



DECEMBER 2023 Vol. 107 No. 12

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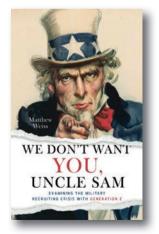




From the archives: Marines with 3/9 Mar, Regimental Combat Team 7, pose for a holiday photo at Forward Operating Base Geronimo, Helmand province, Afghanistan on 25 December 2012. (Photo by Sgt John R. Rohrer.)

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 $The \textit{Marine Corps Gazette} \ (ISSN 0025-3170) is published monthly by the Marine Corps Association to provide a forum for the exchange of ideas that will advance knowledge, interest, and the marine Corps Association to provide a forum for the exchange of ideas that will advance knowledge, interest, and the marine Corps Association to provide a forum for the exchange of ideas that will advance knowledge, interest, and the marine Corps Association to provide a forum for the exchange of ideas that will advance knowledge, interest, and the marine Corps Association to provide a forum for the exchange of ideas that will advance knowledge, interest, and the marine Corps Association to provide a forum for the exchange of ideas that will advance knowledge, interest, and the marine Corps Association to provide a forum for the exchange of ideas that will advance knowledge, interest, and the marine Corps Association to provide a forum for the exchange of ideas that will advance knowledge of the marine Corps Association to provide a forum for the exchange of the marine Corps Association to provide a forum for the exchange of the marine Corps Association to provide a forum for the exchange of the marine Corps Association to provide a forum for the exchange of the marine Corps Association to provide a forum for the exchange of the marine Corps Association to provide a forum for the exchange of the marine Corps Association to provide a forum for the exchange of the marine Corps Association to provide a forum for the exchange of the marine Corps Association to the marine Corps Association to provide a forum for the exchange of the marine Corps Association to the marine Corps Asso$ and esprit in the Marine Corps. Periodicals postage paid at Quantico, VA, USPS #329-340, and at additional mailing offices. • OPINIONS expressed herein are those of the authors and do not necessarily reflect the attitude of the Department of Defense, Navy Department, or Headquarters Marine Corps. "Marine Corps" and the Eagle, Globe, and Anchor are trademarks of the U.S. Marine Corps, used with permission. • MEMBERSHIP RATE: Annual \$42.00 • ADVERTISING QUERIES: Contact Valerie Prefetz at advertising@mca-marines.org/703-640-0107 or LeeAnn Mitchell, VP Sales at 703-640-0169. • COPYRIGHT 2023 by the Marine Corps Association. All reprint rights reserved. • EDITORIAL/BUSINESS OFFICES: All mail and other queries to Box 1775, Quantico, VA 22134. Phone 703–640–6161. Fax 703–640-0140. Location: Bldg #715, Broadway St., Quantico, VA 22134. • E-MAILADDRESS: gazette@mca-marines.org. • WEB ADDRESS: www.mca-marines.org/gazette. • CHANGE OF ADDRESS: POSTMASTER: Send address changes to Marine Corps Gazette, Box 1775, Quantico, VA 22134 or e-mail: mca@mca-marines.org. • For credit card orders, call 866-622-1775. PUBLISHER'S STATEMENT: Publication of advertisements does not constitute endorsements by MCA except for such products or services clearly offered under the MCA's name. The publisher reserves the right to accept or reject any advertising order at his absolute discretion.



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Gen Robert E. Hogaboom.

The Marine Corps Gazette's annual Gen Robert E. Hogaboom Leadership Writing Contest is here. The contest honors the essay that is the most original in its approach to the various aspects of leadership. Authors should not simply reiterate the 11 Principles of Leadership or the 14 Leadership Traits of an NCO addressed in the Guidebook for Marines. Authors must be willing to take an honest, realistic look at what leadership, either positive or negative, means to them and then articulate ways and methods of being an effective leader of Marines.

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DEADLINE: 31 January, 2024

Background

The contest is named for Gen Robert E. Hogaboom, USMC(Ret), who served the Corps for 34 years. Upon graduating from the Naval Academy in 1925, Gen Hogaboom saw service in Cuba, Nicaragua, and China. Following action in a number of key Pacific battles in World War II, he later served first as assistant division commander, then division commander, 1st Marine Division, in Korea in 1954-55. Gen Hogaboom retired in 1959 as a lieutenant general while serving as the Chief of Staff, Headquarters, U.S. Marine Corps, and was subsequently advanced to the rank of general.

Prizes include \$3,000 and an engraved plaque for first place; \$1,500 and an engraved plaque for second place; and \$500 for honorable mention. All entries are eligible for publication.

Instructions

The contest is open to all Marines on active duty and to members of the Marine Corps Reserve. Electronically submitted entries are preferred. Attach the entry as a file and send to gazette@mcamarines.org. A cover page should be included identifying the manuscript as a Gen Robert E. Hogaboom Leadership Writing Contest entry and include the title of the essay and the author's name. Repeat title on the first page, but author's name should not appear anywhere but on the cover page. Manuscripts are acceptable, but please include a disk in Microsoft Word format with the manuscript. The Gazette Editorial Advisory Panel will judge the contest during February and notify all entrants as to the outcome shortly thereafter. Multiple entries are allowed; however, only one entry per author will receive an award.



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DECEMBER 2023

Editorial: Happy Holidays

First, the entire Association and the *Gazette* staff wish all our members and readers a happy holiday season, Merry Christmas, and all the best in the coming year. As our cover reminds us, Marines will always find ways to celebrate even in the most austere challenging conditions. During this festive season of celebrations, we should all pause to remember the many Marines, sailors, and all members of our Joint Force who are right now deployed and in harm's way. Whether operating in the Middle East, training in Europe, or at sea and across the globe, these warriors will find blessings throughout this season of holidays. God speed, victory, and a safe return home.

Our cover also highlights some of the most noteworthy articles in this month's edition. As the Corps continues to modernize capabilities supporting operations as stand-in forces, logistics remains the pacing function. Beginning on page 6, we present a series of three articles originally published online by LtCol Robert D. Wolfe and Maj Matthew T. Barnes, two of the Marine Corps Logistics Fellows at Smeal Business College, Pennsylvania State University. This series title, "Artificial Intelligence in the Marine Corps Logistics Enterprise," is a detailed and realistic examination of the potential application of machine learning capabilities in complex supply and distribution operations. As their thesis statement states: "The Marine Corps logistics enterprise does not have the building blocks in place to use or implement AI in the logistics community. Right now, AI and its application in logistics is a people and skills problem." This series should generate further discussion and we look forward to following the discourse in March's annual Installation & Logistics-focused edition.

Other standout articles this month focus on both training and leadership. In "Do Not Train to Beat Somebody, Train to Beat Everybody" by Capt Joseph G. DiPietro on page 79, the author examines the Corps' requirement to train broadly applicable skill sets and capabilities relevant to the broadest range of threats and environments. In "Faulty Assumptions" by Maj Ryan Shannon on page 46, the author examines the challenges of company command and questions typical assumptions and "the common wisdom" with multiple leadership lessons learned.

Again, to all *Gazette* readers and members of the Association, best wishes this holiday season and success in 2024. Semper Fidelis.

Christopher Woodbridge

>Editor's Note: In the November print edition of the Gazette, LtGen James F. Glynn's article was published with an incorrect title. The article's title should be "Talent Management Tangibles." The online version of the article is titled correctly. We apologize for the error.

MCA President and CEO, LtGen Charles G. Chiarotti, USMC(Ret); VP Foundation Operations, Col Tim Mundy, USMC(Ret); VP Professional Development, Publisher & Editor-in-Chief Marine Corps Gazette & Leatherneck Magazine of the Marines, Col Christopher Woodbridge, USMC(Ret); VP Corporate Sponsorships, Events & Advertising, Ms. LeeAnn Mitchell.

Ukraine Observations

We have all been watching the war in Ukraine over the last few years with great interest. My perspective is that of a Marine artillery officer who fought with 1st-MarDiv in a direct-support firing battery during Operation DESERT STORM. Since that time, I built a successful executive recruiting business with a focus on IC attorneys and executive professionals. This experience helped hone my analytical skills in ways difficult to fully articulate. I offer the below observations about the Ukrainian/Russian war:

The Russians have developed the A-67M fuse mated with their OF47 High Explosive Fragmentation Incendiary projectile in the 3UOF8 30x165mm round that allows for increased destructive effect upon urban concrete and armored vehicles. The fuse relies on free-floating steel balls within the fuse body to delay percussion enough to slightly penetrate the target. There are numerous videos of their 30x165mm autocannons reducing high-rise concrete blocks into rubble; the terminal ballistics of this design is ingenious and worthy of study. More can be found in this excellent write-up: http:// www.thesovietarmourblog.blogspot. com/p/30x165mm-cartridges.html.

I am shocked and dismayed by the complete lack of field skills practiced by both sides. I am referring to the basics of camouflage, concealment, fixed positions, field hygiene, prepared fields of fire, and poorly constructed defensive positions with a complete lack of overhead cover or concealment. This is also apparently the first war in history requiring the use of high-visibility yellow tape around the helmets, arms, and bodies of Ukrainian soldiers. I have heard their justifications via various social media outlets, but this is just beyond my comprehension. Neither side has issued their soldiers any sort of what we know as a poncho liner for their use as field expedient overhead concealment. With the use of thermal image sensing drones, it would not be difficult to manufacture a poncho liner-type blanket with one side having a space-blanket lining. While not a 100 percent solution, this type of camouflaged and thermal signature reduc-



The A-67M fuse mated with a OF47 high explosive fragmentation incendiary projectile in the 3UOF8 30x165mm round. The fuse relies on free-floating steel balls within the fuse body to delay percussion enough to slightly penetrate the target. (Photo provided by Richard K. Bordelon.)

ing/elimination can and will save lives in the future.

I am sure others have noticed that the Russians are now mass-producing first-person view drones using 3D printers. They print the quad body and rotors, then attach electric motors and small cameras. This capability is something we should be able to evaluate and improve upon. We will need a steady supply of drones in our next conflict, the size optimally to carry a payload equivalent to an RPG7 projectile. That seems to be a good starting weight based on the Ukrainian's pioneering work utilizing RPG warheads with first-person view drones.

Finally, I am going to again point out the absolute necessity of not using any sort of social media in any battle space, for any reason, under any circumstances. It is 3 July 2023 as I type; however, in late June, American volunteers located in and around Kramatorsk were so focused on their Instagram and TikTok accounts, with geolocation clearly marked by their own design. We all know what happened next in Kramatorsk with a strike upon a certain hotel/restaurant in the city center. I will not reveal the names of those responsible for this shocking breach of operational security. I argue Marines should not be allowed to deploy into a combat zone with any type of personal electronic device. Others will disagree, but it is the only 100 percent guarantee we maintain OpSec.

I hope this stimulates thinking, I am omitting many other items of note, but

these are what occupy my thoughts currently. Semper Fidelis.

Richard K. Bordelon

Force Design 2030

Frank Hoffman and T.X. Hammes suggested in a letter to the editor that I—and critics like me—have never offered an alternative to Force Design 2030 (FD2030). That is an incorrect assertion. In an April 2022 OPED on Military. com, I suggested a viable joint alternative that would have fulfilled the National Command Authority's guidance to better counter the China threat while supporting INDOPACOM theater-wide. That suggestion was to build a joint task force or combined joint task force command element around the III MEF headquarters that could be task-organized to meet any contingency the Chinese might initiate without creating the redundancy inherent in FD2030. The Marine Corps has successfully accomplished this in operations such as SEA ANGEL in 1991 as well as in response to the 2005 Indo-Pacific Earthquake. This alternative was not seriously considered, and the Marine Corps continued on the path of a single course of action.

In the September issue of *Marine* Times, I challenged the current Commandant to sponsor an independent series of war games to re-look at FD2030 in view of real Chinese capabilities. Such a game might also consider the joint task force concept as an alternative. I argue that a fair and impartial series of such games would show FD2030 to be unsound at the strategic, operational, and tactical levels of war. I would also challenge Mr. Hoffman and Col Hammes to identify a single capability planned for FD2030 that does not already exist in one or more of the other Services. Goldwater-Nichols was designed to help eliminate Service duplication of effort. FD2030 represents the kind of Servicecentric approach that should have been eliminated with increasing jointness.

Gary Anderson

Letters of professional interest on any topic are welcomed by the *Gazette*. They should not exceed 300 words and should be DOUBLE SPACED.

Letters may be e-mailed to gazette@mca-marines.org. Written letters are generally published three months after the article appeared.

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Artificial Intelligence in the Marine Corps Logistics Enterprise

Part 1: It's not pretty: What is artificial intelligence and its components? by LtCol Robert D. Wolfe II & Maj Matthew T. Barnes

arine Corps logistics is moving toward artificial intelligence (AI) as an element of our logistics systems. We will address the challenges for the Marine Corps and provide solutions through a three-article series. Article one, "It's Not Pretty: What is artificial intelligence and its components?" sets up the discussion and addresses what AI is and the building blocks associated with it. The article addresses misinformation or misunderstanding of AI that results from its extremely broad application and the varying degrees with which it is developed and implemented. Article two, "Ît's Not Pretty: How ugly is AI progress in Marine Corps logistics?" will discuss why the Marine Corps logistics enterprise is unable to take advantage of industry technology in timely, relevant, or meaningful ways. The article brings together the magnitude of challenges in implementation for logistics applications. Finally, article three, "It's Not Pretty: How can we start making AI progress 'prettier'?" will discuss an enduring business solution for getting AI

Thesis statement: The Marine Corps logistics enterprise does not have the building blocks in place to use or implement AI in the logistics community. Right now, AI and its application in logistics is a people and skills problem.

implementation right and preventing mistakes early on. It provides tangible and achievable goals to build the capability for execution.

Level-Set Discussion about AI

What is AI? Definitions and capabilities of AI for Marine Corps logistics applications are not uniformly understood, much less agreed upon; furthermore, AI represents broad, dynamic, and evolving technology. There is not a clear understanding among Marine Corps logistics professionals of where the lines between data, information, business analytics, automation, and deep/machine learning are—much less how to formulate and perform these

functions. Adding in AI creates another layer of complication. We will attempt to unify the collective understanding of technology and the path to AI.

Definitions and Building Blocks

In this section, we will provide critical definitions for the essential building blocks of AI. There are several precursors to AI, and it is important to understand how the precursors are linked. AI begins and ends with data. However, the bridge between data and AI is pillared on information, knowledge, analytics, automation, deep learning, and machine learning. Put simply, AI is to data what astrophysics is to arithmetic. There are steps in between that must be refined or, dare say, mastered before diving into a new arena. Ultimately, AI performs human-like analytical tasks based on pattern recognition. Pattern recognition is best accomplished through data manipulation and visualization known as business analytics. Within business analytics, there are critical components of data, information, and knowledge. Below, we provide

>LtCol Wolfe was a Marine Corps Logistics Fellow at Smeal Business College, Pennsylvania State University, and previously served as Battalion Commander for 3rd Supply Battalion. He is currently assigned to the Joint Staff J4.

>>Maj Barnes was a Marine Corps Logistics Fellow at Smeal Business College, Pennsylvania State University, and previously served as Operations Officer for Combat Logistics Battalion 22. He is currently assigned to HQMC Installations and Logistics.

detail for each of these components and the relationship of business analytics with data, information, and knowledge

is depicted in Figure 1.

Data is "the basic individual items of numeric or other information, garnered through observation; but in themselves, without context, they are devoid of information."1

Business analytics is the process of analyzing raw data to draw out meaningful, actionable insights. Effective analytics is the key driver behind data, information, and knowledge. It is embedded within each domain (Figure 1). Without it, we cannot make sense of material to understand the meaning, recognize trends, or arrive at a decision. When looking at a random set of numbers, we can determine it is a phone number. Further analysis can reveal what country it might be from, the state where it was issued, and even to whom it may belong.

Example: Think about random numbers 5553467864, which have no mean-

Information is "that which is conveyed, and possibly amenable to analysis and interpretation, through data and the context in which the data [is] assembled."2

Example: Give meaning through rational connection. 555-346-7864 is a phone

Knowledge is "awareness, understanding, or information that has been obtained by experience or study, and that is either in a person's mind or possessed by people generally."3

Example: Apply useful meaning to the phone number. 555-346-7864 is Jim's

Business Analytics: Examine the data and draw conclusions about the information it contains.

Figure 1. (Figure provided by authors.)

number; he is the owner of a manufacturing business.

Automation is "the ability of software systems and equipment to perform repetitive, monotonous tasks."4

Examples: text notifications on your smart device, assembly lines, and out-ofoffice replies.

Deep Learning/Machine Learning is "a type of artificial intelligence that uses algorithms (sets of mathematical instructions or rules) based on the way the human brain operates" and "the process of computers changing the way they carry out tasks by learning from new data, without a human being needing to give instructions in the form of a program."5

Example: speech and image recognition.

Artificial Intelligence is "the ability of machines to perform tasks that normally require human intelligence recognizing patterns, learning from experience, drawing conclusions, making predictions, acting, and more—whether digitally or as the smart software behind autonomous physical systems."6 "AI makes it possible for machines to learn from experience, adjust to new inputs and perform human-like tasks."7

Examples: autonomous vehicles, smart assistants like Siri, and grammar predictions.

