ Therefore, as the Chinese Communist Party (CCP) becomes increasingly expansionist and aggressive, and USINDOPACOM's ground forces steadily lose their credible deterrence impact, the basing posture of U.S. forces in the region must be reexamined.

The Army's forces in USINDOPACOM should adopt a doctrine of decentralized deterrence, wherein ground forces are redispersed throughout the Indo-Pacific as opposed to maintaining the current, centralized posture. In this way, not only will we broaden our network of regional military partners, but we will also



prevent the possibility of a single decapitating strike by the PLA, thus enhancing the Army's credible deterrence and ability to respond to PLA aggression.

The Current Army USINDOPACOM Basing Posture Is Vulnerable

At present, USINDOPACOM maintains its major foreign-based ground forces in the Republic of Korea (ROK) and Japan. While these forces have been instrumental in maintaining peace on the Korea Peninsula, the rapid expansion of the PLA's capabilities has caused dramatically diminishing returns in the deterrence effects that the U.S. troops based in these locations exert on the PRC.⁵ In the wake of the Soviet collapse (when the posture we have today was inception), the PLA simply did not have the capability to effectively strike at current USINDOPACOM positions, while U.S. Forces Korea (USFK) was almost always under threat by a joint PLA/North Korean effort. Furthermore, Beijing clearly understood that swift retribution would be forthcoming if it could not effectively neutralize the bulk of regional American forces, which it simply did not have the capability to do. However, while the Global War on Terrorism has fixed Washington's focus on the U.S. Central Command (USCENTCOM) for

Soldiers of People's Liberation Army stand in formation 1 October 2019 near Tiananmen Square before a military parade marking the seventieth anniversary of the founding of the People's Republic of China on its National Day in Beijing. (Photo by Jason Lee, Reuters/Alamy Stock Photo)

the past two decades, the PLA has embarked on a robust modernization campaign, particularly in antiaccess capability.⁶

This enhanced capability was dramatically demonstrated in a 2017 study by the RAND Corporation, which projected that the PLA had not only gained the ability to easily neutralize all U.S. positions within the ROK and Japan with ballistic and cruise missiles but could also disrupt operations at bases as far out as Andersen Air Force Base in Guam.⁷ Therefore, it is little surprise that the PRC has become more emboldened in recent years given that the United States' default posture in the Indo-Pacific (a few large, hardened positions) has rendered USINDOPACOM ground forces exceptionally vulnerable to a PLA first strike.⁸ Accordingly, the answer to reinvigorating the Army's Indo-Pacific deterrence lies not in further entrenching its present posture but

rather in expanding its current footprint and decentralizing its consolidated assets.

The Efficacy of Decentralized Deterrence Is Empirically Proven

Although the current Army USINDOPACOM posture is highly vulnerable to being neutralized by PLA first strike weaponry and serves a highly compelling argument for decentralization, empirical evidence also strongly argues that USINDOPACOM's credible deterrence effect would be enhanced through a decentralized basing posture. In 2020, RAND conducted a subsequent study examining the deterrence that forward-deployed U.S. forces were able to exert. The authors found that the most effective forward-deployed deterrent to foreign aggression are ground forces, whereas air and naval forces showed "little if any evidence" of exerting a deterrent impact.⁹ Further, the study also stated that among these ground forces, "heavy" elements (e.g., armored, artillery, or mechanized units) on steady-state deployments exerted the highest deterrent effect, and this deterrence is even further enhanced when these elements can be surged to regional flashpoints in so-called "crisis deployments."¹⁰

The implications that this RAND data has for the Army's role in the modern USINDOPACOM posture are staggering. In fact, it was abundantly clear during Congress's 2019 hearing on the challenges facing USINDOPACOM that both the uniformed and civilian sides believe USINDOPACOM requires a higher investment in naval assets and USFK/Japan forces are sufficient ground-based deterrents.¹¹ The

PLA is presently up to the task of completely hamstringing USINDOPACOM's Army component (and is actively investing in countering regional U.S. naval and air assets). Statistical analysis of the 2020 RAND data shows that naval and assets simply do not exert the same deterrent effect that a

permanent forward-deployed ground presence does.¹² Bearing in mind that sequestration demands evidence-based solutions, it makes far more strategic sense to decentralize the assets that are empirically proven to effectively deter, rather than pouring precious funds into naval assets that are unlikely to meaningfully shift the balance of power.

While admittedly, any permanent ground presence in the Indo-Pacific will be within PLA striking range, basing such forces within more allied and partner nations to increase decentralization will greatly enhance both the deterrence credibility and retaliatory response capability of USINDOPACOM's ground forces. Not only would the first strike calculus of the PRC be enormously complicated by a wider geographic dispersal of U.S. "trip wire" forces throughout the region (elements that would trigger a larger conflict if they were transgressed), but basing such forces in partner nations would force the PRC to contend with bringing a third party on the side of the United States into any potential Sino-American conflict. At present, the PLA would merely have to launch ballistic missiles and conventional air power at the highly centralized USFK and Japanese positions to effectively neutralize USINDOPACOM's ground force presence in the region. However, under the proposed doctrine of decentralized deterrence, these forces would be dispersed throughout the region and could be coalesced to mount an effective counterattack following the PRC's initial thrust.

This Strategy Is Diplomatically Viable

Turning from the understanding that a decentralized ground presence in the Indo-Pacific is desirable and would enhance USINDOPACOM's mission of securing U.S. national interests against an increasingly expansionist PRC, the question now is whether such a strategy is feasible. The 2017 RAND study predicted that Chinese expansionism in the South and East China Seas would be positively correlated with many regional nations' willingness to cooperate with the United States on security matters.¹³ Given that the CCP, as stated in its 2019 white paper (a document outlining its defense policy for the coming years), essentially claims sovereignty over the entirety of the South China Sea and all outlying islands—a claim that

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is not only disputed by multiple Indo-Pacific nations but is also in violation of international law—Chinese territorial assertiveness in the region is unquestionably on a meteoric rise.¹⁴ Therefore, the time may be right to approach our regional partners in Asia regarding enhanced security cooperation.

Though in the past, many Indo-Pacific states wished to remain neutral in the Sino-American power struggle, in recent years, the increasingly expansionist attitude of the PRC has forced a number of these nations into a position where they must soon choose a side.¹⁵ Further, as Randall Schriver, the assistant secretary of defense for Indo-Pacific Security Affairs, noted during a 2019 House Armed Services Committee hearing, the PRC has progressively eroded the trust of many of its regional neighbors either through dubious trade practices or outright aggression.¹⁶ The United States has multiple nations that it could approach that may be eager to reap the deterrent benefits of hosting a modest USINDOPACOM ground presence. The South China Sea issue alone has caused the Philippines and Vietnam to entreat the United States to take a more active role in securing the region against the “Chinese threat.”¹⁷ As Adm. Philip Davidson noted during a 2019 talk at the Aspen Institute’s Security Forum, Thailand remains one of our oldest and most active military partners in region.¹⁸ Even Malaysia, though traditionally a staunchly neutral party for fear of becoming fixed in Beijing’s crosshairs, could perhaps be swayed if the Malaysians were to see significant U.S. ground force dispersal throughout the region. Despite Malaysian neutrality, the PRC has recently stepped up its transgressions on Kuala Lumpur’s airspace in the region, sending a clear message that China cares little for diplomatic niceties should its ability to assert claims of sovereignty be impeded.¹⁹

Accordingly, many of our regional partners maintain complex dual ties to both the United States and the PRC. China, in becoming ever more aggressive in pressing its expansion in the Indo-Pacific, has created a climate in which many East Asian nations have become far more amicable to cooperating with Washington on security issues. Therefore, the disbursement of USINDOPACOM ground forces to multiple partner nations throughout the region, while untenable a decade ago, may now be not only diplomatically feasible but also in fact welcome.

This Strategy Is Unlikely to Provoke Sino-American Conflict

Detractors of an expanded USINDOPACOM basing effort have correctly noted that even the academic discussion of doing so has provoked bellicose responses from the PRC. An article in this very publication advocating for a permanent troop presence in Taiwan elicited a response from Chinese state-run media that vowed that an Army presence in the country may trigger a “reunification-by-force operation.”²⁰ While these stirring words clearly had the intended effect of giving Western readers pause, lending undue credence to the saber-rattling coming out of Beijing is inadvisable as this sort of rhetoric is at best a calculated strategy and at worst the product of a civil-military divide within the PRC.²¹

Although it is tempting to read a headline from a PRC official and automatically presume that the words have the approval of the state as a whole, within the PRC there exists a significant civil-military divide. While the literature remains split as to why this divide exists, it is undeniable that in the realm of foreign policy statements, Central Military Commission (akin to the U.S. Department of Defense) officials often act counter, and in a far more aggressive manner, to their civilian CCP counterparts.²² This civil-military gap is even tacitly acknowledged in the white paper, wherein the State Council Information Office devotes several subsections to delineating what steps China is taking to ensure that the CCP has a tighter grip on the conduct and “political integrity” of its armed forces.²³

Even if we were to take all the statements coming from every official organ of the PRC at face value, this would necessarily mean that the statements in the white paper provide us with at least as much insight into how the PRC would react to an expanded USINDOPACOM basing effort as the statements of lone officials. Accordingly, statements such as “the military strategic guideline for a new era adheres to the principles of defense, self-defense, and post-strike response” and “we will not attack unless we are attacked, but we will surely counterattack if attacked” should be more than dispositive evidence that an expanded ground force presence in the Indo-Pacific would not provoke an armed response from Beijing.²⁴

In any case, this discussion is all a moot point as the State Council Information Office devotes an entire paragraph to stridently condemning the United States’



deployment of missile defense assets in the ROK as having “undermined the regional strategic balance and the strategic security interests of (Indo-Pacific) countries,” despite these being assets with no offensive capability whatsoever.²⁵ Thus, it is clear that no matter what action the United States takes in the Indo-Pacific, Beijing will protest should it have an impact on China’s ability to act with *carte blanche* in the region. Accordingly, while “fire and fury” statements issuing forth from Central Military Commission officials certainly should not be discounted, they cannot be used in isolation to prognosticate a Chinese response, nor should Washington allow them to dictate how we base USINDOPACOM forces.

Implementation Could Begin Rapidly

The final question to consider regarding the proposed doctrine is whether such a strategy could be implemented by USINDOPACOM within a reasonable time frame. With USCENTCOM’s Middle East mission rapidly ending, sequestration and drawdowns are soon to hit the Department of Defense. Given this pending period of force and budgetary reduction, one may question if the resources exist to engage in a dramatic reshuffling of the Army’s Indo-Pacific basing posture.

Japan Ground Self Defense Force (JGSDF) paratroopers line up to load onto a C-130J Super Hercules assigned to the 374th Air-lift Wing during exercise Airborne 21 at Yokota Air Base, Japan, 9 March 2021. More than five hundred JGSDF paratroopers performed a static-line jump at the Combined Arms Training Center drop zone, Camp Fuji, Japan, making it the largest U.S.-Japan personnel drop in the history of the two countries’ alliance. (Photo by Staff Sgt. Gabrielle Spalding, U.S. Air Force)

To begin, Congress has already earmarked funds to increase USINDOPACOM’s fleet assets. While it is beyond the scope of this work to delve into interservice budgetary disputes, it does bear repeating that given USINDOPACOM’s primary mission of exerting credible deterrence, these funds would be far better spent on permanent ground forces that are proven to have a greater deterrent impact than naval assets.²⁶ However, this proposal will take current INDOPACOM budgetary levels as they are and presume that no interservice funding shifts will be forthcoming.

The findings of the 2020 RAND study were not that the forward-deployed ground forces needed to be stationed at levels sufficient to undertake an extended campaign on their own, but rather that these forces simply needed to be sufficient to demonstrate a significant U.S.

commitment to the region.²⁷ Accordingly, preexisting base infrastructure of the prospective host nation could jointly house American forces with modest alterations to accommodate the heavier assets. Because this strategy requires, at most, one or two brigade-strength forces to be centralized in any one area in the region, it is highly unlikely any significant long-term investment would need to be made into host nation infrastructure to accommodate these redeployed elements.²⁸ Accordingly, the cost USINDOPACOM would incur in implementing the decentralized deterrence doctrine would be negligible at most.

When taking into consideration where the Army might draw preexisting personnel for the implementation of this doctrine, two options are immediately viable. First, with USCENTCOM's Afghanistan mission largely at its end, the Army could elect to partition some of its division's heavy brigades for either rotational or permanent forward deployment to the Indo-Pacific. This would not require an increase in recruitment and could be entirely accomplished merely by reassigning needed elements from USCENTCOM to USINDOPACOM.

Alternatively, should bringing USCENTCOM elements under the USINDOPACOM umbrella so soon after withdrawing from the Middle East prove

untenable, portions of USFK could be redeployed. Given that USFK serves much the same function as the other trip wire forces (and in any case is not expected to fend off a DRPK invasion on its own), dispersing it throughout the Indo-Pacific would be unlikely to reduce its current credible deterrence impact. Further, the DRPK first-strike casualty projections for USFK are staggering. Dispersing USFK assets out of North Korean conventional weapons range would enhance force survivability and its ability to effectively counterattack following a DRPK first strike. Thus, a wider regional deployment of USFK ground forces would not only be implementable without personnel increases but would also expand the deterrence impact beyond the Korean peninsula.

Chinese modernization and ambition have wildly outpaced USINDOPACOM regional posture since its modern inception. As a result of the PLA's dramatic modernization campaign, the Army's credible deterrence impact has been significantly reduced. As the Indo-Pacific rapidly becomes the focus of U.S. strategic competition, many arguments will be forwarded as to the best way to strengthen USINDOPACOM's posture in the face of the modern PLA. The proposed doctrine of decentralized deterrence presents an empirically proven, diplomatically viable, and rapidly implementable solution. ■

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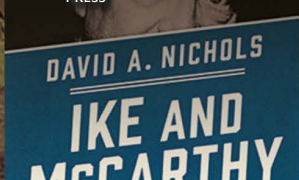


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Maximizing Engagement Area Lethality

A Tale of Two Doctrines

Maj. Justin K. Bateman, U.S. Air Force

The cold winds of the winter of 1944 blow across the front line. As the squad leader kneels next to his machine-gun team going over the engagement area plan, he hears an all-too-familiar sound that sets him on edge. Two soldiers who fled their observation post across the field stretched out in front of them confirm his fears: “Tanks!” they shout. Suddenly, a pair of Sonderkraftfahrzeug 251 half-track armored personnel carriers burst through the opposing tree line, flanked by two Panzer IV tanks. Riflemen and machine gunners along the line watch in terror as the .30 carbine ball rounds from their M1 rifles ping helplessly off the armor while the company commander calls for the bazooka men. These brave men risk their lives running forward, or at angles, in a desperate attempt to hit the Panzer IVs’ flank or a flat part of the half-tracks.

This well-recognized scene, often portrayed in pop culture, permeates the thoughts and feelings of many soldiers, sailors, airmen, and marines, especially those without heavy weaponry, as they consider defending against a mechanized or armored onslaught from a modern peer or near-peer adversary. However, if adequately equipped with the knowledge of modern munition terminal ballistics that showcase how small arms can have a big impact on modern armor, today’s squad leader does not need to suffer the same level of fear.

Although engagement-area development doctrine provides a solid foundation at all echelons of planning,

the inclusion of joint weaponeering (the process of matching munitions with targets to achieve specific effects) can maximize engagement area lethality to unprecedented levels by enabling leaders to better understand modern munitions’ terminal ballistics when planning. Modern small-arms munitions’ ability to penetrate more than 12 mm of rolled homogeneous armor and simultaneously maximize terminal ballistic damage on soft targets opens an array of possibilities on the battlefield. Regardless, training centers have highlighted the necessity to refocus on engagement area development, especially fighting at appropriate doctrinal ratios, as an essential effort for all training levels across the joint force.¹ An important component of this effort is understanding how weapons perform inside engagement areas. Leadership across the joint force understands the need to better grasp modern weapon systems’ effects. This requirement indirectly includes using some forms of modeling used in weaponeering. For example, one general officer has experimented with using the surface danger zones calculated via weaponeering models for Department of Army Pamphlet 385-63, *Range Safety*, to maximize the overlap of higher probability of hit zones of various weapons in fires planning.²

Additionally, some papers have addressed distribution modeling of direct fire against an infantry formation to better understand the probability of hit.³ These efforts are innovative and can serve to improve the capability of military formations in close contact. However, these



A German *Sonderkraftfahrzeug* 251 half-track armored personnel carrier January 1940 in Berlin. (Photo courtesy of the German Federal Archive via Wikimedia Commons)

efforts do not provide a doctrinal approach to understanding weaponeering's potential impact at the combat formation level. The joint force can gain advantages by evaluating the existing engagement-area development doctrine, developing a sense for the application of weaponeering doctrine, and applying the advantages of integrating the two doctrines. However, the first step to understanding this potential merger is to examine how direct fire and indirect weapons, and their associated munitions, have evolved since the Second World War.

Not Your Grandparents' Munitions

Today's small arms carried by the U.S. military have much in common with those in World War II. Notably, the Department of Defense has made significant efforts to reduce the weight carried by combatants across the branches by using lightweight materials and better engineering. Many of the weapon systems' actions and general performance characteristics remain similar, albeit with mild improvements over time. Reference table 1 (on page 23) to see an indication of this slow adaptation.⁴

Larger weapon systems have evolved dramatically since World War II. These changes include some critical breakthroughs with joint artillery systems in recent years. Notably, the Army's showcasing of strategic

long-range cannons and precision strike missile systems demonstrates incredible breakthroughs to enable effective dynamic force employment.⁵ Furthermore, the recent use of 155 mm artillery systems to intercept and destroy a cruise missile points to the continuing evolution of joint artillery, munitions, and cueing systems integration required by the joint all-domain command and control construct.⁶ Although, as demonstrated by table 1, small arms have not seen as dramatic a change in weapon performance, each weapon's associated munition's terminal ballistic performance has changed significantly over the years. For example, the 1926 .30 caliber M1 munition featured a "boat tail" lead design that could penetrate the estimated equivalent of 4 mm of rolled homogeneous armor (RHA) at 91 meters.⁷

The end of World War II and progression through the Cold War would see dramatic changes in munitions with the adoption of U.S.-led NATO munition standards. Chief among these were the M80 7.62 mm and M193 5.56 mm NATO rounds.⁸ The smaller and lighter

Table 1. Limited Weapon Performance Change over Time

World War II				
Weapon	Effective Range	Rate of Fire	Muzzle Velocity	Weight
M-1 Garand	457 m	40–50 rpm (rapid sustained)	2,800 ft/s	9.5 lb
M1918 “BAR”	460 m	500–650 rpm	2,822 ft/s	19.4 lb
M1919 Browning	1,280 m	600 rpm	2,800 ft/s	31 lb
Modern Day				
Weapon	Effective Range	Rate of Fire	Muzzle Velocity	Weight
M-4 Carbine	500 m	45 rpm (rapid sustained)	2,970 ft/s	6.3 lb
M-249	600 m	750–850 rpm	3,000 ft/s	17 lb
M-240B	800 m	650–950 rpm	2,800 ft/s	27.6 lb

(Note: Performance characteristics vary by model, variant, and manufacturing year; table by author, data derived from multiple sources [see note 4])

M193’s lead-antimony alloy core could only achieve a 50 percent probability of penetration against an estimated 4 mm RHA equivalent at 37 meters (This is hereafter expressed as Range Probability [either 50 percent or 90 percent] of distance X: “R50 of 37 meters”).⁹

Challenges in Vietnam led to the design of the more modern M855 5.56 mm lead and steel split-core round that increased soft tissue damage and armor penetration.¹⁰ However, in Operations Enduring and Iraqi Freedom, feedback from the field led to the creation of the M80A1 and M855A1 enhanced performance rounds shortly after the creation of the M995 and M993 armor piercing (AP) rounds.¹¹ The inclusion of the M855A1 in the rifleman’s inventory, for example, gave each shooter the ability to achieve an impressive R50 of 350 meters against an estimated 4 mm of RHA while increasing soft tissue damage performance.¹² Furthermore, the creation of the enhanced performance rounds and inclusion of the M993 and M995 AP rounds gave any soldier a myriad of capabilities, including the ability to achieve an R50 of 172 meters against 12 mm of RHA.¹³ These new enhanced performance rounds, combined with the ballistic performance of modern AP ammunition, provide a significant capability against armored targets, as indicated in table 2.¹⁴ Furthermore, the ongoing development of additional rounds to replace the M993/5 series, such as the XM1158 advanced AP round, will continue to enhance small-arms capabilities on the modern battlefield.¹⁵

Ultimately, the warfighter has underappreciated the advances in terminal ballistic performance by improved munition designs and their effects on peer and near-peer adversaries. Modern armored personnel carriers and armored vehicles often feature hull armor thicknesses between 7 mm and 18 mm, depending on applique armor.¹⁶ A 1993 test demonstrated the .50 caliber API round’s ability to repeatedly penetrate the hull of a BMP-2 infantry fighting vehicle at five hundred meters with a 68 percent probability of damage to the BMP’s commander, highlighting the possibility of direct-fire muni-

tions creating casualties to crew members and passengers.¹⁷ The rapid development of terminal ballistic performance for rifles and light, medium, and heavy machine-gun munition performance is impressive. Still, it comes with a lack of doctrine to harness its advances in the execution of engagement areas. To intelligently cover this gap, warfighters should evaluate the state of engagement-area development doctrine and determine how to incorporate the joint weaponeering process.

Engagement Areas Revisited

An engagement area is defined as “an area where the commander intends to contain and destroy an enemy force with the massed effects of all available weapons and supporting systems.”¹⁸ Army Techniques Publication 3-21.10, *Infantry Rifle Company*, further stresses that “the success of any engagement area depends on how

Table 2. Comparison of Estimated RHA (eRHA) Performance

Munition	eRHA Penetration
.30 M1	R ₅₀ 4 mm* at 91 m
.30 M2 (AP)	R ₅₀ 11 mm* at 30 m
M855A1	R ₅₀ 4 mm at 350 m
M995	R ₅₀ 12 mm at 172 m
M993	R ₅₀ 18.9 mm at 100 m

(Note: Typical RHA hardness values vary slightly since 1945; table by author)



Left: A shell casing flies out with a trail of smoke as U.S. Army Pfc. Michael Freise, 1st Battalion, 72nd Armor Regiment, fires an M-4 rifle during reflexive fire training 23 March 2005 at the Rodriguez Live Fire Complex, Republic of Korea. (Photo by Staff Sgt. Suzanne Day, U.S. Air Force, courtesy the National Archives)



Right: Marine infantrymen fire M1 Garand rifles at a simulated enemy position March 1952 as they advance with tanks during training behind the lines in Korea. (Photo courtesy of Wikimedia Commons)

effectively the commander integrates the direct fire plans, indirect fire plan, the obstacle plan, [and various fires and supporting plans] ... and the terrain within the engagement area to achieve the tactical purpose.”¹⁹ The doctrinally tested steps of engagement area development lay out a detailed series of considerations for planning to ensure that enemy tactics, enemy formations, the operational environment, available forces, and control measures receive close attention (see figure 1, page 25).²⁰ However, existing doctrine gives vague guidance to the alignment of weapon systems to targets to enable the leader to leverage modern munition ballistics intelligently.

The same techniques publication discusses the need for considering the maximum ranges and line of sight concerns, as well as positioning weapon systems to achieve “overwhelming effects.”²¹ Still, it does not assist a leader in understanding just how and what will achieve those effects. Doctrine discusses “engagement priority” to ensure leaders assign priorities based on the threat and the range from friendly forces and the requirement to “match organic weapon systems capabilities against enemy vulnerabilities.”²² Even so, the doctrine provides this guidance without explaining how to ensure a weapon or munition employed matches a target’s vulnerabilities. Furthermore, during step 5 of engagement area development, doctrine directs the

leader to select fighting positions to “achieve the desired effect for each target reference point.”²³ This doctrinal guidance is again without specific reference to evaluating various weapon systems’ capabilities in achieving the desired effect against a wide range of targets.

As ground combat units in the U.S. military refocus on the challenges of peer and near-peer competition worldwide, many have begun a renewed focus on engagement area development at training centers. The Army has undoubtedly led the way in many efforts to refocus on the threat of future peer and near-peer competition. Renewed focus on these adversaries is essential considering that dynamic force employment drives various units to reorganize or train to fight in smaller, more agile tactical teams.

The Army has also highlighted and proposed planning solutions for the observation that “light infantry formations typically struggle to conduct [engagement area development] suited for an armored/mechanized near-peer threat in a compressed timeline.”²⁴ Furthermore, the Joint Multinational Readiness Center noted that important lessons learned for brigade-level deliberate defense included a need to study the terrain physically to better understand and react to enemy movement within engagement areas.²⁵ Leaders are relearning lessons about the importance of terrain and maneuver in fast-paced modern warfare. The issues noted through countless training

Engagement-Area Development

1. Identify likely enemy avenues of approach
2. Identify most likely enemy course of action
3. Determine where to kill the enemy
4. Position subordinate forces and weapon systems
5. Plan and integrate obstacles
6. Plan and integrate fires
7. Rehearse the execution of operations within the engagement area

(Figure by author; adapted from Army Techniques Publication 3-21.10, *Infantry Rifle Company* [May 2018])

Figure 1. Engagement-Area Development Steps

center rotations in all the branches show the complexities and challenges facing our unit leaders. Engagement area development doctrine is proven but still presents challenges, as noted by Kyle Frazer and others, in enabling success against all modern threats.²⁶ In the context of the rapid, impressive evolution of modern munition terminal ballistics, the existing doctrine does not provide a tool set for understanding how and where to harness modern munitions' incredible lethality. But that exact problem set is answered elsewhere.

Weaponneering as a Doctrine

Weaponneering is an older joint doctrine, originating in the Air Force and Army, defined as "the process of determining the quantity of a specific type of lethal or nonlethal means required to create a desired effect on a given target."²⁷ Perhaps a more specific definition is offered by former Naval Postgraduate School professor Morris R. Driels:

In general terms, Weaponneering can be defined as the process of determining the quantity of a specific type of weapon required to achieve a defined level of target damage, considering target vulnerability, weapon effects, munitions delivery error, damage criteria, probability of kill, weapon reliability, and so forth.²⁸

The process of weaponneering became firmly rooted after the Close Air Support Board of 1963 began noticing issues with data published on air-to-surface nonnuclear munitions.²⁹ The *Joint Munitions Effectiveness Manual* (JMEM) became the joint solution as a comprehensive repository of munitions capabilities in defeating various threats. The Army was tasked to lead the creation

of the Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME) in fall of 1965 and focused on target vulnerability, chemical and biological weapons, and air-to-surface munitions.³⁰ The JTTCG/ME would undergo multiple changes and revisions over the years, expanding to evaluate both the surface-to-surface and surface-to-air computations.

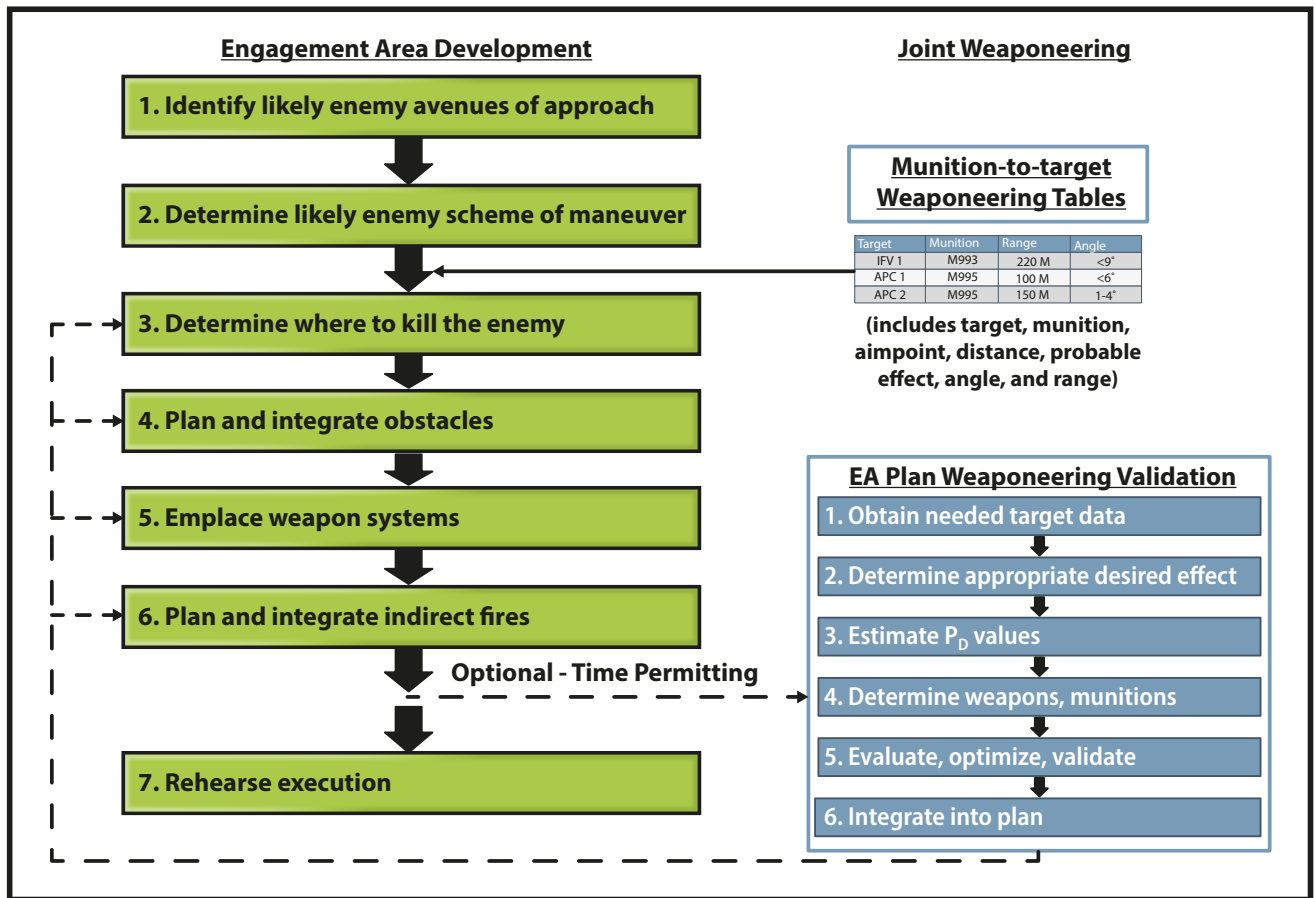
After the major reorganization of the JTTCG/ME in 1994, the JMEM Weaponneering System (JWS) combined two role-specific computerized

solutions and replaced the original JMEM hard copy of data and methodologies for calculating weaponneering solutions.³¹ JWS enables users to access various models like the Monte Carlo simulation to statistically compute the probability to hit a target in a certain number of engagements or the Mott and Weibull distribution models to estimate the probability of fragment hits from warheads.³² Users can even combine these complex statistical probability models to estimate the probability of hit and probability of incapacitation of enemy dismounted infantry at a specific range by a particular weapon system.³³ Figure 2 (on page 26) demonstrates the wide variety of variables for both fragmentary and nonfragmentary di-

rect-fire munitions used to compute these probabilities inside of the JWS system.³⁴ The JTTCG/ME has used the doctrine of weaponneering extensively for acquiring and testing a myriad of weapon systems for decades, but with a heavier emphasis on heavy-caliber arms than on small arms.

Significantly, these weaponneering solutions can help predict the probability of munitions creating specific damage conditions to a target (whether person or

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(Figure by author)

Figure 3. Merging the Two Doctrines

probability of damage, with a hierarchical order of best-paired weapon to each target.³⁹ This, through training, enables quick decisions on which muniton should be used first on any target. Through training, this concept of preidentified ballistic parameters becomes a means with which to employ the capabilities of weaponneering in the execution of engagement area development.

Maximizing Engagement Area Lethality

The steps of weaponneering bear some obvious points of connection to engagement area development (see figure 3). Understandably, due to the fluid nature of maneuver in ground combat and the direct tie to the land domain, the warfighter can take the first two engagement-area development steps without immediate feedback from weaponneering. Upon evaluating the likely enemy schemes of maneuver, the weaponneering process and preidentified weaponneering tables can serve as an

informative component to respond to and drive adjustments to all steps of the engagement-area development process. Available weapon systems and munitons for those systems can determine where to kill the enemy and how to integrate obstacles to turn and fix enemy forces. Likewise, evaluating muniton effectiveness can drive muniton changes or dictate how and where to emplace weapon systems in accordance with the enemy scheme of maneuver. An iterative process of using an understanding of muniton performance from weaponneering can build a better-informed engagement area. If time allows during the preparation phase of a defense, the defensive operation leader can incorporate specific weaponneering calculations to validate the effectiveness of weapon system emplacement and allow continued optimization.

Nonetheless, this does not need to lengthen the engagement-area development process. As Frazer pointed out, time constraints against modern threats are a continuous challenge in engagement area development.⁴⁰

When time is available, accurate lethality predictions are possible, as is maximizing terminal effects against target sets. If time is not available, known parameters must be premodeled to enable rapid weapons system integration for lethal effects, similar to the A-10 community weaponeering tables. In this case, a light infantry unit expecting an incoming mechanized force can confidently emplace direct-fire weapon systems and integrate indirect-fire planning with high probability modeling to pair munition to target, by range and aimpoint, in a prioritized manner. These parameters will enable practicing of employment ranges, angles, and aimpoints to maximize firepower and generate lethal effects within the engagement area.

Moreover, knowing that mechanized threats may be a potential in conflict requires reference to weaponeering data to determine if the traditional enhanced-performance rounds are suitable or if a request for M993 or M995 AP ammunition is warranted. Similarly, it can aid in the choice of white phosphorous, high explosive, or dual-purpose improved conventional munition (DPICM) by associated fire support units through a detailed understanding of the probability of effects on specific targets matching the desired effects (mobility kill or firepower kill, and duration) against a target. This understanding gives the commander the capability to deal with mechanized forces or modern infantry with ballistic-protective vests or plate carriers by maximizing the type and amount of fire and lethal employment of munition to target.

One benefit of joint weaponeering favored by airmen is the ability to ensure efficiency of munition delivery. Although munitions expenditure efficiency could be a byproduct of the inclusion of weaponeering into the existing engagement-area development doctrine, that would not be the primary reason for weaponeering's use. Obviously, aerial delivered munitions' incredible expense drives a concern of not wasting munitions for too little or too great an effect for the combined joint forces air component commander. Though, in the chaos of contact between land maneuver forces, firepower's psychological effects on the battlefield can be as critical as the terminal effect itself. Proper massing of direct and indirect fire has its own varying levels of impact on the enemy soldier by inducing confusion, stress, and reduced reaction based upon several variables.⁴¹ Weaponeering's inclusion, as

proposed here, is not intended to remove the need for various fire schema to achieve psychological effects in the engagement area, but instead to maximize the lethality of weapons and munition employment, as to magnify that very effect.

Conclusion and Recommendations

Engagement-area development doctrine is nearly timeless. The doctrine provides a sound series of steps to ensure a leader correctly analyzes the factors at hand to influence the enemy's maneuver and direct its own forces and weapons for a decisive engagement. However, this doctrine lacks the tool set to guide the leader into harnessing modern terminal ballistic effects to maximize engagement area lethality. Including a library of munition-to-target weaponeering that identifies the munition, distance, angle, and range combinations for various aimpoints to achieve mobility, firepower, or catastrophic kills against dismounted and vehicle targets significantly enhances the ability to rapidly create lethal engagement areas. When time allows in both the defense and offense, plans can harness real-time weaponeering to validate or adjust munitions planning to maximize the probability of achieving the desired target effect on the first attempt.

Overall, these changes can accelerate planning speed in the defense, gain soldier and leader confidence, increase soldier and team lethality and flexibility, and even better enable mission command tactics. Furthermore, by harnessing weaponeering as a planning and execution tool, those in the field can provide far more specific feedback to the JTCG/ME than previously offered before the creation of the enhanced performance round series. Shorter feedback loops can drive an even faster and more specific response to the field's needs in the terminal, midcourse, or boost ballistics of munitions or the supporting weapon systems.