> Like anything else, AI is a building process that requires multiple predecessors to execute correctly (Figure 2 on following page). It is a sequencing of steps from a repertoire of operations, each building from its predecessor so that the goal is better achieved. In business, certain elements must first be refined or created before reaching the desired end state. For example, stakeholders must be identified, roles and responsibilities defined, project scope created, budget formulated, timeline built, milestones established, goals prioritized, and deliverables defined. The Marine Corps is no different. The Marine Corps Planning Process has taught us that there are precursors to the final execution of a well-developed plan. Before we reach the transition step, we must sufficiently

tease out a problem-framing course of action (COA) development, COA wargame, COA comparison and decision, and orders development. Moving from problem framing straight to transition does not work—neither does jumping Marine Corps logistics from its current state to AI without enhancing the predecessors.

Business analytics (data, information, and knowledge) can be accomplished without the use of computers, non-digitally. Even though the use of computers and digital systems can enhance analytics, they can still be accomplished (albeit slower and less efficiently) by non-digital systems and processes. Replicating a non-digital process in digital form should not be confused with automation.

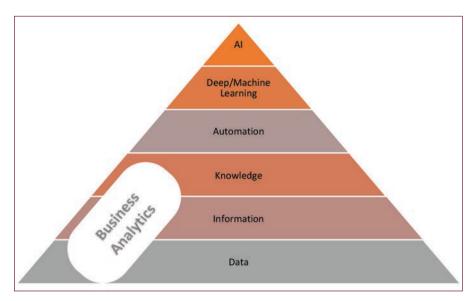


Figure 2. (Figure provided by authors.)

Findings From Relevant Literature

Reading the Commandant's Sustaining the Force in the 21st Century and Talent Management 2030, Marine Corps Gazette articles, and "Stanford University Artificial Intelligence Index Report 2021" provides a great perspective on the direction logistics is headed and the precursors that are necessary before AI exploitation. Military-specific publications establish the status of AI internal to Marine Corps organizations, while academic publications convey a broader perspective and describe the industry overall. Below is a synopsis of those materials to provide readers with a collective understanding and establish common knowledge.

During his time as Commandant, Gen Berger has published several documents that outline his visions for developing a Marine Corps that is relevant and prepared for future conflict environments. A common thread of urgency to address talent and technology shortfalls can be seen throughout the documents:

Sustaining the Force in the 21st Century: Gen Berger states the logistics community must identify the improvements necessary to elevate the MAGTF beyond its current state. He goes on to allude that we must always review, discuss, and debate the capabilities we hope to develop. Finally, he talks about data-driven processes

for conversion into actual task-related information.

Talent Management 2030: Gen Berger primarily discusses the retooling of our personnel system to better recruit and retain especially skilled individuals. The former Commandant says, "unless we find a means to quickly infuse expertise into the force—at the right ranks—I am concerned that advances in artificial intelligence and robotics, among other fields where the speed of technological change is exponential, will force us into a reactive posture. We should have an open door for exceptionally talented Americans who wish to join the Marine Corps, allowing them to laterally enter at a rank appropriate to their education, experience, and ability."8

Gen Berger is referring to the building blocks that are necessary to advance our logistics operations. He is not expressing a specific direction here but is leading the logistics community to identify vulnerabilities and mitigation strategies that will enable advanced technologies like AI in support of the MAGTF. Likewise, following the Commandant's guidance, our recommendations will enhance our current capabilities to better transition into more technological domains.

A review of *Marine Corps Gazette* articles from the last five years highlights that we have an exceptionally large

gap to close from our current logistics practices to what is required in future operating concepts as outlined in key documents like the *National Defense Strategy* (2018), the *Commandant's Planning Guidance* (2019), and *Force Design 2030* (2020). Technology, innovation, and rapid flexibility will be essential for logistics support, yet progress is being slowed by legacy systems and practices:

"21st Century Logistics, Designing and Developing Capabilities": LtGen Dana's (Ret) focuses on hybrid logistics, which optimizes old technologies and blends them with the new, discussing how data will drive our future. He indicates that the Marine Corps must realize the full potential of a user-friendly Global Combat Support System-Marine Corps while anchoring in data-driven predictive analytics. Harnessing a data-based approach will elevate logistics operations to the next level. He then mentions training and education as critical for logistician success. He talks of greater operational understanding among the joint, interagency, international, commercial, and host-nation environments to expose logisticians to new ideas. In article two, we will pick up on this topic and address the analytical skills shortfall that is becoming an ever more abundantly clear impediment to advancements and growth in the technology sphere.

"Future Logistics Challenges": BGen Stewart (Ret) points to logistics information technology shortcomings and our struggles to maintain material readiness for the future we want. He states that we need a user-friendly command and control foundation to advance any future capability or innovative technology. He questions whether the logistics community is invested and taking the right steps to properly educate and train the force for *big data* and advanced technology execution.

"Data Driven Logistics": LtCol Spangenberg et al proposed a year-long experiment that would equip the MLGs with specialized cells focused on data-driven logistics. The cells would consist of six to fifteen Marines with expertise in data engineering, systems engineering, software design, and data analysis. These

teams would "experiment with data (collection, analysis, visualizations, decision support) to tangibly demonstrate capabilities, limitations, and requirements of D2L [data-driven logistics] ... collect, access, and analyze data; produce actionable insights with clear visualizations; and answer questions or solve problems to enable decisions of their host MLG." At its core, the article proposes a solution to conduct formalized business analytics with core competencies in a manner that mimics leading logistics companies and organizations in the private sector.

The key documents discussed above highlight two crucial points. First, we

are unquestionably headed into a data-centric world. Second, we do not have the core competencies, skills, or training to maneuver properly within the inescapable advancements in technology and AI development. We argue we are not even close to commercial industry progress.

The "Stanford University Artificial Intelligence Index Report 2021" highlights the trajectory of AI

research and publications and accurately tracks the current state of the art for AI. The report compares the trajectory and effort of various industries, economic sectors, superpowers, Fortune 500 companies, etc. The key takeaways are listed below:

Private investment in AI soared: The private investment in AI in 2021 totaled around \$93.5 billion—more than double the total private investment from 2020.

AI capabilities and technology shifts: The AI algorithms are more capable than ever and continue to make drastic improvements (language and image recognition). Robotics are less expensive and more accessible than ever before (42 percent price decreases).

The United States and China dominate cross-country collaborations on AI: Despite rising geopolitical tensions, the United States and China had the greatest number of cross-country collaborations in AI publications from 2010 to 2021, increasing five times

since 2010. The collaboration between the two countries produced 2.7 times more publications than that between the United Kingdom and China—the second-highest collaboration on the list.

Increased investment: Data management, processing, and cloud received the greatest amount of private AI investment in 2021—2.6 times the investment from 2020—followed by medical and healthcare.

Technical experts flocking to industry—not government: In 2020, one in every five computer science students who graduated with PhD degrees spe-

the private sector's development of AI. At first look, the rapid increase in the number of *Marine Corps Gazette* articles and journal publications around the 2018 timeframe are parallel—this is a positive. However, it is important to note that these are publications that only mention AI and are not necessarily related to logistics.

A closer look at the *Marine Corps Gazette* articles reveals that of the 47 articles written since 2017, three of them were related to logistics, but they only make cursory mention of AI and address little about what is needed to get to an AI end state. Is three a high

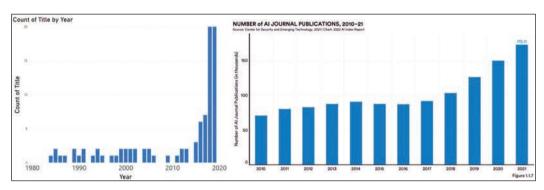


Figure 3. (Figure provided by authors.)

cialized in AI/machine learning, the most popular specialty in the past decade. From 2010 to 2020, most of the AI PhDs in the United States headed to industry while a small fraction took government jobs.

or low number of articles? The answer depends on whether the information in the articles was acted upon. Were the results of their implementation assessed, refined, and redeveloped? The sparsity of articles should make

... we are not collectively discussing how to implement AI, what the requirements are, and what structural problems might exist ...

The chart above (Figure 3), which depict the number of publications written on AI, correlate with the sense of urgency for AI progress in the Marine Corps and industry. The chart on the left depicts the number of articles written in the *Marine Corps Gazette*, and the chart on the right shows the number of articles written in the industry. Publication and research efforts are driving

the corresponding suggestions easy to track, and if they are not being implemented, then they are the wrong ideas, and not enough ideas are being presented. Since, as a logistics community, we are not collectively discussing how to implement AI, what the requirements are, and what structural problems might exist, the three articles written in the *Gazette* have not served

as benchmarks for traction and implementation across the Marine Corps logistics enterprise

Understanding AI

A better understanding of what it can do, some examples of its use, and how it works may increase the priority it is given within the Marine Corps logistics enterprise.

The PBS special, In the Age of AI, provides several real-world examples of recent advances in AI. One of the most powerful lines in the video is: "China is the best place for AI implementation today, because the vast amount of data that is available in China. China has a lot more users than any other countrythree to four times more than the U.S." The host goes on to further explain, "We're talking about ten times more data than the U.S., and AI is operating on data and fueled by data. The more data, the better the AI works-more importantly than how brilliant the researcher is working on the problem. So, in the age of AI, where data is the new oil, China is the new Saudi Arabia."10

In his TED Talk, "The Incredible Inventions of Intuitive AI," Maurice Conti walks through the progression of human ages and argues that we are at the dawn of a new age. Human society has progressed through hunter-gatherer, agricultural, and industrial societies and is currently in the Information Age. Conti argues that the next age is the Augmented Age, in which natural human abilities will be enhanced by computers, robotics, and digital nervous systems. While the previous ages have been defined by passive tools, the augmented age will be defined by generative and intuitive tools based on the abilities of humans, robots, and AI systems to work in harmony and solve complex problems. Conti makes a clear argument that within a human lifetime (64 years), computers started off playing tic-tac-toe (1952), then advanced to beating the best humans at chess (1997), then beating humans at Jeopardy (2011), and finally beating humans at Go (2016). Computers started off playing kids' games and are now able to outperform human thought in our most complex games of strategy.

The video "But What is a Neural Network" contains a clear explanation and demonstration of how a neural network is fundamentally built. The demonstration is based on illustrating how the human ability to recognize a set of handwritten numbers from zero to ten is a very simple task. For example, the number three is extremely easy to recognize even when written sloppily and in several different ways. However, writing a program to recognize digitally written numbers becomes extraordinarily complex. Though the video focuses on neural networks, the host explains that neural networks are the foundation of machine learning. Understanding the mechanics and a specific and narrow application of a neural network and understanding where a neural network is in the progression from data to AI are valuable insights.

The Problem

AI is extremely technical, heavily reliant on technology and extensive/ free-flowing data, and requires technical experts that can manage complex systems. The Marine Corps logistics apparatus is deep. Not only does the logistics domain include the six functions of logistics but embedded within each of them is a consortium of diverse functions including ship loading, transportation distribution, cargo throughput, mortuary affairs, acquisition, arming and refueling, and warehousing, to name only a few. AI is extremely specific in its algorithm application. Data and information are vast and predictive analytics is brought to life by specifically designed algorithms. Data manipulation has a human element; without understanding the data at a fundamental level, we are guessing about what to tell computers to do.

Conclusion

In our minds, understanding the building blocks for any innovation is critical. The breadth and scope of AI are a significant challenge for any industry, and the Marine Corps is not exempt from this challenge. The three primary concerns are: we have fallen behind industry standards; we have significant challenges adopting state of

art for logistics applications; and our pacing-threat competitors are leaning in heavily to develop and apply AI. To win in this domain, Marine Corps logistics must have the goals, talent, and infrastructure to smartly advance it further. In our next article, we will identify the ugly, inconvenient details that currently exist within Marine Corps logistics and must be addressed prior to any deep movement into the AI landscape.

Note

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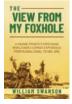
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Artificial Intelligence in the Marine Corps Logistics Enterprise

Part 2: It's not pretty: How ugly is AI progress in the Marine Corps logistics? by LtCol Robert D. Wolfe II & Maj Matthew T. Barnes

his is the second article in our three-part series. The first article discussed the topic of artificial intelligence and how it relates to Marine Corps logistics operations. This article describes how the advancement of our logistics enterprise toward artificial intelligence (AI) cannot rest on highly developed technologies alone.

LtCol Wolfe: I was a previous commander of the 3rd Supply Battalion, a large multifunctional logistics organization; I had a 75 percent and 25 percent rule. Success and effectiveness in running an organization extend beyond effectiveness and efficiency at the operations level. Seventy-five percent of my time was devoted to the tone, temper, and climate of the organization. In other words, things like vision, influence, morale, equality, leadership, mentorship, and decision making affect

>See page 6 for bios.

nance, facilities, budget, and the endless amount of paperwork that must be signed. Twenty-five percent of my time was left over for operations improvement and development. I focused on the conceptual aspects of command, not the technical ones. I relied on and trusted the technical acumen of those professionals embedded within the organization.

Maj Barnes: I was the operations officer for Combat Logistics Battalion 22, a small battalion with a broad set of capabilities (motor transportation, maintenance, medical readiness, supply, engineering, landing support, explosive ordnance disposal, and communications). The battalion had roughly 300

one" capability. The cornerstone of the job was a balancing act to ensure capabilities are maintained and ready amidst incredibly dynamic personnel shifts (permanent change of station orders, promotions, disciplinary actions, end of service, injuries, etc.).

The Problem: Conceptually

The Marine Corps has a group of smart officers that adapt very well. The Marine Corps culture fosters adaptability and decision making with uncertainty extremely well. Unfortunately, the manpower system pays little attention to innate talents, college degrees, or commercial work history. It does not seem to be recruiting specific talent to handle our future data-driven challenges. Instead, it is purely a numbers game. For example, the offensive coordinator does not recruit specific quarterback talent from a pool of college baseball and minor league players. Likewise, Amazon is not recruiting supply chain managers or business analytics or distribution experts from the geology department at Penn State; they are looking for top-performing applicants from the business and statistics departments who have internship experience. The Basic School is often the luck of the draw, with Marines thrown into the logistics world with no formal understanding or passion for the field, and they then receive cursory training in our schoolhouses. There is no clear path to an advanced understanding of how logistics operate and the data

This article describes how the advancement of our logistics enterprise toward artificial intelligence (AI) cannot rest on highly developed technologies alone.

the entire organization. Beyond this, there were the daily requirements that consumed my time: substance abuse control, legal matters, personnel management, medical/dental readiness, training, inspections, safety, career planning, package routing, mainte-

Marines and sailors who possessed around 80 occupational specialties. Due to the broad scope and narrow depth of the battalion, all personnel issues and considerations were unequivocally linked to battalion operations—Marines and sailors become the "one-of-

that supports decisions and feeds new technology. Some military skills need to be developed within the Marine Corps because there is not a commercial industry talent pool: infantry, artillery, etc. However, this is not the case with logistics. Logistics and analytics are in every industry, every university, and every business model. But the Marine Corps training model for logistics and supply officers takes a wide range of individuals and begins their training from zero. This method does not allow for gaining efficiencies provided by university degrees or the latest industry applications. Progress, improvements, and innovation are systematically stunted by the current methods of assigning occupational specialties.

The battleground for AI progress is ugly and full of shortfalls that must be addressed. We will describe the people and skills shortfalls within the Marine Corps' logistics enterprise, which we believe must be addressed prior to the exploitation of AI. We are not saying that we are bad at logistics; however, through the spectrum of business analytics, the Marine Corps logistics enterprise is not prepared to transition current practices toward AI for logistics command and control and decision making. Logisticians across the Marine Corps possess the conceptual understanding, but

driven by decisions about how to manage scarce resources. Business analytics is a significant technical skill required at supervisory and middle management levels, and we propose that it is an altogether missing element in the

based on information. And, finally, prescriptive analytics focuses on what should happen in the future. In other words, based on the predictions, what decision should be made to affect the predicted outcome?

From either point of view, the skills gap remains; it simply shifts from a shortfall in the officer population to the enlisted population.

administration of our logistics structure. Advanced systems will not solve people problems. Back to the football example, a perfect system, designed by the greatest football offensive coordinator, will not reach its full potential without appropriately skilled players to execute it. So, who are the players?

Data Skills Requirement

The major players in implementing artificial intelligence must possess two critical attributes. First, they must have a deep understanding of Marine Corps logistics. Secondly, they must have a high aptitude for technical skills around data analytics.

In the previous article, we described that business analytics is the precur-

Across the three fields of analytics, data visualization is a key component. Data visualization serves two very critical functions. First, the human brain has strong and natural abilities to observe patterns. Therefore, data visualization is a critical step for understanding data and relationships. Second, data visualization is a very powerful tool to convey relationships and communicate concepts to individuals with a wide range of skills and abilities. Data visualization makes concepts from analytics tangible and understandable to people, even when they do not fully understand the deepest technical aspects.

Business analytics software generally falls into two categories: business intelligence and business analytics applications. According to IBM, business intelligence is "an umbrella term for the technology that enables data preparation, data mining, data management, and data visualization." The software company, Oracle Corporation, compares business intelligence and business analytics by stating the purpose of business analytics:

To make data-driven predictions about the likelihood of future outcomes, business analytics uses next-generation technology, such as machine learning, data visualization, and natural language query.²

The variety of available tools and resources to perform business analytics/intelligence are too numerous to cover in this article. However, it is worth mentioning a few entry-level software platforms that are well-known and highly used. First and foremost, Excel can

Data visualization makes concepts from analytics tangible and understandable to people, even when they do not fully understand the deepest technical aspects.

there is an exceptionally large gap in the technical abilities to transition raw data and information into useful AI systems.