As the joint force looks at major combat operations against peer and near-peer adversaries, these doctrinal changes will bring about a greater understanding of what can and cannot be done against various modern infantry, mechanized, and armored threats. Additionally, these changes can assist in formulating far more effective offensive and defensive schemes of maneuver. Furthermore, as the joint force continues to work through dynamic force employment challenges, this evolution in weaponeering will

allow it to maximize the capabilities brought forward by smaller teams, like those involved in the Air Force's "Agile Combat Employment."⁴² These teams struggle to pare down equipment and still be capable of self-defense, and doctrinal changes like the integration of weaponeering can ensure success and help validate developing tactics, techniques, and procedures. To realize these changes, the following items are recommended:

First, additional research and refinement of the doctrinal concept proposed herein is required to enable this shift. Ultimately, how leaders include weaponeering in engagement area development will change slightly or substantially with trial and error.

Second, JTCG/ME needs funding and requirements provided to enable live-fire testing, and/or modeling and simulation of specific peer and near-peer target sets against exiting munitions ranging from small arms to indirect fire platforms to develop these basic terminal performance parameters. This would enable a greater understanding of what munitions have the highest probability of achieving firepower, mobility, or catastrophic kills and what various munitions are likely to do in the areas they can perforate.

Third, graphic training aids (GTAs) or other items are required for the joint force's training and reference to harness this knowledge and begin to consider how to exploit these advantages tactically. These GTAs can be included in modern battlefield situational awareness systems like the Android and Windows Tactical Assault Kits for quick reference in the field or even included in future iterations of advanced technology. GTAs could span from inclusion in joint all-domain

command and control systems to advanced optics for immediate reference by a weapon system operator.

Fourth, the various services' training centers and training and doctrine hubs would need to consider training programs, exercises, and evaluations to enable this data's use and validate changes in unit effectiveness.

Remember the helpless squad leader fighting German armor? These changes could dramatically alter the outlook of defense against a mechanized attack.

With the inclusion of weaponeering during the execution of modern-day engagement area development, our squad leader looks upon the battlefield with steely-eyed determination as the specialist next to him reports a mechanized formation approaching. The squad leader looks forward as the vehicles cross along the anticipated avenue of approach toward the trigger line. The M-240 gunners beside him take up aimpoints on the infantry fighting vehicles just above the front wheels, confident that their M993 munitions will give at least a five-minute mobility kill by slicing into the driver's abdomen.

The M-2 machine-gun position aims just above the center wheel well of the turreted armored personnel carrier, knowing her M903 sabotaged light armor penetrator round will sow confusion with a high probability of wounding the commander and gunner. The forward observer notes the supporting main battle tank is only a slight adjustment from the target reference point. He calls for a tight cluster of white phosphorus and DPICM rounds to damage the optics and electronic warfare defense system with molten metal to temporarily firepower-kill the tank, while DPICM impacts attrit the explosive reactive armor defenses. This should buy enough time for the well-concealed Carl Gustav recoilless rifle team to use their prioritized variety of munitions to defeat the target.

The fight is on. ■

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Conflict, Chaos, and *Auftragstaktik*

Modern Insight on Mission Command Pitfalls from German Leadership at the First Battle of the Marne

Capt. Clayton B. Jaksha, U.S. Army

[I] was quite unaware of the all-important fact that the Fourth, Sixth, and Seventh Armies were being held up east of the Moselle, and thus allowing the enemy there freedom of maneuver. Had this been known in time, the idea of crossing the Marne with any large forces of the First Army would not have been entertained!

—Generaloberst [Colonel-General]
Alexander von Kluck

The circumstances preceding World War I—rising industrial nation-states, untested battlefield technologies, and a tinderbox world sparking with conflict—are as striking today as they were in 1914. As the U.S. Army trains for large-scale combat operations, it must capture broad lessons from history that can inform its future. Just as Carl von Clausewitz and Sun Tzu remain glued to shelves of military leaders today, lessons in military philosophy remain eternally relevant even as operational and tactical lessons fade to obscurity. Any number of global hot spots could teeter away from their tenuous stability and devolve into rapid mobilization and large-scale combat. Consequently, World War I holds many lessons for the

modern military leader, particularly in the importance of mission command. German leaders developed, practiced, and implemented a system of mission command (*Auftragstaktik*) that would prove effective, but not all used it correctly. Despite their experience in the art of mission command, the actions of German commanders at the First Battle of the Marne illuminate pitfalls in mission command execution that are relevant to modern leaders in large-scale combat operations.

Auftragstaktik and Modern Mission Command

Understanding the nineteenth-century Prusso-German philosophy of *Auftragstaktik* is necessary to study German commanders at the Marne, since those leaders had practiced *Auftragstaktik* throughout their careers. Even more, the officer credited with its development, Helmuth von Moltke the Elder, was uncle to the German commander at the Marne, Helmuth von Moltke the Younger.

The U.S. Army's modern concept of mission command, as outlined in Army Doctrine Publication (ADP) 6-0, *Mission Command: Command and Control of Army Forces*, traces its roots to *Auftragstaktik*.¹

Defined from the original German, *Auftragstaktik* attests that “orders given from rearward commands will easily be made obsolete by events” and that “timely action is only possible upon independent decision” by subordinate commands.² The philosophy’s champion, Moltke the Elder, rejected command by close control because of the inability to timely and effectively react to changing conditions at the front.³ Although *Auftragstaktik* initially faced some resistance, military leaders codified its use in the 1888 German drill regulations after its successful application in the late nineteenth century.⁴

Auftragstaktik and ADP 6-0’s descriptions of mission command are largely similar, but *Auftragstaktik* places slightly more emphasis on decentralization. Analogous to ADP 6-0’s elements of mission command, the five elements of *Auftragstaktik* are main effort, commander’s place, commander’s intent, immediate initiative, and higher-level thinking.⁵ *Auftragstaktik* places special emphasis on the relationship between senior and subordinate commanders and, slightly more than modern mission command, “emphasizes decentralization, commander’s intent, and low-level initiative.”⁶ Nevertheless, analyzing actions at the Marne

German soldiers haul field guns during the Second Battle of Marne in July 1918. (Photo from the Smith Archive/Alamy Stock Photo)



through the lens of modern mission command will enable a better understanding of potential pitfalls as the Army trains using its current doctrine.

The German Right Wing at the Marne

At the outset of the Great War, German strategy largely followed the Schlieffen Plan—a “lightning wheel” through Belgium and France that culminated in the neutralization of Paris, enabling German forces to then rapidly redeploy eastward against Russia.⁷ This circumvented the massive French defensive structures erected along Alsace-Lorraine

and capitalized on advantages in German mobilization.⁸ Initially, Moltke the Younger’s execution of the Schlieffen Plan resulted in rousing success, but progress stalled in northern France. Though his army was battered, the German First Army commander on the far right wing, Alexander von Kluck, “was convinced that [the enemy] was permanently out of action ... [and] incapable of a concerted attack.”⁹ However, the German Second Army to Kluck’s immediate left, commanded by Karl von Bülow, “had to order a 36-hour pause ... for his men to recover.”¹⁰ German momentum was running out.



After reevaluating the situation at the front, Moltke published new guidance: Paris was no longer the objective, and the main effort would be the German center destroying the French army at Verdun and Nancy.¹¹ This drastic shift in objectives struck Kluck as out of touch from “the situation on the ground [and]

Competence. The early twentieth-century German army excelled in professional competence, particularly after honing its doctrine in multiple late nineteenth-century wars.²⁰ Yet, Moltke, Kluck, and Bülow all possessed shortcomings in competence that cast doubt on their ability to command effectively. For one,

“Moltke placed abundant trust in his subordinate commanders to execute guidance with minimal interference, but mission command is only effective with *mutual* trust.”

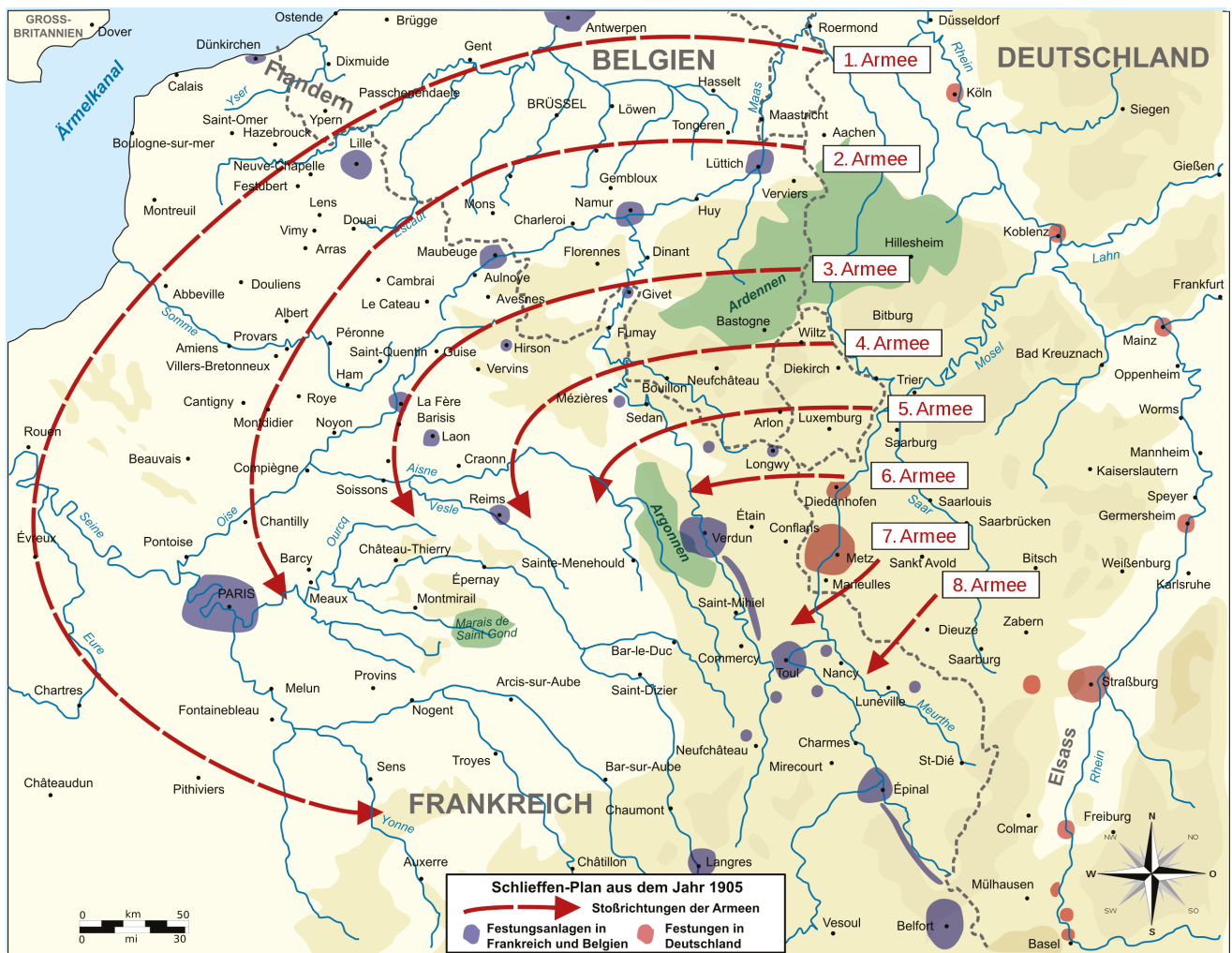
he decided to continue with his rapid advance [toward Paris].”¹² Ignoring Moltke’s orders and continuing toward Paris, Kluck became decisively engaged with the French Sixth Army.¹³ He then pulled two of his corps from Bülow’s right flank to support his engagement, leaving Bülow exposed.¹⁴ Kluck underestimated the danger in the newly formed gap between the First and Second Armies, which the French Fifth Army and the British Expeditionary Force exploited.¹⁵ Moltke did not know that Kluck ignored his orders until Kluck’s army was already committed to fighting the French Sixth Army.¹⁶ Needing to evaluate the severity of the situation, he sent his intelligence officer, *Oberstleutnant* [Lieutenant Colonel] Richard Hentsch, to determine if a general withdrawal was necessary. After visiting the headquarters of First and Second Armies, Hentsch concluded that even though the First Army was successfully fighting its own battle, it risked encirclement. On Moltke’s behalf, he ordered Kluck and Bülow to retreat and close the gap in the lines.¹⁷ The German right wing retrograded, began digging positions, and trench warfare commenced in earnest.

Mission Command Pitfalls

ADP 6-0’s seven principles of mission command—competence, mutual trust, shared understanding, commander’s intent, mission orders, disciplined initiative, and risk acceptance—provide the framework for examining Moltke’s command.¹⁸ Despite leading an officer corps steeped in *Auftragstaktik*, severe gaps in the application of mission command principles directly contributed to German failure at the Marne.¹⁹

Moltke had officers “of relatively junior rank [playing] dominant parts,” and he consulted them “on matters of important policy, often without regard to the limitations of their particular fields.”²¹ Though placing junior officers in positions outside their scope is excellent training in peacetime exercises, large-scale combat is hardly the environment to test mettle at the expense of soldiers’ lives. ADP 6-0 stresses the importance of professional military education to achieving professional competence, something Kluck lacked.²² Kluck was not a career staff officer. He commanded at every level, but he was the only army commander who had not attended the *Kriegsakademie* (war college).²³ However negative those effects might have been, no direct link exists between the seniority of Moltke’s staff or Kluck’s education and the battle’s outcome.

More likely, the advanced age and poor health of German commanders adversely contributed to their competence and ability to command. Moltke’s health was poor from the outset of the war, and after having a heart attack a month prior to the battle, he had no way to disguise his poor health from those around him.²⁴ Abraham Maslow’s hierarchy of needs would affirm that Moltke could not achieve professional competence without an acceptable degree of physical well-being. Moltke’s chief of staff attested to this conclusion, describing Moltke as lacking “all self-assurance and thus all self-confidence” during the battle.²⁵ Bülow also dealt with health issues. He long suffered from thyroid illness, which flared up under combat conditions, making him “edgy, agitated, and hard of hearing.”²⁶ Akin to Moltke, Bülow’s health may not have directly impacted the battle at any specific



(Map courtesy of Wikimedia Commons)

Schlieffen Plan of 1905

point but rather dulled and distracted an otherwise sharp, respected commander. Nagging health issues certainly hampered Moltke and Bülow from achieving their full level of professional competence, yet other factors would prove far more influential in German defeat.

Mutual trust. Weakness in mutual trust, both at echelon and between peers, was detrimental to German coordination and allowed for the formation of a gap between first and second armies. ADP 6-0 alludes to training as the means of building trust at echelon in peacetime; likewise, Moltke remained firm that “staff rides and war games had sufficiently honed [his commanders’] skills at interaction and cooperation.”²⁷ Importantly, Moltke opined that training *sufficiently* honed his trust in subordinates. After signing orders, Moltke “rigidly observed the policy [of Auftragstaktik]

... and contented himself with a passive role.”²⁸ Moltke placed abundant trust in his subordinate commanders to execute guidance with minimal interference, but mission command is only effective with *mutual* trust. Kluck famously defied Moltke’s orders partly because he chafed at Moltke’s prudent approach and did not trust Moltke’s decision to subordinate his role to that of a flank guard.²⁹ While Moltke trusted that Kluck would dutifully fulfill his intent, Kluck’s distrust of his commander fueled his defiance and opened a gap in the German lines. Functional trust between peer commanders could have mitigated the imbalanced trust between echelons, but Bülow and Kluck clashed to the point of overt distrust.

Although effective and charismatic generals in their own right, Kluck and Bülow could not build the mutual

trust necessary to coordinate operations and prevent a breach in the German right flank. ADP 6-0 places special emphasis on trusting the initiative of adjacent commanders and synchronizing actions to ensure all forces meet the overall intent.³⁰ Fundamentally, Bülow was a cautious commander and Kluck was a “thruster,” which laid the foundation for their mutual distrust.³¹ Bülow describes Kluck’s “insistence” with winning his individual battle as the reason the “entire English and fifth army could break through unhindered.”³² Meanwhile, Kluck’s resentment for Bülow’s slower pace reached a fever pitch as Bülow retreated forces to protect his flank—an act that Kluck deemed as “[snatching] away a victory within [his] grasp.”³³ Neither Kluck nor Bülow wished to see eye-to-eye with his peer, and each considered the other either too aggressive or too conservative. Kluck had no confidence that Bülow’s operational concept would defeat the French, and Bülow could not tolerate Kluck’s rash maneuvers. With both commanders entrenched in their own ideas, a gap in peer trust formed that both foreshadowed and manifested the physical gap formed in the German right flank.

Shared understanding. Breakdown in shared understanding and its resultant impact on decision-making was perhaps most critical to the German outcome at the Marne. Effective shared understanding rests on a bedrock of collaboration that allows for critical and creative problem solving.³⁴ The animosity between Kluck and Bülow corroded their willingness to collaborate on shared problems. Kluck’s readiness to abandon coordination with Bülow surfaced after Moltke’s General Directive of 27 August. Kluck became a “free agent, released from the galling restraint of his arrogant colleague and [he] enjoyed a liberty of which he made full use.”³⁵ Similarly, when Bülow noticed a breach in

the lines and began to retrograde, he did so “characteristically without consulting either his colleagues or his superiors.”³⁶ In a collaborative environment Kluck and Bülow could have worked together to reinforce the seam between their armies. Alternatively,

collaborating with Moltke may have enabled a separate solution. Despite the pervasive enmity, collaboration would have only been possible with effective communication.

German leaders at the Marne relied too heavily on the radio, an immature technology, to communicate and build shared understanding. In his later works, Moltke the Elder “warned about the negative influence of the telegraph on the initiative of commanders on the front,” a warning his nephew disregarded.³⁷ Moltke the Younger was content to remain at his headquarters in Luxembourg; meanwhile, scant “communication existed between [Moltke’s] headquarters and the three right wing armies, or between these armies themselves.”³⁸ With no regular network of runners, aircraft, or liaisons, Moltke’s headquarters relied almost entirely on radio, still in a state of “mechanical imperfection,” to communicate with subordinate armies.³⁹ Radio technology at the time possessed little bandwidth, was entirely unsecure, and often garbled messages. These challenges resulted in “the German high command [often going] twenty-four hours or even longer with no news at all.”⁴⁰ Building shared understanding across an organization with a twenty-four-hour delay seems an impossible task when the situation at the front changed by the minute. Even if German commanders were willing to cooperate to close the gap in the right wing, technological barriers to shared understanding would have made timely coordination improbable.

Moltke could have employed liaison officers to overcome the nascent radio technology and build shared understanding, but he did too little, too late. Upon identifying the weaknesses of radios, Moltke the Elder recommended that commanders use “liaison parties” to facilitate information flow between units.⁴¹ Moltke the Younger, however, had “no system of liaison officers” at the Marne.⁴² Moltke’s only notable application of a liaison officer was when he dispatched Hentsch to the front upon learning of a potential breach in the German right wing.⁴³ Hentsch was an effective liaison, and Moltke empowered him to use judgment to assess the situation and direct the First and Second Armies to close the breach.⁴⁴ He did just that; he quickly developed situational awareness, built shared understanding between the commands, and directed them to retrograde. Though controversial, Hentsch liaised within his scope, acted on military necessity, and removed the threat of First

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Army's encirclement.⁴⁵ Surely, Moltke's staff included other officers of Hentsch's caliber who could detach, gather information, and provide informed, personal guidance to subordinate commands. Had Moltke used liaison officers from the outset of the battle, he could

favour of a new strategical conception the exact nature of which was not included."⁴⁹ A drastic shift in the later strategy warranted further explanation. Without the strategic context, Moltke left Kluck to execute Auftragstaktik without being able to visualize his place

“Commanders at the Marne waded blindly into twentieth-century warfare—they dealt with armies of massive scale, technology that reinvented the battlefield, and chaotic engagements with the enemy.”

have engendered better shared understanding among his commanders and discovered mutually supporting positions to defeat the enemy. In whole, shared understanding among uncooperative commanders deteriorated when radio technology faltered, and the commanders had no liaisons to better understand their surroundings.

Commander's intent. One of Moltke's strengths was utilizing clear, concise commander's intent, but he left room for misunderstanding without the appropriate context. Auftragstaktik inherently mitigates the chaos and confusion of large-scale combat by empowering subordinates to make decentralized decisions guided by a unified commander's intent.⁴⁶ Moltke's 27 August General Directive is an excellent example: bolded, centered, and spaced from the rest of the directive, he “orders that the German armies advance in the direction of Paris” before explaining the purpose, key tasks, and end state for the entire western front.⁴⁷ Reducing the overall purpose into a simple, accurate statement provided commanders at every echelon a single, unequivocal touchstone that all leaders could use when making decisions. By all measures, Moltke published acceptable, if not admirable, commander's intent.

Similarly, Moltke's General Directive of 5 September—which canceled Paris as the German objective and ordered Kluck into a flank guard—possessed all of the successful elements of his 27 August General Directive.⁴⁸ Although the directive provided an operational reason for departing from the Schlieffen Plan's original encirclement of the French, it failed to provide the new strategic context. Kluck received the 5 September General Directive and immediately recognized the Schlieffen Plan “had been abandoned in

in the western front. Building on a career of successfully executing Auftragstaktik, Kluck determined that Moltke issued the order with faulty information and proceeded within his previous conception of Moltke's intent.⁵⁰ Kluck writes in his account on the Marne that “the application of Caesar's maxim that ‘in great and dangerous operations one must act, not think,’ necessarily produced in this critical situation rapid alternations in the movements of the First Army.”⁵¹ To Kluck, time spent deciphering why the intent changed so drastically came at the expense of initiative. Including a clear, concise explanation of changes in the 5 September General Directive may have prevented Kluck from committing additional forces toward Paris and opening the German lines.

Mission orders. As with Moltke's proficiency in issuing commander's intent, decades of practicing Auftragstaktik resulted in effective mission orders at the Marne. ADP 6-0 defines mission orders as directives emphasizing “the results to be attained, not how ... to achieve them.”⁵² Each of Moltke's general directives followed the same general format: situation, commander's intent, and task and purpose for each subordinate unit. However excellent his orders, Moltke was incapable of appropriately supervising their execution. While his commanders made decisions, his armies fought, and the lines moved, Moltke kept his headquarters in Luxembourg, two hundred kilometers away.⁵³ The U.S. Army recognizes that commanders have a responsibility to “check on their subordinates and provide directions and guidance as required to focus their activities.”⁵⁴ Moltke was unable to provide direction or guidance with a headquarters so far away. He limited

his own ability to supervise orders execution, which contributed to his inability to control the right flank.

Disciplined initiative. Disciplined initiative resides somewhere on the spectrum between timid and rogue. On one end, a commander lets opportunity slip, while on the other, a commander strays from the overarching mission. Difficult to adequately define, ADP 6-0 refers to disciplined initiative as the duty to “exercise initiative within the constraints of the commander’s intent to achieve the desired end state.”⁵⁵ By defying Moltke and continuing southeast, Kluck seems the obvious target for undisciplined initiative. That defiance, however, fits *within* the definition of disciplined initiative. ADP 6-0 states that “subordinates are required, not just permitted, to exercise disciplined initiative in the absence of orders, when current orders no longer apply, or when an opportunity ... presents itself.”⁵⁶ Kluck assessed that he could continue southeast and that “the whole plan of campaign, which depended on rapid execution for its success, would thereby break down” if he followed the 5 September General Directive.⁵⁷ Kluck recognized, if not mistakenly, that the orders he received were either misinformed or erroneous, and he continued to exercise initiative within his conception of the commander’s intent. Defying Moltke did not qualify as *undisciplined* initiative; rather, Kluck’s willingness to desynchronize the entire operation makes his initiative undisciplined.

When exercising disciplined initiative, ADP 6-0 directs commanders to consider “whether the benefits of the action outweigh the risk of desynchronizing the overall operation.”⁵⁸ As Kluck discovered his assumptions on the enemy to the southeast were incorrect, Bülow expected Kluck to fall back and establish close contact with the Second Army. After the war, Bülow wrote that if Kluck had accepted a tactical defeat and rejoined with the Second Army, the overall mission at the Marne could have continued.⁵⁹ Instead, Kluck continued to exercise initiative outside the commander’s intent, became increasingly entangled with the French Sixth Army, and exposed Bülow’s right flank. This desynchronization forced Bülow to protect his flank, widen the gap, and seal the German outcome at the Marne.

Risk acceptance. According to modern doctrine, commanders who wait for perfect intelligence and synchronization actually increase risk to their operation; expert mission command requires commanders and subordinates to manage accepted risk.⁶⁰ Moltke accepted

enormous risk in his decision to provide subordinate commanders almost unchecked decisional authority. Auftragstaktik dictated the need for command oversight to ensure subordinates complied with the overall campaign strategy.⁶¹ In retrospect, Moltke’s fault was not risk acceptance, it was risk management. He accepted copious risk but applied few controls to mitigate the risks associated with decentralization. In fact, as the battle raged, his ability to manage the German position slipped. First and Second Armies began to separate, and Moltke “declined to give a direct order to his senior commanders in the field to speed up the advance—all the while mumbling ‘*ordre–contre-ordre–désordre*’—before ... his puzzled staff.”⁶² Faced with the decision to retrograde and lose the battle, Moltke froze in disbelief. Even after his dutiful liaison Hentsch returned from the front and described the grave reality, Moltke “still had hopes of limiting the retreat to [the right wing].”⁶³ Moltke’s acceptance of risk enabled Kluck to turn his army against the French Sixth Army, but Moltke’s inability to manage risk meant he could not promptly control the right wing in time to salvage the battle.

Trends and Applications in Large-Scale Combat Operations

Commanders at the Marne waded blindly into twentieth-century warfare—they dealt with armies of massive scale, technology that reinvented the battlefield, and chaotic engagements with the enemy. Today’s Army faces a similar problem set with twenty-first-century competition, albeit with different operational and technological solutions. Therefore, trends from German application of Auftragstaktik to twentieth-century warfare can inform modern leaders as they apply mission command to twenty-first-century conflict. In particular, German failure at the Marne illuminates three potential pitfalls in the implementation of mission command: overreliance on technology, underutilizing liaison officers, and professional affinity for hyperdecentralization.

A faulty, overburdened communication infrastructure at the Marne prevented critical information from reaching commanders in a timely manner. Attributing those issues to overreliance on the fickle early radios would be fair. Likewise, the adolescent information age is blooming immature network technology that the Army eagerly adopts. Useful applications like the Command Post Computing Environment and Joint Battle

Command-Platform are quickly made useless by network outages and degraded environments. Even more, commanders can easily saturate their allotted bandwidth with data that contributes little to their shared understanding. Ironically, the modern Army would benefit from shifting to analog—paper orders are difficult to hack, acetate map overlays seldom have network issues, and the finality of physical media forces staffs to produce quality products. Analog is not without its faults, but the Army knows those faults. At this time, command-and-control network technologies are too young, too vulnerable, and too inconsistent to be reliable during large-scale combat operations against peer threats.

Moltke, Kluck, and Bülow all underutilized liaison officers and, in turn, their shared understanding suffered. The Army already recognizes that liaison officers facilitate effective communication, gain valuable insight, and influence staff planning and execution, but these critical capabilities often come at the expense of the losing staff's manpower.⁶⁴ By sending a liaison officer, a staff section will lose a planner, an analyst, or simply additional set of hands. Therefore, many staffs view liaison requirements as a leech or a burden. In the short term, commanders must force their staffs to conduct deliberate, continuous liaison with senior, adjacent, and subordinate staffs. In the long term, the Army should conduct a cost-benefit analysis of appropriately resourcing liaison officers for staffs at echelon. Such an analysis is beyond the scope of this research, but the battle at the Marne spotlights the consequence of undervaluing the utility of liaison officers.

Lastly, German desynchronization at the Marne demonstrates that there is a negative limit to decentralization in mission command. Auftragstaktik underestimated the importance of planning and control mechanisms while overemphasizing the value of initiative

and improvisation.⁶⁵ Leaders today extol disciplined initiative, and for good reason—disciplined initiative is the “secret sauce” of brilliant tactical leaders. However, not all leaders possess the requisite judgment to discern *disciplined* initiative from *undisciplined* initiative. By the law of large numbers, commanders who hyperdecentralize their decision-making are bound to have certain subordinates exercise *undisciplined* initiative. The mistakes of those few could hold operational or even strategic consequences. Worse yet, hyperdecentralized mission command generates the impossible task of supervising the execution of all those decentralized decisions. Rather, commanders should moderate the scope of decentralized decisions under their command. Most commanders already practice this: with a small group of trustworthy subordinates, allow for more decentralization; and with a larger group of unknown subordinates, retain more control. The danger lies with an institutional fascination with unmetered initiative; it carries the potential to breed a generation of officers unwilling to moderate decentralization. Such was the case with Moltke and Auftragstaktik at the Marne and it resulted in a strategic defeat.

Large-scale combat will present challenges that leaders cannot foresee today. Realistically, the best mitigation for those challenges will be effective leadership and application of mission command. The principles of mission command are fundamentally sound, but human execution is seldom perfect. By examining the mistakes of others and training mission command in peacetime, Army leaders gain the agility and guile necessary for victory. Pitfalls exist and unless commanders seek them out, they are likely to fall victim. History does not hold the answer to tomorrow's problems, but without its wisdom, those pitfalls remain cloaked in ignorance. ■

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Preventing a Short Jump across a Wide Ditch

Fully Embracing Mission Command to Avoid a Multi-Domain Disaster

Maj. Robert Rose, U.S. Army

A short jump is certainly easier than a long one; but no one wanting to get across a wide ditch would begin by jumping half-way.

—Carl von Clausewitz

The American military risks a short jump across a wide ditch with the multi-domain operations (MDO) concept. The concept assumes an American advantage in rapid and agile decision-making due to mission command. Mission command provides the tempo and agility required to succeed in complex environments, pursue maneuver warfare, and succeed on the multi-domain battlefield. However, the Army has only partially embraced mission command. Unless the Army fully embraces mission command through organizational, doctrinal, and training changes, it could make a halfway jump into a military disaster.

In pursuing MDO, the Army assumes an advantage in mission command against peer threats. We need to challenge that assumption in Russia's case. The U.S. Army must recognize the strategic, cultural, and hierarchical pressures that inhibit such an advantage. To overcome those barriers to mission command and to enable maneuver warfare, the Army should (1) clarify the vision of mission command to allow soldiers to properly conceptualize the vision; (2) strengthen unit

cohesion and flatten hierarchies to produce an entrepreneurial organizational culture; (3) adopt a decision-making model based on satisficing that supports rapid and flexible decisions; and (4) conduct regular large-scale, force-on-force exercises that simulate the complexity of warfare to develop the frames of references necessary for mission command. These changes will enable the decentralized, high tempo, agile decision-making required for MDO to succeed.

MDO recognizes five domains (ground, air, maritime, space, and cyber/electromagnetic spectrum). Although the United States has dominated these domains in Afghanistan and Iraq, it must prepare to operate under conditions in which future adversaries have windows of dominance in select domains. According to MDO, competitors have invested in antiaccess/area denial (A2/AD) systems to provide layered standoff. This standoff could allow them to use force to create a *fait accompli*, which the joint force would struggle to penetrate at an acceptable cost and without risking escalating a limited conflict to a general war. U.S. Army Training and Doctrine Command Pamphlet (TP) 525-3-1, *The U.S. Army in Multi-Domain Operations 2028*, states that "Army forces penetrate and dis-integrate A2/AD systems and exploit the resultant freedom of maneuver to achieve strategic objectives (win) and force a return



Marines with Weapons Company, 1st Battalion, 7th Marine Regiment (Reinforced), Marine Rotational Force–Darwin, check the feed tray of an M240B machine gun on a support-to-ground-maneuvers range 23 June 2021 during Exercise Southern Jackaroo at Mount Bunday Training Area, Australia. Marines, Australian Army soldiers, and Japan Ground Self-Defense Force soldiers exercised their combined ability to provide mounted and dismounted support to trilateral maneuver elements utilizing direct and indirect fire support weapons. Defense ties between the United States, allies, and partner nations are critical to regional security, cooperation, and integration of our combined capabilities. (Photo by Sgt. Micha Pierce, U.S. Marine Corps)

to competition on favorable terms.”¹ In order to penetrate A2/AD systems, Field Manual (FM) 3-0, *Operations*, explains that the Army will exploit weak points and seize positions of relative advantage through maneuver warfare.²

Maneuver warfare seeks systemic disruption. In 1989, the Marine Corps Doctrinal Publication (MCDP) 1, *Warfighting*, provided the most succinct definition of maneuver warfare: “A warfighting philosophy that seeks to shatter the enemy’s cohesion through a series of rapid, violent, and unexpected actions which create a turbulent and rapidly deteriorating situation with which he cannot cope.”³ It repeatedly out-decides the enemy and exploits opportunities until they are in such chaos that they cease to provide effective resistance.

B. H. Liddell Hart described maneuver warfare as water overcoming an obstacle: the water does not approach the obstacle with a centralized plan. It tests it at countless points until it finds weaknesses then rushes in to create and exploit breakthroughs.⁴ Edward Luttwak explained that “the whole operation rests on the ceaseless maintenance of momentum,” which becomes supreme during the breakthrough phase.⁵ If momentum is lost, the enemy can plug his gaps and encircle vulnerable units that have broken through.

Achieving this tempo requires commanders to empower subordinates to act with disciplined initiative through mission command. Low-level leaders can more quickly understand the situation at their level and exploit opportunities than senior leaders.

William Lind argued that “only a decentralized military can have a fast OODA [observe, orient, decide, act] Loop.”⁶ A force that more rapidly cycles through OODA loops than an enemy will cause its foe to lose cohesion and collapse. By making decisions more quickly than the enemy can react, this form of decision-making can exploit enemy vulnerabilities that arise from the natural friction of warfare faster than enemies can fix them.

The concepts of OODA loop cycling and maneuver warfare provide a solution against modern adversaries. Our adversaries are complex and adaptive, and they possess the resiliency to react to our actions in difficult-to-predict, asymmetric ways. Centralized solutions cannot overcome such adversaries except through overwhelming attrition. OODA loop cycling and maneuver warfare can achieve a level of systemic disruption to overcome our adversaries’ resiliency at an acceptable cost. MDO attempts to pursue this theory of victory, but we must maintain a higher tempo of operations than our adversaries for this theory to succeed.

MDO assumes the American military can decide at a more rapid tempo than its adversaries. Gen. David Perkins, the former commander of U.S. Army Training and Doctrine Command, called maneuver warfare our “ace in the hole” against adversaries such as Russia that take an attritional approach to warfare.⁷ Perkins claimed that we should pursue maneuver warfare, because the “enemy does not have that agility, does not empower subordinates to do that.”⁸ TP 525-3-1 similarly assumes that Russia “organizes and operates forces through highly centralized command and control structures that have difficulty adapting to rapid tactical changes or complexity.”⁹

These are dangerous assumptions. Robert Leonhard warned that overconfidence in maneuver warfare could prove disastrous if “the U.S. is engaged with a better rival [than Iraq] ... that is capable of showing initiative in every echelon of command.”¹⁰ If America was to attempt high-risk maneuver warfare against an enemy that operates at quicker tempo, it would risk disaster.

Gen. Mark Milley voiced concerns over the Army’s decision-making: “I think we’re over-centralized, overly bureaucratic, and overly risk-averse—which is the opposite of what we’re going to need.”¹¹ He observed a trend in America’s way of war. The Army has tended toward centralization and attritional warfare rather

than decentralization and maneuver warfare. It never fully embraced mission command.

The Army first codified mission command and maneuver warfare under AirLand Battle doctrine. Gen. Donn Starry produced the AirLand Battle concept in 1982. The concept owed much to Prussia’s *Auftragstaktik* (mission type tactics), which was translated into “mission command.” AirLand Battle introduced the operational level of war and revolved around four tenets: initiative, depth of operations, agility, and synchronization.

However, when Col. John Boyd, the father of the OODA loop, met the writers of the doctrine, he complained that *synchronization* was antithetical to maneuver warfare. He argued that *synchronization* means evening up the front line and waiting for slower units. “An army that relies on synchronization is not an army that practices maneuver warfare ... This idea of synchronization will ruin the Army.”¹²

MDO continues the chorus of synchronization. TP 525-3-1 tries to avoid using the word “synchronize” (only six occurrences) but delves deeply into the thesaurus to repeatedly use synonyms such as “integrate” (seventy-three occurrences), “converge” (ninety-four occurrences), “federate” (three occurrences), and “synergy” (twenty-three occurrences).¹³ The pamphlet begrudgingly accepts the trade-off between tempo and synchronization: “Commanders will invariably accept less-than-perfect multi-domain synchronization in order to maintain a higher tempo.”¹⁴ Leonhard’s criticism of AirLand Battle could apply to MDO: “The developers of AirLand Battle flirted with maneuver but have been unable to shake off American military traditions of the past ... the irresistible song of technology, fire, and mass destruction continue to lure American thought back to the battle calculus of attrition.”¹⁵ To understand America’s difficulty in adopting mission command and maneuver warfare, it is important to identify the mechanisms that gave rise to these concepts in the Prussian army.