We propose that our logistics business structure is off. Structurally, Marine Corps logistics is missing key business attributes within its skills progression. Do not be fooled—the Marine Corps logistics enterprise is a business, even though the business is not driven by profit. It is a business because it is

sor to artificial intelligence. We also explained that business analytics encompasses data, information, and knowledge. To expand on that concept further, the science of analytics is generally divided into three fields of study: descriptive analytics, predictive analytics, and prescriptive analytics. The core competencies of descriptive analytics are rooted in statistical analysis. Predictive analytics builds on descriptive by creating models to predict outcomes

run various basic analytics and Marine Corps logistics personnel do not typically scratch the surface of its inherent capabilities; for example, think solver. Going beyond Excel, other powerful data analytics programs include PowerBI, Tableau, R, and R-studio. These programs are more powerful than Excel and are specifically designed to perform business analytics/intelligence tasks. These programs are important because they are capable of handling data and transforming information into actionable insights to inform leaders as they make decisions.

Current, Disorganized Systems

Maj Barnes: While at Penn State, I chose to pursue a professional certification in business analytics in addition to a master's degree in supply chain

on temporary-duty orders 25 days ago, but he is at a remote training location and cannot be reached, and he did not receive the training that is reflected in our Marine Corps Training Information System. The S-1, S-3, sergeants major, and the individual sections spend hours tracking this information down. All this is, of course, happening in the background as general update briefs, along with PowerPoint representations of maintenance readiness information, are being refreshed. Furthermore, there is other information that must be collected, analyzed, and reported for readiness reporting in DRRS-MC. Put simply, it is too much—too much information, too many systems, and too much redundant effort.

Excess in anything is not a good thing. There are seven deadly sins in

Too much irrelevant data can hide the more valuable data and make an already complex and disjointed network of systems more complex, resulting in faulty control measures ...

management. During the coursework, my eyes were opened to the expansive world of business analytics and its applications. Reflecting on what I learned in the classroom, I looked back on my recent operations officer billet. I had hands-on, daily interaction with a multitude of digital platforms to perform and track battalion operations. The best way to describe the experience is segregated and misaligned. It is a common occurrence that, when there is a data call for training, organizations will use Marine Corps Training Information System metrics, but the Marine Corps Training Information System does not match the morning report, and the morning report is different than 3270 because updates are pending. Then, once the final roster is identified, it is discovered that a lance corporal that checked in two days ago received the training at his previous unit, but it never got entered. Furthermore, there is a corporal that checked out of the unit

supply chain management implementation that are routinely discussed, one of which is having too many options from which to choose.3 In our search among high-level organizations, it was discovered that the Marine Corps logistics enterprise has over one hundred information systems that are used, partially used, or available but ignored by the logistics community, and it is unclear who owns and controls the systems. There are too many managing systems functioning in fast-changing environments. Too many tools and data repositories lurk in the shadows. It is hard to keep pace and know where these systems hide. Most do not interact with one another; rather, they are silos that operate independently. The number of systems is so numerous that many officers do not know they exist, much less how to maneuver within them. Marine Corps logistics information and data are everywhere and nowhere. AI cannot save that business model.

Data collection is a good thing, but with unbounded collection comes risk; indeed, too much data can be worse than not enough. It is clear that there is a wide variety of elements within Marine Corps logistics production that must be monitored. Collecting everything just because it is easy to gather the data is not an appropriate monitoring system.4 Too much irrelevant data can hide the more valuable data and make an already complex and disjointed network of systems more complex, resulting in faulty control measures that keep repeating themselves. Silo monitoring policies from shadow logistics element "mafias" has added to the dilemma. In the end, if we want our systems to have better performance, we must simplify data collection, alter the processes, and have personnel on hand who fully understand analytics. AI will not fix these persistent process gaps. Therefore, AI should not be viewed as a savior for something that is deeply rooted within our core business practices:

Digital waste is especially detrimental to the supply chain. It refers to redundant or unnecessary data that is collected, managed, and stored for no tactical or strategic reason. The amount of digital waste within an organization is typically great. It increases exponentially when one considers the data flow among members in a supply chain.⁵

Skill Set Placement and Point of View

AI implementation requires special analytics talent and skills. Determining where to position the talent is a critical decision in an organization as large as the Marine Corps. The division of labor is not only broken down between officer and enlisted but goes much further into a large array of MOSs.

Within the managerial hierarchy, there are essentially three levels—top, middle, and supervisory. Top-level managers are responsible for controlling and overseeing the entire organization. Middle-level managers are responsible for executing organizational plans which comply with the company's policies. They act as an intermediary between top-level and supervisory-level managers focus on the execution of tasks and

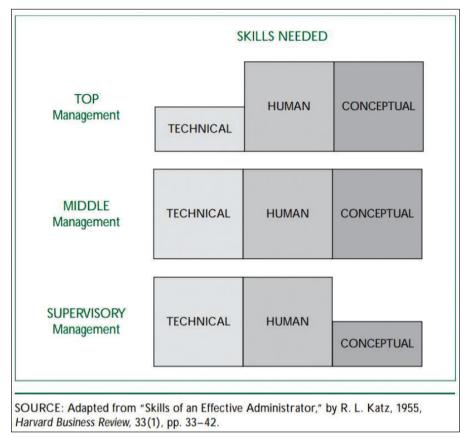


Figure 1. (Figure provided by authors.)

deliverables and serving as role models for the employees they supervise. ⁶

In any organization, there are certain skills associated with each management position. These skills are technical, human, and conceptual. The transition of technical, human, and conceptual skills corresponding with the supervisory, middle, and top management roles is a well-described framework in the business environment (Figure 1). Looking specifically at the business skills required for Marine Corps logistics operations at the battalion level, the top management are the battalion commander, majors, and sergeants major; middle management is captains, CWO3-CWO4, master sergeants, first sergeants, and gunnery sergeants; and supervisory management is first/second lieutenants, CWO/CWO2, and corporals through staff sergeants.

Not all levels of management need the same skills and points of view shift depending on an individual's level. For example, a general officer does not view the skills framework from the same perspective as a battalion commander. At the level of general officer, it is very easy to imagine how battalion commanders can be considered middle management (possibly even supervisory management) when there are regiments, school at Penn State—too late when I am already at the top management level, where conceptual thinking prevails over technical.

LtCol Wolfe: In my previous organizations, (for example, Supply Battalion) we collected a lot of data. In my conceptual leadership role, I did not have the time, resources, or, unfortunately, the training in higherlevel analytic skills to precisely develop, read, or formulate massive amounts of data and information into something actionable. Holistically speaking, I was already past the technical and was operating from a conceptual level. I relied on supervisory- and middle-level managers to oversee this task. All the while knowing that the business-level analytics needed was not taught in Marine Corps schools. This knowledge gap forced my personnel to learn on the go, and often on their own. My CWOs, who specialized in specific domains of logistics, had to take personal initiative to get up to speed with industry to stay above water. I was keenly aware that most of my staff were not trained for that type of technical understanding. Additionally, prior to my assignment with Supply Battalion, I had served as the Field Supply Maintenance Analysis Office-Western Pacific officer in charge. In this data-centric organization, I also saw that something was missing

With respect to AI and supply and logistics operations, the supervisory management level requires understanding independent versus dependent variables ...

divisions/groups, and MEFs between the most senior generals and battalions. With respect to AI and supply and logistics operations, the supervisory management level requires understanding independent versus dependent variables, knowing how to make statistical predictions, and understanding the scope of the data needed (e.g., six weeks or ten years' worth). I (Maj Barnes) did not learn these things until participating in my intermediate-level resident

within all the Marine units my teams analyzed. Not until becoming a fellow at Penn State and participating in the supply chain management coursework did I realize the missing component was business analytics. Today, these functions are often the cornerstones for advances in operations at any level of commercial business operation. If any organization should have the training, specialized skills, and current industry supply chain management tools





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to assist with analytics, it should be the supply battalions and Field Supply Maintenance Analysis Office–Western Pacific, yet neither did! Unfortunately, the norm is to fall back to spreadsheets or ACCESS, regurgitate the data into it, and then attempt as well as possible to formulate conclusions. My experience highlights an area where the Marine Corps logistics enterprise is behind in advanced business analytics. With these skills being the cornerstone of AI, Marine Corps logistics is not positioned to establish AI systems and practices.

In conclusion, no matter your point of view, information wrangling requires the technical understanding of middle and supervisory managers. Logistics technology, information systems, and business analytics tools are not commonplace in our entry- or mid-level training models. We tend to be broad in scope and rarely, if at all, incorporate commercial industry practices or state-of-art tools to implement advanced analytics for logistics operations.

Current Skill Set Pipeline

It is unnecessary for the Marine Corps to create its own talent pool of software engineers that can develop from scratch these complex systems. That is a bridge too far. However, Marine Corps logistics does not have a group of professionals with the technical skills to manage data on an advanced level. Rather, there is a pool of Marines looking at white noise, trying to understand what it means and where it may fit into complex AI systems or even basic decision making.

Brooks McKinney, in his *Northrop Grumman* article, "Defense AI Technology: Worlds Apart from Commercial AI," says:

AI is not simply a "bolt-on" capability that will make everything more capable than before. It doesn't instantly make things smarter. AI must be integrated into a system from the ground up. According to Jackson Bursch, an AI software engineer for Northrop Grumman, defense AI requires a diverse skill set, including more disciplines than the domain of software engineering. "We're not just

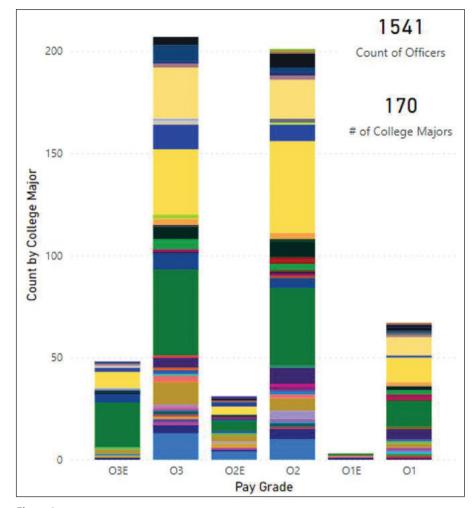


Figure 2. (Figure provided by authors.)

developing software, we're developing complex systems that work in every domain," he explained, So, we need people who specialize in specific sensors for data collection, others who can build AI software and still others who can handle the network engineering that connects those sensors to our software.

The future of logistics problems will be driven by data ...

Talent Management 2030 states, "Every Marine treated like a round peg, every billet like a round hole." The tangible aspect of this concept in the logistics community is that there are

approximately 1,540 second lieutenants through captains with a supply or logistics MOS. The 1,540 Marine officers in that category have approximately 170 degrees among them (Figure 2). The degrees range from ocean engineering and forestry to advertising, art studies, and biblical studies.

Therefore, these individuals were processed as if through a meat grinder. In other words, they were assigned a supply or logistics MOS, sent to three months of supply and logistics school, and then assigned as maintenance management officers, platoon commanders, supply account holders, etc. Logistics problems have always been calculus problems—constantly changing in space, time, and scope. The future of logistics problems will be driven by data, restricted communications, and deep understanding. As an example, consider the following situation.

A logistics unit will be on the move from Objective D to Objective E. They know Objective E is seven days away. The maintenance team is thinking about where they will be seven days from now. Due to communications restrictions and security considerations, it is unsafe to transmit from the locations. So, the team programs a quadcopter to take off from Objective D in three days. Therefore, they will be four days from Objective E with new requirements. Applying an eighty percent accuracy to the timeline, what are the high and low estimates of the team's actual arrival? What are the risk factors of early or late delivery? What will the future requirement be?

shortfall in the officer population to the enlisted population. In contrast, industry is specifically targeting these skills in their recruitment. If they need a supply chain manager or business analytics skill set, they are not recruiting forestry majors from college or the workforce; rather, they are targeting the skills they need. This goes back to Figure 1 and identifying where the organization needs the technical skills.

System Security and Bureaucracy

Another strategic business consideration is that, if we had the talent pool today, the bureaucracies and security measures in place would prevent these individuals from accessing the tools

and Microsoft Project, which are basic business tools. Access to open-source tools like R-Studio and Tableau is even harder and more restrictive, with limited licenses. With systematic Marine Corps restrictions on commercial industry logistics tools, the transition to artificial intelligence cannot be realized at a rapid pace.

Conclusion

From our perspective, data overload, skills and talent shortfalls, thousands of people with hundreds of degrees and multitudes of occupational specialties, hundreds of systems, untethered information collection, and restricted software access in the logistics and supply community makes the landscape for AI implementation very ugly. This is a system in disarray. Moreover, artificial intelligence and data analysis are rapidly developing fields, and staying at the cutting edge requires serious strategic decisions aligned with future visions.

... artificial intelligence and data analysis are rapidly developing fields, and staying at the cutting edge requires serious strategic decisions ...

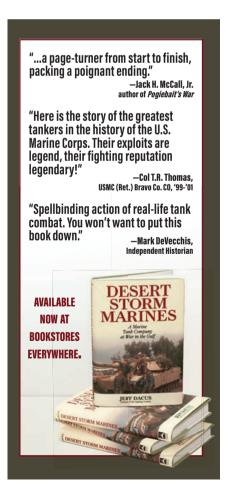
To think about data and information in this manner, both the person transmitting and receiving the information must understand probabilities, error rates, sensitivity analysis, rates of change, and so forth. LtGen Wissler (Ret), in his article, "Logistics: The Life Blood of Military Power," says that logistics is the most complex capability provided by the military. The depth, breadth, and scope of logistics are immense and intricate. Alan Estevez, former principal deputy undersecretary of defense for acquisition, technology, and logistics says, "Logistics isn't rocket science ... it's much harder!"7

The skills gap does not go away by redefining roles. One could argue that all officers must be conceptual thinkers, or that filling unrestricted officer seats by targeting specific business analytics skills would be too restricted. These arguments make sense because leaders that are required to make decisions and influence outcomes are needed and are a major part of the management hierarchy. However, recruiting talent in this specific way results in an enlisted skills gap. From either point of view, the skills gap remains; it simply shifts from a

required to perform AI precursors of analytics. Delving into the systems and information security risks that are naturally inherent to the subject is beyond the scope of these articles, and indeed, free-flowing information and unhindered access to data is a risk. Furthermore, open-source programs are an integral part of developing AI systems. In the article, "Why Is Open-Source So Important? Part One: Principles and Parity," the authors discuss the importance of open-source programs.

'For every single branch of IoT and AI there's an army of companies competing to have their technology become the 'new standard,' says Ontañon, 'those companies developing their technology the open-source way are in a much better position to get ahead of the rest.' Quite simply, this is because open-source technology has thousands of skilled workers building, checking, and testing code in real-time and in any number of different applications, and thousands of heads are better than one.⁸

It would be a monumental hurdle for a lieutenant to get permission to have a lot of leading-edge tools such as PowerBI



In our next article, we will present and discuss solutions that would chip away at the ugly, making it prettier for AI and other advanced technology to flourish.

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Quote to Ponder:

"What makes the general's task so difficult is the necessity of feeding so many men and animals. If he allows himself to be guided by the supply officers he will never move and his expedition will fail."

-Napoleon, Maxims of War, 1831



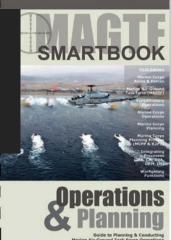
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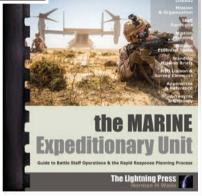
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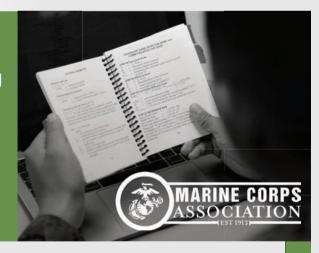
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Artificial Intelligence in the Marine Corps Logistics Enterprise

Part 3: It's not pretty: How can we start making Al progress 'prettier'?
by LtCol Robert D. Wolfe II & Maj Matthew T. Barnes

ntroduction

In our first article, we discussed the definitions of artificial intelligence (AI), business analytics, data, and other similar terms to level set understanding. In our second article, we described how "ugly" the precursors of AI are within the Marine Corps logistics enterprise and alluded to fixes that must occur for successful AI implementation.

We began this research as an effort to describe how to implement AI in logistics applications. However, through our research, we uncovered an inconvenient truth that the current personnel involved in logistics do not possess the multitude of technical skills required to manage, enable, or implement AI systems.

In this article, we present to you a business case that outlines a fundamental shift in how we view our logistics operators in a data-driven world. AI applications require constant and realtime development, maintenance, and updates. AI applications are also specifically targeted at well-defined decision points. We cannot ask contractors to build thousands of different AI applications to manage deck plate issues. Global Combat Support System is our current enterprise resource planning database, and it has a lot of information that may or may not be useful, depending on the decision point at hand. However, what is more important is reliance on an individual's ability to carve out the right data from the system, create

>See page 6 for bios.

the right inferences, then present the information to the decision maker. Business analytics, the use of technology and software tools, the creation of decision trees grounded in data, and a basic business understanding of what needs to be done must be built by our own logistics personnel. In business, executives are continually faced with

Al applications require constant and realtime development, maintenance, and updates.

a question: do they make a capability within the organization, or do they buy it by outsourcing the capability? We argue that professional skills need to be developed within Marine Corps logistics personnel instead of trying to purchase systems or contracts to develop AI applications.