Prussia’s Adoption of *Auftragstaktik*

Prussia’s geopolitical position provided the impetus for maneuver warfare. Prussia was economically weak and vulnerably located in the center of Europe. It needed to pursue wars that were *kurtz und vives* (short and lively).¹⁶ If its adversaries could concentrate

their resources on Prussia, they could overwhelm it in a war of attrition. This threat provided the impetus for *Bewegungskrieg* (maneuver warfare), which was enabled by “an army with a high level of battlefield aggression, an officer corps that tended to launch attacks no matter what the odds, and a flexible system of command that left a great deal of initiative, sometimes too much, in the hands of lower-ranking commanders.”¹⁷

Field Marshal Helmuth von Moltke the Elder codified the concepts that became *Auftragstaktik*. He had a Clausewitzian understanding of war as the interplay of chance, friction, and the fog of war. Since no plan survives first contact with the enemy, as Moltke reputedly said, he put a premium on flexibility. Strategy was a “system of expedients.”¹⁸ He emphasized decentralized and rapid decisions. Victory depended on the ability of subordinates to identify and exploit fleeting opportunities for the benefit of the strategic objective. He prepared the army to take advantage of these chances with minimal guidance. During the Franco-Prussian War he “had no firm plan for his operation against France. He never had one for any of his campaigns.”¹⁹ No one had the foresight to plan the events that led to the decisive

Prussian victories over Austria at Königgrätz or the French at Sedan. Both battles came about through aggressive, independent action by subordinate commanders.

Prussia enabled *Auftragstaktik* through a flattened hierarchy amongst officers. The state was founded on a compact between the monarch and aristocrats who maintained near sovereignty over their fiefs and dominated the officer corps. Acknowledging their independence in battle was not only effective decision-making but part of the Prussian

social contract. It would have been unseemly to micromanage an aristocrat even though he was serving as a subordinate.²⁰ Prussian officers celebrated stories of subordinates defying their commanders to act with their own initiative. As Prince Frederick Charles admonished an officer, “His majesty made you a major because he believed you would know when not to follow orders.”²¹

The Difficulty of Translating *Auftragstaktik* into Mission Command

America has faced challenges adopting Prussia’s model. The United States has a strategic culture that promotes risk aversion during wars. The oceans provide safety while America’s industrial base ensures that time is in its favor. These advantages allow America to build up overwhelming combat power to win wars. With a few notable exceptions, often from periods of relative power equivalence such as Winfield Scott in Mexico, Ulysses S. Grant at Vicksburg, or Douglas MacArthur in Korea, America has followed an approach to war that emphasizes attrition over maneuver. As with Dwight Eisenhower’s broad front strategy, the attritional approach relies on synchronizing combat power to efficiently and dependably grind down opponents rather than achieving the tempo necessary to exploit the opportunities that lead to an enemy’s systemic disruption. This approach emphasizes risk mitigation and control over risk tolerance and subordinate initiative.

Recent operations have reinforced the Army’s risk aversion. Ideally, mission command would flourish in counterinsurgency, which should be driven by small-unit operations. Mission command allows low-level leaders the initiative to adapt to the unique situations in each of their areas of operation. Britain controlled its empire through an extreme version of decentralized control that was more akin to “umpiring.”²² However, with success so difficult to measure in Afghanistan and Iraq, commanders veered toward risk aversion. Commanders feared casualties and the “strategic corporal” whose tactical mistakes could have strategic impacts. They emphasized restrictive rules of engagement, constant oversight, and Byzantine approval processes. These methods were the antithesis of mission command.

American military culture further hinders mission command by a tendency toward technophilia.

Maj. Robert Rose, U.S.

Army, is the executive officer for 2nd Battalion, 502nd Infantry Regiment at Fort Campbell, Kentucky. He has previously served as the lead counter threat finance planner for Operation Enduring Freedom and as an observer controller trainer at the Joint Readiness Training Center. He commanded companies in 1st Battalion, 509th Infantry Regiment; and 3rd Battalion, 353rd Infantry Regiment. He holds an MPP from Harvard University, an MPhil from Cambridge University, and a BS from the United States Military Academy.

It assumes technology can pierce through the fog of war. Robert Bateman expected that our improved communications capabilities would signal the “Death of Auftragstaktik.”²³ In the 1990s, the Revolution in Military Affairs (RMA) played into the “technological optimism that has historically animated U.S. defense planning.”²⁴ It engendered visions of a mystical silver bullet that would eliminate Clausewitz’s “fog of war” and allow for quick, decisive victory. Even with the obvious limitations of the RMA, technophilia has found a new lease with endless discussion of technological offsets and “decision dominance.”

“Decision dominance” provides utopian visions of perfectly connected sensors feeding into artificial intelligence (AI) to provide omnipotent understanding for commanders. It reinforces centralization and synchronization. This latest concept ignores the real world friction that prevents systems from talking even in highly regulated warfighter exercises in which simulations replace real sensors.

“Decision dominance” also puts unfound faith in AI. Current machine learning excels at developing algorithms to play games such as Go. Go provides perfect information, limited options, and millions of replays. When problems become less structured, AI fails. After high expectations and billions of miles analyzed, driverless cars have hit a roadblock and occasionally pedestrians. The founder of a failed self-driving vehicle company explained, “Supervised machine learning doesn’t live up to the hype. It isn’t actual artificial intelligence akin to C-3PO. It is a sophisticated pattern-matching tool.”²⁵ While useful for certain problem sets, modern machine learning is unsuited for decision-making in the fog and friction of war, which provides a data set of zero, novel situations, and an enemy who will actively deceive algorithms. If the Army’s investment in AI produces an operational system, opaque algorithms will freeze commanders, as their decision-making will be dominated by untrustworthy and untestable inputs.

Decentralized Decision-Making in Russia

While technology, recent operations, and culture have served to hinder America’s adoption of mission command, the Russian military has trended toward a decentralized, rapid, and flexible system of decision-making. This system emerged through Russia’s

geopolitical vulnerability, strategic culture, and military reforms. From the time of Red Army Chief of Staff Mikhail Tukhachevskii’s reflections on the Russian Civil War, Russian theorists have understood the importance of the operational level of war, the need for the disruption of continual, uninterrupted strikes, and the “operational shock” of maneuver warfare.²⁶ More recently, based on lessons from the 2008 Georgian War, the New Look Reforms have supported maneuver warfare by professionalizing Russia’s force, training rapid decision-making, and decentralizing capabilities. Russia has tested these concepts in Ukraine and Syria.

Russia shares Prussia’s sense of strategic vulnerability. Russia cannot win an attritional war against NATO or China. It needs to pursue a form of warfare that exploits weakness and achieves rapid victories. The Chief of the General Staff, Valery Gerasimov, calls this “21st Century Blitzkrieg.”²⁷ To stand a chance against the West, Russia must act fast to achieve a *fait accompli*.

Instead of waiting for a synchronized strategy, Russian decision-makers pursue a strategy of tactics guided by a shared vision. Much as Moltke explained that strategy is a “system of expedients,” Russian strategic culture emphasizes flexible tactics adapted toward the current situation. Michael Kofman explains that Russian leaders pursue a strategy common to successful business startups. “The hallmarks of this approach are fail fast, fail cheap, and adjust. It is principally Darwinian, prizing adaptation over a structured strategy.”²⁸ Without a structured strategy, Russian decision-makers can rapidly adapt, exploit success, and abandon failures. “Moscow can fail and try again comfortably within a single U.S. decision-making cycle.”²⁹

The Russian military desires a quicker decision-making process than potential adversaries. Since Soviet days, Russian commanders have used a form of doctrinal template to provide a rapid framework for quick decisions. Russia generously estimates NATO forces require eight hours to produce a brigade-level plan. The Russian military aims to out-decide NATO by reducing its planning process to under six hours.³⁰ It is reforming staff systems to increase decision speed. With this rapid decision-making process, Russia hopes to gain and maintain an advantage in the decisive “initial period of war.”³¹

Russia further improved the decision-making processes of its military with investments in leadership



development and training. The New Look Reforms professionalized the army. By 2015, the number of contract soldiers exceeded the number of conscripts.³² Russia concentrated contract soldiers in a few formations to create a core of units with high levels of combat readiness. These professional soldiers provide initiative at the lowest levels.

Russia emphasizes that subordinate leaders must be comfortable planning without orders from higher as enemy cyberattacks and electronic warfare will disrupt communication. Russian military leadership has called for decentralized management of the battlefield: “Tactical commanders need the authority and initiative to conduct battles in order to meet rapidly developing and changing situations in an effective and timely manner.”³³ To provide tactical commanders with that authority, Russia decentralized cyber and electronic warfare capabilities. Russian ground forces have dedicated cyber and electronic warfare assets at the brigade, battalion, and sometimes company level. Russia leaders across echelons practice rapid decision-making in snap exercises that dwarf Western training events.

Crimea proved the value in rapid and decentralized decision-making. As the Ukrainian government fell into disarray, Russia had no concrete plan to seize

Russian soldiers pack up things 7 October 2008 at the Georgian village of Karaleti. Russia had to pull out of the territory surrounding the separatist regions of Abkhazia and South Ossetia under agreements reached after its war with Georgia. (Photo by Sergey Ponomarev, Associated Press)

Crimea. Vladimir Putin instructed Defense Minister Sergei Shoigu to create a contingency plan. On the night of 26 February 2014, Russia’s Crimean garrison and some paratroopers began seizing government buildings with minimal guidance.³⁴ Soon the rest of Russia’s networked system of power began arriving in Ukraine. On 28 February, veterans of Afghanistan and Chechnya, athletes, motorcycle clubs, and patriotic groups flew into Crimea to agitate for independence.³⁵ Russia’s rapid actions made it impossible for Kyiv to plan and implement any effective countermeasures.³⁶

By early April, armed groups emerged in the Donbass and proclaimed the Lugansk and Donetsk People’s Republics. A key actor in these initial days was Igor Strelkov. Though a retired colonel, there is scant evidence that Putin ever directly ordered Strelkov and his compatriots to the Donbass. Using his own initiative, Strelkov identified Slavyansk as a city vulnerable

to his fifty-two supporters and seized it.³⁷ His initial success led to the creation of the Luhansk and Donetsk People's Republics.

By August 2014, Ukrainian forces threatened to cut the republics in half. Russia rapidly responded. It poured regular units into Ukraine. Ukrainian officials were dumbstruck. Prime Minister Victor Poroshenko took four days to publicly acknowledge the offensive. Before Ukrainian decision-makers could act, Russian forces surrounded several hundred Ukrainian soldiers in Ilovaïsk. The Ukrainian commander understood that the Russians were cutting off his only escape route, but he could not obtain permission from his superiors in Kiev to withdraw.³⁸ Russia's rapid actions and Ukraine's slow response would leave hundreds of Ukrainian troops dead. America must recognize the progress Russia has made or risk one of its brigades suffering a similar fate.

To prevent such an outcome, the U.S. Army should adopt the following recommendations to embrace mission command.

Clarify the Vision of Mission Command

The U.S. Army needs to articulate a clear vision of mission command and how it supports maneuver warfare and MDO. Mission command provides the tempo and agility necessary to pursue maneuver warfare and to be successful in future wars, which will be fast, lethal, and complex. Gen. Martin Dempsey provided a vision of mission command in a white paper. He explained that “decentralized approaches will provide us with competitive adaptability and tempo advantages.”³⁹

Unfortunately, Dempsey also diluted mission command's meaning. He called for “all Army leaders [to] understand and apply the Mission Command philosophy habitually to everything they do—training, operations, routine military functions, and daily administrative activities.”⁴⁰ However, mission command is optimized for complex environments that require rapid decision-making. It is appropriate when chance, friction, and fog of war apply.

When problems are not complex and are only complicated, when analysis can reduce ambiguity, when outputs can be predicted, and when tempo is not critical, then centralized decision-making can provide more efficient outcomes than decentralized systems. When

a company is planning a training event, the Eight-Step Training Model provides the centralized control to ensure effective training. When a battalion conducts garrison maintenance, a detailed plan ensures vehicles follow their service schedule. Often, centralized decision-making has value.

To fully explain the value of mission command, the Army needs to provide a clear understanding of maneuver warfare as a theory of victory. Instead of the complete destruction of an enemy force, maneuver warfare seeks systemic disruption. In 1989, MCDP 1 explained maneuver warfare's theory of victory: “Maneuver Warfare is a warfighting philosophy that seeks to shatter the enemy's cohesion through a series of rapid, violent, and unexpected actions which create a turbulent and rapidly deteriorating situation with which he cannot cope.”⁴¹ Maneuver warfare requires decentralized decision-making to repeatedly out-decide the enemy and exploit opportunities until they are in such chaos that they cease to provide effective resistance. These insights recently resurfaced in TP 525-3-6, *The U.S. Army Functional Concept for Movement and Maneuver: 2020-2040*. This pamphlet explained that maneuver “achieves surprise and gains a temporal advantage. The aim is to shatter the enemy's cohesion ... avoid enemy strengths and attack enemy weaknesses from multiple positions of advantage throughout the depth of the battlefield. The ultimate goal is panic and paralysis for an enemy who has lost the ability to respond to friendly actions effectively.”⁴²

However, TP 525-3-1 does not clearly link mission command and maneuver warfare to a theory of victory. Part of the problem is the muddling of the term maneuver. The Army often defines it simply as the combination of fire and movement to achieve position of advantage rather than a definition based on the disruptive effect on the enemy. This definition leads to a weak conception of maneuver. Nearly every time the Army uses “maneuver,” the term “move” or “movement” would suffice. TP 525-3-1 regularly describes “maneuvering” to positions of advantage.⁴³ Moving to a position of advantage or presenting a dilemma to enemy is meaningless if the enemy can react in a manner and tempo that leads them undisrupted. TP 525-3-1 admits this by discussing the enemy's A2/AD system: “If given time, the enemy will regenerate the system through tactical adaptation, reorganization, and limited

reconstitution.”⁴⁴ Unless the Army is trying to grind down an enemy through attrition, positions of relative advantage and dilemmas only matter if they lead to the systemic disruption of an enemy. Systemic disruption occurs when the resiliency of his system is overcome by rapid and successive shocks that he cannot adapt to in time. It is the rapid and agile decision-making of mission command that allows the systemic disruption of the enemy through maneuver.

Increase Unit Cohesion

Mission command requires agile battlefield entrepreneurs that can make rapid decisions. Developing these entrepreneurs necessitates mutual trust, a shared frame of reference, and a flattened hierarchy as existed amongst the Prussian officer corps. Col. Brandon Teague, an observer coach/trainer from the Joint Readiness Training Center (JRTC), explained,

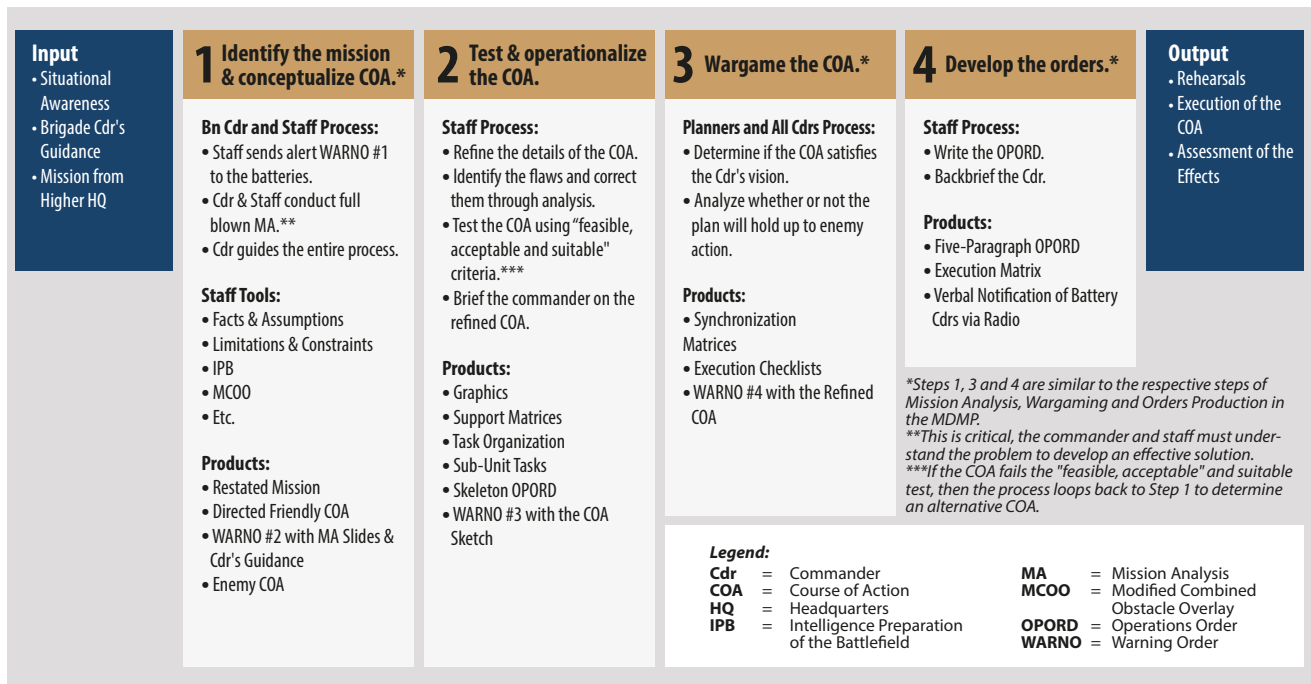
If a subordinate has the trust of his superior, then he is commanded (defined as given intent, task and purpose, and freedom to execute with minimal oversight: engage and report type mentality). If trust is lacking, then control is needed of the subordinate (control defined as reporting early and often, strict graphical control measures, limited assets to control at a lower level, not the unit you would task organize to another BN, etc.).⁴⁵

Trust is built on a shared frame of reference. A shared frame of reference is a common approach for handling abstract problems. Gen. Stanley McChrystal explained that Adm. Horatio Nelson developed a shared frame of reference. His “unique innovation lay in his managerial style and the culture he had cultivated among his force ... his captains were to see themselves as entrepreneurs of battle.”⁴⁶ His real genius lay not in clever maneuvers but in the years of innovative talent management and leadership that preceded it. He developed a shared frame of reference in his subordinates so he trusted how they would react in the chaos of battle. An example of a frame of reference is a unit standard operating procedures (SOPs). Units at every echelon require SOPs for frame of references for how they fight, but in reality, few units at the battalion and higher-level have the time to develop, evaluate, and inculcate SOPs that provide the frame of references for how an entire battalion, brigade, or division fights.

To facilitate frames of reference development, the U.S. Army needs to build cohesion through a regimental system. Under a regimental system, soldiers spend most of their careers within the same unit. The Duke of Wellington said the British Army’s secret weapon was the regimental system. It provided intimacy and familiarity.⁴⁷ Through familiarity comes the flattened hierarchies that enable decentralized decision-making. Before 1945, the German army maintained a regimental system. Its system of “organization represented a conscious determination to maintain at all costs that which was believed to be decisive to the conduct of war: mutual trust, a willingness to assume responsibility, and the right and duty of subordinate commanders at all levels to make independent decisions and carry them out.”⁴⁸ The German system was decentralized and personal. It put a priority on unit cohesion over administrative efficiency.

The American system of regular permanent changes of stations represents a misguided scientific management ideal of interchangeable parts. It made sense for an Army that had to rapidly grow for World War II. It had some logic for a large draftee Army during the Cold War. It is counterproductive for a small professional force. These moves cost over \$4.3 billion a year, disrupt soldiers’ families, and exact a high price in cohesion and readiness.⁴⁹ Recently, the Army has even begun forcing NCOs to move, whereas in the past some would spend years in a unit and serve as its backbone. Tom Odom gave the most damning indictment of the current system. He has over nineteen years as JRTC’s Center for Army Lessons Learned senior analyst and has observed 190 training rotations; he had never seen any improvement in overall negative trends because units have “no collective experience longer than a year.”⁵⁰ He explains that “no CEO in his right mind would tell everyone to change jobs every year; we do just that in the Army ... we discard the collective experience of 10 x 25 million dollar training rotations every year only to start all over again, every year for every unit.”⁵¹ We need to reject this costly and counterproductive system.

There are risks in changing to a regimental system. It could reduce the diversity of a soldier’s experience and cause groupthink within a unit. Ironically, the Army often allows senior leaders to command in the same battalion, brigade, and division, while forcing junior leaders to move, allowing groupthink to fester at senior levels. Turn this paradigm on its head. Company



(Figure from David A. Bushey and Michael Forsyth, "Recognition Primed Decision Model: An Alternative to the MDMP for GWOT," *Field Artillery* 11, no. 1 [January-February 2006]: 10–13)

Figure. Recognition-Primed Decision Model

grades officers should serve in a brigade system, and field grade officers should be assigned to a divisional system. The Army should force senior leaders to serve in different units to break nepotistic networks. For junior leaders, the Army's system of professional development schools and broadening assignments will ensure a crossover of ideas. A regimental system would spur innovation because leaders would have the time horizons to test and implement long-term concepts. To enable flexibility, soldiers should be free to request transfers, but permanent changes of stations should not be regularly mandated. Such a change would bring incalculable morale, psychological, and family benefits, and only through such reform will the Army properly prioritize cohesion to enable shared frames of reference and mission command.

Adopt a Decision-Making Model Based on Satisficing

The Army requires a doctrinal decision-making process based on satisficing to enable mission command and maneuver warfare. Since the 1950's FM 101-5, *Staff Organizations and Procedures*, the Army

has used a rational choice model of decision-making. Over time, the steps have expanded far beyond the initial five-step analytic procedure. However, for decades, studies have shown that units do not follow this model in combat conditions.⁵² Today, the closest units come to fighting a high-intensity conflict is at combat training centers (CTCs).

The military decision-making process (MDMP) does not enable rapid decisions at CTCs. At the JRTC, Col. Brandon Teague observed, "I can only recall one time in the ten rotations that I conducted that a battalion gave a subordinate unit two-thirds and it was before they 'deployed' into country" (the Army calls for units to spend no more than one-third of time until an operation to plan for it and grant subordinate units the remaining two-thirds of the time).⁵³ Lt. Col. Brian Olson explained that "units will conduct deliberate MDMP during RSOI [reception, staging, onward movement, and integration] period, but after the joint forcible entry period devolve into hasty decision-making." (Hasty decision-making is no longer a doctrinal term, but they still do it.)⁵⁴ Lt. Col. William Adler highlighted the difficulty in

conducting MDMP in a contested environment at the National Training Center: “This model becomes almost impossible to execute in actively contested environments against peer competitors who may exploit options to target mission command nodes throughout the depth of the battlefield.”⁵⁵

Gary Klein has found that leaders rarely use rational choice models of decision-making such as MDMP in practice. Decision-makers seldom have the time to follow such models. While they seem to offer efficiency by allowing staff sections to break a problem to its component parts and work on multiple courses of action (COA) in parallel, in reality, junior officers create plans for complex problems of which they only understand a segment. The commander is often isolated from the process. Staff officers are regularly broken into an “A” team and “B” team, with the “B” team producing a throwaway COA. Alternatively, they might produce COAs with similar values leading to a zone of indifference in which the staff dithers on choosing between two equally suitable COAs. Often, staff members that worked on a losing COA do not feel ownership of the chosen COA. Klein argues that even when properly executed, rational decision-making processes do not lead to better outcomes.⁵⁶ He found that satisficing was more effective than rational choice models. He proposed the recognition-primed decision model (RPM) as an alternative to MDMP.

RPM provides the agility and tempo necessary for maneuver warfare. By emphasizing rapid decisions and the iterative nature of planning, it allows subordinate units the time to make their own decisions and provide feedback. RPM is commander-driven. It makes maximum use of a commander’s mental models developed over years of experience. After receiving a mission, a commander conceptualizes a draft COA based on his or her understanding of the situation. If a situation is unfamiliar, the system provides for a commander to use staff and subordinate commanders to help conceptualize a COA using an iterative process of mission analysis. In the second step, the staff tests and operationalizes the COA and begins producing products. In the third step, staff and subordinate commanders wargame the COA. Finally, the staff publishes the order. RPM provides for feedback loops throughout the process and allows for adaptation to changing situations.

Peter Thunholm tested RPM with the Swedish army. During the tests, a division staff produced more rapid, bolder, and more flexible plans.⁵⁷ Based on this evidence, the Swedish army adopted RPM. In 2003, a group of researchers tested RPM using an ad hoc American brigade staff. Even with minimal training in RPM, it produced orders in 30 percent less time than MDMP.⁵⁸ 4th Battalion, 25th Field Artillery successfully employed RPM during Operation Iraqi Freedom and said it produced battalion-level plans in four to eight hours. Their version of RPM is presented here (see figure, page 49).⁵⁹ My battalion, 2nd Battalion, 502nd Infantry, incorporated RPM into our planning SOP. At JRTC, RPM enabled us to rapidly plan an overwhelmingly successful defense and to condense the air assault planning process to under twenty-four hours.

RPM’s emphasis on satisficing reflects how effectively units approach decision-making at CTCs. Adler reported that “successful units place emphasis on the continuous nature of mission analysis based on unit reporting and commander’s assessments to inform the formulation of adequate command directed COAs.”⁶⁰ When combined with the previous recommendation of increased unit cohesion, RPM allows a commander to choose a framework for an operation from a unit SOP that his staff and subordinates will largely already understand and on which they can initiate movement. The rest of the planning process is spent operationalizing and testing that initial plan.

Train Mission Command through Force-on-Force Exercises

Army units must concentrate on large-scale, force-on-force exercises to develop the expertise and frames of reference required for effective mission command and maneuver warfare. Milley says, “We preach Mission Command ... if we’re going to have to operate like that in warfare, we have to train as we’re going to fight.”⁶¹ TP 525-3-1 acknowledges that “the Army does not always design our training programs and exercises that facilitate or require this type of decentralized decision making.”⁶² Since mission command’s purpose is to provide the tempo and flexibility to deal with the complex problems of future warfare, training exercises must replicate that complexity.

Complexity occurs under circumstances simulating Clausewitz’s chance, friction, and fog of war. German

Capt. Adolf von Schell introduced the concept of *Auftragstaktik* to the U.S. Army Infantry School during the interwar years. He explained the importance of training *Auftragstaktik* under conditions approximating war: “In peacetime problems, there is no uncertainty, nothing goes wrong, units are always complete ... In war, it is quite otherwise ... Teach your men that war brings such surprises and that often they will find themselves in apparently impossible situations ... Every soldier should know that war is a kaleidoscope, replete with constantly changing, unexpected, confusing situations. Its problems cannot be solved by mathematical formulae or set rules.”⁶³

Soldiers require training that teaches them to deal with ambiguity, identify opportunities to exploit, accept risk, and make rapid decisions. Lind recommended introducing force-on-force exercises early in training. “Only by encountering an active enemy who is trying to confuse, surprise and defeat them in an environment of uncertainty and rapid change can they begin to understand the nature of the business to which they have committed themselves ... Free-play exercises are critical to developing initiative, imagination, and new tactics.”⁶⁴

Observer coach/trainers recognize that the lack of repetitions hampers units conducting operations at CTCs. Adler states that “enemy vulnerabilities and tactical opportunities may be transitory and BCTs and BNs are often hampered in the exploitation of revealed opportunities because lower echelons lack the kind of agility gained through repetitive training.”⁶⁵ Units need to practice maneuver warfare if they are to succeed at it.

Germany realized that only large-scale maneuvers taught commanders to accept risk. These exercises became essential to officers’ careers. During the 1920s, even with the constraints of the Treaty of Versailles, Chief of German Army Command Hans von Seeckt prioritized training for the chaos of large-scale meeting engagements. These exercises created the doctrine and mindset that led to the Wehrmacht’s initial success during World War II. He stressed that the commander who would prevail was the one who could more rapidly recognize the situation and deploy his forces.⁶⁶

The German emphasis on unconstrained meeting engagements contrasts with the current scenarios at CTCs. CTC rotations follow predictable phases.

BCTs culminate the training through a combined arms breach that emphasizes synchronization over tempo. A notional division provides timely orders to a BCT that provide clear intelligence and perfectly predict when the enemy’s main body will attack. Units never have to develop the situation using their own internal assets through “reconnaissance pull.” While CTCs overconstrain exercises, divisional Warfighter exercises are worse. Units spend months wargaming and rehearsing for a couple of weeks of operations involving simulated troops that lack any individual initiative. Warfighters center on a wet-gap crossing to demonstrate how a division can synchronize its assets from the comfort of a command post tent city that would put P. T. Barnum to shame. Divisions need to get in the field with their brigades to face the fog and friction of war.

Only unconstrained force-on-force incentivizes soldiers to identify enemy vulnerabilities, use mission command, and exploit opportunities through maneuver warfare. The Army can provide time and resources for force-on-force by deprioritizing formulaic live fires, which often resemble theatrical productions. Live fires reinforce detailed, centralized planning rather than developing the adaptive decision-making required for the chaos of war. Commanders also must reject traditional training progressions. Not all crews, platoons, and companies need to certify before a battalion, brigade, or division exercise. It will not matter if those small units are combat ready if their higher headquarters cannot make a timely decision in the face of an enemy.

Conclusion

If the Army does not make these changes, it risks entering into a peer fight with a high-risk concept of warfare that is not supported by its decision-making capabilities. The current concept calls for BCTs to advance independently to seize positions of relative advantage. They will be moving semi-independently with vulnerable flanks during windows of enemy domain dominance. Without the tempo and flexibility provided by mission command, these brigades will not operate at a tempo required to prevent an enemy from encircling and destroying them. Unless the Army fully embraces mission command, it risks falling into a multi-domain disaster. ■

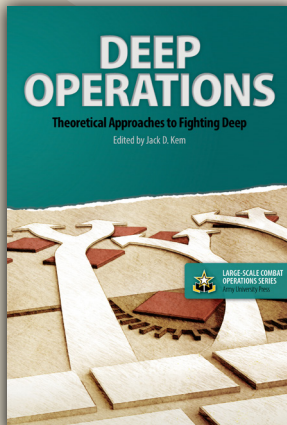
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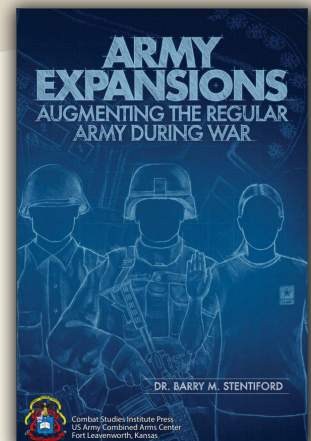
Deep Operations Theoretical Approaches to Fighting Deep

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Gaining the Advantage

How Patton's Unique Information Forces and Competitive Approach to Information Enabled Operational-Level Success in August 1944

Maj. Spencer L. French, U.S. Army

In late July 1944, with Allied forces bogged down in the Norman hedgerows, Berlin and victory seemed nowhere in sight. Lt. Gen. George S. Patton Jr.'s Third Army was earmarked as an exploitation force tasked with the seizure of the port of Brest. Allied planners intended the supplies flowing through Brest to fuel a long, systematic campaign across France, which, even if all went well, was forecasted to take at least another year to reach the German border.¹ Yet less than a month later, Third Army was on Germany's doorstep, over five hundred thousand German troops were killed, wounded, missing, or captured, and the vast majority of German war materiel in France was in Allied hands.² From the moment it became operational on 1 August until it reached the Moselle River in September, Third Army was always one step ahead of the Germans. Throughout August, Third Army overran unprepared German defenses and outmaneuvered German attempts to counter-attack. Despite the challenges posed by immature technology, logistical constraints, a new and difficult

operational environment, and a peer enemy, Patton found a way to generate advantage.

Patton derived his success in large-scale combat operations on the continent from his dynamic approach to warfare and his special units, purpose-built to aid Third Army in managing information. Specifically, Patton strove to generate what twenty-first-century U.S. concepts define as information advantage, "a condition when a force holds the initiative in terms of relevant actor behavior, situational understanding, and decision making."³ Patton sought to seize the initiative and continually take his following action before the enemy could react to his previous one. The effect became cumulative as Patton gained a further advantage in each successive decision cycle. Rapid exploitation disintegrated the enemy in depth, while speed compensated for security, allowing Patton to economize his force and concentrate combat power. Generating this information advantage over the German forces allowed Third Army to gain and maintain the initiative, manage prudent risk,



Lt. Gen. George S. Patton (*standing*) and Maj. Gen. Walter Robertson pass in review of Third Army soldiers, circa April 1944. The Third Army did not participate in D-Day but was unleashed on the Germans just after the breakout from Normandy. (Photo courtesy of the U.S. Army)

anticipate decisions, and extend its operational reach throughout the pursuit across France.

Patton's Information Methodology

Patton's approach to information and decision-making set him apart from his peers and contemporary U.S. Army doctrine. Throughout the conflict, U.S. doctrine placed most of its emphasis on the massing of firepower, and exploration of how to enhance friendly decision-making and disrupt enemy decision-making was somewhat limited.⁴

As early as 1943, Patton developed a concept for leveraging information to first gain and then maintain the initiative:

First—surprise; find out what the enemy intends to do and do it first.

Second—rock the enemy back on his heels—Keep him rocking—never give him a chance to get his balance or build up.

Third—relentless pursuit—a l'outrance as the French say—beyond the limit.

Fourth—mop him up.⁵

Patton viewed intelligence as providing an initial advantage to “do it first,” gain the initiative, and pursue operational-level maneuver. Similarly, he saw that he could “rock the enemy back on his heels” by attacking enemy cognitive processes. By denying the enemy information, providing false information, or reducing the



U.S. Army Signals Intelligence Service cryptologists at work at Arlington Hall, Virginia, circa 1943. (Photo by the U.S. Army, courtesy of Wikimedia Commons)

enemy's time to make decisions, he could get "inside the enemy's decision-making cycle."⁶

Patton's G-2, Col. Oscar Koch, described Patton's formula as "following up his first action by a second in less than that minimum [time necessary for the enemy to react]."⁷ Patton recognized that if he could maintain the speed and accuracy of his decision-making while injecting friction, delays, or indecision into enemy decision-making, he could maintain the initiative indefinitely.

To prevent the enemy from "getting his balance," Patton sought to protect his information and advantage in situational awareness. Patton viewed communications security as critical to protecting information and rapid transmission of friendly information as the key to maintaining common situational understanding. Yet, information was only valuable if one possessed time to orient oneself, decide, and act on the information gained. Consequently, Patton conceptualized his approach to information in terms of a time-based competition for a decision-making advantage in which the winner gained or maintained the initiative.⁸

Patton's emphasis on "pursuit" reflects his understanding of how information could be employed to disintegrate enemy formations, allowing his forces to

"mop them up." Patton sought to present the enemy with multiple dilemmas and confound enemy expectations while attacking the enemy cognitively, producing a "shock" effect and enabling his forces to "mop them up."

Thus, Patton possessed a clear, cohesive, and comprehensive vision of achieving specific friendly and enemy decision-making effects. Patton's approach reflected a more intent-based framework for managing the employment of the capabilities at his disposal. He also approached information competitively to open windows of opportunity against the enemy. Patton viewed intelligence, particularly strategic intelligence, as a tool that could provide an initial position of ad-

vantage if operationalized aggressively. Combined with superior situational understanding and assured decision-making processes, this intelligence would allow him to move first and dictate the campaign's tempo to the enemy. He saw value in attacking enemy sources of information and decision-making processes to disrupt and delay enemy decision-making. He also saw how protecting friendly information would allow him to keep control, even as the enemy attempted to "catch up" by fighting for information. Patton went beyond his peers in how he managed these various activities cohesively to produce a combined effect, translating cognitive advantages into operational results.

Patton's Information Forces

To operationalize his information advantage approach, Patton and the Third Army staff built dedicated information forces during the spring and summer of 1944: the Army Information Service (AIS) and the Signal Intelligence Service (SIS). The SIS was led by Maj. Charles Flint and organized under the Signal Section in close coordination with the G-2. Doctrinally, the SIS was responsible for signals intelligence activities, signal security, and the preparation of cryptographic equipment

for the Army.⁹ The SIS exercised technical control over the Army-level 118th Radio Intelligence (RI) Company and the four corps-level signal service companies.¹⁰ These companies conducted signals intelligence collection and production, friendly signal security monitoring, and direction-finding.¹¹ Together, the SIS enterprise protected friendly information through security monitoring and distribution of cryptographic materials. It also enabled decision-making through the provision of combat information and intelligence. Yet, in the run-up to the invasion of fortress Europe, Patton integrated additional functions under the SIS to support his information advantage approach. Patton charged the SIS with managing all radio countermeasures for Third Army.¹² This included disrupting enemy decision-making processes by integrating radio deception into Army operations, such as opening and closing networks to confuse German traffic analysis or providing false information via radio.¹³ It also included responsibility for denying the enemy the use of information through electronic attack.¹⁴ Integrating these activities under a single executive agent created efficiency, synchronized effects, and supported Patton's information advantage vision of protecting friendly information to prevent the enemy from acting first or regaining their balance.

Patton believed that both time and detail were lost in transmitting messages back to Army Headquarters through normal command channels. So in the summer of 1944, he converted the 6th Cavalry Group (Mechanized) into an "Army Information Service."¹⁵ The AIS was tasked with enhancing operational-level situational understanding by operating a "rapid communications channel, bypassing normal command channels, under Army control, direct from front line units to the Army Command post"; monitoring "friendly battalion, regiment, division, and reconnaissance unit radio nets"; and running a "system of patrols of combat posts and observation pots [*sic*] of battalions and regiments," while maintaining "periodic contact with division G-2 and G-3 to exchange information."¹⁶ The AIS directly reported reconnaissance and intelligence information to the G-2 and friendly force information to the G-3.¹⁷ To accomplish this mission, the 6th Cavalry commander, Col. Edward "Joe" Fickett, created and retrained nine platoon-sized "information detachments" for assignment at the division level and four supplementary detachments consisting of troop

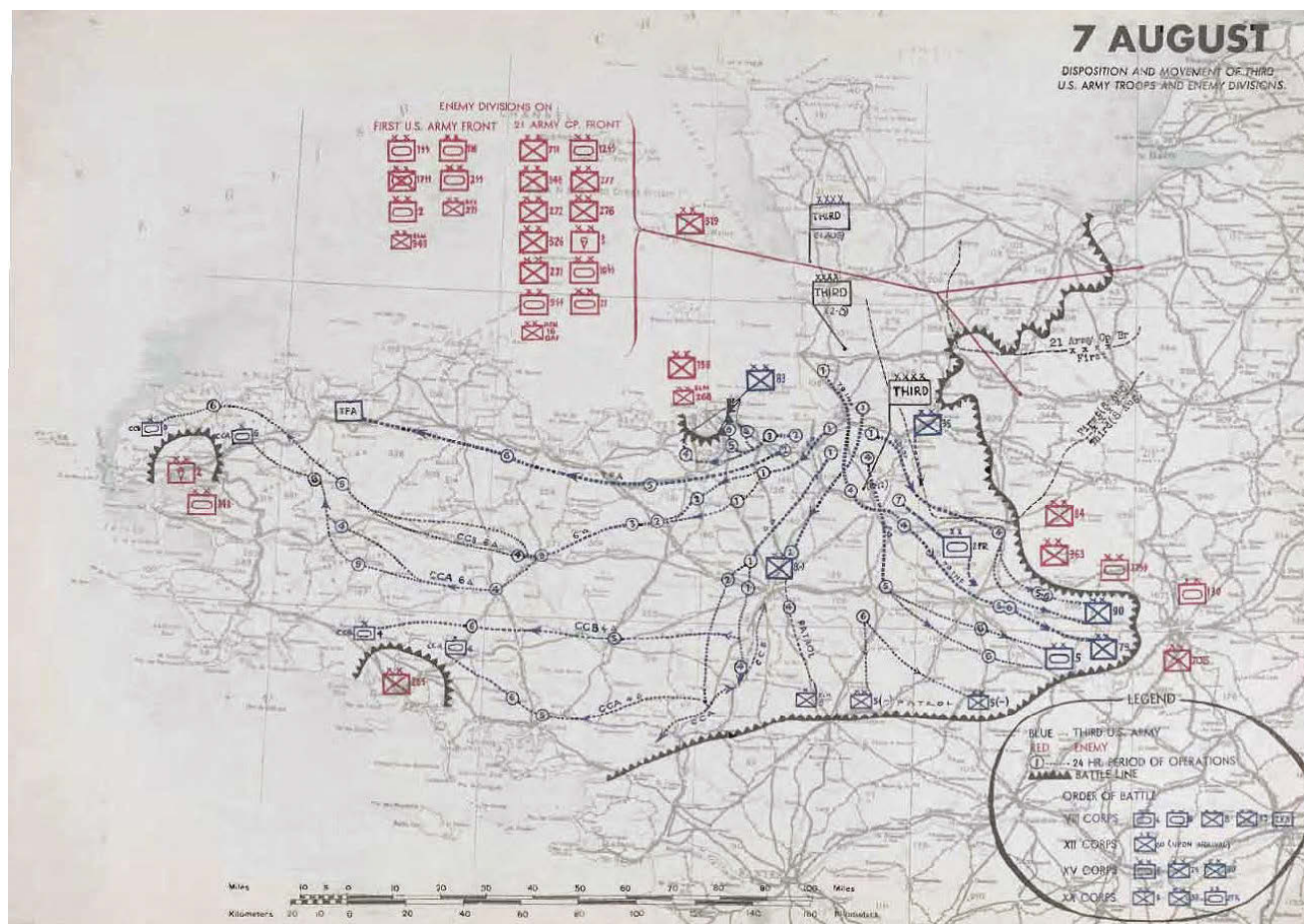
headquarters for assignment at the corps level.¹⁸ The divisional detachments consisted of two officers and forty enlisted men. They were subdivided into a "command and monitoring" section and a "patrol and liaison" section, each led by a lieutenant.¹⁹

At the Army level, Fickett established an AIS information center collocated with Flint's SIS Headquarters in a specially built communications van.²⁰ This information hub would process and route signal intercepts and communications security violations to the G-2 and signal officer from the 118th RI Company and the signal service companies. It would also process and route combat information and intelligence from the AIS patrols to the G-2 and G-3.²¹

Exploiting Cobra: Gaining an Initial Information Advantage

Third Army activated in France at 1200 hrs. on 1 August 1944, and the days and weeks that followed would demonstrate the effectiveness of Patton's information advantage approach and information forces. Operation Cobra began on 25 July with the limited objective of breaking through German lines and seizing Coutances. While Maj. Gen. J. Lawton Collins's VII Corps fixed elements of the German 7th Army, Maj. Gen. Troy H. Middleton's VIII Corps punched through the German left flank past the initial Cobra limit of advance, Coutances, and toward Avranches, a key node on the routes running south out of the peninsula.²² By 1 August, VIII Corps had seized Avranches and was moving south.

Sensing the opportunity to exploit the breakthrough on the Cotentin peninsula, Patton decided to push Maj. Gen. Wade H. Haislip's XV Corps and Maj. Gen. Walton Walker's XX Corps, two hundred thousand men, and forty thousand vehicles, in column through the narrow corridor at Avranches. This decision risked both corps being destroyed in detail if the German 7th Army recognized what was occurring and rapidly oriented on Third Army's exposed flank. Upon arriving in France in July, at Patton's direction, Third Army placed a significant premium on security to conceal its presence. Telephone security was a high priority, and total radio silence was enforced.²³ When Third Army went operational on 1 August, it lifted the radio silence restrictions, but the emphasis on denying the enemy insight into Third Army operations



(Image from Third United States Army, *After Action Report Third US Army 1 August 1944–9 May 1945: Volume I, The Operations* [Regensburg, Germany: Third U.S. Army, May 1945], 23)

Figure 1. 7 August 1944: Disposition of Third Army and German Forces

remained. Thus, while the operation entailed risk, Third Army possessed an initial advantage.

Even unopposed and undetected, pushing so many elements through such a small “straw” risked delays, and each delay provided the Germans’ decision-making cycle an opportunity to catch up. Furthermore, elements passing through the corridor needed to emerge as combined arms formations ready to continue the exploitation. Gen. Omar Bradley noted that this movement was “flat impossible ... but out the other end of the straw came divisions, intact and ready to fight.”²⁴ It is highly likely that the AIS provided Patton with the superior situational awareness and assured communications he needed to manage this “impossible” movement. Even before Third Army and the AIS went operational on 1 August, AIS detachments were operating with their assigned divisions, and AIS officers had visited First Army units to orient themselves with

operations in France.²⁵ Thus, in part due to the work of AIS, Patton had a significantly better understanding of his environment than the German 7th Army. This understanding, in turn, allowed him to take prudent risks. He also possessed uninterrupted decision-making processes and a secure way to communicate his decisions to his subordinates. This capability enabled him to make rapid decisions, move two corps through the narrow corridor and maintain the initiative.²⁶

By 5 August, Third Army’s aggressive maneuver had disorganized German forces across Third Army’s area of operations, and the only organized German defense existed near Saint Malo.²⁷ VIII Corps’s 4th Armored Division proceeded toward Vannes, threatening to isolate Brittany while 6th Armored Division advanced toward Brest. XV Corps’s 90th Infantry Division secured Mayenne, and 5th Armored Division prepared to cross the Mayenne River near Chateau Gontier.²⁸ Finally, XX

Corps's 5th and 35th Infantry Divisions and 2nd French Armored Division positioned themselves to cross the Selune River near Vitre, securing crossings over the Mayenne and Loire Rivers. From there, XX Corps was poised to sweep east, protecting the southern flank of the

Chief West, Field Marshal Gerd von Rundstedt) was almost entirely unaware of Third Army's activities and how large a force Patton had moved through the Avranches corridor. The German 7th Army only gained its first real insight into Third Army's opera-

“Patton's continued involvement in military deception operations throughout 1944 is noteworthy and demonstrates that Patton saw the utility of deception as a way to achieve economy of force.”

Allied advance (see figure 1, page 58).²⁹ By itself, Third Army presented the Germans with multiple dilemmas, threatening Brittany with isolation, the envelopment of forces in Normandy, the seizure of Paris, and a drive to the unprotected German border.³⁰

Particularly characteristic of Patton's operations during August was his continued involvement in military deception to achieve economy of force. In the first days of August, Third Army took part in Tactical Operation B, a military deception operation to convince the Germans that the main allied axis of advance was toward Brittany. German double agents provided false reports to the Abwehr, and elements of the 23rd Special Troops presented the signature of additional Third Army units moving into Brittany.³¹ While Tactical Operation B was a SHAEF (Supreme Headquarters Allied Expeditionary Force) plan rather than a Third Army plan, Patton's continued involvement in military deception operations throughout 1944 is noteworthy and demonstrates that Patton saw the utility of deception as a way to achieve economy of force.

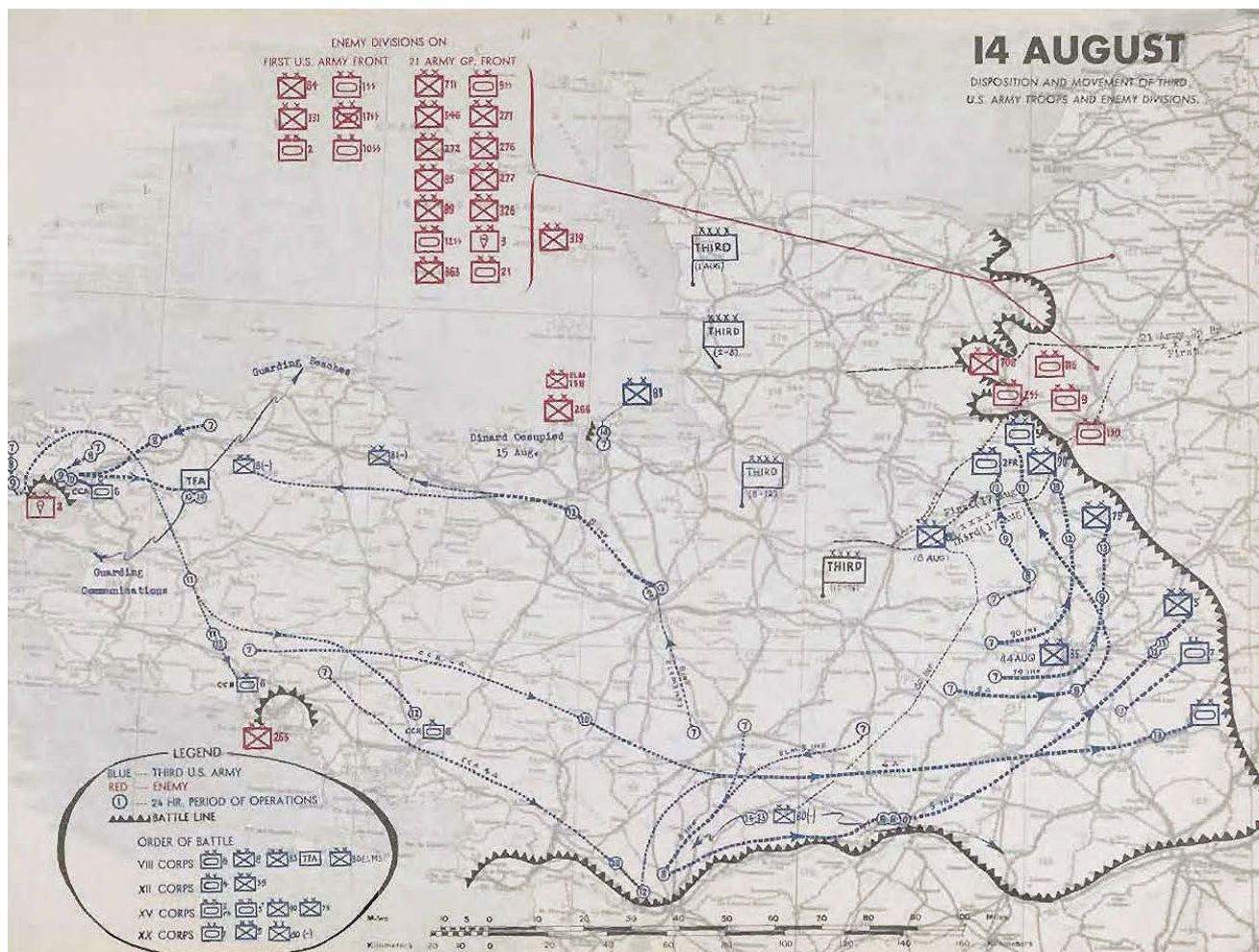
Ultra: Gaining the Initiative, Anticipating Decisions, and Managing Risk

Patton's information advantage approach was remarkably effective in the first days of August. Communications security, the continued deception regarding Patton's fictional First U.S. Army Group, Third Army's superior situational awareness, and adequate intelligence combined with the speed of its advance through the Avranches corridor left the Germans at a substantial information disadvantage. Oberbefehlshaber West (Commander in

tions and its efforts to exploit the breakthrough on 5 August when it began receiving reports of 90th Division at Mayenne, 70th Division at Laval, and mechanized cavalry near the Loire. The shock of Third Army's rapid advance and uncertainty regarding its reach further impacted German morale.³² Yet, to this point, Third Army still was not well and truly inside the German decision-making cycle. Ultra promised to make the difference.

On the night of 6 August, Maj. Melvin Helfers, the Third Army special intelligence officer, provided Patton with Ultra intercepts from the first week of August indicating that Adolf Hitler had ordered all armored units withdrawn from around Caen in preparation for a counterattack.³³ Hitler's plan called for German forces in Normandy to seize Mortain, cut the one American supply route from Normandy to northern France at Avranches, and destroy all allied forces, including Third Army, south of the Mortain-Avranches area.³⁴ Patton initially believed the veracity of Helfer's Ultra information but assessed that it described a bluff to cover a more significant withdrawal.³⁵ Nevertheless, in response to the warning, Patton halted the 80th Infantry Division, French 2nd Armored Division, and the 35th Infantry Division near Saint Hilaire, where they could contain a German breakout toward Avranches if the attack materialized.³⁶ Patton's information advantage, in this case, enabled him to assess German intent, anticipate subsequent decisions, and place forces where they would be in a position to act on the enemy.

On 7 August, Field Marshal Günther von Kluge launched a counterattack toward Avranches, spearheaded by Gen. Hans von Funck's XLVII Panzer Corps. As



exploit the initial success, and “keep the Germans rocking.” For example, on 14 August, the 118th, near Le Mans, began intercepting and decrypting numerous field code transmissions associated with armored formations. These intercepts indicated that an armored unit was attempting to penetrate Third Army’s enveloping lines and the company’s direction finders provided the location of the formation.⁴² In response, XV Corps blocked approximately fifty armored vehicles moving southeast from the Forêt d’Écouves, and over the next day, the 79th Infantry Division destroyed the remaining isolated German armor elements.⁴³ Thus, strategic intelligence set the conditions for tactical success on the ground, subsequently creating conditions to exploit enemy information systems, resulting in further success.

Over Patton’s continued objections, XV Corps never was permitted to close the Argentan-Falaise gap. Similarly, when on 17 August, Patton recommended Third Army turn northeast and trap the German 7th Army west of the Seine, Bradley refused. Bradley remained focused more on gaining territory than staying inside the enemy decision-making cycle, keeping him off balance and unable to regain the initiative.⁴⁴ Patton recognized how information advantage is situationally dependent, often fleeting, and must be operationalized to gain and maintain the initiative and achieve operational outcomes. Despite the failure to close the pocket, Third Army killed or captured over 135,000 German troops.⁴⁵ Col. Robert S. Allen, Third Army deputy G-2, attributed Third Army’s success in the first weeks of August to the “effective functioning of command. Intelligence warned the commanders about the impending attack, and commanders acted promptly and aggressively to meet it.”⁴⁶

Third Army’s successes in reversing and exploiting the German Mortain counterattack demonstrated to the staff the utility of integrating strategic and tactical capabilities to generate operational advantage. Soon Third Army was looking for ways to utilize Ultra intelligence even more aggressively than it had been intended. While remaining security conscious, starting in August and lasting for the remainder of the campaign, Third Army aggressively operationalized Ultra, often going beyond how other commands employed usually employed it.⁴⁷

Maj. Warrack Wallace, Helfer’s assistant, noted that Ultra “often is said to be primarily of strategic value and only useful tactically in a static situation. Perhaps

its prime value is strategic, but Patton’s use of Ultra in his historic drive across France is a fitting thesis for a tactical epic.”⁴⁸ Patton’s use of Ultra was unique in that he successfully operationalized strategic capabilities for tactical effects, thereby enabling operational-level maneuver. Where others may have seen the value of Ultra in indications and warnings, Patton saw the potential of Ultra to facilitate a greater understanding of the Germans across their entire operational depth. Instead of simply leveraging Ultra to prepare for German counterattacks or understand the forces directly facing him, he used it to sequence his actions and weight his efforts against German weakness. The awareness provided by Ultra allowed Patton to assume risk in guarding his flanks, and Patton himself remarked that Ultra “saved him the services of two divisions in the Third Army drive across France toward Germany in August and September.”⁴⁹ If anything, 12th Army Group constrained Patton in his ability to operationalize Ultra to assume prudent risk and concentrate his forces on objectives. Patton continually engaged Bradley about relieving 35th Infantry Division of its responsibility for covering the Army Group’s Flank along the Loire, noting that he had “studied the ‘black market’ dope [almost certainly Ultra] intently and could see no hazards there [south of the Loire].”⁵⁰

When asked for feedback on Ultra in early September, Patton and Koch noted that their only complaint with the Ultra system was that they wanted more information of general significance, not just strategic warning.⁵¹ They saw the value of Ultra lying in how it contributed to their overall visualization of dynamics

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across the theater. Because Patton had insight into what the enemy was going to do, he could do it first. Maneuver then facilitated intelligence collection in a virtuous cycle since the retreating Germans were forced to rely primarily on less secure radio rather than wire communications.⁵² Because he had a unique insight into enemy intentions, he could effectively assume greater risks with his flanks and strike harder and faster. He also had greater insight into his friendly force situation due to the AIS, and he could prevent the enemy from clawing back insight into Third Army thanks to the SIS's communications security work. Combined, he continued to generate a distinct information advantage over the enemy, staying inside the German decision cycle.

Integrating Capabilities to Protect Information, Enhance Decision-Making, and Retain the Initiative

Third Army could generate information advantage during the pursuit because it went further than other allied Armies by aligning functions and information capabilities in complementary ways that increased efficiency. For instance, the G-2 was responsible for the Psychological Warfare Branch.⁵³ The branch was responsible for combat propaganda directed at enemy forces and "first phase consolidation work," or information operations directed at civilians.⁵⁴ It operated a radio station, distributed friendly propaganda through various means, and monitored enemy propaganda radio.⁵⁵ This alignment integrated all types of radio monitoring under the joint control of the G-2 and SIS. Thus, responsibility for the majority of Third Army's capabilities to attack enemy decision-making was consolidated under the same G-2 and SIS structure. The tight integration of the SIS, G-2, and Psychological Warfare Branch also provided the branch with access to the AIS's tactical information, which the European Theater Board later cited as critical to the success of psychological operations.⁵⁶ Incorporating the branch into the G-2 was a significant departure from 12th Army Group and First Army, which retained its Psychological Warfare Branches as part of a special staff section apart from the G-2.⁵⁷

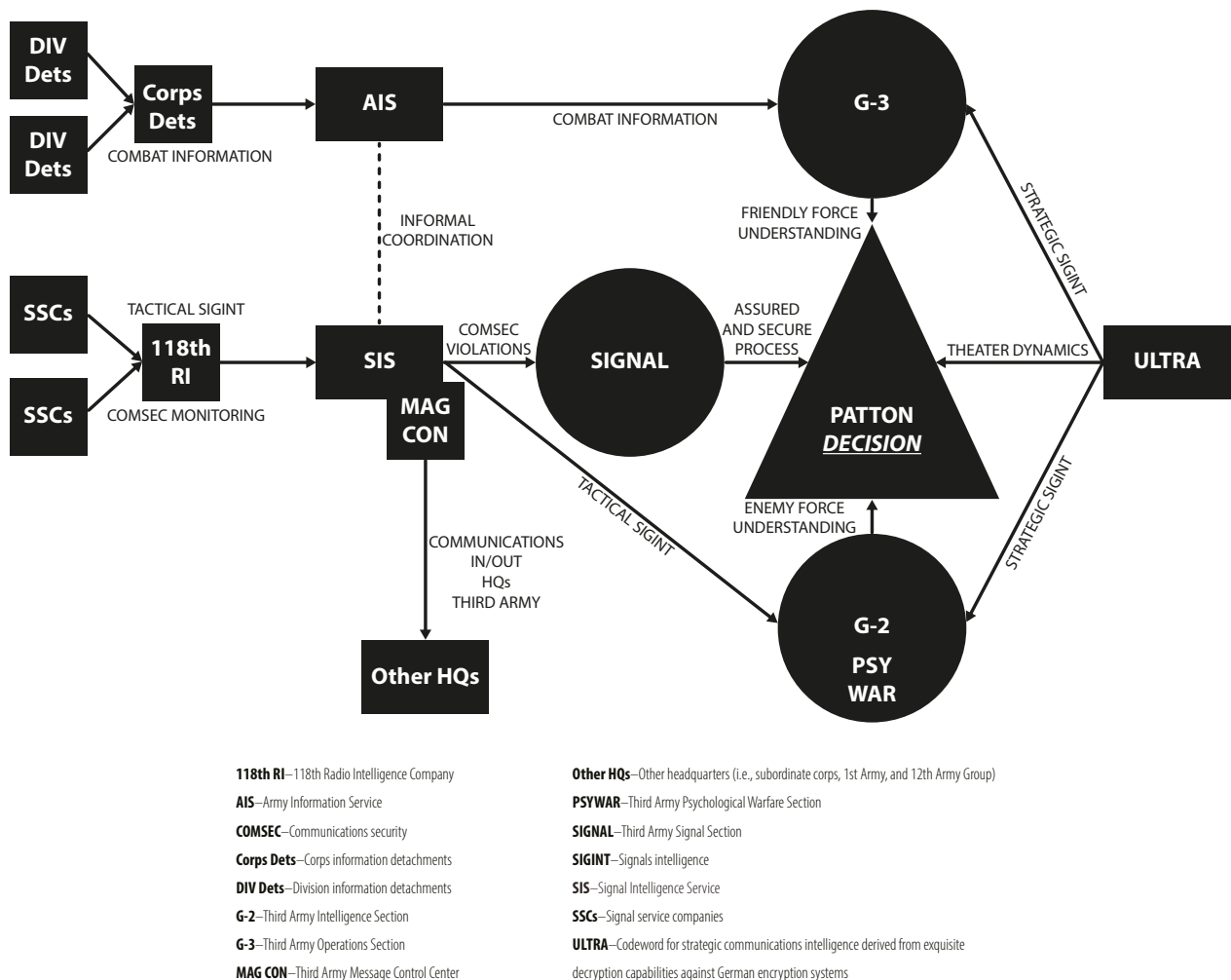
To increase efficiency and speed of decision execution, Third Army aligned like functions and placed the Third Army Message Control Center under the responsibility of the SIS.⁵⁸ This made the SIS responsible

for monitoring which enemy and friendly communication paths were open. In addition, it was responsible for assuring the security and rapid transmittal of priority friendly information while simultaneously exploiting enemy communications. Both functions enabled friendly decision-making by assuring the security of friendly decision-making processes and ensuring timely, relevant, and comprehensive information flowed to decision-makers. The SIS was also best postured to attack enemy decision-making processes, denying information to and deceiving the enemy by coordinating radio countermeasures throughout Third Army. With all these functions integrated under one organization, Patton had the speed of decision-making and execution necessary to generate information advantage. This arrangement went further than other armies in the European theater of operations, which for the most part only arranged for close collaboration between the Message Center and the cryptologic security team.⁵⁹ The unique decision to place the Message Control Center under the SIS arose from Patton's vision for information advantage.

The AIS "Information Hunter": Extending Operational Reach

The August pursuit posed unique command and control problems for Third Army. Technical communications problems abounded, and following the breakout at Avranches and the crumbling of German resistance after the Mortain offensive, the rapid exploitation increased the distance between Third Army units. At times motorcycle couriers, run by the AIS, were the only reliable means of communication with some divisions.⁶⁰

By 15 August, less than two weeks following its initial breakout near Avranches, Third Army had advanced nearly four hundred miles. It was responsible for the roughly north-south frontage from Argentan in Normandy to Orleans on the Loire.⁶¹ Third Army had seized multiple positions along the Seine River and threatened to encircle Paris, effectively making it impossible for the Germans to organize an effective defensive line. XX Corps's 8th Armored Division had reached Chartres southwest of Paris, forcing Hitler to reposition elements of Army Group G from the south to face Third Army. XII Corps had seized Orleans south of Paris, and XV Corps was advancing east of Dreux to the west of Paris. There was a wild variety of operations conducted by mid-August. VIII Corps in Brittany was reducing



(Figure by author)

Figure 3. The Third Army Staff and Information Forces, Late August 1944

fixed positions. Elements of XII Corps were blocking the German 7th German Army's escape from the Falaise pocket, while XX Corps and XV Corps were driving east in a combination pursuit toward the Seine and the German frontier. The distances involved in Third Army's operations toward the middle to end of August put significant strain on the AIS's ability to communicate with its far-flung detachments. Subordinate corps were too far for effective ground wave communication but too close for twenty-four-hour sky wave communications.⁶² The Third Army forward command post itself was also moving forward approximately every five days, further complicating communications.⁶³

Thus, in mid-August, Third Army faced the challenge of maintaining situational awareness and

decision-making superiority in a battlespace that was enlarging by the hour, given limited manpower and unreliable communications technology. First, to address the communications technology shortfalls, the AIS developed new ways of getting the messages through. Where radio communications were impossible, the AIS ran motorcycle messenger and courier services.⁶⁴ The AIS also maintained advanced signal centers wherever the army and corps command posts were more than sixty miles apart. These centers relayed messages by radio and courier and provided AIS headquarters with a central distribution point for information.⁶⁵ In addition to passing information up to Army headquarters, the AIS also ensured lateral and downward communications and situational awareness. For example, the Third Army G-2

regularly used the AIS to pass intelligence information to lower echelons, noting that “when no other means was available, the AIS could get the information through.”⁶⁶

Second, by 15 August, the AIS discontinued friendly radio monitoring and retransmission to focus entirely on liaison.⁶⁷ Following the war, Patton explained this decision, noting that “information obtained by monitoring is incomplete and sometimes unreliable and must be confirmed by information obtained from other sources.”⁶⁸ Instead, he concluded that information gained directly from liaison, particularly with staff at the division level, yielded the most reliable information with an acceptable time delay. Understanding Patton’s information requirements at the army level, AIS headquarters could direct the search for information at lower echelons and guide liaison and patrol activities.⁶⁹ Refocusing the AIS on liaison rather than monitoring transformed it into an active rather than passive information gatherer.

The AIS’s efforts extended Third Army’s operational reach and prevented Third Army from culminating in central France in mid-August. Despite losing the 2nd French Armored Division to participate in the liberation of Paris and orders to keep the 6th Armored Division in Brittany, Third Army was still able to seize crossings over the Seine on 21 August before the Germans could react. XII Corps and XX Corps repulsed local German counterattacks against the Seine bridgehead at Sens, Montreuil, and Melun, and Third Army drove east toward Metz and the still unmanned Siegfried line beyond.⁷⁰ In August’s waning days, logistical shortfalls, not information shortfalls, began to hamper Third Army’s pursuit to the German border. Despite receiving progressively less fuel, on 26 August, XII Corps’s armored spearhead, the 4th Armored Division, reached Troyes, eighty miles southeast of Paris, overrunning the German defenders, and on 27 August, XX Corps captured Nogent.⁷¹

By 29 August, Third Army’s gasoline shortage became acute, and the advance effectively stalled until 3 September. Third Army was now only seventy miles from the German border, having advanced over seven hundred miles in the past month.⁷² This reduction in tempo progressively robbed Third Army of the initiative.⁷³ Without the sustained pressure, the German decision-making cycle began to “catch up.” German Army Group G had time to start planning counterattacks that would buy additional time to man the Siegfried line.

Thus, when Third Army’s offensive operations resumed on 5 September, they faced an enemy over which they had substantially less of an advantage.

Conclusion

Third Army’s success during the August pursuit can be explained by its effective employment of purpose-built information forces and Patton’s unique information advantage approach (see figure 3, page 63). The AIS and SIS served as an integrated information advantage enterprise, enhancing friendly decision-making and protecting friendly information while attacking enemy decision-making and disrupting the enemy’s use of information. Third Army employed this system to the fullest as part of Patton’s competitive approach to information and decision-making.

Third Army’s information forces were militarily effective because they integrated information capabilities within information forces while ensuring operational concepts were consistent with available technology. The SIS was responsible for the bulk of the mission of protecting friendly information systems and processes. By placing the Message Control Center under the SIS, Third Army empowered the SIS not only with responsibility for the physical encoding or encryption of information but also the entire process of securing and delivering information to enable rapid and assured decision making by Third Army leaders. With the Psychological Operations Branch integrated into the G-2, G-3, SIS, and AIS structure, Third Army also possessed integrated processes for attacking enemy decision-making processes.

The AIS, for its part, focused on actively hunting information that could drive rapid decision-making. Along with SIS, the AIS assured systems and processes for better decision-making. While the AIS enhanced Third Army’s friendly situational understanding, the SIS ensured information was secure from the enemy. Together this helped Third Army keep the “enemy rocking” and unable to get its “balance.” Psychological operations and Third Army’s aggressive pursuit allowed Third Army to exploit battlefield success and “mop them up,” degrading German morale and encouraging surrender and desertion.

The continual use of maneuver to generate opportunities to exploit enemy information represents another less formal integration of capabilities. The insight provided by Ultra allowed Patton to achieve economy of

force and balance risk while maintaining his operational tempo. Aggressive maneuver combined with military deception attacked German cognitive processes, resulting in their generally poor ability to mass combat power at points where they could have halted Third Army. These information disadvantages compounded themselves. As the Germans continued to retreat, they lost control of cryptographic materials and were forced to abandon their secure wire communications and rely on less secure and reliable radio communications. This made their information systems and decision-making progressively more vulnerable to compromise and further disruption. Therefore, aggressive offense in the physical domain opened access into enemy communications that would be otherwise inaccessible given the limitations of available intelligence collection technology.

Third Army also excelled because Patton ensured that its approach to information advantage was consistent with available technology. The establishment of messenger services and relays as backups for radio communications enabled the AIS to continue functioning even when other elements could not communicate. This experience demonstrates the value of “the human element” in a communications degraded, intermittently connected, or low-bandwidth environment. As a student of history, Patton was familiar with the “directed telescope” concept, in which commanders used liaisons as their eyes and ears across the battlefield.⁷⁴

Understanding Patton’s information requirements and possessing a streamlined method for acquiring and relaying information, the AIS served as that “directed telescope,” keeping the commander updated with the relevant and timely information necessary for decision-making. It also ensured that adjacent units had a shared situational understanding, permitting decentralized execution of a common approach. Without the AIS liaison and messenger services, Third Army would have struggled to acquire the information necessary to make timely decisions or lost confidence in its information and the integrity of its decision-making processes. Recognizing the limitations of communications technology, particularly in a contested electromagnetic spectrum, Patton created a system that mitigated these challenges by relying upon the “human element.”

Throughout August, Third Army effectively generated information advantage, enabling dramatic operational level success. Instead of breaking through in Normandy, Third Army broke out, disintegrating German defenses and continually outpacing German attempts to establish new lines. Patton’s competitive approach to information and Third Army’s dedicated information forces contributed significantly to battlefield success during the August pursuit. His unique formations and information advantage approach allowed Third Army to anticipate decisions, retain the initiative, manage risk, and extend its operational reach. ■

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Marines of Company E, 2nd Battalion, 9th Marines, carry a wounded marine to an H-34 helicopter while fighting North Vietnamese Army forces during Operation Hickory III in Vietnam. (Photo courtesy of the Department of Defense)

Reorganizing Around Combat Casualty Care

Can Army Medicine Negate the Peacetime Effect?

Col. Michael J. Tarpey, MD, U.S. Army

We are going to repeat the same mistakes we have made before. We are going to think our doctors are trained. They are not going to be trained. You have just got to pray that your son or daughter ... is not the first casualty of the next war. Pray that they come in about the 5-year mark.

—Gen. Peter Chiarelli

Army medicine has long been torn between its two primary missions—care of 9.6 million beneficiaries in military treatment facilities (MTFs) and treating casualties on the battlefield. The beneficiary care mission has taken precedence for multiple reasons, including its enduring nature (unlike the episodic nature of combat casualty care), the daily bureaucratic demands associated with its size, and the attention to detail required to meet civilian accreditation standards.¹ The overwhelming amount of attention and resources devoted to beneficiary care has come at the expense of battlefield medicine. At one time, the Army medical force could move directly from caring for patients in stateside MTFs to treating casualties on the battlefield. However, this is no longer the case due to increased medical specialization and the absence of trauma patients in the majority of military hospitals.²

Revolutionary advances in combat casualty care over the last two decades in Iraq and Afghanistan have increased casualty survivability to record levels.³ However, the gains from combat experience tend to erode during periods of relative peace. Combat casualty outcomes over the past eighty years demonstrate that casualty survival rates worsened at the beginning of each new conflict before improving as the conflict continued—a phenomenon known as the “peacetime effect.”⁴ Researchers estimate that up to 107,256 combat

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fatalities that occurred at the onset of World War II, the Korea War, the Vietnam War, Operation Iraqi Freedom, and Operation Enduring Freedom could have been prevented if trauma systems and skills had been maintained during the interwar periods.⁵ Today, after two decades at war, multiple critical gaps exist in the Army medical force’s ability to treat casualties in large-scale combat operations (LSCO). The Army Medical Department (AMEDD) has too few surgeons and an insufficient number of operative cases for them in Army MTFs. Moreover, it is inadequately prepared to provide prolonged field care and lacks standardized tactical combat casualty care (TCCC) training for medical personnel across the force.⁶

Congress and other key national leaders have been concerned about the military’s lack of trauma preparation since the first Gulf War. The issue has persisted for decades because developing and sustaining enduring solutions is extremely difficult. Moreover, AMEDD leaders have primarily focused on health care delivery in MTFs. In order to increase efficiencies in beneficiary care and encourage the services to focus on their combat casualty care missions, Congress passed the National Defense Authorization Act (NDAA) for Fiscal Year 2017. The NDAA directs the transfer of responsibility for MTF administration and management from the services to the Defense Health Agency (DHA).⁷ The Department of Defense (DOD) and the surgeons general have argued against this transformation for years, most recently citing the COVID-19 response as a reason to slow things down. Their arguments, however, have fallen on deaf ears as Congress remains adamant about the transition; DHA assumed control of all MTFs in September 2021.⁸

Contrary to popular arguments from the medical community, the transformation of military medicine presents a tremendous opportunity for the AMEDD generally, and the Army Medical Command (MEDCOM) in particular. Being relieved of the responsibility to provide beneficiary care allows MEDCOM to develop and sustain a medical force that can maximize combat casualty survival rates in a LSCO with a near-peer competitor. Transforming MEDCOM to create a medical force ready to perform its wartime mission has significant ramifications for Army medical personnel, the Office of the

Surgeon General (OTSG), and the MEDCOM staff. The effort and resources involved in planning, organizing, coordinating, and improving trauma training and patient care experiences for 43,000 active-duty Army personnel (including 15,000 combat medics, 4,200 physicians, and over 3,000 nurses) based on data, metrics, and research are consistently underestimated.⁹ Success, however, has the potential to negate the peacetime effect and prevent thousands of deaths in the next conflict.