Purpose

The purpose of this article is to formalize our ideas about the training, education, and recruitment of logistics

professionals that will enable AI development and improve our broader logistics community in a rapidly advancing technology- and data-driven world.

Objectives

To achieve this purpose, this article will highlight the need for designing a sound business strategy, propose solutions that should be included in the strategy, and ensure implementation is tracked through a strategy map. Strategic implementation will ensure changes are well-founded, made based on the strategy, and not lost as leaders make permanent change of station moves and shuffle between billets. And finally, the Marine Corps can incrementally build a logistics force that is astute in the data domain.

The strategy must tackle key short-falls:

Vision: Marine Corps logistics is at a critical decision point: take a risk to rapidly move toward the shiny object of AI without the appropriate strategic building blocks and talent, or take the prudent risk to patiently wait and build from within. A long-term strategic vision is necessary here.

Labor: Ideas like postponement and supply chain design/strategies are rooted in business analytics. So, who is responsible for business analytics? Who is trained and capable? Who has refined abilities to perform proper business analytics?

Talent: Make the capability, do not buy it. If the Marine Corps logistics

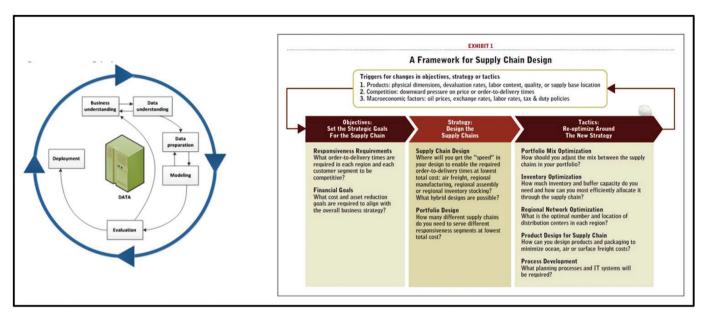


Figure 1. (Figure provided by authors.)

enterprise decides to buy commercial solutions (consultants, contractors, or systems), they are not going to have the Marine Corps' business understanding. Likewise, having underprepared Marines tackle the problem is like asking a right-handed person to write with their left hand. Therefore, specific talent, expertise, and aptitudes need to be brought in at the entry-level and woven into the fabric of logistics professionals.

To maintain a productive focus on AI implementation for logistics decision making throughout the organization, established frameworks for data mining and strategic implementation should be used. Above is an example of how IBM's Cross-Industry Standard Process for Data Mining would support a strategic framework aimed at optimizing the supply chain (Figure 1). Notice that business understanding, data understanding, data preparation, and modeling are parts of the core structure of the chain. Data handling is the bedrock of their network design. Indeed, these core elements are the anchor points in any logistics operation—Marine Corps logistics included—no matter the desired end state. This combination of the Cross-Industry Standard Process for Data Mining and the "Framework for Supply Chain Design" is one of a thousand models of business processes and tools used in almost all industry efforts.

Solution: Enterprise-Level Conceptual, Strategic Actions

To unpack the statement below, we need to have a common understanding of business strategy, permanent structure change, operational effectiveness, and types of innovation. We will discuss each of these components; but first, here is the statement:

As the assessment in preceding articles indicates, the Marine Corps does not have a sound business strategy to keep up with advancements surrounding AI. We are stuck in stage one operational effectiveness, trying to implement AI as disruptive innovation. We do not understand that we are at the precipice of permanent change to the logistics structure regarding data usage and visualization. Data is critical because the future of supply and logistics is rooted in data. People at all levels in the organization will have to understand data, how to collect it, manage it, manipulate it, and translate it into relevant and timely decisions. The ability to do so rests in technical skills, knowledge, and access to relevant systems.

Business Strategy

Business strategy is a well-defined, overarching, and long-term plan to

achieve a certain goal. Strategies include well-understood plans, timelines, goals, and assessments to be successful. The Marine Corps' logistics challenges match what current business executives are seeing in various industries (Figure 2 on following page)—a shortfall in technical skills to perform business analytics. Businesses are aggressively identifying these gaps and deliberately developing business strategies to address the shortfall; it is a matter of survival because they are realizing that without these competitive advantages, they will not succeed against competitors who are able to make better decisions faster and more efficiently. The following statement is a synopsis of survey results from 60 senior-level supply chain executives:

> They see an urgent need to get better control over their supply-chain technology, which will likely be possible only with a skilled workforce trained to use new digital tools at speed and scale. Some 90 percent of leaders surveyed say they plan to increase the amount of digital supply-chain talent within their organizations, through a combination of in-house reskilling and external hires. Just over half also expect permanent changes to their planning processes as the next normal, such as greater centralization of planning activities, shorter planning cycles, and introducing advanced-analytics techniques. 1

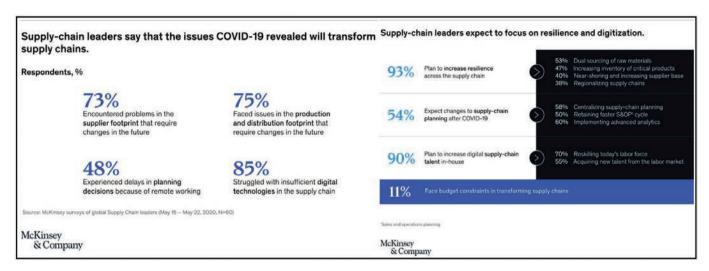


Figure 2. (Figure provided by authors.)

Therefore, if 90 percent of companies are planning to increase digital-supply-chain talent in-house and introduce advanced analytics (Figure 2), the Marine Corps should keep pace with these strategies.

Permanent Structure Change

Before such adaptations can be made, operational effectiveness must be internally supportive versus internally neutral. In his article, "Triple A Supply Chain," Hau L. Lee describes how successful businesses tackle permanent structural changes in their organizations. He says they foster agility, adaptability, and alignment to keep pace with permanent structural changes in industry. AI is undoubtedly a permanent structural change in the way Marine Corps logistics operations will be executed and managed.² Case study reviews show us that time and again, organizations that do not appropriately manage change cannot keep up with rapid and critical advances. For Marine Corps logistics, the currency is time and accuracy—sometimes the most important factor is a fast decision, and sometimes the most important factor is an accurate decision. The Marine Corps will struggle to make competitive, timely, and accurate decisions if it does not properly manage the transitional changes that lead to AI.

Lee also addresses the most common pitfalls and mistakes. He describes that supply chains often become uncompetitive because they do not adapt to changes in the structures of markets or remain aligned with the strategic objectives of the organization. Adapting to technology and data and remaining aligned with the commandant's talent management strategies is needed. According to Lee, "companies may find

change in technology and data advancements, and the Marine Corps must do the same. At first, failure to make these appropriate adaptations will make it difficult to make the most basic logistics decisions; subsequently, it will be difficult for the Marine Corps to interface with other Services, industry lo-

Companies must adapt to the permanent change in technology and data advancements, and the Marine Corps must do the same.

it tough to accept the idea that they must keep changing, but they really have no choice" and "most companies don't realize they face near-permanent structural changes/shifts in the market like advances in technology." Companies must adapt to the permanent

gistics organizations, and open-source systems. Ultimately, it will hinder the Marine Corps from making rapid and accurate sustainment decisions to support units fighting an adversary.

Stage	Measures			
 Internally neutral 	The objective is to minimize operations negative potential.			
	Firefighting is common.			
	Outside experts are called in for strategic decisions.			
	Operations are primarily reactive.			
2. Externally neutral	Industry practice is followed.			
	The aim is to achieve competitive parity.			
3. Internally supportive	Operations investments support the business strategy.			
	An operations strategy is formulated and pursued.			
4. Externally supportive	Operations is involved upfront in major strategic decisions			
	The aim is to achieve a competitive advantage through operations.			
	The goal is to achieve competitive superiority.			

Figure 3. (Figure provided by authors.)

Operational Effectiveness

There are four stages of operational effectiveness commonly understood in business education and execution (Figure 3). In the book, *Operations and Supply Chain Management for MBAs*, organizations are expected to progress through these stages to meet strategic objectives. This framework guides organizations to actions that move them to being healthy, sustainable businesses.

Marine logistics sit firmly in stage one—having poorly focused objectives, firefighting, outsourcing to experts, and being reactive. At a minimum, the Marine Corps needs to elevate its logistics operational effectiveness from stage one to stage two. The aim of achieving competitive parity with standard-setting logistics organizations like Walmart, FedEx, and West Marine is to help focus efforts and establish limits. By understanding and following industry standards, it is possible to have a benchmark for comparison. The thing the Marine Corps has in common with leading organizations is that everyone uses enterprise resource planning systems, and Oracle databases (like Global Combat Support System) are high-caliber systems. However, unlike leading companies, the Marine Corps does not hire skills and talent to utilize these resources. In fact, moving from stage one to stage three would probably be the most ideal. Our business model in the Marine Corps is unique and requires specific tailoring. Therefore, specifically formulated strategies supported by operations investments are required, in other words, alignment. Advancing to stage four is unnecessary. Stage four implies that the organization is leading development and innovation. We do not need to be ahead of commercial industry in this effort; we do not have the research and development resources. We need to be at stage four for Marine Corps warfighting, not for logistics applications.

Types of Innovation

Innovation is not truly understood without understanding where effective innovation is best implemented. In the article "How Many Supply Chain Innovations Are Truly Revolutionary?"

the author discusses two kinds of innovation: sustaining and disruptive.⁴ Disruptive innovations are drastic. They change the whole idea about something—its process and design. It gets everyone excited. Sustaining innovations move organizations forward at a steadier pace with innovations and ideas that are more grounded and incremental. Executives view disruptive innovation as the shiny object in the room and as the most glamorous object to pursue. The author warns that executives tend to gravitate toward the disruptive when they should be more focused on the less exciting sustaining innovations. The author goes on to say that "incremental change represents one of the most powerful weapons companies have to stay ahead of the competition."5

Wrap-Up for Strategic Enterprise-Level Solution

Is AI a sustaining innovation or is it a disruptive innovation? It should be treated as a sustaining innovation. However, it is currently and incorrectly viewed by leadership as a disruptive innovation. We must not misjudge where to align our innovation. The way companies are moving toward AI is radically different than our current logistics design. Our design should be matured through a strategic and incremental approach. We are not rejecting AI. In contrast, we agree that it is likely

Is AI a sustaining innovation or is it a disruptive innovation?

the way of the future, but conceptual shifts in thinking are needed to move to stage two of operational effectiveness. Therefore, our idea is to ratchet down the glam of AI and focus on sustainable measures to improve the AI building blocks or precursors discussed in our first article: data, information, knowledge, automation, and deep/machine learning. Shifting our focus on AI from a disruptive innovation to a sustaining innovation will enhance and grow our

response to the permanent changes we are seeing in data and technology. There are very important things needed to strengthen our logistics capability to remain agile, adaptable, and aligned to the permanent structural changes of data and technology. Investing in people, training, and education will likely enable AI in the future as well as make us better in many other areas of logistics operations.

Solution: Immediate, Targeted Actions

We have identified achievable actions that can be developed now to prepare the logistics landscape for permanent advancements in technology and data proliferation. We outline specific logistics fault lines that must be improved to better position the logistics enterprise to compete in the data and technology domain.

Dr. Langley, a professor who teaches Supply Chain Innovation and Transformation at Penn State's Smeal College of Business gave his answer to the question, "What are the precursors that have the best chance of success at implementing AI for logistics and supply chain management?" as follows:

Facilitating the uses of AI can be accomplished with the help of capable people who have the math and statistics qualifications to understand and implement relatively concisely defined applications of AI. This would need to include having capable talent in the relevant areas of math and statistics, in coordination with those having operational and strategic involvement in logistics and supply chain. Then, this could be a steppingstone to conceptualizing and launching a larger and more organizational-encompassing plan that would involve AI.⁶

Dr. Langley's analysis is well aligned with the key observations we have made in our research and based on our experiences in the operating forces. Namely, we are lacking technical talent in entrylevel (supervisory management) positions. Furthermore, the skills need to be developed and cultivated through clear talent management practices; AI is not a commercial off-the-shelf system that can be purchased.

Professional Education Opportunities (Enlisted and Officer)

Professional education opportunities are already in place to some extent in other areas, but they have not been fully executed within business analytics, for logistics. Again, the future of logistics is rooted in data, and we must firmly plant Marine talent in appropriate jobs to fully optimize the benefit of data collection. The goal is to start building a base from within our ranks that can maneuver through rapidly advancing technology and exponential information flows. A start is to direct and fund ten enlisted and ten officers to complete a certificate in business analytics from Smeal Business College, Penn State University, and then grow this number over time; make it mandatory for logistics and supply chain officers to get analytics certifications from reputable sources before attaining the rank of captain; and send Marines to formal Oracle training programs and place certified Marines within Marine Logistics Groups, Logistics Command, and Logistics Division, Installations and Logistics to function as operational, business, and data analysts.

Establish Lower-Tier Corporate Business Fellowships with Large Logistics Enterprises

Through the Marine Corps topand intermediate-level schools, we send individuals to think tanks, academic institutions, interagency programs, as well as a few corporate businesses every year. These programs target more senior Marine officers to develop conceptuallevel understanding. They do not target developing technical skills or the how-to of business operations. No one seems to be learning best practices for distribution, warehousing, procurement, or network design for holistic logistical or supply-chain operations. These opportunities and skills should be offered and taught to the lower tiers (e.g., first lieutenant, captains, sergeants, and gunnery sergeants). It would be beneficial to send logistics specialists to supply-chain industry leaders like Walmart, Home Depot, Scotts Miracle Grow, Amazon, and many others, giving them a clear directive to understand the companies' business models, the systems, software, and technology they use, the analytics they espouse, and how all these elements translate into executive decision making.

Adjust Logistics and Supply-Related MOS Pipelines

The Marine Corps should recruit college graduates with degrees in supply chain management, statistics, data science, analytics, and other similar areas to be contracted as logistics or supply officers instead of assigning an MOS at The Basic School. To do so means to hunt for the talent we need to survive in this data environment and slowly begin to embed it within the foundation of Marine Corps logistics. Industry would never hire an art studies student to work logistics operations and data management, but the Marine Corps does. Instead, industry would recruit the specific talent that they need, and the Marine Corps should begin this process incrementally. Not all logistics and supply officers need to fit this model, but five to ten percent could be an achievable initial goal. To take it a step further, the Marine Corps

could take the first step by coordinating with Smeal College of Business at Penn State University. This would strengthen the already strong Marine Corps fellowship program at Penn State. A productive start would be providing one to three positions at the MLG and Headquarters Marine Corps Installations and Logistics levels.

Strategy maps provide organizations with better visualization of strategic business processes and provide an understanding of strategy interactions. Our proposed solutions are aligned with the strategy map Figure 4 (on following page). It is essential to note that as the Marine Corps onboards talent and skills for this effort in the form of internships and recruiting efforts, those individuals need to be clearly aware that they are walking into newly defined roles. They cannot have the misperception they are walking on well-trodden paths. They will be the individuals expected to mature the effort and make progress.

Failure is a certainty if we remain on the current path. Right now, Marines are seeking education opportunities independently by completing degree and certification requirements on their own

To take it a step further, the Marine Corps should look to establish a new MOS for maintenance management officers (e.g., school trained in business analytics, data visualization, etc.).

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Funded Internships for Professional Graduate Students from Relevant Degree Programs

Businesses are doing this on a large scale. Companies like Dell, Johnson & Johnson, Shell, and FedEx, to name a few, team up with universities and provide paid internships for business school students during the summer prior to their graduation. The Marine Corps

while often personally funding their programs. Marines that have an interest in this area are watching YouTube videos and getting self-help books to read on the weekends and after hours. This is the type of great personal initiative that we love to see in the Marine Corps, but it is not a strategic business model to follow at the enterprise logistics level.

High-Level Timeline

Billet turnovers, shifting priorities, and lack of focus will be hindrances to implementing these changes. The timescale for changes to take effect will

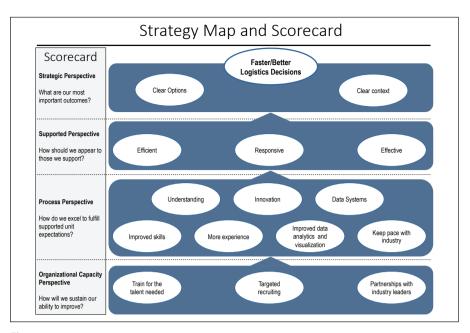


Figure 4. (Figure provided by authors.)

be slow. The people and organizations that implement the changes will not be the same people and organization to assess the effectiveness and make adjustments. Therefore, understanding the timescale is critical to achieving success. Just as the Commandant's Force Design is not a one-year project but a ten-year plan to slowly move the Marine Corps toward his vision, so also our concept to infuse targeted logistical talent within our ranks to harden Marine Corps logistics conveys long-term vision. To survive changing technologies and remain flexible and inclusive of the nature of AI and analytics involves incremental steps to populate the force with the talent needed. At a minimum, this is a five-year process to infuse the force with critical technical skills, and talented logistics and supply-chain managers. The results of this type of effort will be seen over longer periods of time, and in this case, more training, and over longer periods of time, is better. For example, sending more Marines to get formal skills will result in faster progress toward AI management.

Conclusion

Essentially, the goal is to use AI to make better and faster decisions. A lot of time is wasted trying to put information into context, but by understand-

ing infographics, statistics, and probabilities, an individual can quickly put information into focus for quicker and better decisions. Humans conducting analytics are the foundation to stay in step with changing information and technology environments. To keep pace with future innovative advancements like AI, employing the correct people is a top priority, then the systems—not the other way around. For example, only trained drivers drive Formula One race cars. If a random person is asked to drive the car, he would not even know how to get in, much less buckle in and start the vehicle—and then drive it? He would be lost. The environment is foreign, and the levers, buttons, and diagnostics would be meaningless. Business analytics tools and AI are high-performance vehicles. Without the proper talent and training, a person is looking at blank screens and mounds of data that mean nothing. Great information is embedded within the tools Marines use. Having talented Marines with the background and training in advanced analytics is critical to "driving" the AI innovations of the future. Having the types of people that will drive AI innovation involves taking what we have plenty of Marines that possess a deep understanding of Marine Corps logistics and supply—and giving them the

skills and education required to push business analytics into AI applications.

Elon Musk wants to go to Mars, but he is not going there tomorrow. He and many others in his organizations have been working for over a decade with many precursors and contributing factors to inch closer to the goal. The DOD, the Joint Staff, and the Marine Corps all want some level of AI. This is a great vision and something we should move toward, but it will not happen overnight. There are precursors and contributions that must be made to get us there smartly.

These articles represent our contribution to the vision of implementing AI in Marine Corps logistics. We hope others will build on the concepts we have mentioned and take it to the next phase of development.

Notes

- 1. Knut Alicke, Richa Gupta, and Vera Trautwein, "Resetting Supply Chains for the Next Normal," *McKinsey*, July 21, 2020, https://www.mckinsey.com/business-functions/operations/our-insights/resetting-supply-chainsfor-the-next-normal.
- 2. Hau Lee, "The Triple-A Supply Chain," *Harvard Business Review*, October 2004, https://hbr.org/2004/10/the-triple-a-supply-chain.
- 3. Ibid.
- 4. Jim Rice, "How Many Supply Chain Innovations Are Truly Revolutionary?" *Supply Chain 24/7*, January 2019, https://www.supplychain247.com/article/how_many_supply_chain_innovations_are_truly_revolutionary.
- 5. Ibid.
- 6. Email correspondence between authors and Dr. Langley in June 2022.



Closing the Gap on Expeditionary Supply Chain Management Education

Connecting the needs of the future force and how we train supply officers

by Maj Stephen M. Rondone & Maj Jon C. Herrera

uture, high-intensity conflicts against strategic competitors will be decided by the military force that can maintain the initiative over their adversary. Speed and initiative apply to kinetic, non-kinetic, and sustainment actions across all warfighting functions. Sustainment is the key to maintaining the initiative. The challenge to sustain maneuver forces in the anticipated future fight is a problem set Marine Corps supply officers have not planned to face in a generation or experienced since World War II. The leading operational concepts of distributed maritime operations (DMO), littoral operations in contested environments, expeditionary advanced base operations, and the Marine Corps' Concept for Stand-in Forces (SIF) influence Force Design 2030 to provide a tailored, capable Marine Corps force. The Force Design 2030 force must operate effectively across the conflict continuum and within the adversary's weapon engagement zone.³ These concepts inherently involve unique logistical demands that will only be answered by creative approaches to supply chain management and sustainment. 4 Investments in connectors and conceptual foraging concepts, while value-added and worth serious consideration, will not alone bring about victory.5 Marine Corps forces operating as the SIF are required

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"The Marine Corps must change the way it is organized, trained, manned, equipped, and employed."

—Force Design 2030, May 2022 Update

to be "relatively simple to maintain and sustain," yet the reality is anything but simple due to the tyranny of distance, low-signature and survivability requirements, procurement laws and regulations, and steady-state fiscal constraints supply officers are educated in (think financial improvement plans/financial improvement and audit readiness). 6 The Marine Corps must create and grow a generation of competent critical thinkers and problem solvers within its supply officer ranks to effectively answer the growing number of future complex sustainment requirements. The Marine Corps must address this complex problem set by creating a cadre of technically proficient and expeditionary-minded supply officers. To do so, the Marine Corps must institute MEF-sponsored primers across the enterprise to entrylevel supply officers and create a supply officer-centric career-level course focused on expeditionary operations in austere environments.

The SIF concept calls for low-signature sustainment and dynamic sustainment mechanisms to be responsive when requested by highly mobile small units within the weapons engagement zone but is not addressed within any formalized education for supply offi-

cers. There is a disconnect between the needs of the future force and how we train our supply officers.7 The current supply officer training and education pipeline is not postured to effectively meet the demands of this future SIF as it currently prepares supply officers for garrison and mature theater landbased sustainment at the consumer level.8 Supply Chain Management Officer Course (SCMOC), a 68-day program of instruction focused on property management, fiscal management, procurement, general warehouse storage and distribution, and general combat service support produces a basically trained supply officer who can supervise the management of a using unit account in garrison. ⁹ The SCMOC culminating event, the Account Management Exercise and MAGTF Operations Exercise, simulates the supply support requirements for a battalion- or squadron-level command Unit Deployment Program deployment to Okinawa, Japan.¹⁰ While SCMOC produces a basically trained supply officer who can generally navigate the myriad of garrison-focused fiscal audits, internal controls programs, and Field Supply and Maintenance Analysis Office inspections, the SIF concept and Force Design 2030 demonstrate the need for supply officers to be proficient in sustaining forces in expeditionary and austere environments.

The first way the Marine Corps must address this technical proficiency gap, specifically with entry-level supply officers, is to formalize a one- to two-week, MEF-sponsored primer for supply officers within the first 30 days of reporting to their first operational unit. Freshly minted supply officers arriving to the fleet have a limited understanding of the operating environment, current requirements, or support and resources available to them in both garrison and deployed environments. The MEF-sponsored primer must be MEF area of responsibility-focused. It should include MEF-specific policies and procedures, budget formulation and execution, enterprise and area of responsibility-specific systems management, command relationships, and adjacent and lateral support available across the joint logistics enterprise (JLEnt).¹¹



Lighterage operations conducted by Navy Cargo Handling Battalion ONE. (Photo by Chief Petty Officer William Parker.)

The lead time and acquisition authorities required for tying into sustainment resources and capabilities across the JLEnt can be a significant constraint for a deploying unit.¹² Knowing and understanding what capabilities exist in theater and how to access them can

infrastructure already exists to support such a primer and must be leveraged to realize cost savings and resource efficiencies. II MEF's Materiel Readiness Training Center currently offers a five-day Supply Supervisors Course for personnel returning to the fleet from

Knowing and understanding what capabilities exist in theater and how to access them can alleviate a myriad of sustainment challenges.

alleviate a myriad of sustainment challenges. The upfront introduction of a MEF-sponsored primer would eliminate much of the discovery learning that takes place among junior supply officers. The primer would posture deploying Marine Corps forces with a higher level of sustainment responsiveness by providing the unit with a supply officer capable of understanding the systems, means, and methods for immediate support rather than learning through a baptism by fire. The MEF-sponsored primer should be planned and executed around the SCMOC graduations (which occur three times per year). In some cases, the appropriate level of resourcing and

a non-fleet tour.¹³ Using many of the same elements contained in the Supply Supervisors Course, II MEF Materiel Readiness Training Center could tailor a similar primer for new supply officers arriving at the MEF.

The second way the Marine Corps must address the expeditionary and austere environment sustainment gap is to create a supply officer-focused course targeted to career-level officers (captains). Officers at this level must be postured to expand their technical expertise into more complex expeditionary supply support and sustainment education. ¹⁴ Unlike the concept of support planning across other functions of logistics, the technical nature of supply

support encompasses unique legal, financial, and internal controls considerations. Supply officers are not educated through any formalized venue on current systems or processes that reduce the lifecycle of a requisition, contingency or creative contracting solutions, or other procurement methods outside of existing rigid policy, business rules, and programs of records. 15 In its current form, supplemental supply support educational opportunities are stand-alone, not combined with any other existing programs of instruction, and typically provided ad hoc in support of deployment operations. Current course offerings for topics such as the field ordering officer/pay agent program, acquisition and cross-Service agreements, and joint capabilities through the JLEnt are locally scheduled across the enterprise, marketed via informal communication means, and compete with day-to-day operational requirements. As an example, contracting (the 7th function of tactical logistics) familiarization, training, and execution are provided by the local regional contracting office and are generally focused on the lowest common customer—not a unit's procurement owner and without an expeditionary focus. The result of an unsynchronized approach leads to limited access, lower levels of attendance, and disparate levels of competency in expeditionary resources for supply officers. A supply officer course focused on expeditionary supply support would immediately improve this knowledge gap across the Marine Corps supply community.

Creating supplemental career-level officer education is not a new concept to the greater Marine Corps logistics community. The Marine Corps has historically recognized the need for additional expeditionary formal logistics education for career- and intermediatelevel Marine Corps logistics officers. The Intermediate MAGTF Logistics Operations Course, known today as the Advanced Expeditionary Logistics Operations Course (AXLOC), was redesigned a few years ago by the Marine Corps Logistics Operations Group (MCLOG). Hosted at Marine Corps Air Ground Combat Center Twentynine Palms, AXLOC is a four-week inresidence course that is offered three times per year producing logisticians who can "plan, direct and conduct integrated tactical level logistics in a littoral contested environment."16 Graduates are also awarded the additional MOS and title of expeditionary logistics instructor.¹⁷ Capitalizing on the current AXLOC course design, MCLOG could create a supply officer-specific version that is focused on the technical supply support aspects of sustaining Marine Corps forces in expeditionary and austere environments. That course could be titled the Advanced Expeditionary Supply Operations Course (AXSOC) and be a follow-on phase of AXLOC.

to each MEF); joint partnership and access with other Service partners (such as the Army's theater sustainment commands); organic capabilities to support on-the-ground purchases such as the field ordering officer/pay agent program; and authorized logistical support actions with host nation partners through acquisition and cross-Service agreements. The culminating event of AXSOC would have students "appropriately resource and manage" the concept of support products from AXLOC students across all phases of a planned operation (while navigating through exercise injects), thus educating officers on creative and technically minded supply support solutions for



Marines from Combat Logistics Battalion 8, Transportation Support Company, work together with Navy personnel from Beach Master Unit 2 off-loading ISO containers off a Landing Craft Utility during the Expeditionary Logistics Wargame, on Joint Expeditionary Base, Little Creek, VA, 15 June 2012. (Photo by Sgt Anthony Ortiz.)

As a follow-on phase of AXLOC, AXSOC would be the supply officer's expeditionary supply and sustainment course. AXSOC should comprise a front-end academic package that would carry over some AXLOC content but mostly focus on unique supply support considerations, resources, and best practices. Training and certification should focus on simultaneous, phased, and planned procurement actions such as coordination with the expeditionary contracting platoon (currently organic

SIF elements conducting DMO and forces executing expeditionary advanced basing. The implementation of AXSOC is the critical sea change from the status quo to professionalize a cadre of technically proficient and expeditionary-minded supply officers that is not available today within the Marine Corps' professional military education (PME) continuum.¹⁸

The Marine Corps' PME continuum offers promotion-required PME opportunities for captains, yet none contain

expeditionary and technically focused supply support education (nor are they designed to). For captain supply officers, the Marine Corps' Expeditionary Warfare School educates career-designated officers in preparation for companygrade, expeditionary and amphibious warfare, fleet operations, and company command yet is markedly absent of any understanding of supply service support and its impact. The other option for captain supply officers is the U.S. Army's Logistics Captains Career Course, which requires selection on the Commandant's Career-Level Education Board. Logistics Captains Career Course students undergo a six-month curriculum focused on all functions of logistics, culminating in an individual concept of support event for an armored brigade combat team conducting offensive operations. 19 Logistics Captains Career Course educates officers across all functions of logistics and logistics concept of support education from an Army perspective but does not provide the Marine Corps supply officer the necessary tools and technical education to sustain Marine SIF and other future concepts.

Supply support operations affect all aspects of logistics. "In war, it is relative speed that matters rather than absolute speed," this applies to kinetic, non-kinetic, and sustainment actions, across all functions of war.²⁰ Any delay in timely support exposes forces to risk which will only be magnified by the expected disaggregated nature of SIF and sources of supply. DMO inherently requires a diverse and complex supply and distribution network to mitigate the risk of an identifiable iron mountain and maintain a low signature. Effective support will require in-depth knowledge and experience with elements across the JLEnt, interagency partners, and various host nations' capabilities to meet legal thresholds supporting operational demands as locally as possible. Creative solutions to address legal, regulatory, time-space, and other restraints/ constraints require a significantly faster way to fulfillment. Conflict may also reside in a threshold just below armed conflict—gray zone or otherwise—that requires a significant understanding of

various local sustainment capabilities to prevent escalation.²¹ Future conflict in the Pacific, for example, will require onthe-ground knowledge of relationships and partnerships to operate as effectively as possible to ensure a low-signature legal and political impact on Navy and Marine Corps operating concepts such as DMO, littoral operations in contested environments, and expeditionary advanced base operations require that these capabilities are available at the lowest level.²² The Marine Corps needs a "systemic change in logistics" and supply chain management.²³ The change starts with better-trained and educated people. Creating and maintaining a cadre of technically proficient and expeditionary-minded supply officers through a follow-on entry-level MEF primer and at the career level through AXSOC will ensure supply officers can meet the complex challenges of sustaining the future force.

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The Relationship Between Enlisted and Officers

Part 2: Developing the T-Shape culture by Capt Jeremy Carter & 1stSqt Thomas Ochoa

'n 1920, Gen Lejeune stated that "the relation between officers and enlisted men should in no sense be that of superior and inferior nor that of master and servant, but rather that of teacher and scholar. In fact, it should partake of the nature of the relation between father and son, to the extent that officers, especially commanders, are responsible for the physical, mental, and moral welfare, as well as the discipline and military training of the men under their command who are serving the Nation in the Marine Corps." This statement is especially true regarding the newly arrived Marines from their MOS school since they are extremely impressionable early on in their Marine Corps careers. As stated by our 13th Commandant, Gen Lejeune, "These men are in the formative period of their lives and officers owe it to them, to their parents, and to the Nation, that when discharged from the service they should be far better men physically, mentally, and morally than they were when they enlisted."

As stated in the forward of Sustaining the Transformation, "Our Corps does two things for America: we make Marines and we win our nation's battles. Our ability to successfully accomplish the latter, of course, depends upon how well we do the former. We make Marines through a process called transformation. During this process, we change young men's and women's lives forever by imbuing them with our nation's highest ideals."²

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The pride these young men and women have upon graduating basic training and earning the title Marine is impressive. Thomas Ricks dedicated an entire book (*Making the Corps*) to the process and transformation. However, all too

In the first article ... the T-Shape Philosophy was introduced.

often, these young Marines' pride and transformation are damaged by poor leadership early on in their careers.

This article is the second part of a two-part series on developing the optimal relationship between enlisted and officers. In the first article, the concept of the T-Shape Philosophy was introduced. The T-Shape Philosophy describes a concept for the optimal relationship between enlisted and officer, where the officer's role is to have a

greater width in knowledge than their enlisted counterpart, the enlisted role is to have a greater depth of knowledge than their officer, and the staff noncommissioned officers' (SNCO) role is to be the bridge between the subject-matter experts (SMEs) and the officer.

This article will describe how to develop the optimal culture regarding the T-Shape Philosophy. The reader should note that there is a difference between a philosophy and a culture. A philosophy is merely words, but a culture is what truly matters since the culture is the unwritten norms and rules of an organization. When one is to look back upon the Marine Corps' history in our larger-than-life battles such as Belleau Wood, the Pacific Campaign, or the Chosin Reservoir, one can easily deduce that the Marine Corps' culture, not philosophy, facilitated battlefield success. The subsequent sections of this article will describe how to develop this culture in Marines both up and down the chain of command.

Recommendations for the Junior Marines

As a junior Marine, the most important thing you can do for your relationship with your officer is develop trust. Establishing a baseline of trust begins by consistently executing the 3 Ls (i.e., never be late, never be light, and never be last). Meaning be on time, have the prescribed gear, and do not fall out of training. If the junior Marine can do the 3 Ls, then they are off to fulfilling the requirement to be a good Marine.

Additionally, an individual Marine, a fire team, or a squad cannot be trusted without internal discipline and therefore must be contccrolled versus commanded. In his book, Extreme Ownership, Jocko Willink repeatedly states that "discipline equals freedom." Discipline is a bare minimum and a pre-requisite for an average unit, much less a good, or preferred, great unit. In the absence of internal discipline, meaning a Marine doing the right thing the right way for the right reason without being forced, leaders have to apply external discipline, such as early showtimes, random gear inspections, restrictive orders, no mutual ownership of the unit, etc. A unit that relies on external discipline is slower, has less initiative, more susceptible to mistakes, and unable to effectively impose its will on the enemy.

Our Corps does not need average Marines. Rather, we need great Marines, and the Corps has a history of junior Marines making a difference. This difference has been shown time and time again in battle, such as LCpl Brady Gustafson. LCpl Gustafson (2d Platoon, Company G, 2/7 Mar) returned accurate heavy fire against a numerically superior enemy in Afghanistan, despite an RPG severing his right leg. For LCpl Gustafson's heroic and selfless actions, he earned the Navy Cross and was meritoriously promoted to corporal on 27 March 2009.