Historical Overview

Examples of the peacetime effect date back at least to the 1700s and should come as no surprise.¹⁰ Part of the peace dividend includes dismantling wartime trauma systems, reducing the number of military medical personnel, capturing fewer innovations in the medical literature, and shifting focus away from trauma education and training toward beneficiary care.¹¹

For example, in the aftermath of the first Gulf War, significant attention was directed to closing the readiness gaps of deployed military medical providers. Specifically, military doctors and nurses lacked critical trauma training and real-world trauma experience.¹² In 1998, the Government Accountability Office (GAO) cited examples of physicians and nurses who had never treated trauma patients prior to deployment. In fact, the GAO found that many medical professionals did not receive predeployment training in managing trauma patients.¹³ Col. Donald Trunkey, a trauma surgeon and deployed military hospital commander at the time, pointed to the need to “train as we would fight.”¹⁴ He was an early advocate of sending military surgeons

to civilian trauma centers to maintain currency in trauma care.

Following the Gulf War, Congress and the GAO directed the DOD to establish demonstration training programs in which military medical personnel practiced in civilian trauma centers since few trauma patients were seen in MTFs.¹⁵ In response, the DOD established a joint military-civilian trauma training program in 1999 at the Ben Taub Memorial Hospital in Houston, where a small number of Army, Navy, and Air Force physicians and nurses worked alongside their civilian counterparts to treat trauma patients.¹⁶

In two short years, however, the program was terminated due to administrative and legal issues.¹⁷ The program, while helpful in establishing the viability and usefulness of joint military-civilian trauma training programs, revealed many significant challenges associated with creating enduring collaborations between military and civilian medical facilities.¹⁸

For example, variations in state regulations, local policies, and concerns about malpractice, billing, provider privileging, and continuing education were too significant to overcome.¹⁹

Although MEDCOM was involved in the Ben Taub military-civilian partnership, it was focused at that time on the “Gateway to Care” initiative to develop a more efficient, “business-like approach to health-care delivery.”²⁰ Consequently, relatively few Army medical personnel received trauma training in civilian trauma centers. Unfortunately, the peacetime effect struck again, and Army medicine found itself in a familiar place on 11 September 2001, with only a small percentage of its medical force having extensive experience treating trauma patients.²¹



Carver Hospital, Washington, D.C., circa 1860–1865 during the U.S. Civil War. (Photo courtesy of the National Archives)

Combat Casualty Care over Three Decades (1990–Present)

The last three decades of military medicine included many revolutionary transformations in combat casualty care. The failure to prioritize battlefield medicine,

Fresh out of civilian family medicine residency training, I deployed to Kuwait as a physician with 1st Battalion, 15th Infantry Regiment (1-15 IN), 3rd Infantry Division, in January 2003. Although I did not receive military trauma training prior to deployment,

“My own experiences as a medic with a Patriot missile battery in the first Gulf War and as a battalion surgeon in Operation Iraqi Freedom enabled me to witness the revolutionary transformation of combat casualty care.”

however, led to preventable deaths.²² A medic deploying to Desert Storm in 1990 would have used prehospital care techniques that were essentially unchanged since the Civil War.²³ Seemingly none of the lessons learned between World War II and Vietnam had been incorporated into prehospital trauma care doctrine or treatment guidelines by the first Gulf War. Although the tourniquets used in World War II were known to be ineffective, medics in the first Gulf War carried them in their aid bags with instructions to use them only as an absolute last resort when all other methods failed.²⁴

Retired Navy Capt. Frank Butler, one of the modern visionaries in prehospital medicine, stated that “turning lessons learned in combat casualty care into lives saved in future conflicts requires definitive action and strong leadership.”²⁵ Clearly, neither occurred by the first Gulf War, and medics went to war ill-equipped and lacking tactical trauma care guidelines explicitly designed for the battlefield.

In 1996, Butler and his colleagues published a seminal article that launched the TCCC revolution.²⁶ The TCCC guidelines were developed over the next several years and transformed prehospital trauma care, eventually saving thousands of lives during combat.²⁷ However, the Army did not initially appreciate the transformational nature of the new TCCC guidelines. It took over a decade for the conventional Army to adopt the guidelines as the standard for battlefield trauma care.²⁸ My own experiences as a medic with a Patriot missile battery in the first Gulf War and as a battalion surgeon in Operation Iraqi Freedom enabled me to witness the revolutionary transformation of combat casualty care.

I was fortunate that my unit was colocated with the 3rd Battalion, 75th Ranger Regiment at Fort Benning, Georgia. Some of their medics introduced us to the new TCCC guidelines, the value of which our medical leadership immediately recognized and began teaching to our thirty-eight enlisted medics. While in Kuwait, our medics conducted rigorous medical training using the TCCC guidelines to address combat scenarios from the 1993 battle in Mogadishu, Somalia. The TCCC guidelines were based on the best evidence available and were superior to the Army Medical Department Center and School’s curriculum at the time.

When the 3rd Infantry Division attacked Iraq in March 2003, 1-15 IN conducted twenty-five days of continuous combat operations over eight hundred kilometers of open desert. We treated thirty-two wounded American soldiers during that time, many with life-threatening injuries, without losing a casualty. Many other units that had not trained their medics using the TCCC guidelines were not as fortunate. For example, early in the war, a soldier from 2nd Battalion, 69th Armored Regiment, a sister battalion from the 3rd Infantry Division’s 3rd Brigade, bled out and died on the battlefield due to an ineffective tourniquet.

Approximately two years later, I returned to Iraq with 1-15 IN for a second tour. I was dismayed to discover that the TCCC guidelines had minimally infiltrated the conventional Army nine years after their introduction despite evidence showing proof that they save lives.²⁹ In January 2005, over three years into Operation Enduring Freedom and two years into Operation Iraqi Freedom, the TCCC guidelines were not considered doctrinal and were not taught at



AMEDD schools. Moreover, many units still arrived in Iraq without tourniquets, the cornerstone of the TCCC guidelines. Units had to go outside regular medical supply channels to acquire tourniquets and other medical equipment prescribed by the TCCC guidelines.

On 6 March 2005, the front page of the *Baltimore Sun* featured an article by Robert Little that exposed the Army for sending soldiers into combat without tourniquets two years after the Committee on Tactical Combat Casualty Care recommended that all soldiers be issued a tourniquet and be trained on its use.³⁰ Little discussed the number of deaths that could have been prevented if soldiers carried tourniquets while “the Army conducts tests to determine the best pouch to put it in, which could take several months.”³¹ He also quoted Maj. Gen. Joseph Webb, the Army’s deputy surgeon general, who was surprised to learn that some soldiers in Iraq did not have tourniquets. Webb admitted that he was not familiar with the purchasing and logistical procedures necessary to make it happen.³²

As a result, Sens. Richard Durbin and Carl Levin asked Secretary of Defense Donald Rumsfeld why

Medical personnel tend to a simulated casualty during a drill aboard the hospital ship USNS *Comfort* (T-AH-20) in the Persian Gulf 1 January 1991 during Operation Desert Storm. (Photo by the Department of Defense via Wikimedia Commons)

soldiers were deploying to Iraq and Afghanistan without tourniquets.³³ Congressional hearings on the subject ensued, and senior military leaders quickly responded to equip all deploying soldiers with a tourniquet that they were trained to use. Once again, Congress intervened to improve Army medicine’s performance on the battlefield. Soon after that, AMEDD finally adopted the TCCC guidelines as prehospital trauma treatment doctrine.

Army Medicine Priorities

Caring for 9.6 million beneficiaries is a huge and, at times, overwhelming mission. Nevertheless, Army medicine provides outstanding health care to its beneficiaries.³⁴ The quality of Army medicine has been driven by congressional interest that forced surgeons general from all the services to work to provide care

as efficiently as civilian hospitals.³⁵ Until very recently, Army MTF commanders faced similar pressure to meet dozens of hospital standards that included metrics on access to care, patient satisfaction, and various safety requirements, just to name a few. However, Army MTF commanders have never been evaluated on how well their personnel are prepared to perform their wartime missions. In fact, one could argue that MTF commanders are incentivized to prevent active-duty personnel from attending trauma training since time spent outside the clinic negatively affects the efficiency metrics used to evaluate MTF commanders.³⁶

Similarly, Army providers are not credentialed to perform their wartime mission. Instead, they are credentialed on the procedures commonly performed in MTFs. Family physicians, for instance, may be required by TCCC guidelines to perform cricothyrotomies (inserting a tube into the cricothyroid membrane through an incision in the neck to establish an airway), insert chest tubes, and perform needle decompression of tension pneumothorax. The vast majority of Army family physicians are not credentialed to perform these wartime procedures. Instead, they are credentialed to deliver babies, treat ingrown toenails, and other procedures commonly performed in MTFs.

Finally, the Army's medical force structure mix prioritizes beneficiary care over combat casualty care. Although the Army has 4,200 active-duty physicians, fewer than 150 practicing general or trauma surgeons are in the inventory.³⁷ As a result, they are the most deployed physicians in the AMEDD, spending approximately 30–40 percent of their professional careers deployed.³⁸ Many general and trauma surgeons leave the Army soon after fulfilling their initial obligations. In contrast, there are over twice as many gastroenterologists, three times as many dermatologists, and over eight times as many pediatricians and obstetricians as there are trauma surgeons, all of whom are devoted to delivering health care in brick-and-mortar facilities.³⁹

MTFs: Training Platforms to Sustain a Ready Medical Force

There is no doubt that MTFs play an essential role in training medical personnel to care for disease and nonbattle injuries, which are the leading cause of wartime casualties.⁴⁰ However, the lack of trauma patients seen in most MTFs combined with the increasing

divergence between modern combat casualty care techniques and civilian trauma protocols leave military providers inadequately prepared for combat casualty care.

Combat casualty care has evolved into its own medical specialty with its own research, protocols, literature, and training requirements. Combat casualty care includes two separate but related components: prehospital trauma care and battlefield surgical care. Although MTFs play a role in preparing medical providers to perform both aspects of battlefield medicine, each requires training and patient care that can only take place outside the MTF.

Prehospital Trauma Care Training

Since their introduction in 1996, battlefield trauma protocols have diverged from civilian guidelines designed for high-technology hospitals. As one might expect, combat casualty care interventions are context-dependent based on the tactical situation. Training conducted in a tactical setting offers advantages over hospital-based training for medical personnel who provide care at the point of injury and in Role 1 (basic medical care) facilities.⁴¹ Because medical personnel in MTFs lack realistic tactical training scenarios and see few trauma patients, their ability to provide combat casualty care may erode. Both issues could be addressed by conducting tactical casualty simulations in medical simulation training centers (MSTCs) and rotating nonsurgical Army medical personnel to civilian trauma centers.

Surgical Training for Combat Casualty Care

Between 2001 and 2010, surgeons gained valuable trauma experience while deployed in Iraq and Afghanistan. Fortunately, casualty rates decreased drastically over the following decade, providing surgeons fewer opportunities to operate while deployed. In contrast, the Brooke Army Medical Center (BAMC), the only military level I trauma center, treats approximately 4,500 trauma patients each year, accounting for 66 percent of all trauma patients seen in MTFs.⁴² Unless stationed at BAMC, many surgeons deployed without recent trauma experience. Fortunately, a small number of Army general surgeons have rotated through civilian trauma centers as

part of military-civilian partnerships established as a result of the NDAA.⁴³ This promising development will allow Army surgeons to gain real-world trauma experience but needs to increase dramatically in scale to impact the problem significantly.

Revolutions in Military Medical Affairs

Combat casualty care has long driven medical innovation during wartime, resulting in revolutions in military medical affairs.⁴⁷ The last two decades of war

“The modern surgical techniques practiced in U.S. hospitals continue to diverge from the surgical methods used to control damage on the battlefield.”

The nature of the surgical profession has changed over the last fifty years, further exacerbating the skills gap described above. Until recently, general surgery residents were exposed to a wide variety of surgical conditions, including trauma. Upon completing residency, most surgeons maintained generalist skills throughout their careers. Like many other medical specialties, however, surgery has become increasingly specialized over the last several decades. For example, cardiothoracic, vascular, and plastic surgeons used to complete a general surgery residency before specializing. The current trend in surgical training for these specialties does not include a full residency in general surgery.⁴⁴ Changes in surgical training coupled with the reduced number of trauma patients seen in most MTFs have created the Army's need to ensure these surgeons are “trauma competent” prior to deploying.

The modern surgical techniques practiced in U.S. hospitals continue to diverge from the surgical methods used to control damage on the battlefield. In the United States, surgical care frequently involves minimally invasive techniques, advanced imaging, and subspecialty consultation.⁴⁵ These trends also impact modern trauma surgery in the United States, though less than most other surgical subspecialties. Combat surgery—including damage control surgical techniques—generally features aggressive operative and staged interventions not commonly practiced in civilian hospitals.⁴⁶ As a result, Army surgeons of all types, but particularly specialists, are unlikely to gain regular experience with modern battlefield surgical techniques while practicing in MTFs. Civilian trauma centers (and BAMC) are the next best thing to the battlefield, though additional training in war surgery is also necessary.

in Iraq and Afghanistan are no exception and have resulted in an absolute explosion of medical innovations. Among these are the TCCC guidelines, the creation of the Joint Trauma System (JTS), tourniquets, hemostatic dressings, and damage control resuscitation/surgery.⁴⁸ Few of these innovations emerged from institutions designed to support combat casualty care. Instead, most of them resulted from informal, innovative, bottom-up efforts from military members of all ranks.⁴⁹ Unfortunately, most of these lifesaving methods were not institutionalized in protocols, doctrine, or training until many years after their development.

Tourniquets, the “signature life-saving prehospital intervention of the wars in Iraq and Afghanistan,” are an excellent example of bottom-up driven medical innovation.⁵⁰ The recommendation to use tourniquets as the primary option to stop arterial bleeding on the battlefield was made in 1996.⁵¹ Over the next several years, special operations units began equipping their soldiers with tourniquets to carry into battle. In 2006, a decade later, all deployed soldiers were finally trained to use them and were required to carry them when deployed.⁵² The death rate due to extremity hemorrhage in U.S. casualties decreased by 66 percent between 2006 and the end of 2010 and is attributed mainly to the use of tourniquets.⁵³

Another revolutionary medical innovation that emerged in the last two decades is the JTS. At the start of the wars in Afghanistan and Iraq, no organized trauma system existed, and there were no plans to create one. In November 2004, the Joint Theater Trauma System was created by a group of Army and Air Force trauma surgeons who developed a plan to

coordinate medical care and evacuation in Iraq and Afghanistan.⁵⁴ The Joint Theater Trauma System evolved into the JTS and has been instrumental in developing clinical practice guidelines, coordinating care and evacuation in theater, and collecting data to promote research and development.

Both the JTS and the tourniquet exemplify the value of military medical innovations in saving lives on the battlefield. They also demonstrate the critical need to capture the revolution in military medical affairs and lessons learned in combat by institutionalizing them in protocols, doctrine, and training. As part of the Military Health System transformation, MEDCOM should reorganize itself in a way that allows the innovations and lessons learned on future battlefields to be institutionalized rapidly.

Current Medical Force Readiness Gaps to Execute its Wartime Mission

Military medicine has performed exceptionally over the last two decades of war, and as a result, case fatality and killed-in-action rates are the lowest in history.⁵⁵ Nevertheless, the threat of LSCO against near-peer competitors reveals critical medical readiness gaps in trauma skills and trauma systems. Each gap should be addressed to avoid the peacetime effect in the future. Six readiness gaps are particularly concerning:

- prehospital trauma care,
- battlefield surgical care,
- prolonged care,
- data collection and performance improvement,
- the AMEDD's ability to assess its readiness to perform wartime missions, and
- developing senior AMEDD leaders with significant combat casualty care experience.

Prehospital Trauma Care

Survival rates in Iraq and Afghanistan were as high as 98 percent for casualties who arrived at a combat hospital alive, but the vast majority of battlefield deaths occurred before casualties made it to the hospital.⁵⁶ In fact, 87.3 percent of the battlefield deaths in Iraq and Afghanistan from 2001 to 2011 occurred in the pre-MTF environment.⁵⁷ During that time, 976 soldiers died of injuries that were deemed potentially survivable.⁵⁸ This finding suggests that advancements in the prehospital arena are most

likely to reduce combat deaths. Although the TCCC guidelines revolutionized prehospital trauma care on the battlefield, TCCC training across the Army is not well-standardized, varies in quality, and is not applied universally.⁵⁹ A recent survey of 601 U.S. Army physicians and physician assistants (PAs) revealed that over 40 percent had never completed a TCCC course.⁶⁰ Moreover, adherence to TCCC guidelines in Iraq and Afghanistan was generally poor.⁶¹

Measuring adherence to TCCC guidelines also remains an issue. The Army lacks a mechanism to ensure that medical personnel receive initial TCCC training, that the training meets published standards, and that providers maintain their proficiency. The Army's twenty-one MSTCs could easily fill this void and are ideal sites that provide tactical scenarios consistent with the TCCC guidelines. However, too many organizations, including MEDCOM, U.S. Army Installation Command, and U.S. Forces Command, are involved with MSTCs without clear lines of operational control. Under the current arrangement, MSTCs lack manning documents and baseline standards for the training they should provide. A reorganized MEDCOM could collaborate with stakeholders to transform MSTCs, allowing them to serve as the Army's executive agent for delivering and sustaining TCCC training.

To complicate this problem, Department of Defense Instruction (DODI) 1322.4, *Medical Readiness Training*, made TCCC the standard of care for all military first responders. According to the DODI, all service members should receive TCCC training based on their skill level every three years and within twelve months of deployment.⁶² The Army lacks a well-formulated plan to operationalize this requirement across the force. Although the Medical Center of Excellence (MEDCoE), now aligned under the U.S. Army Training and Doctrine Command (TRADOC), provides effective training to combat medics in Advanced Individual Training and as part of predeployment trauma training courses, other commands do not have an effective plan to provide TCCC sustainment training for soldiers across the Army. To make matters worse, no one is tracking the current status of TCCC training across the Army.

Battlefield Surgical Care

The Army is facing a genuine crisis concerning its ability to recruit and retain surgeons.⁶³ Most military

general surgery residents deploy within sixty days of graduation.⁶⁴ They typically spend five to nine months deployed in environments where they have few opportunities to operate. For example, 60 percent of Army general surgeons deployed from June 2014 to June 2015 reported performing less than one operative case per month during their deployment.⁶⁵ Military surgeons typically return to low-acuity, low-volume practices in stateside MTFs for ten to twelve months before deploying again.⁶⁶ This operational tempo and low caseload is not sustainable and accounts for the growing exodus of surgeons after their initial obligation.

From 2012 to 2016, general surgeons across Army MTFs averaged only 108 cases per year compared to civilian general surgeons, who averaged 398–533 cases per year. It is easy to conclude that “obtaining mastery of general surgery is a nearly impossible proposition given the current care models at Army MTFs.”⁶⁷ Only 15 percent of Army surgeons currently meet the knowledge, skills, and abilities standards.⁶⁸

It is particularly challenging for general and specialty surgeons who are not trauma specialists to remain current in trauma care if they are not stationed at BAMC, where they can routinely operate on trauma patients. The MEDCOM began to address this issue in the year 2000 by sending individuals and forward surgical teams to the Army Trauma Training Center, part of the Ryder Trauma Center in Miami, for two weeks of trauma training before they deployed. The RAND Corporation reviewed this program in 2020 and found that only about 40–50 percent of Army surgeons attended the course prior to deployment.⁶⁹ Of those who did attend, reviews were mixed. Surgeons stated that they had little opportunity to provide hands-on care to patients during the two-week rotation.⁷⁰

Nevertheless, military-civilian partnerships wherein Army surgical teams practice in civilian trauma centers provides them the best opportunity to gain experience caring for sufficient numbers of trauma patients.⁷¹ MEDCOM created the Army Medical Department Military-Civilian Trauma Team Training (AMCT3) program in 2018. Under AMCT3, Army surgical personnel are practicing in seven civilian trauma centers.⁷² The level of effort required to develop agreements and administer partnership programs to allow hundreds of active-duty Army surgeons and thousands of surgical team members to maintain their operative trauma

skills is enormous. In reorganizing, MEDCOM should ensure that it builds a staff sufficiently large and knowledgeable about building and maintaining these essential partnerships.

Prolonged Care

Combat casualty care during a LSCO with a near-peer competitor will differ substantially from the care provided during the Iraq and Afghanistan conflicts, where the United States maintained air superiority. According to a TRADOC capability needs assessment, “Army units currently lack the capability to provide prolonged care (greater than sixty minutes) at the point of need when evacuation is delayed.”⁷³ Without air superiority in a LSCO with a near peer, Army medical personnel will need to provide prolonged care at Role 1, 2, and 3 facilities. The MEDCoE will begin addressing this gap by including prolonged care training as part of Advanced Individual Training for combat medics. Unfortunately, no programs currently exist to train and sustain medical personnel in the prolonged care of casualties across the remainder of the Army.

Data Collection and Performance Improvement

A learning health system uses data to drive process improvement.⁷⁴ Many of the military innovations developed during the last two decades of war benefited from a process that included data collection, interpretation of the results, and a willingness to adopt policies and procedures associated with improved outcomes.⁷⁵ Refinements in blood product resuscitation and the development of the JTS are just two examples of many.

However, much of the learning and the programs developed in response over the last two decades of conflict occurred informally, outside established institutional channels. Moreover, as with delays in the institutionalization of tourniquets and TCCC training, the lack of a formal learning system model embedded into Army medicine organizations contributed to preventable deaths. As conflicts draw down and casualty rates decrease, the learning health system model needs to be formally embedded into reorganized Army medicine institutions so that in future conflicts data-based process improvements begin at the outset.



Assessing the Army Medical Force's Readiness to Execute its Wartime Mission

Until recently, Army medicine had never specified the skills based on areas of concentration (AOCs) and enlisted military occupational specialty (MOS) that are required to certify medical personnel as ready to deploy. In the past, physicians and other medical providers were considered ready to deploy if they were credentialed by the MTF. The divergence of battlefield medicine and hospital-based medicine makes this assumption questionable. In fact, the NDAA directed the DOD to implement ways for military health care providers to maintain critical wartime medical readiness skills.⁷⁶ MEDCOM responded by identifying Individual Critical Task Lists (ICTLs) for all 103 AOCs and twenty-four MOSs containing tasks that must be completed to be considered ready to perform their wartime mission. The scale of this initiative is vast, and progress in the MTFs has been very slow. Although the MSTCs could be a part of the solution, they are not resourced for ICTL accomplishment. In addition, the ICTLs are not aligned with the ever-evolving TCCC guidelines.

Medical personnel from Fort Belvoir Community Hospital operate on a cut suit, a human-worn medical training device, during the 78th Training Division's Warrior Exercise 78-15-01 "Arctic Lightning," 21 January 2015. "Changes in surgical training coupled with the reduced number of trauma patients seen in most military treatment facilities have created the Army's need to ensure these surgeons are 'trauma competent' prior to deploying." (Photo by Phillip Scaringi, 78th Training Division)

Development of Senior AMEDD Leaders with Combat Casualty Care Experience

General officers in the AMEDD oversee all aspects of the Army Health System to include everything from commanding medical regions to leading MEDCOM staff directorates. Most flag officers developed professionally in the MTF system, and naturally, that is where their expertise and experiences lie. Remarkably, MEDCOM never established a directorate focused exclusively on battlefield care or identified a general officer whose primary mission is combat casualty care.⁷⁷ This oversight created a lack of leadership and accountability at the highest levels of Army medicine,

often resulting in hospital-based care's primacy over battlefield medicine. Transitioning all Army MTFs to DHA control provides the perfect opportunity for MEDCOM to establish a directorate headed by a general officer dedicated exclusively to battlefield casualty care. Establishing a directorate of this type would empower a general officer and his or her staff to spearhead efforts to address the current critical gaps in combat casualty care afflicting Army medicine.

Training, Organizing, and Equipping for Combat Casualty Care

The MEDCOM, OTSG, and Regional Health Command (RHC) staffs combined include over one thousand military and civilian personnel who almost exclusively focus on the quality of care provided in MTFs.⁷⁸ With the DHA's assumption of responsibility to run the MTFs, these staff members can be refocused on building and sustaining a medical force ready to perform its wartime mission. The staff should prioritize maintaining a learning Army Health System that is operationally focused. Data should drive research, training, performance improvement, and assessments of medical force readiness.

MEDCOM should focus initially on prehospital care because most preventable deaths occur before casualties reach combat hospitals. Yet, MEDCOM and the RHCs have little involvement in providing prehospital trauma training—the very foundation of combat casualty care—to the forty-three thousand active-duty Army medical personnel and the rest of the Army. Although TRADOC provides TCCC training to basic trainees and at the MEDCoE, the Army does not have a plan to deliver TCCC sustainment training across the force. Upon reorganization, MEDCOM should play a prominent role alongside involved Army Commands in implementing a plan to meet the requirements of DODI 1322.24, *Medical Readiness Training*.⁷⁹

MEDCOM does not need to look far for a good model to push across the force. The U.S. Army Rangers set the gold standard for maintaining a prehospital casualty response system.⁸⁰ The Ranger model eliminated preventable deaths by implementing a command-directed casualty response system. All Rangers are trained on TCCC guidelines according to their skill level, and prehospital trauma registry data are used to facilitate performance improvements centered on clinical outcomes.⁸¹

Although currently focused on combat medics (68Ws), MSTCs should be the foundation for Army TCCC sustainment training across all AOCs and MOSs. Moreover, MEDCOM should play an essential role in transforming MSTCs into standardized platforms used to train TCCC guidelines and ICTLs.⁸² Most importantly, the TCCC training conducted in the MSTCs should be updated regularly to keep up with evolving TCCC guidelines.

Additionally, MEDCOM should lead the effort to implement prolonged care training across the medical force in MSTCs, MTFs, or at the unit level. Prolonged care training should address a longstanding capability gap by providing Army combat medics with opportunities to practice their trauma and prolonged care skill sets. For combat medics, caring for patients alongside physicians and nurses in emergency rooms, inpatient wards, and intensive care units is an excellent way to practice providing prolonged care in battle.

With the DHA assumption of responsibility to run MTFs, MEDCOM should refine its effort to recruit and retain Army surgeons. MEDCOM has already taken some positive steps by centrally managing several critical wartime specialties and increasing incentive pay for surgeons. It is also essential for MEDCOM to work with civilian partners, the U.S. Department of Veterans Affairs, and MTFs to ensure that all Army surgeons see enough patients annually to maintain their trauma competence and that all surgeons can increase their operative caseload and complexity within their surgical specialty.

In addition, MEDCOM should focus on increasing trauma exposure for surgeons and their surgical teams through military-civilian partnerships involving civilian trauma centers. Once again, MEDCOM has taken some important steps by targeting individuals in forward surgical teams with the AMCT3 program.⁸³ The AMCT3 program will need to grow exponentially to provide trauma experiences for the hundreds of Army surgeons and thousands of surgical nurses and technicians in uniform. Navigating the challenges associated with malpractice, billing, and provider privileging, which led to the demise of the military-civilian partnerships established in the 1990s, will be essential.

Finally, MEDCOM should focus on implementing ICTLs, which would serve as the vehicle for commanders to certify that their medical personnel

can perform their wartime mission. Army medicine has not made nearly enough progress on this front since Congress directed it to do so in the NDAA. Simulation is an integral part of the solution and as with MSTCs, a lack of synchronization among the multiple organizations that provide simulated medical training contributes to the problem. Currently, DHA, Army Futures Command, OTSG, and the MEDCoE all have subordinate units that provide simulated medical training, but there is little synchronization or standardization. MEDCOM should work to bring these disparate and unsynchronized organizations together in support of ICTL implementation.

Recommendations

A transformed MEDCOM should focus initially on ten key areas:

1. Prioritize TCCC training. MEDCOM should work closely with Army commands to develop a plan for all soldiers to receive recurrent TCCC training at the appropriate skill level. The MSTCs should serve as the preferred method for TCCC training delivery.
2. Transform the MEDCOM and RHC staffs. Over one thousand military and civilian staff members currently focused on health care delivery in MTFs should now concentrate on the significant task of sustaining a medical force that is prepared to execute its wartime mission.
3. Establish a directorate within the MEDCOM dedicated exclusively to battlefield medicine that is headed by a flag officer. Doing so would ensure that the AMEDD negates the peacetime effect.
4. Build a learning health system focused on battlefield medicine that uses data to drive performance improvement. Initial efforts should focus on improving prehospital data collection and analysis methods.
5. Implement a plan that uses MSTCs, MTFs, and battalion aid stations to provide prolonged care training to Army medical personnel.
6. Identify the AOCs and MOSs essential for providing medical care in LSCO and prioritize recruiting and retention efforts for these personnel. Critical wartime specialties, particularly general and trauma surgeons, currently represent the most significant gap, and efforts to increase their numbers should be prioritized.
7. Improve opportunities for combat medics to advance their trauma skills and clinical acumen. Advocate for combat medics to be able to perform their wartime skill sets while working in home station MTFs.
8. Urgently begin implementing ICTLs and embed this in AMEDD culture by evaluating MTF commanders on their personnel's readiness to perform their wartime mission. Develop an operational credential for providers that includes the ICTL procedures needed to perform on the battlefield.
9. Build and sustain military-civilian partnerships with civilian trauma centers. These partnerships are essential to expose Army medical personnel to trauma patients prior to conflict.
10. Develop AMEDD leaders with extensive operational and combat casualty care experience. The MEDCOM needs leaders with expertise in both areas to lead an organization focused on expeditionary medicine. Surgeons, in particular, should have career pathways that encourage clinical expertise and leadership experience.

Conclusion

An enormous transformation is underway as the DHA assumes administration and management of all MTFs, forcing Army medicine to transition away from what has been its primary focus for many decades. To remain relevant, MEDCOM also needs to reorganize and refocus on establishing and sustaining a medical force that is completely prepared to treat casualties from a LSCO with a near-peer on the first day of the next war. By doing so, Army medicine can negate the peacetime effect that led to thousands of preventable deaths at the outset of major conflicts over the past eight decades. ■

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The Lesson of the Security Force Assistance Brigade in Africa

Find the Authority to Compete and Win

Maj. Spencer D. Propst, U.S. Army

Don't measure yourself by what you have accomplished, but by what you should have accomplished with your ability.

—John Wooden

Employment of the security force assistance brigade (SFAB) in Africa has not gone as smoothly as one might hope or expect. The U.S. Army designed this premiere security cooperation unit to relieve strains placed on brigade combat teams (BCT) to fill security cooperation mission requirements and to provide a force that was specifically manned, trained, and equipped for the train, advise, and assist mission. On 12 February 2020, when the Pentagon announced the 1st SFAB would deploy to Africa, the spokesperson stated that this specific design “allows them to perform this important ‘great power competition’ role more effectively and more efficiently than conventional units.”¹ However, when putting the SFAB into action conducting security cooperation activities in Africa not tied to contingency operations, the authorities necessary for SFAB to achieve its intended

effects were not appropriately considered and therefore remain inadequate.

The failure to recognize this issue leaves operational-level leaders and planners combing through existing authorities to find ways to gainfully employ SFAB forces. “Get to yes” has become thematic among leaders trying to keep the SFAB actively engaged with partners. While there are preexisting Title 10 and Title 22 security cooperation cases the SFAB is supporting to advise and train partners, they are limited in scope and duration. In the space between, rather than having the flexibility to leverage SFAB’s maximum capabilities, designed as they are for an advisory and training role, staffs are limited to planning episodic event after episodic event, most of which must legally fall below the threshold of actual advising or training. What is required is an adjustment to how the U.S. Army views employment of the SFAB in non-contingency areas and in the context of competition, as well as a push from strategic leaders to develop the appropriate authorities to facilitate the employment of the SFAB to its maximum utility.

The Context of Competition

The 2017 *National Security Strategy* (NSS) signaled a significant shift in the focus of U.S. national security policy, and interim strategic guidance from President Joseph Biden appears to hold the same theme.² The NSS acknowledged the return of “great power competition,” citing increases in Russian and Chinese influence regionally and globally.³ It warned that adversaries are fielding military capabilities designed to deny the United States “access in times of crisis and to contest our ability to operate freely” in an effort to diminish our geopolitical advantages.⁴ The supporting 2018 *National Defense Strategy* (NDS) went further, stating clearly in the introduction to its unclassified summary that “inter-state strategic competition, not terrorism, is now the primary concern in U.S. national security.”⁵ The NDS stressed that to succeed in the emerging security environment, the Department of Defense (DOD) will have to “out-think, out-maneuver, out-partner, and out-innovate” all other actors in the competitive space.⁶ To accomplish that, the 2018 *National Military Strategy* (NMS) articulated five mutually supporting mission areas as the principal ways the joint force operates across the continuum of conflict. In the context of security cooperation, there are two key mission areas: assure allies and partners, and compete below the level of armed conflict (with a military dimension).⁷ The NMS also acknowledges that building a strong, agile, and resilient force requires better interoperability and enhancing the combat lethality and survivability of our allies and partners.⁸

In line with the assessment of U.S. strategic leaders, China and Russia continue to expand their influence in Africa specifically. China’s military presence in Africa continues to increase steadily. While China bases its Belt and Road Initiative on economic opportunities and expansion, its projects support Chinese military access to the region.⁹ At the same time, Russia is

reasserting its influence in Africa, beyond just military equipment sales and donations that generally characterized its efforts through most of the last decade.¹⁰ Since 2015, Russia has concluded military cooperation activities with twenty-one African countries and openly sought permission to establish bases in six.¹¹ There is likewise media reporting that Russia has offered African countries International Military Education and Training-style programs for training African military members in both their home country and Russia,

and operating training programs via private security contractors such as Wagner.¹² This is all in addition to a known and significant Russian military and private security contractor presence in Libya and the Central African Republic.

In support of the shift emanating from the NSS, NDS, and NMS, and to address expanding Chinese and Russian military presence globally, the U.S. Army developed the multi-domain operational (MDO) concept as part of the 2018 *Army Modernization Strategy*. MDO postulates that the current strategic environment is typified by a state of continuous competition by great powers. It is built on the expectation

competitors will challenge the United States in all domains, employ layers of standoff, and leverage the competitive space to achieve their operational and strategic objectives.¹³ MDO seeks to compete below the threshold of armed conflict, penetrate and disintegrate enemy standoff, exploit the resultant freedom of maneuver, and return to competition on favorable terms.¹⁴ U.S. Army literature states that executing MDO requires three tenets to change how the Army postures physically, organizes its formations, and employs its new capabilities.¹⁵ These tenets are a calibrated force posture, multi-domain formations, and convergence.¹⁶ The calibrated force posture is most applicable in the context of discussing employment of



(Graphic courtesy of Freepik, www.freepik.com. Composite graphic by Beth Warrington, Army University Press)



the SFAB and is described as “the combination of forward presence forces, expeditionary capacity, access to joint, national and partner capabilities, enabled by sufficient authorities.”¹⁷ The SFAB is perfectly suited to contribute to forward presence, expeditionary capacity, and access to partner capabilities. It is not, however, presently enabled by sufficient authorities.