Lastly, the junior Marines must be on a continual pursuit to master the motor skills and knowledge of their MOS. For example, in the infantry, the junior 0311 needs to be able to conduct magazine reloads faster than their officer. According to Daniel Pink, in his book, *Drive: The Surprising Truth About*

What Motivates Us, mastery of a skill comes with pain (deliberate practice is not fun and is challenging), it is asymptomatic (it takes more practice with diminishing returns to get better as one improves their skill), and requires the correct mindset (embraces challenge).⁴ As the junior Marines increase their mo-

tions high and try to exceed them."6 It is a simple concept; if you have low expectations for your young Marines, they will meet your expectations, but the opposite is also true. If you set high expectations, even if they do not fully meet them, the unit will be better for having tried. However, if the unit does

As a junior Marine, the most important thing you can do for your relationship with your officer is develop trust.

tor skills and ability to execute the orders of their non-commissioned officers (NCOs), they need to be concurrently increasing their knowledge of their profession as they prepare for a leadership role in the Marine Corps.

Recommendations for the Officer

For the officer, the most important thing you can do for your relationship with your junior Marine is set the example. If your junior Marines must abide by the 3 Ls, you most certainly must abide by them, but exponentially more. Your junior Marines will be looking at you always, and you must always be beyond reproach. As stated by Gen Lejeune, "Young Marines respond quickly and readily to the exhibition of qualities of leadership on the part of their officers. Each officer must endeavor by all means in his power to develop within himself those qualities of leadership, including industry, justice, self-control, unselfishness, honor, and courage, which will fit him to be a real leader of men."5

As the officer, you primarily work through your NCOs for developing your junior Marines. The NCOs will drive day-to-day operations and lead, mentor, and develop the junior Marines. However, as their officer, you should set high expectations and provide them with opportunities for leadership and ownership of the unit. In the book, Legacy: What the All Blacks Can Teach Us About The Business of Life, James Kerr says, "Successful leaders have internal benchmarks. They set their expecta-

not meet the expectations, the leadership must address the issue by determining what went wrong (unrealistic goal, competing interest, poor planning, bad execution, etc.) and what they will do to address the issue.

In the book, Outliers: The Story of Success, Malcolm Gladwell shows that the one thing all successful people have in common is that they had the opportunity to develop their skills early on in their careers. An example of providing an opportunity for a junior Marine is to have them teach a class on equipment, such as a night vision device, or a simple technique class, such as emplacing sandbags correctly. Their NCO will conduct rehearsals with them and the junior Marine will be responsible for understanding the equipment fully before giving the class to the platoon. It is important to remember that Marines want to be challenged and that every Marine wants ownership within the unit. Table 1 (on following page) displays a basic template for ensuring Marines have the opportunity to possess ownership of the platoon as well as the ability to develop their leadership and teaching skills.

The Relationship Between Non-Commissioned Officers and the Officer

At the platoon level, the NCO should have a direct line of communication with the platoon commander, while keeping their SNCO informed. The relationship between the NCO and officer should be that of loyal dissent, meaning that the NCO can disagree

	Weapons	Optics	Techniques, Tactics, & Procedures	Movement	Communicate	USMC History
Junior Marines	-M4 -M27 -M203 -M320 -M67	-PAS 28 -PAS 13G -PVS-24 -PVS-27 -PVS-17C -PVS-13D -RCO -SDO -PEQ 16	-7-sandbag fighting position -Sector Stakes -Hasty fighting position -Two-man fighting position -Fire and Movement -Danger area crossings	-Compass -Pace Count -Determine the error in a lensatic compass	-PRC 152 -PRC 153 -PRC 117G -PRC 117F -PRC 150 -Hand and Arm signals	-Belleauwood -Guadalcanal -Tarawa -Peleliu -Iwo Jima -Okinawa -Inchon -Chosin Resevoir -Khe Sahn
NCO Marines	-M249 -M240 -AT-4 -LAAW -M32 -M9 -Claymore	-Vector -DAGR -LBS -Colliminator -PSQ 18/ GLS	-Call for Fore- Grid, Polar, Shift -Immediate Action Drills -Hasty Attack -Occupy Support by Fire -Breach an Obstacle -Clear a trench -Detainee handling -Secure a LZ	-Map Work -Develop a Map Overlay -Navigate with a map and compass -Navigate with terrai association -How to pack a ruck	-SPACES Kit -Field Expedient Antennae -Landing zone brief - MEDEVAC 9-line -IED Report	-Banana Wars -Soissons -Saint-Mihiel -Navajo Code Talker -Combined Action Platoons -Grenada -Panama -Forward Operating Base Rhino

Table 1.

with the officer behind closed doors. The Marine Corps does not need or deserve yes-men in her NCO ranks. This type of relationship is possible only with trust. An NCO who is above reproach on and off duty will easily gain the trust of their platoon commander.

The officer should create an adoration toward themselves by, as mentioned earlier, being beyond reproach. This adoration is not to say that the NCO wishes to be an officer; rather, it means that they wish to follow the example set by their commander and live up to their expectations and not let the officer down. To achieve this effect, the officer must of course be worthy of adoration and emulation, which is a burden but the utmost privilege. Both the NCO and the commanding officer must strive to be their absolute best because that is what the junior Marines deserve. As described in greater detail later, both the NCO and the officer should seek the advice of the SNCO. The SNCO has the experience of having served in multiple units and has been a junior Marine, small unit leader, and in some cases, a platoon commander.

Recommendations for the NCO

For the NCO, the single most

important thing you can do is develop, coach, and mentor your subordinates. An NCO with an efficient, well-disciplined unit begins to develop the trust and confidence of their commander. Similar to other levels of leadership, you will need to train your unit to operate seamlessly and eventually operate on implicit communication rather than explicit commands. The first, and arguably most important step, comes from the example you set. You must be the first to rise and last to sleep in your team or squad. As an NCO, you should continually strive so that your officer and SNCO never beat you at anything. Constantly strive to be the best in all the domains necessary for your profession, since you are the first link in the leadership chain, and it cannot be weak.

This concept is simply applying the second Marine Corps leadership principle (know yourself and seek self-improvement). Lastly, look to the command for development and seek it out if necessary. Your officer will provide you with a mission statement and commander's intent, but when in doubt, ask for clarification and never assume. Remember, your SNCO is your bridge to the command. The SNCO not only

has experience in developing junior Marines but officers as well.

Recommendations for the Officer

First, allow your NCOs to take ownership of the platoon, develop, create, and drive the training and standards (Table 1), and of equal importance, allow them to make mistakes in training. Too often Marine Corps' leaders adopt a zero-defect mentality; meaning that the command-and-control structure does not tolerate mistakes. This zero-defect mentality can come from numerous origins, but the result is the same, where the subordinate does not feel empowered and they become timid and indecisive.

We, as leaders in the Marine Corps, often preach that it is acceptable for our Marines to make mistakes in training, but when a Marine makes a mistake, we too often unnecessarily reprimand them. Thus, we must always self-assess to ensure that we are allowing mistakes of commission, meaning the NCO tried something that did not work out the way they intended, while not tolerating mistakes of omission, meaning they did not try anything. Or, simply stated, the NCO should get a speeding ticket, not a parking ticket. As stated by President

Theodore Roosevelt, "In any moment of decision, the best thing you can do is the right thing, the next best thing is the wrong thing, and the worst thing you can do is nothing."8

It is important to distinguish the title that the Marine Corps bestows on a young officer: platoon commander, not platoon leader. Meaning that a young officer commands their platoon, while the NCOs lead the platoon. While a commander must be a leader as a prerequisite (our leadership traits and principles), they must exercise the commander's intent and provide the NCOs with task and purpose. With task and purpose, the officer must allow the NCOs to execute the mission how the NCO sees fit. By being a platoon leader, a young officer takes away the authority of their enlisted, which results in a centralized command with a slower tempo that is less resilient to friction. Remember that you As a young officer, do not rest on your own personal accomplishments, or on how well you know your profession, but rather on how well you have developed your NCOs to know their profession and how much ownership they have in the platoon.

The Relationship Between the Staff Non-Commissioned Officer and the Officer

It is often said that good SNCOs make good officers. We both disagree with this statement. The Marine Corps invests a great deal in the screening, selecting, and training of their officer corps, starting from their commissioning source to the Basic Officer Course, and then minimally to their MOS school. Every single officer in our Corps goes through six months of instruction at The Basic School where they are taught leadership, basic infantry

efficient and effective outcome for the unit. Failure of this could result from numerous sources, and according to the book, *The Five Dysfunctions of a Team* by Patrick Lencioni is often due to an absence of trust, a fear of conflict, a lack of commitment, avoidance of accountability, and inattention to results.¹²

Recommendations for the SNCO

As the SNCO, especially the first SNCO of a new officer, you have a profound influence on the officer's career, expectations, and outlook on SN-COs. Similar to the officer, if you want Marines to emulate you, you must be worthy of emulation. Additionally, like your officer counterpart, you must have a broad view of warfare and the various MOSs. At the end of the day, no one will come seeking your advice if you have no advice to give. Do not be saddened by the amount of time you will spend in the company office if you do nothing to exit it. The command post is not your appointed place of duty, and you are certainly not a secretary. Remember, you are the most experienced person in the platoon and therefore should have the most influence on each level. Never forget that you were a junior Marine fresh from basic training; you remember your first mission as a team or squad leader, and in some circumstances, you have commanded the position filled by the officer.

In the book, Leading Up: How to Lead Your Boss So You Both Win, Michael Useem tells the story of how Lt-Gen Pace (Ret), prior to becoming a four-star general, was highly efficient and effective while working for six different superiors. In Useem's book, LtGen Pace had three guiding principles, specifically, "One: Ensure that his own performance was above reproach. Another: Fully inform each of the bosses of what he was recommending to all the others. And a third: When in doubt on how to resolve the commander's conflicting requirements, act on principle."13 The three guidelines can easily be applied by an SNCO with a direct line of communication to his officer to ensure the best solution for their unit.

While a commander must be a leader ... they must exercise the commander's intent and provide the NCOs with task and purpose.

cannot lead everywhere; in Chapter 4 of MCDP 1, Warfighting, our Marine Corps emphasizes mission tactics and commander's intent as pillars of how the Marine Corps conducts war.

Second, surround yourself with genius. The book Surrounded by Genius by Dr. Gregerman builds a concept of unleashing your organization's full potential on two ideas: "The first idea is that we all have the potential to be geniuses," and, "the second idea is that we live in a world where we are surrounded by genius and knowledge that can be used to transform practically any company or organization."9 Surrounding yourself with genius, while also empowering your Marines, can be seen in Table 1. As stated by the *United* States Army Leadership Handbook, FM 6-22, "Leadership requires knowing about tactics, technical systems, organizations, management of resources, and tendencies and need of people."10 tactics, and fire support. It is through this investment that there should never be anything less than a good Marine officer. A poor Marine officer does not reflect their SNCO leadership or a failure in the system but rather a failure of that officer. However, as stated by Jim Collins in his book *Good to Great*, "Good is the enemy of great." 11

We feel good officers are the result of the system, but great officers are a reflection of the SNCO, and that our Corps needs great officers due to the amount of influence they have on their unit. Furthermore, the junior Marines deserve a great officer. A good SNCO is similar to a compass. A new officer in the operating forces knows the cardinal direction that they need to be heading toward, and if going the completely wrong way, it is a failure on the officer's part. However, the SNCO can and should narrow down the direction of the commander to facilitate the most

Recommendations for the Officer

In his book, *The 7 Habits of Highly Effective People*, Stephen R. Covey's fifth habit states "seek first to understand, then to be understood," or simply stated: listen first, talk second. The SNCO will likely have more experience than the officer and will be more in touch with the Marines. This is a great asset, an asset that should be whole heartily embraced by the officer, and is exemplified by the T-Shape Philosophy.

As the officer, you may likely have more doctrinal knowledge than your SNCO, while they will have more experience, which is the ideal relationship. In Chapter 3 (Preparing for War) of *MCDP 1*, there is a section dedicated to doctrine. Having a solid understanding of our doctrine which is descriptive and not prescriptive is a role of an officer, which when combined with the experiences of the SNCO on how to optimally employ the Marines' capabilities, facilitates a highly combat-effective unit

A junior officer, or any officer, should never feel intimidated by not having all of the answers and should seek the guidance of their SNCO. Your SNCO can help guide the unit in the correct direction. However, you must have the moral courage to command your unit and not be a figurehead. Since you are a human, there will be times when you are wrong, but since you are a Marine officer, you can never be morally weak. Lastly, remember that you are above the Marines only in rank structure and nothing else. You must be the first to rise and the last to sleep, you must fill your own sandbags and dig your own fighting hole, and you must also share in the suffering. Simply put, when your Marines are wet, cold, and hungry, you are wet, cold, and hungry.

Conclusion

Why does the Marine Corps need officers? The Marine Corps needs officers because while we absolutely need the enlisted SMEs, we need Marines who can employ and harmonize the SMEs; officers who can and should employ the SME's genius, experience, and the potential of the Marines. While the SNCOs can accomplish this, we need

someone to progress rapidly in multiple domains. In an infantry battalion, the mastery gunnery sergeant and battalion gunner should know more about infantry techniques, procedures, and equipment than the battalion commander; however, the battalion commander should know more about the warfighting functions. At the end of the day, the Marine officer is training to become a MAGTF officer, as demonstrated by the curriculum at The Basic School, Expeditionary Warfighting

... you must have the moral courage to command your unit and not be a figurehead.

School, and so on, while the enlisted are on a continual pursuit to master their craft. Through the optimal relationship of the T-Shape Philosophy, as executed as a culture and not a mere philosophy, we as a Corps are more able to impose our will on the enemy by our increased tempo, initiative, and decentralization, which increases our combat power. In this era of strategic competition/Great Power Competition, this culture will be needed more than ever before in our history.

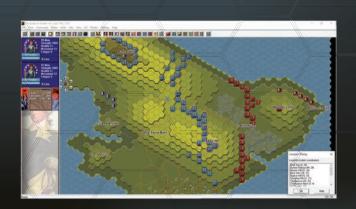
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- >Authors' Note: Capt Carter and 1stSgt Ochoa served together as company commander and company first sergeant at the Infantry Training Battalion, School of Infantry-East, where they developed the concepts written in this article through their mutual trust, respect, and experience.









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Keepin' It Real

Maturing the force through authentic leadership

by SgtMaj Collin D. Barry

'n the past couple of years, the Marine Corps focused its personnel initiatives on first-term Marines, understanding that maturing the force by retaining talent not only increases its return on investment but makes America's 911 Force more lethal against our Nation's adversaries—the Corps' sole purpose within the DOD. "Maturing the force by retaining a greater percentage of qualified firstterm Marines will improve decisionmaking, problem solving, and risk assessment among our junior leaders, with immediate positive effects on our performance in competition and combat." Recognizing that the Corps' manpower management processes do not align with the 21st-century battlefields and implementing policy changes to rectify these deficiencies is indeed a sound strategy, the following two variables should be considered to ensure strategic success in the human resources domain: generational theory in concert with leadership style.

Generational theory suggests that values, behaviors, attitudes, and beliefs are shared among a cohort of people born at a particular time, developing generalized idiosyncrasies based on shared experiences during their impressionable, adolescent years. ² Understanding the behavioral patterns commensurate to the generations in a workplace may provide leaders the capacity to influence their organizations more effectively.³ While leaders recognize the implications of generational tendencies within the workplace as an important issue, many have no idea how to modify their leadership style and managerial strategies to productively influence, thus highlighting not only the Marine Corps' ignorance but most businesses attempting to improve organizational efficacy.4 The largest generational co>SgtMaj Barry is the Command Senior Enlisted Leader for Marine Corps Installations National Capital Region–Marine Corps Base Quantico. While serving Marines in every clime and place, he earned his PhD in Global Leadership and Organizational Management from the Indiana Institute of Technology.

hort in the Marine Corps is Generation Z, comprising ~113,000 enlisted Marines, 67 percent of the total activeduty population of ~169,000, and over 76 percent of the active-duty enlisted force of ~148,000.5 Furthermore, the Corps remains the youngest force due to low retention of first-term Marines, with one of the main reasons for exiting being "dissatisfaction with command climate and leadership" (command climate being established and cultivated by leadership). Recognizing this will ensure the Corps' Talent Management 2030 initiatives possess the capacity to influence the targeted generation of Marines occupying all low- and middle-management positions across the enterprise and eventually our most senior billets.

Generational Theory and Generation 7.

Differing opinions exist for the demarcation of generational periods due to the understanding that generations fade into each other. There is not an exact moment in time that one generation begins and another ends due to generations being defined by events that share birth years through early adulthood.7 Even though birth-year cutoffs are subjective, once a delineation is established and agreed upon, a year or two on each end of a generational span will display similar characteristics. 8 However, averaging the beginning and end birth years among nearly 40 social scientists and the Pew Research Foundation, Generation Z was born in

or after 1996 the last birth year being 2011 (in 2023, the eldest will turn 27 and the youngest 12).

Studies have drawn similar conclusions relating to the generalized values and personality characteristics of generational cohorts, providing critical knowledge that could improve an organization's effectiveness if capitalized upon.9 For instance, Generation Z possesses the characteristics of multitasking and constantly seeking new challenges.¹⁰ Research shows that while Generation Z prefers autonomy and achieving success alone, they collaborate well with others when required to work within a team. 11 Lastly, one of the most prominent positive characteristics of Generation Z is their propensity to not only be transparent and honest concerning their communication but also demand it in return, especially in the form of performance feedback.¹² Generation Z's preference for in-person communication, despite their reliance on technology, can create an environment that has the potential of being free of complexity, ambiguity, and confusion. 13 While Generation Z experiences joy when serving others, they tend to have a "self-centered tunnel vision,"14 which may explain why they prefer pursuing ambitions independently.¹⁵ However, members of Generation Z are not nearly as grandiose, confident, narcissistic, or entitled as their millennial predecessors. 16 In fact, Generation Z is risk averse, has lower expectations for themselves, and possesses a cautious confidence.17



Authentic leadership is a key characterstic that this emerging generation is looking for. (Photo by Cpl Luke Kuennen.)