SFAB Entry into Africa

Sen. James Inhofe, then chair of the Armed Services Committee, drafted a letter to then Secretary of Defense Mark Esper on 9 April 2018 asking him to assess the feasibility and suitability of assigning an SFAB to U.S. Africa Command (USAFRICOM) to meet current and future security cooperation and partner capacity building requirements.¹⁸ As early as 2017, there was some expectation that the SFABs would be regionally aligned in the same way Special Forces groups are; however, Inhofe’s letter is among the first official documented pushes to bring the SFAB to Africa.¹⁹

Sgt. 1st Class Jack Lincoln, an advisor with 2nd Battalion, 2nd Security Force Assistance Brigade, conducts preliminary marksmanship instruction February 2021 with soldiers from the Djiboutian Battalion d’Intervention Rapide. (Photo courtesy of Combined Joint Task Force–Horn of Africa Combat Camera)

The concept was simple, the BCTs from the regionally aligned force (RAF) struggled to maintain readiness while harvesting teams from the ranks of their officers and noncommissioned officers to fill security cooperation requirements all over Africa. On the other hand, the SFAB is specifically designed for the advise, train, and assist mission commonly assigned to an RAF and therefore should be perfectly suited to take the place of an RAF in filling requirements. This represents the beginning for missing the mark on maximizing the utility of the SFAB in Africa as a part of a calibrated force posture to compete in the region. Inhofe’s letter illustrates the focus was on BCT readiness, which should have been

an incidental benefit to the institutional Army. The recognition of what an SFAB could and should bring to the competitive space was neither recognized nor facilitated as a priority of the transition.

Prior to 2020, the U.S. Army only deployed the SFABs to Afghanistan and Iraq to partner with Afghan and Iraqi forces in support of contingency operations. In that context, SFAB was funded partly by overseas contingency operations funds and had a broad scope of activities they could conduct without the need to seek separate authorities for each effort. For example, 4th SFAB's fiscal year (FY) 2020 activities in Afghanistan presumably fell under the Afghanistan Security Forces Fund (ASFF) appropriation and related authorities.²⁰ The ASFF allows the DOD to provide assistance to Afghan forces in the form of training, equipment, supplies, sustainment, infrastructure, advising, and capacity development.²¹ This kind of freedom is ideal for what the SFAB was trained, manned, and equipped to do. It gives flexibility and allows for leaders on the ground to use the disciplined initiative they built over years of successful Army careers to guide the application of two years of training specifically for the advise, train, and

assist mission. Finally, it allows for continuous presence and persistent engagement with the partner.

In Africa, on the other hand, the SFAB fell in on existing Title 10 and Title 22 programs. The bulk of these were Title 10, section 333 (Building Partner Capacity Cases). These cases are relatively limited in scope, compared to what the SFAB was accustomed to in Afghanistan. The drafting of the cases also predated the announced allocation of the SFAB to

USAFRICOM, so they were designed without taking into account unique SFAB capability, structure, or continuous presence in support of great-power competition. Nonetheless, beginning in the third quarter of FY 2020, following interruption by the outbreak of COVID-19, existing programs facilitated SFAB strategic placement and their engagement with partners. Prior to September 2020, section 333 cases had cross-fiscal year authority, meaning that an FY 2019 case with remaining funds could continue into FY 2020. However, a new interpretation of the Economy Act by the DOD's Office of General Counsel prompted the Defense Security Cooperation Agency (DSCA) to publish policy memorandum DSCA 20-47.²²

The new interpretation and subsequent policy memorandum voided cross-fiscal year authority and required the de-obligation and return of funds for services not provided at the end of the fund's period of availability.²³ As a result, defense services support from DOD personnel (civilian salaries, training, temporary duty travel, etc.) cannot legally be extended beyond an appropriation's period of availability, which is the end of the fiscal year in most cases.²⁴ The immediate impact on the SFAB was the loss of roughly 60 percent of Southern European Task Force-Africa's (SETAF-AF) plan for SFABs employment, starting on 1 October 2020. Compounding the issue was a delay in notification of FY 2021 programs to Congress. Before section 333 programs can be funded, they must be notified to Congress, and the first tranche of FY 2021 programs were not notified and cleared until 22 December 2020. Once notified, it typically takes two to three months for funds to then be available for execution of the case. The reinterpretation of the Economy Act, while unique and impossible to foresee, laid bare the reality that the SFAB is not employed any differently than units pulled from BCTs were before them. They are reliant upon episodic cases subject to annual notification, and therefore potential delays, meaning that while the Army may maintain the SFAB physically postured forward, there is a cyclical, self-induced, functional separation from their partners.

Getting to Yes

While it has been demonstrated that every tier of security strategy, all the way down to the newest Army Operational Concept, recognized and drove a

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shift in priority to interstate competition below the threshold of armed conflict, the SFAB is still not in the optimal position to compete and win in that context. By not recognizing the need for and seeking the appropriate authorities to operate effectively in the competitive space, the Army is not maximizing the potential of the SFAB. Despite the lack of appropriate authorities, and recognizing the strategic urgency of keeping the SFAB on-ground and engaged on the continent, operational-level leaders and staffs have gone to work. In between the episodes of congressionally notified training, the U.S. embassy country teams, SETAF-AF, and USAFRICOM are left walking, and so far effectively, a legal tightrope of what the SFAB can do. The options include using the SFAB under congressionally notified Title 10, section 321 authority for existing exercises, conducting traveling contact team activities left unfilled due to the COVID-19 pandemic, and military-to-military engagements under the authority of theater commander's activities. Of note, traveling contact teams, military-to-military, and theater commander's activities are meant to focus only on familiarization and interoperability and build no capacity for the partner. So the SFAB, in the interim between cases, is prohibited from doing exactly what it was built for and is most effective at doing. In practice, this has proved confusing and

Staff Sgt. Dane Francis with Alpha Troop, 3rd Squadron, 2nd Security Forces Assistance Brigade, observes a Senegalese soldier fire an M16A4 rifle 11 June 2021 during Exercise African Lion 21 in Tan Tan, Morocco. (Photo by Spc. Brandon Malcolm, U.S. Army National Guard)

frustrating to the host nations, as the SFAB remains forward-deployed but only sporadically engages the partner force.

Finding a Solution

Immediately following the first deployment of the SFAB to Afghanistan, Brig. Gen. Scott Jackson, then 1st SFAB commander and now the Security Forces Assistance Command commander, stated that the success of the SFAB proved that the Army "got it right" with standing them up.²⁵ If the Army wants to continue to get it right, adjustments to existing authorities or the establishment of new ones is the best way to accomplish the mission. For the last decade, vague strategic guidance and failures at the policy level predisposed Army staffs to devise their own solutions to security cooperation.²⁶ In the current geopolitical environment, the achievement of strategic effects requires the engagement of strategic leaders at the highest levels to set the right conditions.

Title 10, sections 322 and 321, and all-new authorities dominate most conversations about how to best employ the SFAB in Africa in the future. It is therefore worth discussing each as a possible solution. Title 10, section 322 (Special Operations Forces: Training with

of section 322.³¹ At first glance, it seems disingenuous to send a unit whose very purpose it is to advise, train, and assist a partner, yet state that their primary purpose is not to advise, train, and assist but rather to train themselves to do so. However, upon deeper evaluation,



The SFAB sharpens skills and builds experience that will flatten the learning curve in less permissive environments when the need arises.



Friendly Foreign Forces) is better known as the Joint Combined Exchange Training (JCET) program. It is designed to train U.S. special operations forces (SOF) in their mission-essential tasks, particularly foreign internal defense and unconventional warfare.²⁷ During JCET, SOF train with military and other security forces of friendly foreign nations to build SOF capability to conduct combined operations in an unfamiliar environment, develop language skills, and gain familiarity with regional and local geography and culture.²⁸ Building and maintaining military-to-military contacts, gaining regional access, improving interoperability, and enhancing partner-nation forces counterterrorism abilities are all considered to be incidental benefits.²⁹ While this sounds perfect for employment of the SFAB, there is one major issue with employing it under section 322 authority: SFABs are not SOF. During his time as chief of staff of the Army, chairman of the Joint Chiefs of Staff Gen. Mark Milley made this point numerous times as the SFAB was first standing up. It is highly unlikely that strategic leaders will want to change that now.

Title 10, section 321 (Training with Friendly Foreign Countries: Payment of Training and Exercise Expenses) is intended to provide training opportunities for general purpose U.S. forces in countries in which the forces may one day have to operate and improve interoperability with allies who may contribute to coalition operations, as well as provide training opportunities for the armed forces of the host countries.³⁰ It stipulates, “any training conducted ... shall ... support the mission essential tasks for which the unit of the United States armed forces participating in such training is responsible,” which is very similar to the language

a satisfactorily convincing argument can be made. The overwhelming majority of the countries in Africa where the SFAB would be employed are secure, and relative to places like Iraq and Afghanistan, generally safe. This affords the SFAB the ability to focus its interactions on training, advising, and assisting the partner force. As a result, the SFAB sharpens skills and builds experience that will flatten the learning curve in less permissive environments when the need arises.

Training with friendly foreign countries under section 321 is expected to indirectly contribute to developing the military capabilities of partners to enable them to conduct missions that are U.S. security strategy priorities.³² Similarly, training with friendly forces provides strategic access during peacetime or a contingency operation and builds relationships that promote U.S. security interests.³³ Section 321 fills most of the SFAB needs and generally parallels section 322 as the conventional Army’s equivalent. However, there is one critical piece in the text of this authority that makes it different and potentially troublesome. Paragraph (e), which describes interactions with Congress, is starkly different for each authority. Paragraph (e) of section 322, titled “Reports,” directs that “not later than April 1 of each year, the Secretary of Defense shall submit to Congress a report regarding training during the preceding fiscal year for which expenses were paid under this section.”³⁴ In contrast, paragraph (e) of section 321, titled “Quarterly Notice on Planned Training,” directs that “the Secretary of Defense shall submit to the appropriate committees of Congress a notice setting forth the schedule of planned training engagements pursuant to [section 321] during the calendar quarter first following the calendar quarter in which such notice is submitted.”³⁵



Put plainly, section 321 requires approval of each activity ahead of time, while section 322 does not. There are three significant impacts this has on employing the SFAB under this authority. First, it means that SFAB activities are again tied to congressional notification, and therefore subject to delays. Second, it restricts the combatant commander's freedom of maneuver in the competitive space to address emerging requirements or opportunities identified by the SFAB. Finally, given historical instability on the continent, if the SFAB is employed in a country that destabilizes or experiences an unfavorable regime change, the SFAB cannot simply shift to the combatant commander's next priority. If use of section 321 is to be the future of the SFAB, paragraph (e) should be amended to reflect the same reporting requirements in section 322. Should section 321 in its current form become the SFAB vehicle of choice, it is likely to result in gaps of effective engagement and delays in exploiting opportunities to out-partner or outmaneuver global competitors.

The best answer to achieving the maximum effects of the SFAB to enhance partner capacity in support of U.S. strategic priorities and to maintain presence

Staff Sgt. Marissa Vandenheuvel, Security Forces Assistance Brigade (SFAB) signal advisor, Combined Joint Task Force–Horn of Africa (CJTF-HOA), and a member from the Armed Forces of Djibouti (FAD) Battalion d'Intervention Rapide (BIR) go over radio operations in a HMMWV at the BIR compound 21 October 2020. The BIR is a FAD advanced infantry battalion, trained and equipped by CJTF-HOA. Its primary mission is to train and serve as a quick reaction force to accomplish specified tasks directed by its higher command in the Djiboutian army. (Photo by Tech Sgt. Dana J. Cable, U.S. Air Force)

and engagement as a part of a calibrated force posture is the development of a new authority. The SFAB is unique in its capabilities, design, and mission and should therefore receive a separate DOD appropriation and accompanying authorities. The Global Posture and Cooperation-Activities and Training Fund (GPC-ACT) should be presented to Congress as a separate DOD appropriation, with accompanying authorities allowing combatant commanders to employ the SFAB, or similar non-SOF units, to provide assistance to partners in the form of training, advising, and capacity development. Employment of the SFABs under the

GPC-ACT will not preclude them from supporting Title 10 and Title 22 cases, but would eliminate their dependence upon them for placement and access. Unlike the ASFF or previous iterations of the Europe Deterrence Initiative, which were funded by overseas contingency operations, the GPC-ACT should be funded against DOD's base budget and projected in multiyear periods.³⁶ This will help in preventing interruptions, and demonstrate commitment to our partners. The GPC-ACT should be broken down into budget activity groups corresponding to each combatant command allocated an SFAB with sub-activity groups corresponding to training, advising, and capacity development. All activities in each country should require the approval of the secretary of defense and the concurrence of the secretary of state. Lastly, reports to Congress should be required quarterly for all activities conducted under the GPC-ACT in the preceding quarter to provide sufficient oversight.

The Imperative to Support Strategic Objectives

Addressing the global security landscape, Biden's *Interim National Security Strategy*, published 3 March 2021, states that "we cannot pretend the world can simply be restored to the way it was 75, 30, or even four years ago. We cannot just return to the way things were before. In foreign policy and national security, just as in domestic policy, we have to chart a new course."³⁷ In a paper published less than two weeks later, the chief of staff of the Army emphasized the need to persistently build relative positional advantage by cultivating a strong network of allies and partners.³⁸ He noted that U.S. partnerships are a decisive advantage in competition, but our ability to maintain this advantage is not preordained in this era's contest for regional and global leadership.³⁹ What he

termed the DOD's Global Landpower Network is the foundation for global competition, creating inroads and maneuver space for joint and whole-of-government strategic engagement.⁴⁰ His description of the SFAB's role is worth noting at length:

During competition, SFABs build trust, interoperability, and partner capacity. In crisis, SFABs enable the Joint Force and interagency team to quickly respond by enhancing coordination efforts. In conflict, SFABs enhance coordination with partners and can expand to full mission capable brigades.⁴¹

In order for the SFAB to fulfill its desired role in competition, crisis, and conflict, it is incumbent upon U.S. strategic leaders to develop and employ more appropriate authorities for SFAB activities globally. Recognition of this necessity is important; acting on it is a strategic imperative. In the coming years, competitors will work to build their own relationships with our partners. In the developing global security environment, a lack of authorities leading to episodic or inconsistent engagement and presence of the SFAB will provide the functional and physical space adversaries require to separate us from our partners at critical moments. Worse yet, when tied to legislative cycles, these gaps become predictable, and therefore exploitable as part of an adversary's operational design. At a minimum, Title 10, section 321 should be amended to allow the combatant commander, with the approval of the secretary of defense and concurrence of the secretary of state, to employ the SFAB as needed and require appropriate reporting of all activities. To realize the full potential of the SFAB in support of strategic objectives, new authorities are necessary to compliment the design of the SFAB and allow it to effectively and efficiently fill its role in the return of great-power competition. ■

Notes

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U.S. Air Force Staff Sgt. Nathan Shelton, an avionics backshop technician from the 18th Component Maintenance Squadron, guards his fire team's retreat during a break contact battle drill 22 August 2019 at the Jungle Warfare Training Center, Camp Gonsalves, Japan. Shelton and other Team Kadena airmen from the 18th Wing were invited by U.S. Army Green Berets from 1st Battalion, 1st Special Forces Group (Airborne), to broaden their deployment readiness capability in a joint environment. (Photo by Staff Sgt. Peter Reft, U.S. Air Force)

Support the Fight!



The U.S. Army, the Joint Force, and the Indo-Pacific

1st Lt. Joshua Ratta, U.S. Army

Joint campaigns may require land operations as part of unified action since land forces often control areas or assets that influence and enable operations in the other domains. For this reason, land operations are vital during almost all operations, even in places where maritime or air forces dominate.

—Army Doctrine Publication (ADP) 1, *The Army*

As the Department of Defense continues its long-heralded pivot toward China, the Army, with the primary responsibility of “conduct[ing] prompt and sustained land combat,” seems out of step.¹ While the Army has pursued such initiatives as security force assistance brigade (SFAB) rotations to the Indo-Pacific, celebrated the use of High Mobility Artillery Rocket System artillery batteries to engage naval targets, and begun experimentation with innovative multi-domain task forces (MDTF), it has struggled to not only justify the impact of such capabilities but also merge these actions into a comprehensive Pacific strategy for integration with the joint force.² To fully explain existing and emerging Army capabilities, the Army should articulate its contributions in the Pacific under three distinct missions: set the joint force, sustain the joint force, and provide Army support to partner nations.

The Army’s ability to set and sustain the theater is essential to allowing the joint force to seize the initiative while restricting an enemy force’s options. Setting the theater for the joint force includes the establishment of access and infrastructure to support joint force operations. The Army possesses unique capabilities ... [including] intelligence support; communications, port and airfield opening; logistics; ground-based air defense; and reception, staging, onward movement, and integration.

—ADP 1, *The Army*³

Set the Joint Force

In the Pacific, increased Army fires capability via missile batteries and air defense systems could attrit both the People’s Liberation Army Navy (PLAN) and the Army Air Force (PLAAF) while protecting the joint force from Chinese strike assets. Equipped with long-range antiship fires, Army missile batteries—the

nuclei of MDTFs—can create high-risk, no-go zones for Chinese naval forces, canalizing them into known engagement areas for additional joint force strike team prosecution. Such Army strike forces, positioned near the handful of chokepoints that control access in and out of the first and second island chains (chains of islands that form concentric boundaries that roughly parallel the Chinese coast), would be an effective use of Army sea denial capabilities while freeing up more specialized and mobile Marine littoral regiments to operate forward inside the Chinese antiaccess/area denial defensive perimeter.⁴ Such a sea denial presence, even at a distance from a primary area of operations, would also interdict extended Chinese sea lines of communication without the need for significant attached Navy support.⁵ When analyzed defensively, the availability of an Army sea denial capability becomes increasingly attractive as the PLAN continues its efforts to create an offensive naval strike capability outside the first island chain.⁶ Army MDTFs would help prevent such moves while providing a protected staging ground for joint force teams organizing to penetrate the Chinese defensive perimeter. Additionally, when equipped with surface-to-surface missile capability provided via current Army tactical missile systems or in-development long-range precision fires, Army missile batteries offer the ability to conduct artillery raids on Chinese bases to destroy Chinese defensive and offensive strike capabilities, further preparing the battlefield for future joint force exploitation.

As demonstrated during Rim of the Pacific 2018, Army attack aviation also maintains the ability to prosecute naval targets.⁷

While targeting Chinese naval task forces would likely prove too difficult, Army aviation could easily target weaker Chinese naval auxiliaries in the Chinese maritime militia and coast guard, likely conducting an array of missions to include intelligence and reconnaissance operations, counterreconnaissance, antisubmarine warfare

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(ASW), and minelaying.⁸ Such a use of Army aviation, further bolstered by Army investments in next-generation helicopter designs and long-range munitions, would have the additional benefit of allowing U.S. Air Force and Navy concentration against the more formidable PLAN.⁹ Army aviation could make contributions under the sea as well, bolstering struggling U.S. Navy ASW capabilities against an increasingly formidable Chinese underwater threat. While it would be a stretch to suggest U.S. Army aviators undergo ASW training like their Navy and possible Marine counterparts, it is not a stretch to imagine Army aircraft serving as additional delivery devices for a variety of drones and sensors designed to help build underwater awareness for the joint force.¹⁰

In an operational environment marked by extensive use of land, air, and sea launched missiles as well as drone and conventional air attacks, layered air defense capabilities will be in high demand. In addition to Army air defense protecting MDTFs and the potential for temporary task organization to other high-value joint force elements, Army air defenders could also assist in providing theater ballistic missile defense capability.¹¹ Army air defense could also provide offensive effects, creating high-risk areas for the PLAAF. Pushing forward a protective envelope, even one that can be overwhelmed or defeated, would reduce PLAAF flight radii, thus decreasing the range of air launched weaponry without the retasking of additional PLAAF or PLAN assets for a protective suppression of enemy air defense mission. Regardless, Army air defense presence would complicate enemy operations and force additional Chinese resource investment into additional enabling operations to retain indirect strike capabilities. Whether against land, sea, or air targets, increased Army fires ability would provide the joint force with multiple engagement options to set conditions for further joint operations while simultaneously increasing the array of threats the People's Liberation Army (PLA) must defend itself against.

While Army fires complexes would set conditions for joint force freedom of maneuver by restricting enemy options and destroying enemy assets, Army combat support elements possess the ability to enable such maneuver through use of intelligence, cyber, communications, and engineer units. Such combat support elements could be attached to support various

Army MDTFs, and detached elements could also find significant use in fulfilling joint force requirements and needs.

The Russian invasion of Ukraine, Turkey's Operation Spring Shield in northern Syria, and the 2020 conflict in the Nagorno-Karabakh region have provided strong examples of a network that combines sensors and other intelligence assets to a network of shooters—drones, strike aircraft, and artillery—to prosecute targets. Following the logic that the first step in either the joint force or PLA kill chain is the sensor—drone, militia fishing vessel, Marine littoral regiment, etc.—there exists the demand of the friendly sensor to detect, classify, and report the enemy presence while also remaining undetected. The joint force must be prepared to process vast amounts of information on Chinese activities and generate it into actionable intelligence while managing the increasing blur between traditionally separate cyber and intelligence activities.¹² Overlapping the predicted rapid growth of the Internet of Things, a network of devices globally connected to the internet, to the operating environment of the first island chain reveals another problem. The conflict between the United States and China in the Pacific will take place among some of the most densely populated and traveled waterways of the world, giving any person with a cell phone or similar device, including those in neutral populations, a frontline view of the conflict and the ability to share such a view globally and near instantaneously.¹³ Strategic combined cyber and intelligence threats exist as well, ranging from the vast quantities of Chinese security equipment in use around the globe, including in partner nations like Germany, to the increasing ability to use simple internet-connected devices such as fitness trackers to inadvertently reveal secure facilities and personnel movements.¹⁴ When merged with information collected from past Chinese personnel file hacks, the likelihood of a Chinese ability to gain critical intelligence on U.S. military deployments even before departure from the continental United States is alarmingly high.¹⁵

For problems of such scale, the U.S. Army intelligence and cyber communities must be prepared to support the joint force. While the individual branches would be able to focus on tactical intelligence and cyber support, the Army could take lead on developing joint intelligence centers capable of processing vast amounts



of information into actionable intelligence for forward units, echeloning and enhancing information gathering and processing capabilities. It is not enough that American sensors simply exist; they must be correctly oriented by successful intelligence operations toward potential targets or areas of interest. To protect U.S. forces from the moment of activation inside the continental United States, such intelligence centers must also work on conducting deception and counterintelligence operations on a scale not seen since the Second World War. While it remains to be seen whether simply overloading hostile intelligence sources with false signals or attempting to run completely silent and go unnoticed is the best policy, something must be done, and at scale to prevent successful Chinese intelligence gathering operations during joint force mobilization. Fighting for electromagnetic signature control cannot wait to begin inside the Chinese defensive perimeter. For attacks against civilian targets such as port facilities and critical infrastructure for supporting military operations, both U.S. Cyber Command and civilian

Two AH-64 Apache helicopters operate with the guided-missile destroyer USS *Paul Hamilton* 27 March 2020 during a joint naval and air integration operation in the Persian Gulf. Army attack aviation maintains the ability to prosecute naval targets. (Photo by Mass Communication Spc. 3rd Class Matthew F. Jackson, U.S. Navy)

cyber agencies would likely need assistance in combating formidable Chinese incursions and draw upon these joint intelligence centers as well. It is also worth considering that other malicious actors may take advantage of the confusion generated by Chinese cyber activities and launch further attacks of their own on vulnerable American targets.

The Army can also assist in providing the crucial sensor to shooter link with robust communications systems. That is not to say that a Marine sensor node must go through an Army communications node to reach either a Marine shooter or other joint force strike asset, but that communications infrastructure needs to exist. Whether it is to connect a warhead to a target or to



signal via a manual or automated request that another munition is needed from a rear area supply network, a robust and secure communications network must be present to support such activities, particularly in a region marked by vast distances between combatants and support areas. In the event of a Pacific conflict, demand for such a network will only increase as more joint forces teams, both manned and unmanned, each with their own communications networks and struggles, deploy to the region amidst persistent Chinese attacks on American communications and satellite infrastructure. Army communications teams will be in high demand to ensure that the joint force's ability to communicate does not become a sudden Achilles' heel.

Of all the Army combat services branches, it is likely that the engineers, including the Army Corps of Engineers, will have the most diverse mission set from the forward line of troops to the ports of embarkation in America. While the presence of a highly lethal sensor to shooter network would prevent robust, permanent facilities inside the engagement zone, engineers would be needed to assist in the rapid creation of temporary bases and facilities long enough to accomplish a series of missions before moving to avoid detection or a PLA counterstrike. In contrast, the demand upon rear area units to process and push vast

The U.S. Army Combat Capabilities Development Command (DEVCOM) Aviation & Missile Center, in support of the Long-Range Precision Fires Cross-Functional Team and in partnership with the DEVCOM Ground Vehicle Systems Center and the 18th Field Artillery Brigade, successfully demonstrates an Autonomous Multi-Domain Launcher, culminating with a multi-round live-fire demonstration 22 June 2021 during a proof of concept at Fort Sill, Oklahoma. (Photo courtesy of the U.S. Army)

amounts of material forward from multiple support areas will require such areas to be not only maintained and probably expanded, but in many cases, created out of remote locations prior to operation. In the rear area, Army engineers would also be needed to ensure the continued operations of critical infrastructure and logistics nodes likely to be under a mix of Chinese kinetic and nonkinetic attacks.

Sustain the Joint Force

The Army as a key player in executing joint force sustainment in a maritime theater can understandably be greeted with skepticism. However, such skepticism ignores oft-overlooked Army capabilities and the reality of the rear area in a future Pacific conflict.

The Army possesses latent sustainment capability, even in a maritime theater. Often overlooked in

the Army's inventory is its almost three hundred watercraft as part of the U.S. Army Transportation Command.¹⁶ While poorly acknowledged and similarly funded, they nonetheless provide an additional transport capability, either manned or unmanned, and operating within the Chinese defensive perimeter or on less dangerous supply missions throughout the rear area.¹⁷ Crucially, the Army also possesses ship-to-shore connecting causeways, critical in an immature theater where port facility infrastructure for large material transfer is lacking or has been damaged.¹⁸

While the Army's contribution to logistics support is a critical piece of the sustainment warfighting function, it is not the sole piece. Army Doctrine Publication 4-0, *Sustainment*, describes sustainment as "the provision of logistics, financial management, personnel services, and health service support necessary to maintain operations until successful mission completion."¹⁹ Critically, while the Army may take lead on facilitating, organizing, and coordinating such processes, and adding its significant resources to such actions, it should not attempt to unilaterally override independent service modes of operation regarding rear-area sustainment activities. In a conflict with China, the demands on joint force sustainment will be extreme enough without infighting caused by an inability for services to cooperate.

Equally important to the smooth functioning of the rear area would be the Army's ability to ensure its security. While much focus has been on the growing Chinese ballistic missile inventory capable of targeting the second and third island chains, thus demanding an Army theater ballistic missile defense presence, China also possesses rear area deployable assets in both its People's Armed Forces Maritime Militia and its massive civilian fishing fleet. Such vessels would have significant use in intelligence gathering operations on joint force activities both to integrate with Chinese strike capabilities and warn of upcoming joint force operations.²⁰ While Christopher Booth argues the United States should copy the British Shetland Bus program of using civilian vessels to support covert operations in Norway during World War II for a future Pacific conflict, it can be clearly seen that the Chinese maritime militia is already preparing for such a mission through repeated training and naval exercises.²¹ Chinese fishing vessels would serve as support vessels for a variety of purposes including drone attacks, long-range

offensive mining, and ferrying Chinese special operations forces.²² While a Pacific rear area would begin in the second island chain, distance does not provide complete security. The Chinese fishing fleet has already raised alarm in defense circles for large-scale fishing operations as far away as the Galápagos Islands, and their avoidance of maritime positioning devices makes detection difficult, a problem during a conflict in which the bulk of American intelligence efforts would be focused on the disposition of the PLAN and not the thousands of quasi-civilian Chinese fishing vessels that have the added advantage of appearing similar to the vast majority of fishing vessels belonging to any nation.²³ Of additional concern is an increasing array of Chinese land purchases as far out as Micronesia that could provide additional logistics support for such efforts as well as bases for more conventional drone or missile attacks.²⁴

To protect against such operations, the Army could utilize an array of assets at its disposal. First would be the simple presence of ground troops to protect against sabotage and special forces raids.²⁵ That is not to imply that Marine, Navy, or Air Force security forces are incapable, but their size in comparison with potential security demands creates their own inadequacy. Thus, it may not be surprising that even Army infantry units might be used for mundane security force use. Army aviation and additional intelligence, surveillance, and reconnaissance assets could also be present to assist in patrolling such a large area for Chinese irregular maritime vessels, preserving limited Navy and Coast Guard presence for the actual seizure of such vessels. As a last line of defense, Army assets including air defense and engineers could attempt to limit the effects of attacks through active missile defense as well as through passive measures such as base hardening and force and facility regeneration and repair.²⁶ In the rear area, the Army could also be employed to conduct attacks on smaller Chinese support bases, likely to be less defended and protected than a Chinese base inside the first island chain, while preserving more specialized units for tougher targets. As threats to the rear area are no longer confined to the kinetic destruction, Army communication specialists would work to ensure that extensive lines of communication are maintained to enable the movement of supplies and forces into the theater while Army cyber teams work to protect critical civilian and military logistics nodes.

Support Partner Nations

The infamous tyranny of distance in discussing U.S. operations in the Pacific makes it clear that in addition to limited pre-positioned U.S. forces bearing the brunt of the fighting, so too would any regional allies, and it

traditional maritime trade and fishing networks that would devastate local economies. While it would vary nation to nation and depend on U.S. force availability, it is foolish to assume that the United States will not be asked to conduct a variety of assistance missions

“The reality of a conflict between the two global powers occurring within the most heavily populated and maritime-trafficked region in the world guarantees fallout for surrounding nations that goes beyond just physical and environmental damage.”

will be vital that the joint force is prepared to support and operate alongside such allies. In this respect, the Army with its purpose-built SFABs would be key in facilitating such cooperation and coordination. That is not to say that the rest of the joint force does not have its own cooperation agreements and partnerships in the region, but that the SFAB possesses a unique advantage. Despite the maritime geography of the Pacific, most Indo-Pacific militaries remain Army centric and are focusing on increasing cheaper asymmetric capabilities—chief among them, land-based antiship missiles to combat the PLAN.²⁷ While some may suggest that the Marines can fulfill the role, such a decision would be spreading an already thin force thinner while ignoring a ready-made force capable of conducting military-to-military partnerships.

In addition to direct military assistance, Army Special Forces units and SFABs could assist partner nations in various internal stability actions, including combating Chinese information campaigns on civilian populaces and boosting internal security forces. The reality of a conflict between the two global powers occurring within the most heavily populated and maritime-trafficked region in the world guarantees fallout for surrounding nations that goes beyond just physical and environmental damage. Both the United States and China would look to generate willing partners to open additional basing options for land-based assets and provide sea and air maneuver space. Thus, it is reasonable to expect a barrage of information operations campaigns designed to sway populaces and their governments to a position on the conflict occurring simultaneously with the disruption of

in the Indo-Pacific as a result of fallout from a Pacific conflict. To maintain ongoing relationships, bolster alliances against China, and maintain the moral high ground in a conflict, it is likely that the United States would find itself obligated to respond.

Challenges

Even with clearer framing of U.S. Army priorities in the Pacific, problems exist. Army leaders will have to explore and experiment with new concepts including the possible regional primacy of fires over maneuver, new tasks organizations, reconfigured force structure, and changes to command relationships both internal to the Army and with the joint force. Units will need to train for Pacific operations on training areas that are not flat desert tank ranges but instead tropical jungles and vast maritime spaces, not only by themselves but also with other elements of the joint force in both active and reserve components. There is equipment that will need upgrading, buying, and testing at home station and in the wet humidity of the Pacific to ensure full reliability. The Army will have to think about how any force package, even if perfectly organized, gets to the Pacific. Not only would even the Army's watercraft need some kind of naval escort, but the diversion of key Air Force and Navy logistical assets would also require the Army to carefully prioritize its own force inflow to the region with limited external support. As tricky as these logistical problems are, perhaps trickier is finding a location for Army forces. While rear area support bases and MDTFs can find plenty of a real estate in U.S. territories within the second and third island chains, any basing further west

would require host-nation access; currently a troublesome proposition.²⁸ Finally, all these proposals must be balanced against significant ongoing U.S. Army global commitments.

Conclusion

Currently, the joint force is preparing to fight China without serious consideration to the host of capabilities that the Army brings to the table. Whether it is military advise and assist missions, joint force logistics support, or targeting of PLAN and PLAAF assets by Army MDTFs and other units, the Army provides serious capabilities to the joint force in the Pacific, capabilities that should not be underestimated or dismissed. As the likely supporting force, the Army will continue to face questions on its Pacific investments

considering the dominant maritime geography of the theater and ongoing Army global commitments, necessitating a clear and concise justification of any current or future Army contributions to the Pacific. In order to properly envision and articulate Army support for the joint force, all Army Pacific efforts should be categorized into three distinct missions: set the joint force, sustain the joint force, and provide Army support to partner nations. Such precise framing would not only provide a ready answer for what the Army provides in the Pacific but also serve as a benchmark against which future Army initiatives and planning can be measured, helping to prevent internal Army diversions of time, resources, and efforts into merely duplicating joint force capabilities simply for the desire to put an olive green touch on it. ■

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A soldier of the Long Range Reconnaissance Team, 2nd Battalion, 502nd Infantry Regiment, carries an M-16A1 rifle near Tuy Hoa, Vietnam, 27 February 1966. (Photo by Robert C. Lafoon)

Speed versus Quality

A Cautionary Tale of the M-16 in Vietnam

Maj. Dallas Durham, U.S. Army

In April and May of 1967, young marines fought desperately against elements of the People's Army of Vietnam in the famous Hill Fights near Khe Sanh. During the battle, marines carried a relatively

new rifle known as the XM-16E1. Although invented ten years prior, the XM-16E1 had only recently entered combat, first with the 173rd Airborne Brigade in March 1965 and later with the 1st Cavalry Division

in the Ia Drang Valley.¹ While official reports shone a glowing light on the new rifle, letters sent home from soldiers and marines told a different and horrifying tale. These letters soon became public, documented in the hearings of a congressional investigation:

The M-16 rifle—it is a miserable piece—cheap and unreliable—we used the rifle in every engagement since I returned from Okinawa. In every instance ... the weapon has failed us at crucial moments when we needed fire power most. In each case, it left Marines naked against their enemy. Often, and this is no exaggeration, we take counts after each fight, as many as 50% of the rifles fail to work. I know of at least two marines who died within 10 feet of the enemy with jammed rifles ... the day found one Marine beating an NVA with his helmet and a hunting knife because his rifle failed—this can't continue—32 of about 80 rifles failed yesterday.²

Our M-16s aren't worth much. If there's dust in them, they will jam. Half of us don't have cleaning rods to unjam them. Out of 40 rounds I've fired, my rifle jammed about 10 times ... these rifles are getting a lot of guys killed because they jam so easily.³

How could a country as technologically progressive as the United States, which produced arguably the world's best infantry rifle during World War II (the M-1 Garand), issue a weapon that resulted in countless American deaths? What decisions in the acquisitions process resulted in, as one marine's letter described, a dead infantryman "found with his rifle torn down next to him where he had been trying to fix it?"⁴ The answers to these questions lie in the story of the M-16's invention and development. Plagued by Army bias against this toy-like plastic rifle and cheated out of a comprehensive development process, the original M-16 models fared poorly on the battlefields of Vietnam. The causes of its high malfunction rate are numerous and complicated and have been the focus of much debate in the years since. Considering that the U.S. military and others throughout the world still carry rifles that trace their ancestries directly back to Eugene Stoner's original M-16 prototype known as the AR-15, this topic is still interesting to many

firearms buffs. However, although the controversial rifle is a popular topic for internet discussion boards and gun magazines, the resulting lessons from the M-16's flawed acquisition process and the possible applications for today's military are far less frequently discussed. To understand the lessons, one must first understand the M-16 story, an unfortunate incident at the intersection of Army traditions, civilian political leadership, and commercial manufacturing.

From the earliest days of the Revolutionary War through World War II, the U.S. Army cultivated a strong sense of individual, long-range marksmanship. Beginning with Revolutionary War rifle companies such as that of Daniel Morgan, the American Army developed a unique marksmanship culture that contrasted with European armies, specifically the British and French. Author and analyst Thomas McNaugher observed that the British Army downplayed the individual soldier's ability to shoot accurately under combat conditions, while both the British and French trained their riflemen to operate as a collective rather than as individuals, capable of putting a "wall of lead as far in front of advancing or defending soldiers as was possible."⁵ As American territory expanded westward in the 1800s, marksmanship was often critical to both civilian and military survival, whether for self-defense or putting food on the table. Additionally, great distances between supply points made ammunition conservation necessary, meaning pioneers and Army cavalrymen alike could ill afford to waste ammunition.

The American focus on individual marksmanship manifested most visibly at the firing range, where target distances nearing half a mile were not uncommon. For example, Brevet Maj. Gen. Emory Upton prescribed firing ranges of eight hundred yards in an 1875 infantry manual.⁶ Naturally, considering the technology of the time, soldiers used iron sights and the naked eye to engage such targets. By 1904, Capt. H. C. Hale would describe marksmanship as a "religion," noting that "to be a poor shot was a misfortune if not a disgrace."⁷

The American marksmanship tradition perhaps reached its zenith with the M-1 Garand rifle of World War II, chambered for the .30-06 cartridge and praised for its reliability, accuracy, and range. The M-1 Garand became synonymous with the Second World War GI, and Gen. George Patton described it as "the greatest battle implement ever devised."⁸ However, it had



A rifleman of 2nd Battalion, 502nd Infantry Regiment, fires an M-16A1 rifle 8 September 1967 near Saigon. (Photo by Robert C. Lafoon)

shortcomings, too; it was heavy and big, especially for troops in tight confines such as vehicles or airborne transports. It was also semiautomatic, meaning one bullet fired for every pull of the trigger. On a battlefield where doctrine increasingly favored volume of fire rather than individual shots, this was an important factor. For example, Lt. Col. John Kelly recalled the tactic of “marching fire” prescribed by Gen. George Patton for his infantry echelons. The key goal of marching fire was to advance on the enemy “with all guns blazing ... covering with a blanket of fire all possible or known enemy positions within range.”⁹ Kelly argued that the primary benefits of this technique included prevention of being pinned down, suppression of enemy resistance, and enormous psychological damage to the defender while boosting the morale of the attacker. While these troops were predominantly armed with the semiautomatic Garand, one can imagine the value a fully automatic rifle would have provided.

Thus, the United States began the search for a new rifle following World War II. Though the Army’s Ordnance Department considered several foreign models and calibers, it officially adopted the T-44 rifle and the T-65 cartridge, soon known as the M-14 and the NATO 7.62 x 51mm, respectively. Unfortunately,

the M-14 proved to be only a marginal improvement over the beloved M-1 Garand. One inch longer and only slightly lighter than the Garand, most M-14s were semiautomatic only; in fact, only certain designated squad automatic riflemen received an automatic version.¹⁰ However, it retained the long-range capabilities of its predecessors, therefore satisfying many senior Army leaders who clung to traditional views of individual marksmanship.

Not all senior leaders were enamored with the M-14, however. Soon after the M-14’s standardization in 1957, Gen. Willard C. Wyman, commanding general of the U.S. Continental Army Command, created his own specifications for a new lightweight infantry rifle. Specifically, the weapon would be .22 caliber, weigh less than six pounds, possess a full automatic and semiautomatic capability, and be capable of penetrating a steel helmet out to five hundred yards.¹¹ Wyman sent these specifications to Eugene Stoner, a firearms designer for the ArmaLite company. Stoner soon had a prototype

based on his older AR-10 model, which he designated the AR-15. Unlike every previous American military firearm, this revolutionary rifle featured metal alloys and black plastics instead of the traditional wood and blued steel to meet the six-pound requirement. In every way, it met Wyman's specifications perfectly.¹²

The AR-15 presented a direct threat to the M-14, whose development and standardization had been a long, painful process complete with international irritation. The United States had all but forced its 7.62 caliber cartridge on NATO allies in 1953, particularly angering British representatives who advocated for a smaller .276 cartridge. The United States won the caliber controversy, but at a cost. It was now tied strongly to the 7.62 cartridge, and any admission that the AR-15's smaller 5.56 caliber could be superior would be highly embarrassing.

The Americans further upset European partners during a competition to select a replacement infantry rifle for the famed M-1 Garand. Although the British EM2 and the Belgian FAL proved worthy competitors to the M-14, the Army standardized the M-14 in 1957.¹³ However, the M-14 soon experienced troublesome manufacturing problems. By 1960, Springfield Armory had produced just 4,245 rifles, a fraction of the five million required to field the Army.¹⁴ Two

additional commercial producers, Winchester and Harrington & Richardson, also experienced severe technical manufacturing delays. If the Army expressed any preference for the commercially developed AR-15 so early in the M-14's life, it would draw unwanted criticism of Springfield Armory's very existence.¹⁵

The Springfield Armory, the Army's long-standing small arms development and production facility, therefore had much at stake with the M-14.

Except for the M-1 Garand, every American rifle since 1892 had been based on foreign designs. The M-1 was a major success for the armory, having been developed by armory employee John Garand, and the M-14 was an opportunity to build on that success. The AR-15 challenged this opportunity; although not a foreign design, it originated in a commercial firm, which was equally troubling in the opinion of the armory and the Army's Ordnance Department.

Additionally, it did not look like an infantryman's rifle. As noted above, all previous American rifles, including the M-14, utilized traditional wood stocks, not entirely different from those dating back to the Civil War. The AR-15 was a radical departure from this lineage, featuring a black plastic stock and with a pistol grip similar to that of the German Sturmgewehr 44 and the AK-47, then in full production. The small .223 caliber bullet was an equally radical break with tradition, resulting in reduced range and power when compared with the M-14 and M-1 Garand. Finally, the AR-15's caliber conflicted with the NATO standardized caliber of 7.62. This fact alone provided excellent justification for Springfield Armory and the Ordnance Department to resist the onslaught of the black rifle.

Following Stoner's invention in 1957, the next five years would see the AR-15 subjected to numerous tests and evaluations conducted by various Army groups in dispersed locations from Fort Benning to Aberdeen Proving Ground and California to Alaska. Some of these evaluations yielded resounding victories for the AR-15, both as a standalone weapon and in competition with the M-14. For example, the Combat Developments Experimentation Center at Fort Ord, California, reported that the AR-15 surpassed the M-14 in volume of fire and number of targets hit, and that "a 5- to 7-man squad armed with the AR15 would be as effective as a 10-man squad armed with the M14."¹⁶ However, it also suffered numerous setbacks, many of which appeared to stem from the testing agencies' biases against the nontraditional AR-15. Such biases resulted from a combination of factors described above: the rifle's unconventional appearance, its small caliber, its automatic fire capability, and its commercial origins. An inspector general investigation conducted in 1962 identified specific examples of bias against the AR-15, which undoubtedly skewed certain reports.¹⁷ For example, during one meeting

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in 1962, an unidentified Army colonel noted in his memorandum for record of meeting notes that “the U.S. Army Infantry Board will conduct only those tests that will reflect adversely on the AR-15 rifle plus other tests that may be considered appropri-

the next. Presumably, these conflicting opinions were based on generally comparable studies with the same objective: to identify the most effective combat rifle. The issue even earned the attention of President John F. Kennedy, already familiar with the rifle due to Air

“ ARPA wanted a new rifle for the South Vietnamese army, which was armed at the time with surplus M-1 Garands and M-1 carbines. The M-1 Garand proved too cumbersome for the small-statured Vietnamese soldier, and the M-1 carbine was never meant to be a primary infantry weapon. ”

ate.”¹⁸ Other examples included improper evaluation methods, such as the utilization of specially selected, match-grade M-14 rifles versus stock AR-15s.¹⁹

Perhaps the most significant evaluation of the AR-15's suitability as a combat infantryman's rifle was a study conducted by the Advanced Research Projects Agency (ARPA, the original title of the modern Defense Advanced Research Projects Agency). ARPA began assessing ways to assist U.S. allies in a 1961 program known as Project Agile, whose goal was to develop new tactics and weapons for use in counterinsurgency operations against Communist forces.²⁰ To this end, ARPA wanted a new rifle for the South Vietnamese army, which was armed at the time with surplus M-1 Garands and M-1 carbines. The M-1 Garand proved too cumbersome for the small-statured Vietnamese soldier, and the M-1 carbine was never meant to be a primary infantry weapon.²¹ ARPA, therefore, secured one thousand AR-15 rifles, which South Vietnamese troops and American advisers used in combat over six months in 1962.²² The results were a resounding success. In short, the study claimed, the AR-15 was “the best ‘all around’ shoulder weapon in Vietnam.”²³ ARPA's report lauded the AR-15 for its light weight, reliability, and most of all, extreme lethality. By describing the gruesome wounds inflicted on enemy personnel in great detail, ARPA endorsed the AR-15's superior ability to damage tissue and bone.

Noting that there existed a severe discrepancy between the reports of ARPA, the Army's Ordnance Department, and various external agencies, Secretary of Defense Robert S. McNamara questioned how the AR-15 could be so loved by one agency and so hated by

Force Chief of Staff Curtis LeMay's efforts to purchase quantities for his security forces. McNamara, therefore, commissioned his own study into the matter and instructed the Army to conduct renewed testing on the AR-15, both of which were completed by late 1962. A number of issues arose during this new round of testing, such as the inability of evaluators to duplicate the AR-15's shocking lethality, as noted in the ARPA report.²⁴ Additionally, the AR-15 exhibited an alarming malfunction rate which, although likely attributable to a lack of quality control in manufacturing rather than design defects, should have caused greater concern.²⁵ The report recommended three possible courses of action available to McNamara: continue with the M-14 program exclusively, terminate the M-14 and proceed with the AR-15 exclusively, or continue with the M-14 program while purchasing a limited quantity of AR-15s for special units such as air assault, airborne, and Special Forces. Ultimately, McNamara chose the third option: proceed with M-14 acquisitions while purchasing 104,000 AR-15s, redesignated as the XM-16E1.

Based on this decision, McNamara directed the formation of a joint services Technical Coordinating Committee (TCC) in April 1963 to oversee “only such modifications [to the XM-16E1] as are absolutely necessary” and whose goal was to expedite rifle standardization and production.²⁶ Believing the XM-16E1 to be essentially ready for combat, McNamara placed great pressure on the TCC to streamline the process and minimize delays. However, McNamara overlooked the fact that in the five years preceding his decision, the AR-15 underwent extensive testing but almost no

development or modifications based on that testing. Perhaps McNamara's assessment that the rifle was combat-ready is understandable since ARPA strongly endorsed the AR-15 for combat. However, he failed to grasp the complicated balance of evaluation, modification, and reevaluation that was critical in the development of firearms and ammunition.

Alternatively, perhaps McNamara made his decision in view of the approaching conflict in Southeast Asia. McNamara had a strong desire to expedite the new rifle's production, for soon after announcing the one-time purchase of XM-16E1s, he reversed his decision to continue the M-14 program. To cut costs and focus efforts on the futuristic Special Purpose Individual Weapon (SPIW) then in development, McNamara announced that all M-14 production would cease at the end of fiscal year 1963.²⁷ This decision to purchase limited quantities of M-16s while canceling the M-14 program depended entirely on hopes that the SPIW program would soon bear fruit.²⁸ The Army lacked enough M-14s to arm the entire force, so it faced a tumultuous period of possible conflict in the same condition as it had entered every other major conflict since the Civil War: with insufficient quantities of its standard infantry rifle.²⁹ Kennedy and McNamara did not want to see the Army so ill-prepared for another conflict that it must equip itself with the 1930s technology of the M-1 Garand. Even during Kennedy's first year in office, American troops in Berlin were carrying M-1s.³⁰ Therefore, McNamara conveyed a sense of urgency to the TCC in preparing the M-16 for production.

Despite McNamara's guidance to consider only "absolutely necessary" modifications, the TCC spent the next seven months considering 130 adjustments to the M-16, implementing many without subjecting the rifle to additional testing to determine possible repercussions. Additionally, the TCC failed to consult Eugene Stoner's opinion, further disobeying McNamara's guidance that all proposed changes "should be accomplished by request to the manufacturer concerned in consultation with the weapons designer," in other words, Eugene Stoner.³¹ Many changes were relatively minor, but a few would have significant consequences. Perhaps two decisions were most fateful in the M-16 story. The first was to change the propellant (also known as gunpowder) used in the rifle's cartridges. The original "stick" powder, while performing flawlessly in Stoner's original design, tended to exceed chamber pressures while delivering

bullet velocities about fifty feet per second less than desired. The Army created both requirements, which were somewhat artificial, after Stoner completed his design. The TCC, therefore, replaced stick powder with "ball" powder. While both stick and ball powders had been used extensively for military ammunition, ball powder was known to cause increased fouling during the firing sequence. It also caused the rifle's cyclic rate to increase from approximately 650–750 rounds per minute to 900–1,000 rounds per minute. This rise led to increased wear on the rifle and potentially contributed to malfunctions on the battlefield.³²

The second critical decision involved chrome-lining the chamber and barrel of the rifle. Since the M-14's adoption in 1957, the Army had chrome-lined the chambers of all automatic weapons, and the process was relatively simple.³³ However, the TCC concluded that the M-16's existing chrome moly-vanadium alloy was sufficient, and that "further chrome plating would simply be gold plating."³⁴ This decision proved to be fateful because M-16 chambers quickly succumbed to the humidity of Vietnam through corrosion and pitting. Such corrosion caused increased friction between the walls of the rifle's chamber and the cartridge shell.

As the XM-16E1 reached Vietnam battlefields in significant quantities, serious problems surfaced. The most common malfunction was the "failure to extract." After firing a bullet, the rifle attempted to extract the spent cartridge, which would stick in the chamber. The only resolution for this malfunction required the firer to insert the cleaning rod into the muzzle, punch out the spent cartridge, and resume firing. Often, this malfunction occurred repeatedly, reducing the automatic M-16 to a "magazine fed, air cooled, single shot, muzzle ejecting shoulder weapon," more resembling a Revolutionary War musket than a twentieth-century automatic rifle.³⁵ From 1965 to 1968, untold numbers of infantrymen would die with their M-16s broken next to them, a cleaning rod stuck down the muzzle in a futile attempt to return the rifle to service. The resulting scandal triggered a major congressional investigation and multiple service investigations.

Unfortunately, despite numerous official investigations and books written on the topic, the exact cause of the malfunctions has never been pinpointed. However, based on the evidence at hand, the most reasonable conclusion is that the primary cause of jamming was



corrosion in the rifle's chamber, which was caused by extreme humidity in Vietnam and the TCC's decision not to chrome-plate the chamber. Corrosion caused increased friction, which resulted in a failure-to-extract malfunction. Contributing to this root cause was the increased fouling from ball propellant, which added another layer of friction to the chamber and thus more difficulty in extractions.³⁶ Ball propellant also caused an increased cyclic rate, which likely contributed by causing the extraction sequence to occur prior to contraction of the spent cartridge casing.³⁷ Whether the rifle's woes were due to a single cause or a combination, the results were genuinely tragic and could have been avoided.

While the M-16 story is complicated and has received much attention over the years, it continues to provide lessons that should be heeded for future acquisitions programs. Some lessons may seem obvious but are no less complex to implement. This article certainly falls short of making any definitive conclusions such as "if we avoid doing 'X,' then acquisitions will be successful." However, certain points of the M-16's story warrant consideration to avoid future tragedies.

The first lesson is that we must strive to acquire the best quality materiel possible. Again, this seems self-evident, for no one wants equipment of subpar quality.

A U.S. Army rifleman engages the enemy with an M-16 rifle circa 1970 in Vietnam. (Photo by the Department of Defense via Wikimedia Commons)

However, put in perspective of the life cycles experienced by many American defense systems, the requirement for long-lasting equipment becomes critical. Such warhorses as the B-52 Stratofortress bomber and CH-47 Chinook helicopter, while highly modified and upgraded, are often built around the same basic engineering designs from the earliest days of the Cold War. Today's M-4 systems are not far removed from this, for while the modern infantryman's rifle is loaded with optics, rails, and grips unknown to the infantryman in Vietnam, the M-4 can trace its direct lineage back to the XM-16E1.

When McNamara decided to purchase the first major order of M-16s, both he and the Army intended the purchase to be a one-time buy. This decision satisfied many senior Army leaders who remained committed to the traditional M-14 while giving continued hope to supporters of the developing flechette-firing SPIW. Ultimately, however, the SPIW proved nothing more than a concept. McNamara's decision to cancel the M-14 left the Army with a rifle it had decided would be a limited, interim

weapon. Nearly sixty years later, that “interim” weapon is found throughout the world’s militaries.

The second lesson reminds us of the old saying that “you can get something good, fast, or cheap, but you can’t have all three.” Certainly, acquisitions officers are well

development, tradition must not dictate either. The military is an organization steeped in tradition, which is an important aspect of camaraderie and esprit de corps. Unfortunately, it can easily be carried too far. In this case, the M-16 was a sharp break with the Army’s tradition of



McNamara had noted during 1961 that ‘it is a relatively simple job to build a rifle compared to building a satellite ... or a missile system.’



familiar with this continual struggle between rapid provision of new equipment to the battlefield while ensuring quality and affordability. In directing the TCC to make “only such modifications as are absolutely necessary,” McNamara assumed that rapid production would be the result.³⁸ Unfortunately, he failed to understand the inability of the Army, Air Force, and Marine Corps to cooperate on the M-16’s standardization. McNamara certainly had matters of great world importance on his mind, and as the TCC struggled to gain consensus on the M-16’s finer points, he no doubt felt frustration that the Department of Defense could not seem to get a rifle right.³⁹ McNamara had noted during 1961 that “it is a relatively simple job to build a rifle compared to building a satellite ... or a missile system.”⁴⁰ Perhaps this statement reflects the defense secretary’s dismissive opinion of a rifle acquisition’s complexity, further illustrated by his insistence on expediting the M-16 program.

Beyond the lesson of joint cooperation, McNamara failed to appreciate the cause-and-effect nature of weapons development, the importance of post-modification testing, and the time required to conduct such evaluations. As Stoner would note in his testimony before a congressional subcommittee, “you can’t change the ammunition without causing a change in the performance of the weapon.”⁴¹ Nevertheless, the TCC changed the ammunition but failed to account for the changed performance. This shortcoming was largely due to pressure applied by McNamara’s office. Therefore, while urgency is often required in the acquisitions process, it can result in battlefield deaths if not applied by those with sufficient knowledge and experience.

Lesson three is perhaps the most challenging. While tradition can inform future doctrine and equipment

marksmanship. The M-16 did not look like a rifleman’s weapon but was instead made of plastic and, as Marine company commander Dick Culver recalled, “drew lots of snickers and comments from the old timers.”⁴² Its effective range was less than half of its predecessors, and it fired a tiny bullet about two-thirds as big as the M-14’s 7.62 round. It was invented and produced by an external firm, not the Springfield Armory. Moreover, it gave every rifleman the opportunity to waste ammunition while “spraying” the battlefield in automatic firing mode.

And yet, this break with tradition was fully supported by research. Numerous studies conducted during and after World War II clearly showed that marksmanship doctrine was due for an update. Famed Army historian S. L. A. Marshall wrote that “we are on infirm ground when we hold to the belief that the routine of marksmanship training and of giving the soldier an easy familiarity with his weapon will automatically prompt the desire to use the weapon when he comes under fire.”⁴³ He also concluded that soldiers armed with automatic weapons such as the Browning Automatic Rifle (BAR) were much more likely to fire their rifles than those armed with single-shot firearms such as the M-1 Garand, observing “many cases where men who had flunked it badly with a rifle responded heroically when given a flame thrower or BAR.”⁴⁴

For those modern historians who squirm at the mention of S. L. A. Marshall, substantial laboratory research also supported the idea of a small caliber, lightweight automatic weapon such as the M-16. Both the Ballistics Research Laboratory and the Operations Research Office conducted studies that contradicted the Army’s longstanding wisdom. First, they noted that the optimum range for an infantry rifle was much

less than previously assumed, about 120 yards with maximum range of 500 yards.⁴⁵ Second, these reports countered the Army's assumption that bigger bullets equated to deadlier bullets, concluding that a .22 projectile could be more lethal than a .30 projectile due to the smaller caliber's higher velocity and tendency to tumble upon impact. Third, the probability of a hit increased with the number of projectiles fired.⁴⁶ Whether through so-called "Duplex" or "Triplex" ammunition containing two or three bullets in a single cartridge, or through full-automatic firing capability, the message was clear: The Army's commitment to well-aimed, individual, long-range marksmanship was obsolete on the modern battlefield.

Despite the research, many traditionalist Army leaders clung to marksmanship doctrine. For example, Army Chief of Staff Gen. J. Lawton Collins wrote in 1952 that "the primary job of the rifleman is not to gain fire superiority over the enemy but to kill with accurately aimed rifle fire."⁴⁷ The refusal to accept new doctrine and new equipment would manifest in strong bias against the M-16 and prevent objective evaluation until political leaders became involved.

In today's military, it is tempting easy to maintain doctrine and equipment in keeping with tradition. Rarely does research provide a clear-cut recommendation to turn away from traditions, and even studies as definitive as those described above are often not fully understood until studied in hindsight. However, when such opportunities arise to embrace future concepts in lieu of traditions, today's military leaders must be ready and willing to do so.

Although some military leaders are still dubious of the M-16's killing power, the system has proven itself on battlefields throughout the world. Yet, although the M-16 and its descendants are ubiquitously found in both civilian and military sectors, unfortunately, most shooters today are only vaguely aware of the rifle's troubled origins and the controversies that plagued its development. By examining this case study, today's military professionals can glean valuable lessons. These are applicable to the acquisitions process but are equally important to all military leaders. We all must understand the long-term nature of our equipment, the cause-and-effect that one modification can have on performance, and most importantly, the impact, value, and limitations of our traditions on doctrine and equipment. ■

Notes

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16. Durham, "The M-16," 40; Office of the Chief of Staff, "History of the M16 Weapon System," C4.

17. For more information, see Durham, "The M-16," 37–38.

18. *Report of the Special Subcommittee on the M-16 Rifle Program of the Committee on Armed Services, House of Representatives, Ninetieth Congress, First Session* (Washington, DC: U.S. Government Printing Office, 19 October 1967), 5330, accessed 27 July 2021, <https://www.vietnam.ttu.edu/virtualarchive/items.php?item=2250110016>.



FUTURE WARFARE WRITING PROGRAM

Call for Speculative Essays and Short Works of Fiction

Military Review calls for short works of fiction for inclusion in the Army University Press Future Warfare Writing Program (FWWP). The purpose of this program is to solicit serious contemplation of possible future scenarios through the medium of fiction in order to anticipate future security requirements. As a result, well-written works of fiction in short-story format with new and fresh insights into the character of possible future martial conflicts and domestic unrest are of special interest. Detailed guidance related to the character of such fiction together with submission guidelines can be found at <https://www.armyupress.army.mil/Special-Topics/Future-Warfare-Writing-Program/Future-Warfare-Writing-Program-Submission-Guidelines/>. To read previously published FWWP submissions, visit <https://www.armyupress.army.mil/Special-Topics/Future-Warfare-Writing-Program/>.



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The Congressional Delegation

A Great Opportunity to Build Trust and Inform Strategic Decisions

Col. Nathan Cook, U.S. Army

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Congressional delegations serve a critical function to educate and inform members of Congress and their staffs. As such, the Department of Defense prioritizes congressional delegation travel to military equities “to respond to inquiries from and to cooperate in investigations by Congress regarding the Department.”¹ These travel delegations offer engagement opportunities for organizations to support Congress in their fact-finding or oversight missions. By understanding the history and purpose of a congressional delegation, what it is, who the key organizations are, and the fundamentals of executing a successful visit, Army leaders will broaden congressional understanding and build trust and confidence between the two institutions. The insight and points of consideration that follow will help Army leaders prepare to host congressional travel delegations to inform members of Congress as they enact policy as well as authorize and ultimately fund the military.

History and Purpose of a Delegation from Congress

Article 1, section 8 of the U.S. Constitution grants Congress the authority to provide for the Nation’s

common defense and appropriate funds for its land and naval forces.² Although the Constitution does not explicitly authorize congressional travel to conduct investigative and oversight duties over the military, it is reasonable to conclude this was implied by its authors.

In the bleak winter of 1777 at Valley Forge, Gen. George Washington was under pressure from Congress to break camp and resume military operations. However, it was his firm belief that Congress misunderstood the current state of the Army and was under advisement by those in comfort rather than his soldiers, who occupied the cold, bleak hills and slept “under frost and snow without cloths or blankets.”³ As such, he hosted a Committee of Conference from Congress so they could see for themselves the state of the force and make a better informed decision regarding its use. After visiting the Army and seeing its actual condition, the committee concluded that the Army must remain in camp to refit and that Congress must adopt measures to support that effort. Most importantly, it must “provide comfortable Quarters for the Officers and Soldiers,” or the Army would be of no use in the spring.⁴

Precedent has since further cemented this travel function and role; the next case of Congress exercising



this power over the military resulted from the defeat of American forces under Gen. Arthur St. Clair by Native Americans at the Battle of the Wabash in 1791. A congressional committee was quickly formed to determine the cause of this debacle. Amid a storm of constitutional controversy on whether Congress had the authority to investigate the matter, it was determined that the committee was empowered to “send for persons, papers, and records” to identify the cause and make recommendations for improvement.⁵

The last historical item to illuminate the purpose of a travel delegation is the legislative cycle that both sides of Congress operate within. The yearly National Defense Authorization Act (NDAA) and appropriations bills are the driver behind most congressional interaction with the military. The NDAA, enacted yearly for sixty years, provides authorization of appropriations to the Department of Defense, sets defense policies and requirements, and directs overall organizational administrative matters. The NDAA and appropriations bills operate on a timeline that traditionally begins in February with the release of the president’s budget and ideally culminates sometime in

Just as Gen. George Washington did in 1777 by hosting a Committee of Conference from Congress so they could witness firsthand the state of the force, today’s travel delegations offer Army leaders a unique opportunity to provide input to those who can directly affect or introduce legislation that positively supports national defense. (Copy of engraving after W. H. Powell, published 1866; image courtesy of the National Archives)

the summer. During that time period, defense oversight committees, along with member offices, will engage heavily with senior military leaders and conduct travel to better inform decisions on items they wish to place in the defense-related bills.⁶

In the end, the purpose of a travel delegation is to receive information in real time from persons who possess the knowledge that will enable Congress to better legislate, authorize, and appropriate for the military. Just as Washington illustrated to Congress firsthand the state of his force to keep it from being degraded in a treacherous winter campaign, so today’s travel delegations offer Army leaders a unique opportunity to provide input to those who can directly affect or introduce legislation that positively supports national defense.

Understanding a Delegation from Congress

Today, travel from Congress comes in two forms: a congressional delegation (CODEL) or a staff delegation (STAFFDEL). A CODEL simply means that its participants consist of an elected member of the Senate or House of Representatives. In comparison, a STAFFDEL contains staff from personal offices or committees. Just because a delegation does not contain a congressional member does not make it any less impactful; each is significantly important. Often, members of Congress rely solely on the advice of their staff. Underestimating or disregarding a staffer's influence on his or her member is a missed opportunity for the commander to shape the future of the Army and can even have significant consequences.

Congressional staff are divided into two main categories: committee and personal. Regardless of position, committee and personal staff receive protocol support generally afforded to a general officer or member of the senior executive services. Committee staff are known as professional staff members (PSM) and are responsible for a portfolio linked to the committee they represent. They provide information to the majority or minority party members of the committee. While it is helpful to know which party the PSMs represent, information provided to the delegation should always be apolitical and afforded to all members of the delegation regardless of political affiliation. In contrast, personal staff work directly for an individual senator or representative and focus on topics of personal interest to the member. The personal staff traveling in a delegation to visit a military equity can hold a variety of titles. These include national security advisor, senior policy advisor, or military legislative advisor (or assistant). Personal staff have the direct ear of their member and will advocate for his or her stance on issues as well as report directly back to him or her on anything seen or told.

In the Senate, the oversight or committees of jurisdiction most interested in the military include the Senate Committee on Armed Services, Senate Committee on Appropriations-Defense and Military Construction and Veterans Affairs, Senate Committee on Foreign Relations, Senate Committee on Veterans' Affairs, Senate Select Committee on Intelligence, and the Senate Committee on Homeland Security and

Governmental Affairs. In the House, committees include the House Armed Services Committee, House Committee on Appropriations-Defense and Military Construction and Veterans Affairs, House Foreign Affairs Committee, House Committee on Veterans' Affairs, House Permanent Select Committee on Intelligence, and the House Committee on Homeland Security. Other committees during their scope of work may occasionally intersect with military interests, though most professional staff traveling in delegations will come from one of the committees mentioned above.

On the surface, congressional staffs appear the same. All are hardworking and dedicated men and women who care about national security and advancing their mission on behalf of the Senate or the House. However, it is important for leaders receiving delegations to understand the difference between the two. Professional staff are hired due to their expertise and broad knowledge on national security issues. Often, they know just as much, if not more, about whatever equity they are receiving information on and will ask focused questions to validate and update their knowledge. Visits from professional staff traditionally have very defined objectives and focus, so Army leaders

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Checklist for Receiving a Congressional Travel Delegation	
1	Phase I: Preparation
<input type="checkbox"/> Assign action officer	<input type="checkbox"/> Understand existing priorities
<input type="checkbox"/> Determine atmospherics	<input type="checkbox"/> Establish agenda
<input type="checkbox"/> Exchange biographies	<input type="checkbox"/> Share read ahead material
	<input type="checkbox"/> Rehearse visit
2	Phase II: Execution
AVOID:	PRIORITIZE:
<input type="checkbox"/> Personal Opinions	<input type="checkbox"/> Observing Training
<input type="checkbox"/> Static Briefings	<input type="checkbox"/> Site Visits
<input type="checkbox"/> Political Commentary	<input type="checkbox"/> Soldier/Civilian Engagements
3	Phase III: Follow-Up
<input type="checkbox"/> Due Outs	<input type="checkbox"/> EXSUMs
<input type="checkbox"/> Thank You Note	

(Figure by authors)

Figure. Checklist for Receiving a Congressional Travel Delegation

should prioritize agenda development to address the designated objectives.

Comparatively, personal staff are more state- or district-focused and have varying degrees of expertise on defense issues. Some have prior military service, whereas others draw from what they have learned serving on Capitol Hill or from previous delegation visits. As such, when preparing for a delegation of personal staff, it is helpful for leaders to appreciate the varying degrees of expertise within the group and tailor the visit appropriately.

The type of staff members present is an important item to consider that will shape military leaders' preparations to host a delegation. Regardless of the type of staff members on the delegation, expect whatever they see or are told to make it directly back to the ear of their member and/or committee. Lastly, and worth repeating, these distinguished guests provide a great opportunity for a unit or organization to inform members and their staffs that is directly linked to future decisions in support of Army strategic initiatives and priorities.

Key Army Support Organizations, Roles, and Responsibilities

Understanding the key organizations supporting congressional involvement across the Army enables successful engagements with a delegation. The first organization is the Office of the Chief of Legislative Liaison (OCLL) and the legislative liaisons (LLs) assigned to it. Next are the congressional affairs contact officers (CACO) and/or liaison officers based within most major commands across the Department of Defense. Other key Army players are the Office of the Assistant Secretary of the Army (Financial Management and Comptroller) Budget Liaison Office, the National Guard Bureau LL Office, the Office of the Chief of the Army Reserve Legislative Affairs Division, and the United States Army Corps of Engineers.

OCLL's charter directed by the secretary of the Army is to serve as "the sole directive agency for Army Congressional affairs, responsible for formulating, coordinating, and supervising policies and programs on the Army's relations with Congress."⁷ The role of the LLs assigned to it is to engage directly with congressional offices and PSMs on a daily basis. Travel delegations are often initiated from these encounters. As such, the LLs are usually the most knowledgeable about those in the delegation and the context and purpose, or atmospherics, of the visit. Atmospherics provide the intricacies, interests, and concerns surrounding a member, staff, or committee and inform the assumptions and information requirements that frame the visit. LLs will also possess all biographies of those traveling from Congress, which the unit can research to further understand the visit's human context and establish areas of mutual interest to build relationships.

The second group of key players are the CACOs or liaison officers assigned to the major commands across the Department of Defense. They serve as points of contact between Congress, the OCLL, and their supported command. Their main role is to liaise between all three entities to ensure that the delegation is tracked, received, and hosted and that any follow-ups are annotated and then answered. They, in turn, are the experts in the atmospherics of their command and possess the biographies of those senior leaders that will engage with the delegation. CACOs are responsible for communicating this information to the LLs in the OCLL so they may prepare congressional

members for whom they will meet. The responsibilities between the LLs in the OCLL and the CACOs in the commands cross over. Both must be informed as to the atmospherics surrounding the parties they are responsible for.

In the end, the most important organization in this process is the military equity receiving the congressional delegation. There are legislative liaison organizations ready to help plan and resource the visit, and all have the mission to enable a success engagement. Understanding the different key organizations across the Army and maintaining open lines of communication with them are crucial in setting conditions for success.

Receive the Congressional Delegation in Three Phases

For the receiving unit, a successful CODEL/STAFFDEL visit consists of three phases: preparation, execution, and follow up (see figure, page 112). The phases begin immediately upon notification of a visiting CODEL/STAFFDEL. If the unit does not already possess a protocol office, it should assign an action officer to the delegation to be the lead and sole point of contact throughout all the phases.

Preparation phase. Preparation is the first and most important phase for ensuring a successful visit by a congressional delegation. Receiving organizations must do their homework during this time. As mentioned in the previous section, it is during preparation that the LLs and CACOs provide relevant atmospherics and context. Each visit has background that initiated the visit and informed why members or staff joined. Meeting the purpose for the visit is priority one; however, it is likely there will be time to provide additional insight to members or staff based on Army priorities and initiatives. These priorities are important as they provide the force with overarching and consistent messaging to communicate during any visit by all levels of leadership involved.

As the trip and shared understanding develops, the receiving unit matches points of interest and information provided to the issues or topics that generated the travel. This ensures the scheduled events match the intent of what the delegation needs to see. It is important to note that sometimes what they request to see may not necessarily match what the command prefers or recommends. While adding points of interest to the

trip is acceptable, the receiving unit should negotiate these opportunities ahead of the visit for approval by the congressional trip lead. Should there be a mismatch between the purpose of the trip and what is on the agenda, the unit should communicate this to the CACO and LL with recommended adjustments to address it. This creates an opportunity for the LL to clarify with the congressional planner who can then make an informed decision. A back-and-forth dialogue between the unit and the CACO or LL is common. This ultimately ensures the trip aligns with the atmospherics and provides the delegation with the information it needs to conduct its legislative, authoritative, or appropriative mission.

Finally, agenda development is not purely scientific. A full schedule is helpful, but there should be sufficient time for transitions and reflection. Meetings may run long or end early throughout the visit; gaps in the schedule are preferred versus rushing to the next event or having to cancel engagements. Likewise, avoid a grueling pace that allows for little comfort or executive time unless specified by the congressional staff. This enables the delegation to see everything they need without feeling the pressure of a tight schedule. It also allows time for them to absorb and process each day's events. While each delegation's timeline will be different, no matter the staff's preference for the agenda, open and clear communication between the CACO, LL, and the receiving unit ensures an optimal timeline to support the delegation.

Execution phase. Execution is the second phase of a successful CODEL/STAFFDEL visit. During execution, avoid the "Three Ds" in engagement: being dismissive, defensive, or deceptive. These serve as rules of engagement and should govern the unit throughout the entire visit. Open and honest dialogue with zero attempts to suppress information is the best course of action for communication between Army leaders and the delegation. In addition to this general rule, it is important to always speak to only what is known and not to offer conjecture or seemingly off-the-record opinions. If it does not fall under the unit's purview or if the leaders present are unsure, simply state this to the delegation and take the query as a follow-up. Likewise, if the information has a classification issue, find a suitable location to increase the classification level or schedule a follow-on meeting or phone call.



Lastly, seek authority prior to endorsing legislation and maintain an apolitical stance, especially with any attempted humor.

When executing the CODEL/STAFFDEL visit, seek creative ways to present the information. As a general rule, members and staff do not want to travel far distances to receive briefings all day—this method of conveying information to a delegation is a last resort. Presenting some information in a static format may be necessary; short, to the point, and scene-setter material provides the highest impact. The best visits balance between briefings, demonstrations, site visits, and engagements. For example, if a delegation wishes to determine the environmental impact training is having on a post, spending the majority of the time moving around post to physically see the training areas and interacting with soldiers and leaders is much more impactful than presenting historical information in a briefing. If background information is important, consider sending it ahead of time as a read-ahead. It is no different today than as Washington did at Valley Forge, showing a delegation has a larger impact than a briefing in a conference room.