Most social scientists agree that the reason behind generational patterns can be attributed to the events that occur during the first fifteen to eighteen years of life that shape general idiosyncrasies, which explain generalized behaviors. 18 Specifically, these analogous idiosyncrasies may be tied to memorable societal and world events that occurred during the most developmental years of a generation.¹⁹ For example, Generation Z was the first generation to not remember a time without ubiquitous technological devices, providing them the capacity to perform well in all industries attributed to technological evolution, which is extremely useful as the 21st-century battlespace is evolving heavily into the cyber and space domains.²⁰ As of 2018, the Pew Research Center found that 95 percent of 13–17-year-olds use a smartphone, and 97 percent of them regularly utilize online platforms such as YouTube, Instagram, and Snapchat.²¹ Of course, being exposed to the point of technological reliance has its corresponding consequences.

The efficiency of technological communication inherently involves distance, but this lack of presence adversely impacts Generation Z's overall interpersonal skills.²² Furthermore, Generation Z members lack formal communication skills, both orally and in writing.²³ The Global War on Terrorism, a tumultuous economy, and increased public violence are argued to have shaped Generation Z's generalized traits of cynicism and disengagement.²⁴ For the first time in history, the same generation has a distrust of government and a lack of interest in changing it from within.²⁵ Even though Generation Z are perceived as being civic-minded, passionate about social justice and change, and believe they can change the world, they believe it is the individual that can, not the government.²⁶ This could assist in understanding the generational lack of interest in joining the military but also why

young service members exit after their 48-60 month initial exposure.

Leading Generation Z

The possible relationship between generational age disparities and leadership style must be considered to maximize the current and future influential impact within the workplace.²⁷ Subordinate work output and leadership development are both affected by the manner in which a superior delegates tasks.²⁸ However, a leader should understand how a subordinate receives information through delegation, making an effort to adjust delivery to ensure subordinate comprehension and compliance: "Developmental differences in the way that the brain processes information and makes decisions have important consequences for leaders managing each new generation of workers and also for the development of the leaders of the future."29 Viewing follower characteristics through a generational lens may prompt a leadership style tailored to provoke superior subordinate performance, thus improving the capacity for a Marine unit to perform beyond past expectations and produce leaders to sustain that performance. The leadership style suggested to satisfy Generation Z's needs—but more importantly, improve job satisfaction and retention (thus organizational efficacy)—is authentic leadership.

Authentic Leadership Theory

Authentic leadership is a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate. Those that exercise this style of influence possess greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development.³⁰ The dimensions described above comprise the hallmarks of authentic leadership theory, providing the common foundation of any study vis-à-vis the application of authenticity in the domain of organizational influence. Comprehending each dimension in its entirety will assist in realizing the relevance each one provides the members of an organization, especially the Marine Corps, where the dimensions may be incongruent with the sole utilization of authority as influence. However, when applied within an autocracy, authentic leadership characteristics may suggest improved job satisfaction (thus performance) and retention among subordinates.³¹

The application of authenticity in the discipline of leadership is a modern style of influence in comparison to the past and current leadership styles developed, studied, and performed by practitioners and social scientists. 32 Authentic leadership is not only selfawareness (honesty with oneself) but is comprised of foundational values (principles that guide behavior), motivations (elicitors of drive), support teams (those who are trusted), and an integrated life (synthesizing everything to experience self-fulfillment in the workplace).³³ Authentic leaders comprehend their weaknesses, making an effort to rectify them at every opportunity, are compassionate of others' inadequacies and idiosyncrasies and find self-fulfillment in assisting others as they travel on the journey of enlightenment.³⁴ The antithesis of authoritative influence, authentic leaders do not demand compliance due to position and authority; they inspire others to not only accomplish the mission but simultaneously challenge them to grow personally and professionally.³⁵ It is not to say that differing leadership styles cannot exercise the traits attributed solely to authentic leaders (or vice versa), but it is this emergent style specifically that has gained traction as one that satisfies more of a follower's needs vice the needs of the leader, thus Generation Z's preference of being influenced via authenticity.³⁶

Authentic Leadership Dimensions

Self-awareness. Self-awareness is simply comprehending one's strengths and weaknesses on a level that elicits correction and capitalization.³⁷ This element additionally provides the leader an acute cognizance of his or her impact on others.³⁸ Self-awareness within the emotional intelligence discipline, as described by Daniel Goleman, is the foundation of the acumen aimed at un-

derstanding oneself and others. Goleman postulates that self-awareness is having a natural sense of realizing what is occurring within one's mind, recognizing particular feelings as they transpire, and channeling them in a healthy manner. ³⁹ An aspect of self-aware leaders that is extremely effective concerning influence is the confidence and clarity that is inherent within the territory of constantly evaluating oneself, ensuring that every moment counts. ⁴⁰

Internalized moral perspective. Possessing an internalized moral perspective involves the application of guiding principles and values that manifest themselves into the behaviors of the leader, unaffected by societal or organizational influences. 41 These values and morals that guide a leader in subjective decision making is also critical to the establishment of trust with subordinates. Establishing trust with followers not only involves the leader's internal philosophy of thinking but comprises the empathic ability to comprehend the followers' values. 42 It is apparent that the internalized moral perspective component of authentic leadership is critical in eliciting respectful followership through the application of consistent principles and ideals (which Marine Corps doctrine inherently supports) but also to assist in the ethical development of subordinates.

Balanced processing. The third element of authentic leadership theory, balanced processing of information, involves the practical method of making decisions based on an objective analysis of data, some of the most relevant data being gathered from those within the organization.⁴³ A leader who applies balanced processing of information desires suggestions from everyone, hoping that it challenges the leader's deepest convictions. This type of openness breeds pride in the participants of the decision process as well as assuring the soundest decision is made given the current circumstances. 44 While balanced processing involves participatory decision making and objective analyses, it also relates to the exhaustion of all available resources that can provide clarity to the issue at hand; this is the "balanced" aspect of this component. 45 With decentralization being a core component of Marine Corps success especially on the battlefield, it is imperative that those leaders executing some of the most demanding tasks alone and unafraid have an opinion that is strongly considered.

Relational transparency. Relational transparency is practicing open and honest communication with subordinates, peers, and superiors alike. However, it is the perception of others as to whether a leader is conveying information in a genuine, unfiltered manner that validates the leader's authenticity from a transparency perspective. 46 Å substantial element of being relationally transparent is ensuring the leader is not viewed as being fake, fraudulent, or possessing a hidden agenda.⁴⁷ The avoidance of personality distortion is a priority of the transparent leader, making every effort to be candid—internally and externally.⁴⁸ Relational transparency also requires courage; when an authentic leader identifies a subordinate deficiency, the follower will be notified of that deficiency immediately and provided corrective measures, aligning perfectly with Marine Corps leadership philosophies.⁴⁹ One of the overlooked aspects of relational transparency is the capacity to develop followers into prominent contributors to the organization: "Relational transparency can promote a fair and open organizational environment where employees can freely express themselves and participate by contributing their opinions and ideas to management."50 It is apparent that open and honest communication through relational transparency solidifies integrity, the bedrock of any person or organization, but especially the Marine Corps and its members.

Authentic Leadership Theory and Generational Relevance

The dimensions of authentic leadership theory seem to harmonize with many of the suggested characteristics of Generation Z, providing the perspective that an authentic leader may influence Generation Z members in the most effective manner. In relation to the altruism displayed by authentic leaders, researchers have found that Generation Z recognizes altruism as a

noble pursuit, but few actually execute the selfless concern for the wellbeing of others.51 "Apparently, [Generation Z] agree[s] that altruism is important but have trouble following through" due to the individualistic attitudes developed through the constant exposure to social media.⁵² It is reasonable to believe that a leader who values altruistic ideologies could earn the admiration required to positively influence individualistic attitudes.53 Generation Z yearns for mentorship, meaningful and frequent feedback, motivation, and personal/ professional development from their superiors, hallmarks of authentic leadership (and the outcome of leadership through a Marine Corps lens).54 "Authentic leaders want to witness the growth and development of their followers, setting examples to uplift subordinates' spirits, and providing tools to ensure the follower exceeds not only the authentic leader's expectations, but their own expectations."55 It is believed that the dimensions of authentic leadership satisfies Generation Z behaviors. For example, balanced processing (leader elicitation of follower suggestions) satisfies Generation Z's desire to contribute their creative ideas to the organization, thus improving job satisfaction. 56 The dimensions of authentic leadership theory have the potential of assimilating to the personal and professional generalizations of Generation Z, creating an organizational atmosphere that is conducive to job satisfaction, exceptional performance, and commitment (retention) by its members—all of which the Marine Corps desires to experience in its units across FMF, supporting establishment, and supporting activity commands.

One of the underlying foundations of authentic leadership theory is the cultivation of trust, an integral element of any healthy leader-follower relationship

but especially concerning Generation Z's perspective due to their cynicism.⁵⁷ Millennial superiors will encounter an obstacle when initially building trust with Generation Z members. "Y [Millenials] and Z generations are distrustful, they do not help each other, [and] they build connections only superficially."58 The Marine Corps depends on each member being vigilant on each other's behalf in a hostile environment in order for both members to return safely from combat or other austere geographically dispersed locations. It is imperative that trust is built within such an organization. Luckily, authenticity and trust have been researched extensively. A trustworthy leader possesses a genuine, real personality, which encourages Generation Z followers, who value authenticity, to commit more to their organizations through enduring performance and remaining with that organization.⁵⁹ Authentic leaders are



undoubtedly trusted by their followers, consistently conducting introspection, and ensuring their embodied core values manifest into positive behaviors.⁶⁰

Authentic leaders can foster a collaborative workplace through their approachability and genuine interest in subordinates. 61 Generation Z's characteristics of demanding inclusivity, requiring structure and clearly defined roles to succeed, and the need for consistent mentorship are congruent with what authentic leaders intend to offer and cultivate; the Marine Corps is perfectly postured to facilitate those needs of this largest generational cohort. 62 It is the authentic leader's awareness of their own as well as others' strengths and weaknesses coupled with their honesty and transparency that facilitate Generation Z's yearning for performance feedback in the work environment.⁶³ In addition to satisfying Generation Z's expectations of a leader, the association between authentic leadership traits and Generation Z idiosyncrasies indicates that authenticity is the preferred leadership style for Generation Z members who lead, aligning nicely for the Corps that relies heavily on young commissioned officers and noncommissioned officers through decentralization.⁶⁴

Since leadership styles are often byproducts of personality, leading subordinates of the same generation with an idiosyncrasy-aligning style of influence is theoretically effective. 65 The conformist Generation Z member is likely to adopt the influential traits of a leader who demonstrates qualities similar to Generation Z's beliefs and attitudes, potentially closing the generational divide of influence. 66 If Generation Z prefer leaders who are confident, fair, consistent, compassionate, and push subordinates to their utmost potential, and those traits are exemplified by authentic leaders, it suggests that Generation Z desires to adopt the same behaviors when influencing others, an encouraging perspective to capitalize on regarding the challenges of Marine Corps talent management and organizational efficacy.67

Empirical Evidence

relatively recent study utilizing a

quantitative research method (surveys and statistical analyses) revealed relationships between leader authenticity, job satisfaction, and retention through a generational lens among young active duty enlisted members in the Marine Corps who were deployed overseas.⁶⁸ The findings of this study suggest that leader authenticity is positively related to job satisfaction and retention among Generation Z's active-duty enlisted Marines in a deployed status, serving as a key consideration when attempting to influence this generation effectively. However, given the Marine Corps' critical missions and its success historically achieved through authoritative leadership, the following question likely remains among the older generational cohorts (millennials, Generation X, and the few baby boomers) in senior leadership positions: Can nation-defending Marine Corps missions be accomplished in the same fashion without the application of a hierarchically induced authoritarian style of influence?⁶⁹

If job satisfaction and retention are positively associated with leader authenticity, and performance is positively correlated with job satisfaction and retention, it is suggested that demanding Marine Corps missions can be accomplished effectively, and potentially with a greater degree of performance (quality output) if leaders exhibited levels of authenticity when influencing their subordinates.⁷⁰ Although authority-based leadership is prevalent among performance-driven managers (such as U.S. military leaders), it is suggested that authoritarianism has unfavorable implications on job satisfaction and retention.⁷¹ This data provides a compelling basis for rigidly hierarchical and mechanistic organizations such as the Marine Corps to consider other styles of influence within their chain of command.

Conclusion

Dissatisfaction with command climate and leadership continue to be major reasons Marines select on their career planner exit survey when departing the Corps, indicating unfortunate causes to the lowest retention in the U.S. military.⁷² This data contributes

to understanding the Marine Corps' high attrition, the implications of authoritarian leadership, and recognizing the benefits of leader authenticity; thus, the Marine Corps has an opportunity to consider a change to its influential methods. It is proposed that the Marine Corps integrates leadership styles in concert with generational theory into the leadership curriculum within Marine Corps University, reaching all levels of officer and enlisted resident and non-resident professional military education programs.

In the past ten years, the Marine Corps has evolved considerably in teaching leadership, organizational management, organizational behavior, organizational climate, and the cultivation of cultures conducive to unit success. However, failing to recognize, let alone integrate, generational theory and its corresponding ways to influence into its curriculum could prove detrimental to satisfying the Marine Corps' longterm strategy of talent management and organizational success. Due to compelling overwhelming social science evidence, exploring authentic leadership theory (its four dimensions satisfying all agreed upon elements of effective influence irrespective of mainstream or historical methods) and generational theory (recognizing workplace cohort generalization for ease of follower/ leader comprehension) will be of significant value for the Marine Corps to successfully sustain its sole purpose of fighting battles and winning on behalf of our Nation.

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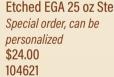
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Faulty Assumptions

Lessons learned from company command

by Maj Ryan Shannon

arines are great at simplifying complex concepts into easy-to-remember quips and phrases. When I began company command, I was guided by various sayings that I thought captured Marine Corps "wisdom." I found many to be wrong. Reflecting a year after company command, here are some things I found to be incorrect and some lessons I learned.

"Good Squads Make Good Platoons."

Individual or squad-level excellence will not balance out ineptitude at the platoon or company level. Commanders need reps and sets in tactics, planning, and leading operations. Everyone needs to refresh basic skills and ensure personal gear is squared away. This only happens if leadership participates in training throughout the whole training continuum, including individual skills.

Participation means actually joining the training, not being a safety structure or an evaluator. Supervision is important but be wary of subordinate leaders who never put themselves in the arena. Anyone who believes they outrank basic fieldcraft, weapons manipulation, or the need to practice should have their attitude aggressively corrected. It is not acceptable for leaders to wait until a potential combat situation is imminent to zero their weapons or co-witness their laser. Basic skills packages are great times for leaders to shake out gear, zero weapons, and ensure comm is set up appropriately.

Participation also means truly engaging with platoon- and company-level training and accepting the frustrations that accompany that training. Company leaders will make mistakes in front of the Marines. Platoon- and company-level training will not be efficient at the squad level and below. Battalion leader-

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Unit readiness starts with commanders leading from the front. (Photo by LCpl Sav Ford.)

ship will get excited and come to the field so they can critique. The battalion executive officer will be mad that Marines are on the range and not at the maintenance meeting. However, even if there are bumps on the way, during deployment the company that trained as a company will be better than the company that just conducts squad live-fire exercises over and over.

Enforcing participation early on will allow for more effective unit training later. Nothing kills the momentum of an Expeditionary Operations Training Group training package like the whole company waiting at the line of departure for an hour while a platoon com-

mander figures out where an antenna should go on their flack for the first time or the company gunny figures out how to get accountability in a tactical manner for the first time.

For unit leader skills, try aggressive schedules of tactical decision games or kreigsspiels. Wargaming and professional military education should not be something to fit in. If it is made a priority during the workup, leaders will develop skills that will pay off later or in real combat.

Making mistakes is okay, even encouraged by *MCDP 1*. What is not okay is when leadership is inexperienced or incompetent because it has not

practiced. No Marine should be put into a position where success is achieved despite leadership rather than because of it.

"You Have the Team You Got."

The biggest impact you can have on unit effectiveness is getting the right people in the right place. All the time spent getting your table of organization right is time well spent. You also may have more influence on this than you think.

Sometimes it feels like it takes an act of God to fire or move someone. In reality, it usually only takes a conversation with your boss and proof of written counseling, especially if you can find a win-win situation for a personnel swap. The earlier in the unit lifecycle, you get the best fit, the greater overall potential your unit will have. Being ruthless in evaluating and moving personalities will pay off in unit cohesion and overall proficiency in the long run. Personality-induced fissures or individual disagreements will only get more severe when the unit is under stress. Getting the team right is so important that it is worth considering deploying below the table of organization or with gaps to deploy with individuals who all want to be there and fit into the unit culture.

That said, personnel shifts late in the unit lifecycle may be more disruptive than helpful, and sometimes your boss will say no. If you cannot swap/fire someone, you can still mold and actively develop Marines through counseling. Counseling is one of the best tools a leader has *if* it is done right.