Capt. Dana Gingrich (right), commander of Company C, 2nd Battalion, 503rd Infantry Regiment, 173rd Airborne Brigade, briefs the details of training conducted as part of Fearless Guardian to Sen. Jack Reed (center), the ranking member of the Senate Armed Services Committee, and Lt. Gen. Pavlo Tkachuk, commander of the Ukrainian Army Academy, 1 September 2015 in Yavoriv, Ukraine. Paratroopers from the 173rd Airborne Brigade were in Ukraine for the second of several planned rotations as part of Fearless Guardian to train Ukraine's newly formed national guard. (Photo by Sgt. Alexander Skripnichuk, 13th Public Affairs Detachment, U.S. Army)

Follow-up phase. The final phase in accomplishing a successful visit from a congressional delegation is the follow-up. As mentioned, due to the classification or knowledge level, it is perfectly acceptable to not have an answer to every question. However, when that occurs, it generates due-outs. Annotate these items and between the unit, CACO, and LL, assign the responsible organization and suspense to respond. Quickly and thoroughly answer the congressional delegation's questions to inform their decisions. Sometimes those answers may take weeks to obtain, but they must not be dismissed or discarded due to the passage of time.

Even if a due-out was not generated during the visit, it is good form to reach out a week after the trip to follow up in case any questions have arisen since the delegation's return. It is hard to underestimate the positive impact of a sincere thank you follow-up.

The concluding action for a congressional visit is the executive summary (EXSUM). The EXSUM captures the overarching context of the trip. The receiving unit and LL work together to create the EXSUM, though it is the LL's responsibility to complete it. This document enables Army senior leaders to stay abreast of what occurred and be better poised to answer any subsequent requests or questions that stem from the trip.

Proper preparation, deliberate execution, and a thorough follow-up are the three phases that deliver a fruitful visit by a delegation from Congress. Following a successful visit, not only are members and their staffs better equipped to legislate on behalf of the Army, they have increased trust and confidence in Army leaders and a broader understanding of the Army and its capabilities.

Conclusion

The U.S. Constitution does not explicitly authorize Congress to travel to conduct its investigative and oversight role over the military. However, much precedent exists for the authority to conduct these

activities as has been demonstrated countless times since the Nation's founding. In 1787, George Mason of Virginia—war veteran, politician, and influencer of both the Bill of Rights and the Constitution—stated that congressional members “are not only Legislators but they possess inquisitorial powers. They must meet frequently to inspect the conduct of the public office.”⁸

The U.S. Supreme Court has reinforced this assertion. As recently as 1959, the court declared the investigative and oversight role of Congress to be “penetrating and far-reaching” and supported by the Constitution. The court went on to summarize that this inquiry power has been exercised throughout U.S. history over numerous national interests, “concerning which Congress might legislate or decide upon due investigation not to legislate; it has similarly been utilized in determining what to appropriate from the national purse, or whether to appropriate.”⁹

Since the founding of the Nation, travel delegations have been crucial for Congress to execute its legislative, authoritative, appropriative, investigative, and oversight missions. As such, by understanding its history and purpose, what they are, key organizations, and the three phases to prepare for a successful visit, Army leaders will be best positioned to support and further this critical activity. ■

Notes

1. Department of Defense (DOD) Directive 4515.12, *DOD Support for Travel of Members and Employees of Congress* (Washington, DC: DOD, 2015), 1.

2. U.S. Const. art. I, § 8, cl. 1, 12, and 14.

3. George Washington, “Letter to the President of Congress,” in *The Spirit of Seventy-Six, The Story of The American Revolution as Told by Its Participants*, ed. Henry Steele Commager and Richard B. Morris (New York: Da Capo Press, 2002), 646.

4. Worthington C. Ford, ed., *Journals of the Continental Congress, 1774–1789*, vol. 9 of 34 (Washington, DC: U.S. Government Printing Office, 1904–1937), 1029–31.

5. 3 *Annals of Cong.* 684 (1849).

6. For a detailed overview of the National Defense Authorization Act (NDAA) process, see Valerie Heitshusen and Brendan W. McGarry, *Defense Primer: The NDAA Process*, In Focus 10515 (Washington, DC: Congressional Research Service, 16 February 2021), accessed 20 July 2021, <https://crsreports.congress.gov/product/pdf/IF/IF10515>.

7. *Office of the Chief Legislative Liaison Handbook* (Washington, DC: Headquarters, Department of the Army, 2019), 1.

8. Max Farrand, ed., *The Records of the Federal Convention of 1787*, vol. 2 (New Haven, CT: Yale University Press, 1911), 206.

9. *Barenblatt v. United States*, 360 U.S. 109, 111 (1959).

Advanced Strategic Leadership Studies Program

Barry M. Stentiford

The Advanced Strategic Leadership Studies Program (ASLSP) is the War College-level program at the School of Advanced Military Studies (SAMS) on Fort Leavenworth, Kansas. SAMS is best known for its Advanced Military Studies Program (AMSP). In AMSP, up to nine seminars of twelve to sixteen students, mostly majors, undergo an intense eleven-month education on operational art. AMSP, however, is not synonymous with SAMS. SAMS actually has three programs: AMSP, the Advanced Strategic Planning and Policy Program (ASP3, also known as the Goodpaster Scholars Program), and ASLSP. ASLSP students are also known as the Marshall Strategic Leaders, in honor of one of the best strategic leaders of the U.S. Army.

The Program

ASLSP is an eleven-month senior service college (SSC) resident program that educates “future senior leaders of the Armed Forces, allies and the interagency for high-level policy, command, and staff responsibilities.”¹ Each new class begins at the end of June and graduates at the end of May. The program provides a rigorous graduate-level education, exposing students to, and preparing them for, the volatile, uncertain, complex, and ambiguous dimensions of the joint, interagency, and multinational security environment. Students learn about strategy formulation, implementation, and campaigning in a dynamic global setting. The ASLSP curriculum provides a comprehensive, multifaceted education focused at the theater-strategic level across the spectrum of joint and service operations during peace, crisis, and

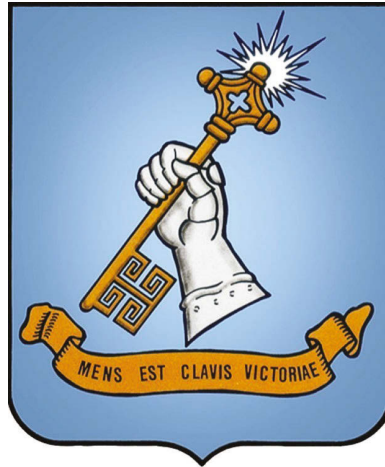
war. As a small program, ASLSP is able to quickly adapt its curriculum to meet the needs of the force.

History of ASLSP

ASLSP had its roots at the start of the SAMS concept under Brig. Gen. Huba Wass de Czege in the early 1980s. Wass de Czege had been one of the architects of AirLand Battle, the U.S. military’s basic concept of war for a generation. In 1984, with the first classes at SAMS, seven lieutenant colonels who had been selected to attend the U.S. Army War College were instead diverted to Fort Leavenworth. That group of seven formed the Advanced Operational Studies Fellowship (AOSF). Following the original concept of SAMS, this small group of lieutenant colonels spent a year at SAMS as students. While there, under the guidance of a handful of senior officers and civilian faculty, they were immersed into the curriculum of the main SAMS course—AMSP. The following year, those officers stayed to each lead a seminar in the AMSP course, teaching their students what they had learned the previous year. They then received credit for completing the SSC. Because such highly qualified officers could not remain on the faculty permanently, the program was designed to accept a new class of students each year into the Advanced Operational Studies Fellowship who would then serve as primary instructors for AMSP the following year.

In 1995, the name of the program was changed to the Advanced Operational Art Studies Fellowship (AOASF) to emphasize the “operational art” focus of SAMS. In the early twenty-first century, the

curriculum was more closely aligned to the strategic level of war, rather than toward operational art as it had previously been.² In 2013, the program was again modified in part to bring it more into alignment with U.S. Army Training and Doctrine Command policies for SSC programs and to prepare it for Joint Professional Military Education II (JPME II) accreditation. It was at that time renamed the Advanced Strategic Leadership Studies Program. The name change was in part to avoid confusing it with the separate War College Fellowships in which SSC selectees attend classes at civilian universities. Despite almost a decade since the change, students are still sometimes erroneously referred to as “Fellows,” although most prefer to be called “Marshall Strategic Leaders.”



making up about half of each class. Other students normally come from Canada, Germany, and the United Kingdom. Military ASLSP students have typically

commanded a battalion-sized unit prior to their selection to attend ASLSP. Most classes also include one or two civilian students from the U.S. government. Such interagency students generally come from the State Department, the U.S. Agency for International Development, the Federal Bureau of Investigation, and other agencies. The interagency students play an important role in keeping the class from becoming too focused on the military aspect of strategy. A top secret security

clearance is required for officers attending this course. Students are also required to have an official passport for use during field studies. While some ASLSP students previously attended SAMS as AMSP students, previous attendance at SAMS is not a requirement for admittance into ASLSP, and the majority of ASLSP students are at SAMS for their first time.

The Faculty

The faculty consists of a dedicated team of four civilian faculty members, all of whom hold PhDs and some of whom are also able to draw upon their own military experiences. One of the civilian faculty members also serves as the program’s director. (Currently, the author of this article fills this role.) The faculty also includes a military member, a graduate from the previous year’s class who demonstrated the skills needed to take on the vital role of educating the next class. The military faculty member, who remains on the faculty for one year, provides a vital link between the students and the civilian faculty, and is a key facilitator of ensuring the linkage between the course material and the needs of the force.

The faculty is dedicated to providing the best education possible to better equip graduates to serve at the strategic level. The faculty takes as a starting point the assumption that for most challenges at the strategic level, there is no “correct answer,” but that the students need an education that prepares them for dealing with the complexity and uncertainty of strategic issues.

The Students

An ASLSP class consists of one seminar of sixteen or seventeen students per year. Students come from all branches of the U.S. military, with U.S. Army students

The Courses

The ASLSP curriculum consists of the six courses: Strategy, Regional Studies, Joint Warfighting, Twenty-First-Century Conflict, Strategic Leadership, and Research and Writing. Students participate in a capstone integrated planning exercise (IPX) in which the products they generate are used by the AMSP students for their own capstone exercise. The six courses, along with the exercises, are structured to be complementary and provide a comprehensive education for students. At the end of the academic year, ASLSP students sit for a comprehensive oral examination, which serves as a final check on learning to ensure each student fully grappled with and mastered the program materials and have met the program learning objectives set by Army University.

The Strategy Course (F100) focuses on national security policy and strategic decision-making. The fourteen lessons provide deeper insights into the complexity of national security policy making and strategy formulation. The course forces students to grapple with questions such as: What is policy and how it is formulated? What is strategy? How is strategy formulated in

our system of government? What are some of the formal and informal structures in the government involved in making national security policy and strategy? How are some of these systems codified in the U.S. government? In the Strategy Course, the students study a series of lessons that present a theoretical construct for evaluating strategy and policy, and they assess historical examples of policy making. The course helps to develop the habits of mind and intellectual background the students will need when they assume their responsibilities as senior leaders and staff officers in high-level policy organizations. The Strategy Course includes a week of fieldwork in the National Capital Region and another to several combatant commands within the continental United States.

The Regional Studies Course (F200) consists of two eight-week subcourses, Europe-Africa and Asia-Pacific. The course provides a framework with which to analyze how factors such as history, geography, religion, politics, economics, and culture shape national policies, strategies, and campaigns. At the conclusion of each subcourse, the students conduct fieldwork within the region and visit the U.S. combatant command headquarters responsible for those regions. F200 includes an exercise focused on NATO policy as well as a strategic planning practicum in which students respond to a complex and dangerous strategic issue.

Joint Warfighting Course (F300) is a sixteen-lesson course designed to evaluate the principles of joint operations, joint military doctrine, and joint functions. It explores how theater strategies, campaigns, and major operations achieve national strategic goals. Normally, the military faculty member takes the lead in this course. The initial part of the course addresses the Department

of Defense, interagency, and intergovernmental structures and processes in forming national security policy and strategy. The second portion of the course analyzes the components of operational planning and design, and includes visits to U.S. Strategic Command and U.S. Transportation Command.

Barry M. Stentiford is the director of the Advanced Strategic Leadership Studies Program. He has been a professor at the U.S. Army's School of Advanced Military Studies since 2009. He holds a PhD from the University of Alabama and a Masters of Strategic Studies from the U.S. Army War College.

The Twenty-First Century Conflict Course (F400) is designed to help the students better understand the changing nature of warfare, the military's role in adapting to these changes, and how to best prepare for an uncertain future, all of which is encapsulated in former Chairman of the Joint Chiefs of Staff Gen. Martin Dempsey's call to develop "agile and adaptive leaders with the requisite values, strategic vision, and thinking skills to keep pace with the changing strategic environment."³ To that end, F400 is a sixteen-lesson course that first examines the types of wars and modes of warfare existent in the post-Cold War world, explores what the U.S. response to these has typically been, and then delves into critical facets of what comprises modern and/or future war, including varying power structures, hybrid warfare, social revolutions, civil wars, armed groups, information operations, cyberwarfare, and space operations. As part of the course, students also look at the moral and ethical ramifications of operating in these environments to better understand the value and limitations of applying force. The course concludes with lessons on how to build scenarios to develop better forecasts for the future, and hopefully successful, employment of military force to achieve the Nation's political and strategic aims.

The Strategic Leadership Course (F500) gets to the higher goals of the program—to expose the students to more complex issues of leadership at the strategic level. The course defines strategic leadership in terms of the military's role in national security issues. The course examines the competencies required to succeed in senior positions in today's environment. This sixteen-lesson course assumes students have already succeeded as leaders at the operational and tactical levels but seeks to prepare them for the challenges they will face at the strategic level by providing them with the competencies and awareness needed by senior leaders. The course challenges students to expand their critical analysis and creative thinking skills, improve their communication skills, and expand their capacity for executive decision-making. The course also includes lessons on accepting responsibility and accountability, the nature of command, moral values, and an awareness of the strategic environment. The objective of the course is to prepare students to lead and serve in a joint environment at the strategic level.

Finally, the Research and Writing Course (E700) is one of the backbones of a SAMS education. Like



AMSP students, ASLSP students are required to research and write over the course of the program a monograph of approximately twelve thousand words that meets the standards of graduate-level research and demonstrates competent writing skills. While AMSP monographs are aimed at the operational level, students in ASLSP are required to complete theirs on a topic at the strategic level. Students are given a list of suggested topics that the school compiles from requests for studies that come from myriad sources throughout the Department of Defense. However, students are given broad latitude in selecting their topic. All topics are chosen in consultation with one of the faculty members as a suitable and viable topic. The faculty ensure that the topic is feasible and is one that the students will both learn from and be interested in. Each monograph is written under the guidance of one of the faculty members. Completed monographs are to be of publishable quality and provide value to later researchers on the topic. As with AMSP monographs, all ASLSP monographs are made public through the Ike Skelton Combined Arms Research Library website.⁴

Col. Kirk Dorr, then director of the School of Advanced Military Studies (SAMS), addresses students and guests 23 May 2019 at the SAMS Class of 2019 graduation ceremony on Fort Leavenworth, Kansas. The Advanced Strategic Leadership Studies Program is the War College-level program at SAMS. (Photo courtesy of ArmyU Public Affairs)

Field Studies

One of the main draws for the program is its extensive field studies program. ASLSP students participate in several field studies as part of their education. The field studies are designed to reinforce and expand classroom studies and allow students to meet with senior leaders across joint, interagency, intergovernmental, and multinational organizations. Students also engage with nongovernmental agencies to gain a varied perspective on strategic issues. In most years, students spend approximately seven weeks away from Fort Leavenworth conducting field studies.

The field studies program includes a weeklong series of engagements in the National Capital Region centered on Washington, D.C. While there, students engage with leaders from the U.S. military, Congress,



and governmental agencies such as the Agency for International Development, the U.S. Department of the Treasury, and the Central Intelligence Agency. Additionally, students have had engagements with non-governmental entities such as the World Bank and major defense contractors. The National Capital Region field study is part of the Strategy Course, although lessons from the Joint Warfighting Course and the Strategic Leadership Course are also reinforced during the field study.

Students participate in a two-week field study to Europe as part of the Regional Studies Course. Students go to Brussels, Belgium, for meetings with the U.S. Embassy, NATO, the Supreme Headquarters Allied Powers Europe, and the European Union. If the schedule permits, other engagements and activities are included. After Brussels, the students normally go to Stuttgart, Germany, where they spend a day each with U.S. European Command and U.S. Africa Command. From Stuttgart, students travel to several other countries to interact with their militaries and governments and get a better understanding of the strategic issues those countries face. In the past, students have gone to

Advanced Strategic Leadership Studies Program students and faculty and Daniel K. Inouye Asia-Pacific Center for Security Studies faculty discuss the relationship between China and Vietnam during an Asia-Pacific field study in February 2019 on Fort DeRussy, Hawaii, in preparation for the follow-on visit to the People's Republic of Vietnam. (Photo by author)

Canada, Estonia, Finland, Germany, Latvia, Poland, Sweden, and the United Kingdom, among others.

Like the European field study, the Pacific field study complements the classroom studies and readings of the Regional Studies Course. Central to any Pacific field study is a visit to the Hawaiian island of Oahu. There, the students engage with U.S. Indo-Pacific Command. Afterward, the students have follow-on engagements with the Pacific Air Force, the Pacific Fleet, and U.S. Army Pacific. Given the proximity of these activities to each other, students can see up close the linkage between the combatant command and the force providers. While on Oahu, students also visit the Daniel K. Inouye Asia-Pacific Center for Security Studies and the East-West Center at the University of Hawai'i. Students follow

their week in Hawaii with an in-depth visit to one of the nations in the Pacific region. In the past, students have gone to Australia, India, Korea, the Philippines, Taiwan, and Vietnam. In all such field studies, students engage with government, military, and nongovernmental agen-

Benefits of Attending ASLSP

All ASLSP graduates earn a Master of Arts in Strategic Studies degree and are considered complete for their professional military education SSC requirement (MEL I). U.S. military students since 2016 have also been



All ASLSP graduates earn a Master of Arts in Strategic Studies degree and are considered complete for their professional military education SSC requirement (MEL I).



cies to complement their classroom readings and discussions with real-world interactions that better equip them to deal with international relations. Always unstated but very real is the responsibility of the program to maintain good relations with the host nations and build the personal connections between Army University and other nations and regions.

Students participate in two short field studies of global significance. The relative proximity of Offutt Air Force Base in Nebraska and Scott Air Force Base in southern Illinois gives ASLSP students the opportunity to make overnight stays to spend a day each at U.S. Strategic Command and U.S. Transportation Command. Both of these global combatant commands have been gracious hosts, giving students access to high-level leaders. At Scott Air Force Base, students usually take advantage of the colocation of the U.S. Air Force's Air Mobility Command to conduct engagements with that important component of the U.S. Transportation Command. These field studies form part of the Joint Warfighting curriculum, though as with all field studies, learning areas from other courses are reinforced.

For one week, students travel within the continental United States to visit the more distant combatant commands as part of the Strategy Course. During that week, students engage with U.S. Northern Command in Colorado; and U.S. Southern Command, U.S. Central Command, and U.S. Special Operations Command in Florida. Depending on the year, students have also spent time at U.S. Army Forces Command and other key elements of the military component of the whole-of-government resources available to strategic leaders.

awarded their Joint Professional Military Education II (JPME II) accreditation.⁵ Additionally, U.S. Army students are awarded the SAMS additional skill identifier 6-S. After graduation, a majority of the students will remain at SAMS for their follow-on year, with up to nine serving as seminar leaders for the next year's AMSP class while another graduate joins the ASLSP faculty. U.S. officers incur a two-year active-duty service obligation.⁶ Graduates typically later serve in a brigade-level command assignment or work for a three- or four-star general officer as a member of his or her staff.

Preparation for Follow-on as a Seminar Leader

Along with the field studies program, the other main draw for ASLSP is the opportunity to serve as a seminar leader in the AMSP the follow-on year. While not all students will be granted this opportunity, many graduates say they came to ASLSP specifically to work with and shape the next generation of military leaders. Selection of future seminar leaders and the military faculty member for ASLSP normally is normally announced in the late winter. Preparation for a potential follow-on assignment as a seminar leader for those eligible begins shortly after the start of the new year. Preparation consists of a series of classes and engagements with current seminar leaders and the SAMS leadership on various aspect of the duties. Additionally, where possible, the readings, topics, and exercises in ASLSP overlap with the AMSP curriculum, though in lessons focused at the strategic level. This overlap gives the ASLSP graduates a depth of understanding when they are leading classes in AMSP focused on

operations. ASLSP students are encouraged to associate with one of the current AMSP seminar leaders and spend some time observing their classes, as well as attending the Post Instruction Conferences (mini-PICs) held at the conclusion of each course. The ASLSP faculty, especially the director, work closely with the student selected to serve as the military faculty member the following year to ensure he or she is prepared to assume that role. Future seminar leaders and the military faculty member also attend Army University's Faculty Development Program after their graduation to bring them into alignment with the university's standards.

Attending senior service college at the ASLSP at SAMS has often been one of the most rewarding professional military education experiences in the careers of many officers. Its small size, extensive field studies program, and potential to serve as a seminar leader for AMSP the following year attract a highly qualified group of students each year.

Officers interested in attending their senior service college at SAMS should contact the SAMS office at DSN 585-3302 or commercial 913-758-3302, or the ASLSP director, Dr. Barry M. Stentiford, at 913-758-3289 or email at barry.m.stentiford.civ@army.mil. ■

Notes

1. Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 1800.01F, *Officer Professional Military Education Policy* (Washington, DC: Department of Defense, 15 May 2020), A-B-8, accessed 12 October 2021, https://www.jcs.mil/Portals/36/Documents/Doctrine/education/cjcsi_1800_01f.pdf?ver=2020-05-15-102430-580.

2. Chairman of the Joint Chiefs of Staff Memorandum CM-0166-13, "Desired Leader Attributes for Joint Force 2020" (Washington, DC: Chairman of the Joint Chiefs of Staff, 28 June 2013).

3. "Ike Skelton Combined Arms Research Library," U.S. Army Combined Arms Center, last reviewed 3 February 2021, accessed 12 October 2021, <https://usacac.army.mil/organizations/cace/carl>.

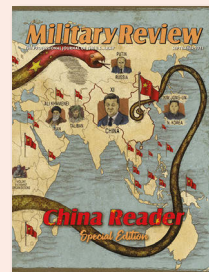
4. Kevin Benson, *School of Advanced Military Studies Commemorative History: 1984–2009* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 2009).

5. Advanced Strategic Leadership Studies Program learning objectives align with the joint professional military education requirements under 10 U.S.C. § 2151 (2011).

6. Ibid.; Army Regulation 350-100, *Officer Active Duty Service Obligations* (Washington, DC: U.S. Government Publishing Office, 26 September 2017), accessed 3 September 2021, https://armypubs.army.mil/ProductMaps/PubForm/Details.aspx?PUB_ID=1001739.

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An Impeccable Spy

Richard Sorge, Stalin's Master Agent

Owen Matthews, Bloomsbury, London,
2019, 448 pages



Lt. Col. John H. Modinger, PhD, U.S. Air Force, Retired

This book, *An Impeccable Spy: Richard Sorge, Stalin's Master Agent*, was one I came across by accident. I had never heard of Richard Sorge. But when reading the dust jacket commentary, with splashy quotes from the likes of Ian Fleming and John Le Carre, I became intrigued with the subject. Fleming called Sorge “the most formidable spy in history.” Le Carre said he was the “spy to end spies.” How then, had I missed this story?

Sorge was born in 1895 in the rich, corrupt, and violent boom town that was Baku, part of the sprawling Russian Empire, at the dawn of the oil boom. His father was German, his mother Russian, having met in Baku. Later, the family would relocate to Germany.

Not long after, World War I broke out, and Sorge enlisted. No doubt, “the shadow of his late father’s stern patriotism” played a part in his decision to join the fight.¹ But any illusions he may have held about the glory of war were quickly, decisively, and brutally shredded, along with many of his friends, on his first day of action. For him, the experience was like going from the schoolhouse to the slaughter block. It was both profoundly formative and shocking for so many of his generation. As such, this “bright young contrarian, found his reason beginning to rebel against the pointlessness of the conflict.”² But that shock would manifest itself in different ways for different people.

To Sorge’s surprise—and likely distress—his soldier buddies, despite the horrors they witnessed, seemed to have little interest in examining the root causes of the conflict in which they had become meat for the grinder. He would eventually be wounded three times and receive a medical discharge. At roughly the same time, he learned two of his brothers had been killed in combat. His last, near-fatal wounding, coupled with the loss of family and friends, crushed any lingering illusions he had. “I was plunged into an intense confusion of the soul.”³ He experienced a revulsion of the worn idealism touted by nations at war and became convinced “that a violent political change was the only way of extricating ourselves from this quagmire.”⁴ Like so many who endure combat, he would undergo a sort of rebirth that called into question so many foundations of the world he had previously known.

His last wounding resulted in two thoroughly shattered legs. Laid up in a bed and unable to walk, he began to read, in search of “the” truth. He became enamored with communism, which he described as “this most difficult, daring, and

Lt. Col. John H. Modinger, PhD, U.S. Air Force, retired, is an associate professor with the Department of Joint, Interagency, and Multinational Operations at the U.S. Army Command and General Staff College, Fort Leavenworth, Kansas.

noble ideology [which strives] to eliminate the causes, economic and political, of this war and any future ones by means of internal revolution.”⁵ The 1917 Russian Revolution cemented those burgeoning socialist convictions. When he had learned to walk again and received his discharge from the Army, he dove headlong into the socialist enterprise within Germany.

In the years that followed, Sorge was recognized for his innate talents and skills and recruited for clandestine work in support of his motherland (Russia), rather than his fatherland (Germany). Part of what made him a tantalizing candidate for recruitment was that he had, in the intervening years since his military service, achieved “academic and journalistic credentials that would serve as a perfect ready-made cover for foreign assignments.”⁶ His illustrious overseas spying career began with a colorful and highly effective stint in Shanghai in 1930. It was there that Sorge honed many of the talents and techniques that would make him such a formidable spy in Tokyo from 1933 to 1941, the focus of the book.

In Tokyo, Sorge’s chief tasks were to ascertain Japanese military readiness and Japan’s designs with regard to the Soviet Union. This task was a difficult one. Japan was not an easy target for spies. The country’s profound suspicion of outsiders had its roots in centuries of isolation. And despite any outward appearance of tranquility, the Japan of 1933 was, in truth, a cauldron of infighting and intrigue. Just like in Germany, a brief experiment with democracy had come up short. In the previous year, the prime minister, finance minister, and several leading industrialists had been assassinated by young Army officers. The economic downturn following the crash on Wall Street, plus a dramatic crop failure, contributed to the intensity of the situation and the scrutiny applied to foreigners. Like many Germans that had suffered through massive inflation and food shortages, the Japanese, collectively speaking, were turning to nationalists versus socialists to rescue them from hardship, but these nationalists varied in their extremism and outlook. As Sorge’s chief task was to determine whether Japan would attack the Soviet Union, it was crucial to know who was really in charge in Tokyo. Sorge was incredibly adept at ingratiating himself with the German community in Tokyo, and particularly its embassy staff, to include the ambassador. His inroads were a direct result of his charm, charisma, flair, refreshingly cavalier attitude toward

authority, and studied insights on Japanese culture. Amazingly, he was able to deliver as much insight on the Japanese as he was the Germans via his harvested network of spies, who proved, somewhat surprisingly, to be very well-connected and highly productive, with stunning access to high-level Japanese government documents and deliberations.

Sorge’s audacity was hard to fathom, as was his luck. He took enormous risks but seemed blessed by some almost spiritual veil of invulnerability for so long. Berlin sent counterintelligence operatives to vet him, but all failed, even if doubts lingered. The Japanese were relentless in their pursuit of spy rings, but he was able to sidestep these efforts for so long, sometimes by design, sometimes by convenient accident. His sordid personal life was likely an outgrowth of all the secrets he had been forced to stow within himself for so long, unable to share with anyone save the always cynical and mercurial Moscow directorate. The twice-married Sorge probably had upwards of thirty affairs while in Tokyo, often with the wives and mistresses of his prime targets, viewing monogamy as a bourgeoisie practice to be shunned. Remarkably, even when a target, most notably German Ambassador Eugen Ott, learned of Sorge’s affair with a wife or mistress, nothing came of it. Sorge’s reckless behavior was fueled—at least in part—by Moscow’s repeated denials of his requests to come home to be with Katya, his long-suffering, *de facto* widow.

One cannot read the story of Sorge’s espionage for long without wondering why he remained so committed to a government that clearly proved itself duplicitous and deceitful, in general, and to Sorge, in particular. In the years leading up to World War II, Stalin had engaged in a deep and ruthless purge of his intelligence agencies, convinced they were all infiltrated by foreign operatives. In so doing, he ravaged their collective effectiveness and encouraged the creation of a stable of “yes men” that would only provide Stalin with tailored intelligence that conformed to his preexisting perceptions, lest they fall afoul of him and subsequently find themselves before a firing squad.⁷ Sorge was clearly convinced at one point in the 1930s that his orders to return home were, in fact, an attempt to kill him—by his own sponsor! He avoided the fate of many other Soviet spies by simply ignoring the order and making himself indispensable. He clearly loathed Hitler, but his distaste for Stalin was also pronounced and only grew with time. Presumably, he figured the

Communist system was just (or at least superior to other forms of government), but its operation routinely maligned by a series of despicable, savage actors. It is truly astounding that Sorge sacrificed so much of his life to the welfare of a vicious entity like Stalin's USSR; that he could place such confidence in a system so warped by violence and wracked by corruption. In the end, the country he served so long and faithfully, saving it untold hardship, did nothing to rescue him after his espionage ring was rounded up. This may have been to cover up Stalin's ineptitude in the years and months preceding Hitler's unleashing of Operation Barbarossa on the Soviet Union. But it could also be the cold, mechanical, grinding of a beast beholden only to its own survival, whatever the cost in lives, where loyalty counts for much, until it doesn't.

A key question for Stalin, in the wake of Operation Barbarossa, was "Can I afford to weaken the Far Eastern areas and use those forces for defense against the Nazi onslaught?" It would be the central question driving Sorge's spy network in its last few months of existence. The answer from Tokyo was "Yes, Tokyo will not attack the Soviet Union." By this time, it seems Moscow was more apt to believe its previously castigated interloper. Stalin transferred forces from the Far East to the front lines opposing the Wehrmacht's push further into Russia. Was this what made the difference in the end? One will never really know, but there is a strong argument to be made that it was pivotal to the ultimate outcome in that Herculean struggle.

Sorge's amazing tale of espionage came to a shuddering close in October 1941. His willingness to tell all, once apprehended by Japanese police, seems strange. Then again, maybe it was a form of release and a way to etch his legacy. He would be executed in 1944 for his crimes, after the Japanese tried to trade him with the Soviets. For their part, the Soviets never came through for Richard Sorge. They never acknowledged he worked for them, throwing under the bus, arguably, the most effectual spy in the history of espionage. Ironically, though abandoned by the Soviets back then, his story was later celebrated by those same Soviets when he was rehabilitated by Khrushchev and made a posthumous Hero of the Soviet Union. His legacy received another boost later when Yuri Andropov was attempting to glamorize the KGB's image.

Owen Matthews' book certainly makes for an interesting read. But one is left wanting to know so much more about Sorge than these pages can deliver! Matthews' scholarship provides valuable insights, for sure, and he definitely deserves a tip of the hat, but Sorge remains a nagging paradox. Why—or better yet how—could Sorge remain a staunch supporter of communism? Why make such sacrifices for an entity that tried to terminate him? That often disbelieved his intelligence reports? That denied him a return home to be with his wife? That betrayed him and other devout communists in a profound and inexplicable way by dealing with the devil and signing the Nazi-Soviet Non-Aggression Pact? One wonders. ■

Notes

1. Owen Matthews, *An Impeccable Spy: Richard Sorge, Stalin's Master Agent* (London: Bloomsbury, 2019), 12.

2. *Ibid.*, 13.

3. *Ibid.*, 15.

4. *Ibid.*

5. *Ibid.*, 17.

6. *Ibid.*, 51.

7. Which happened all too often; at the height of Sorge's Tokyo operation, the Fourth Department's leader, Golikov, was undoubtedly aware that the six former heads of the Fourth Department of Soviet Military Intelligence had been executed by Stalin's henchmen. There are some fascinating excerpts within the texts from Molotov, Stalin's foreign minister, in which he makes some rather honest statements concerning the state of affairs inside the Kremlin under Stalin's tyrannical grip and conspiracy-obsessed mentality.

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Arin Lynn Burgess

16 September 1981–13 January 2022



The staff of *Military Review* was deeply saddened by the loss of Arin Lynn Burgess, visual arts specialist for our journal. She died suddenly on 13 January 2022 at the age of forty.

Arin went to Marionville High School, Missouri, and later studied photography and visual arts at Missouri State University, where she completed her degree in 2006. In December 2012, she began her professional career as a visual arts specialist for the Morale, Welfare, and Recreation activity at Fort Leavenworth, Kansas. In 2016, she was selected for a new position in the Army University Press, working primarily for

Military Review to produce high-quality, visually appealing issues of the journal for publication.

She excelled in this job, selecting eye-catching photo images, reproducing figures and tables to professional standards, and often creating original artwork to support the themes of articles. The aesthetic upgrade in *Military Review* since 2016 is almost exclusively attributable to her.

Apart from her professional attributes, she was generous, kind, and congenial. Arin was much loved by everyone who knew her, and she will be greatly missed by everyone in the Army University Press, as well as the readers of *Military Review*. ■



Sen. Robert J. Dole

22 July 1923–5 December 2021

Born and raised in Russell, Kansas, Robert Joseph Dole (22 July 1923–5 December 2021) established a legal career after distinctive service in the U.S. Army during World War II. In 1942, he joined the Army's Enlisted Reserve Corps and became a second lieutenant in the 10th Mountain Division. He was seriously wounded in April 1945 when a German shell struck his upper back and right arm, shattering his collarbone and part of his spine.

In 1950, Dole ran for political office for the first time and was elected to the Kansas House of Representatives, where he served a two-year term. In 1968, Dole won the Republican nomination for the U.S. Senate, and was reelected in 1974, 1980, 1986, and 1992 before his resignation on 11 June 1996, at which time he focused on his presidential campaign.

Despite the loss of the 1996 presidential election, Dole took advantage of numerous opportunities to engage in a career of writing, public speaking, and television appearances. He wrote several books,

including a 2001 book on jokes told by U.S. presidents, titled *Great Presidential Wit: A Collection of Humorous Anecdotes and Quotations*, in which he ranks the presidents according to their level of humor. His 2005 autobiography, *One Soldier's Story: A Memoir*, chronicles his World War II experiences and the struggle to survive his battle injuries.

Dole never shunned his disability but instead “folded it into his life” by establishing the Dole Foundation to aid the disabled, by aligning himself with the physically impaired, and by lobbying for the Americans with Disabilities Act through Congress.

After he passed, Dole lay in state at the Capitol Rotunda, where President Joseph Biden hailed Dole as a hero of democracy. “America has lost one of our greatest patriots,” said Biden. Dole’s casket arrived next in Russell, Kansas, for a memorial service, after which he lay in repose at the Kansas Statehouse in Topeka. His body then returned to Washington, and Dole was buried in Arlington National Cemetery. ■



Bob Dole is seen here wearing an M-1 steel helmet, circa 1942. He would serve as a captain in the 10th Mountain Division before being seriously wounded in April 1945. (Photo courtesy of the Robert and Elizabeth Dole Archive and Special Collections, Dole Institute of Politics) **Previous page:** Former Sen. Bob Dole addresses the crowd 16 May 2019 during his honorary promotion ceremony to the rank of colonel at the World War II Memorial in Washington, D.C. (Photo by Sean Kimmons, Army News Service)



AN ARMY UNIVERSITY PRESS PUBLICATION

<https://www.armyupress.army.mil>

PB-100-22-03/04

Headquarters, Department of the Army

Approved for public release

Distribution is unlimited—Distribution A



PIN: 211855-000