Ever been frustrated by a boss who refuses to give real feedback because he talks to you every day and expects that to be enough? To be effective, counseling must be formal, written, and detailed. The most critical audience is those most uncomfortable to counsel, like your first sergeant or executive officer. Getting observations and opinions in the open is key to creating a dialogue with your subordinates. Even if you expect it to be ineffective, or if you discover your observations are misunderstandings, counseling clearly articulates your expectations and per-

ceptions to subordinates. You may be surprised at the influence you have on developing your team.

"This Generation of (Noncommissioned Officers, Staff Noncommissioned Officers, Lieutenants, etc.) Sucks."

Before dismissing a whole class of people as worthless, consider rigorously assessing how well that group has been set up for success. Individuals vary, but groups generally perform how they have been set up. Often, the problem is not people but how information flows, how tasking is structured, and time.

Is the platoon sergeant who has not produced a roster ineffective, or was he stuck in company meetings all day and could not get five minutes to task out his squad leaders? Are Marines deliberately gaffing off medical readiness, or does the first sergeant think passing word means

those attending meetings process, repackage, and disseminate information in ways convenient to the Marine responsible for action—not the Marine disseminating the information.

Creating space and structure for your subordinates to spend more time preparing, training, or just conducting required admin tasks will pay off in increased productivity. You also may find that, when set up for success, your subordinates will not only meet but exceed expectations.

"Boots Are Dumb."

Rank structure and expertise do not always equate. Sometimes the junior Marine will know better. Instead of viewing this as disruptive, consider harnessing it as an opportunity to empower subordinates and create buy-in. Provided you do it in a manner that maintains professionalism, you could

What is not okay is when leadership is inexperienced or incompetent because it has not practiced. No Marine should be put into a position where success is achieved despite leadership rather than because of it.

forwarding the battalion-level hitlist to lance corporals who do not have official email accounts? Do the noncommissioned officers fail to prepare, or is the schedule so erratic that they are forced to be reactive instead of proactive?

Consider organizing routine training, exercise, and employment plan briefs for your Marines. Perhaps Marines are unprepared simply because they do not know when things are happening. Try a weekly honesty trace of the training schedule to determine if it is derailed or not. Ruthlessly eliminate things that waste time or are inefficient. A good ten-minute daily stand-up and well-put-together schedule that effectively combines administration and training is likely all you need. Decide who is going to be sacrificed to the time bandits (sorry executive officer) but otherwise minimize the people attending higher headquarters meetings. Ensure

find benefits from establishing a culture where rank, authority, and knowledge do not always have to be linked.

This dynamic often exists when you work with specialized attachments, such as radio reconnaissance or explosive ordinance disposal. Many of these units contain individuals with high levels of technical knowledge, responsibility, and independence—but relatively low rank. Emphasizing and respecting their subject-matter expertise over their rank is an easy way to quickly build rapport, effectiveness, and trust.

This dynamic can also exist in your company, especially if your mission set requires a specialized insertion skill like fast roping. What happens when there is a disagreement between a helicopter rope suspension techniques master corporal and the non-helicopter rope suspension techniques master company gunny about rigging a system? Are there

ways to resolve conflicts that do not jeopardize the chain of command while still giving subject-matter experts authority?

One method is to deal with mismatched hierarchies of rank and expertise by establishing company norms or programs that formalize responsibilities and clarify when subject-matter expertise trumps rank. Making it official defines the SME's scope of authority and creates a structure that can complement the chain of command without matching it. It creates buy-in because including people in planning and training accelerates institutional learning.² Also, a senior martial arts instructor, joint terminal attack controller, or medical trainer who owns a company program probably can create a better individual training event than a swamped executive officer who is creating multiple things simultaneously.

Creating a culture that respects expertise also helps refine leadership skills. It requires practice to successfully judge when to defer to a subordinate's needs or advice (I feed you) and when to demand actions or information (you feed me). Developing that recognition within the company in turn helps the company understand how to properly interact with the battalion staff. As the Marine Corps explores more dispersed formations in communications-denied environments, getting the supported/supporting dynamic within a unit hierarchy correct will pay dividends.

Leaders often use knowledge to bolster the legitimacy they should already have by rank alone. Let your leaders know it is not a threat to their authority if they are not the subject-matter expert on everything—and leverage those who are. If it is done right, it will make the company more professional, not less.

"Be Last to Sleep and First to Wake."

Your contribution to your company is your ability to command, and your ability to command is tied to your cognitive state. If you have not eaten, slept, or taken care of yourself, you run the risk of being a liability to your unit. Rendering yourself a casualty due to exhaustion from self-imposed work is unacceptable.



Listen to the expert, regardless of rank. (Photo by GySgt Mark Oliva.)

As a company commander, you are going to be in situations where your impact is directly proportional to your clarity of thought. Others in your company may be able to mechanically carry out duties when stressed, "internal," or numb, but you will always have to be able to recognize patterns, formulate plans, and make decisions. Unfortunately, the situation where you need

Training does not have to feel horrible to be valid.

to be the sharpest happens during the times when it is the most difficult to take care of yourself. Also, the time you have to take care of yourself may be when others are working the hardest, like after you have issued a company order. Taking care of yourself must be done in a way that takes into consideration others' perceptions.

We say we will ruthlessly execute the best thing for our mission and the unit. Be prepared that this might mean doing something to make yourself more comfortable rather than less. It may mean delegating tasks or supervising tasks to get some sleep. It may mean being honest with your Marines that you are also a human and cannot pull multiple all-nighters. It might also mean finding the balance between literally being the last person to care for themselves and acting according to the spirit of shared hardship and accountability while still stopping to take a meal.

"Don't Make Comfort-Based Decisions."

Training does not have to feel horrible to be valid. Depending on your goals, training might actually be *more* effective if the Marines are comfortable. This can be particularly true when planned training has very specific goals that require high levels of engagement by the training audience. Decreasing extraneous cognitive load (i.e. distractions) increases the mental bandwidth Marines have to learn.

Going to field training does not have to mean getting on a seven-ton and racking out on the ground. Particularly during basic skills packages, if you can let Marines drive their personal vehicles to the range, leave to get food, or go home to sleep, you are going to have higher retention of the skills you are trying to instill. Sleep is linked to human performance. Also, people who had the opportunity to shower can focus on their task rather

than their nasty heat rash. Marksmanship, flat-bay ranges, helicopter rope suspension operations, and medical training are good examples of training that is more effective if people are not miserable.

On the other hand, when it is time to be hard, be very hard. Discomfort and deprivation are critical to creating warriors—but they should be done deliberately when they enhance training. Consider having a human-factors field exercise where you purposely deprive people of things so Marines can learn how they react under the stress caused by austere conditions. Alternatively, aggressively pursue training at the Mountain Warfare Training Center. In short, when it benefits your goals, pursue comfort. Save the sleep deprivation, cold exposure, and lack of food during sustained operations at the unit level when your unit has matured some. Be hard when it adds value, but do not be hard just to be hard.

"We Can Do It Better Than the Schoolhouse."

Consider aggressively leveraging outside experts instead of viewing them as competition. In fact, utilizing outside experts might be the easiest way for you to achieve the best unit possible. Consider using courses taught by outside experts to train your Marines and your time to sustain or synthesize skills.

Do you think you can create a better product than the Infantry Officer Course and would prefer to have lieutenants straight from TBS? If not, why do some people think they can do it better than the Advance Machine Gunner course? Schoolhouses, contracted training packages, and Marines assigned to mobile training teams are likely able to develop higher quality training than a unit can, because their whole focus is teaching that skillset.

Schoolhouses are the institution's standard bearer for a skillset. They also provide certifications recognized across the Marine Corps (or DOD). Consider having an aggressive individual school phase or using outside experts to lay a foundation you build on. You are responsible for the training of your Marines. But that does not mean you

have to be the one who develops all the training.

"We Are Not Higher's Training Aid."

Everyone needs to train. This includes battalion, regimental, and division commanders/staff. Being the best subordinate unit possible during an exercise is the best way to help those commanders and staffs to learn.

It is not fun to dig into the defense and hold security on the open desert for three days during an integrated trainIt also is not unrealistic to what would happen in a real war. Helping higher get better means understanding what incredibly fast-paced, efficient, and valuable training to higher's level may feel slow, frustrating, or even non-sensical at your level.

Maybe your company being slaughtered due to poor staff work at Twentynine Palms or Realistic Urban Training Exercise is what it takes to teach a staff a lesson that will prevent them from getting a unit slaughtered in real com-

Maybe your company being slaughtered due to poor staff work ... is what it takes to teach a staff a lesson that will prevent them from getting a unit slaughtered in real combat.

ing exercise, but a few days of frustration is better than being led into a real war by a commander/staff who has never had a rep or set. Just ask any Russian conscript. No command post exercise or simulation can create the realism and friction inherent to live forces. As they learn, staffs and commanders will make mistakes. Mistakes are part of the natural learning process. In fact, they might make significant mistakes. Why? Because they get even fewer opportunities to train at their level than you do. A regimental commander might get one opportunity at an integrated training exercise to truly do regimental commander things during their whole time in command.

Helping higher get better means understanding and being at peace with the fact higher is made up of humans who are going to make mistakes. Unfortunately, those mistakes may be painful at your level. Understandable errors by higher headquarters might manifest themselves by your company having to attack into what is clearly the teeth of the enemy defense, digging into the defense in the worst spot, or sitting in a 7-ton for twelve hours waiting to go somewhere. Be ready to explain to your Marines that this is necessary for higher headquarters to become more effective.

bat. Instead of trying to duck out of the larger exercise to cram whitespace training in, consider just being a good training aid. Training up the chain of command could have significant benefits later on.

"The Guys Know We're Just Screwing Around."

No one wants to be mocked. Allowing an environment where people cut or tease each other will backfire. Disparagement should rarely or never be a tool to build camaraderie, hold others accountable, or motivate.

A unit with high trust is one that is effective, and the foundation of trust is mutual respect. Teasing is a slippery slope that can lead to the erosion of trust. Teasing leads to mockery which leads to disrespect which leads to contempt. It allows cliques to form which threaten cohesion. If someone is incompetent or simply cannot fit in, do not allow them to be marginalized. Help them improve—or fire them and get them out of your company.

Marines in leadership roles must be particularly careful. The hierarchy ingrained in each Marine at boot camp prevents different ranks from conducting the give-and-take that allows teasing to be equitable and good-natured.

If Marines in your company feel they are held in contempt by their leaders, they will become passive, disengaged, or insubordinate. Think of all the times you held your tongue when your superior said something that made you boil, and recognize that you and your company leaders now have that impact on others. A comment a leader thinks is a good-natured ribbing has the potential to cause deep, simmering resentment.

Maintaining accountability and respect between ranks can be accomplished without demeaning Marines. If you have a good environment, Marines will trust they can come to the chain of command with problems, willingly admit errors, and work to learn from mistakes—and they will not cover things up. As put in MCDP 1-3, "Self-confidence is the wellspring from which flows the willingness to assume responsibility and exercise initiative."

"Paperwork Is BS."

Making sure administration is tight is one of the key ways to build rapport with your Marines. Failing to do it is one of the quickest ways to lose people. Benefits accrue and pitfalls are avoided by simply doing the work.

Marines who have to change barracks rooms every month, cannot get anyone to help them figure out a travel claim, or have to buy items they know are sitting unrequested in the supply warehouse are going to be disgruntled. Timely approval of leave, rapidly processing awards, writing letters of continuity, and resolving pay issues are not fun. It is not going to help a Marine learn to throw a grenade. But tight administration will create trust in the Marine that you will always do what is best to both accomplish the mission and take care of them.

Having tight administration can have benefits in other ways as well. Being savvy on the Defense Travel System can open a whole new method of logistics for your company. It is absolutely possible to send a platoon to an off-site training package via commercial flight and lodge them in a hotel. Understanding how the budget cycle works can help you convince your higher headquarters that the gear you want to buy helps them

obligate excess funds they are going to get slammed for in October. Marines who know and trust the training schedule will be more prepared for events. Like it or not, the ability to navigate bureaucracy and do administration is a critical part of company command.

"Orders Are More a Schoolhouse Thing."

We seem to do ourselves a disservice at schoolhouses by turning the orders process into a tortuous multi-day event with obscenely large products. Some people's response is to discard the orders process as unrealistic. Instead of

What is important is that information is organized in a way subordinates can absorb it.

totally ditching the orders process and products, consider adapting it in ways that make sense given the situation.

The five-paragraph orders process is not restrictive, it is permissive. They are a mental format that the Marine Corps has ingrained in everyone which allows for information passage in an organized manner. Condensed orders formatted in a recognizable manner and passed via a succinct torn-out notebook page, a few radio transmissions, a map brief over the hood of a truck, or a few sentences in chat at the start of a comm window are equally as valid as the 70page order briefed for two hours over a terrain model. What is important is that information is organized in a way subordinates can absorb it. Communicating in a standardized manner, even if it is abridged, builds shared understanding and fosters implicit communication between leaders and subordinates. The Rapid Planning Model technique currently taught at the Advanced Maneuver Warfare Course is an equally valid (perhaps even better) tool.

Organized information lets Marines focus on what is being passed rather than how/when it is being passed. Orga-

nized information also ensures leaders do not forget anything and holds them accountable for producing due-outs to their subordinates. Particularly in tactical scenarios, failing to create warning orders, assuming Marines understand the details, and doing stream-of-consciousness data dumps will not enable rapid or high-quality results. This puts the burden on your subordinates to discern what needs to happen rather than providing actionable guidance. In turn, this increases the time your subordinates need to absorb instructions and act, slowing your unit down.

Using the orders process and associated products increases effective communication and tempo. It is empowering for a subordinate to hear, *your task is in order to*. As your unit develops, standing operating procedures will replace parts of the order, styles will emerge, and things might be tweaked. However, a foundation of organized information is essential to effective communication.

Conclusion

Leaders are made, not born. Trial, error, and experience are critical in the process of creating an effective company leader. Sometimes, however, it is better to learn through what others have experienced rather than rediscover a lesson on your own. Hopefully, there are a few thoughts here that can help.

Notes

- 1. Headquarters Marine Corps, *MCDP 1*, *Warfighting*, (Washington, DC: 1989).
- 2. Arie P. De Gues, "Planning as Learning," *Harvard Business Review*, March 1988, https://hbr.org/1988/03/planning-as-learning.
- 3. Headquarters Marine Corps, *MCDP 1-3*, *Tactics*, (Washington, DC: 1997).



Improving the Enlisted Assignments Process

Immediate recommendations

by 1stSgt Daniel Best

rom an individual Marine's perspective, the Marine Corps enlisted assignment process for staff noncommissioned officers (SNCOs) is fraught with uncertainty and a general lack of autonomy over one's own career. At no point, from the initial contact with a monitor to executing the issued orders, does a senior enlisted Marine have anything more than a cursory level of involvement. Though the Marine Corps has an ambitious plan to transfer the entire process to a web-based system, anything substantive is still years away. Simply stated, our organizational desire to reach perfection is stifling beneficial progress now. There are simple but effective steps that, if implemented, would have an immediate and measurable positive effect on combat readiness as defined by the Marine Corps personnel assignment policy.

Senior enlisted Marines' disappointing level of involvement when deciding their next assignment is a clear policy misstep. There needs to be an immediate disruption of the current practice by authorizing individuals to have a meaningful stake in the process. By allowing Marines to have a functional role when selecting the unit or whichever geographical location they are attempting to serve, the Marine Corps would foster an environment of collaboration vice frustration. Is there a practical reason for blatantly disregarding the needs of the individual instead of working to find a mutually beneficial solution? Specifically, at the SNCO level, these enlisted leaders should be given the full context of what assignments are open, if there are any positions that the

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... our organizational desire to reach perfection is stifling beneficial progress now.

monitors identify as a higher priority, and who else is rotating. This data is already available to monitors but not placed in the hands of the individuals it directly affects. Let me be clear, I know

not everyone has bad experiences with their monitors, but those stories are definitely in the minority—especially among the senior SNCO ranks. These senior enlisted Marines have earned the respect to be treated as stakeholders and not entry-level employees or the Marine Corps will continue to face difficulties with retention.

It is reasonable to assume an increase in self-determinism will be reciprocated with higher morale and a genuine appreciation for the organization which influences all other areas of their profession. Though there may be short-term benefits of assigning orders without adequately consulting the Marine executing them, there are lasting negative effects that must be considered, too. What kind of SNCOs are created when the organization is essentially condoning their mistreatment? Each of these



Senior SNCOs should have a meaningful stake in their assignments. (Photo provided by author.)



Increasing ownership of their own career paths mean more complex decisions for SNCOs. (Photo provided by author.)

SNCOs has made sacrifices to make it to the highest positions of the organization, and the lack of respect that some receive warrants immediate correction. How should a career SNCO respond when given a set of orders that will likely lead to a divorce, financial hardship, or

countability. This inability to report gross misconduct has created a Wild West of decision making, which is contradictory to anything else in the Marine Corps and has destructive effects on combat readiness. Lifelong military practitioners understand there is no

Each person must consider criteria like future career goals, their own prior experiences, guidance from mentors, and of course, family dynamics ...

missing important family milestones—especially when there is likely someone that desires those orders? Are they expected to then expound on the virtues of military life and encourage others to follow their path? Experience tells me that an engaged leader that has reaped the benefits of a healthy military career will have a far greater impact on their subordinates' retention than any \$8,000 bonus or other hollow incentives.

The second but equally important step would be to provide a path for launching a formal complaint against a monitor or the enlisted assignments branch. The current structure allows one Marine to potentially negatively impact hundreds of others with no ac-

benefit to creating a culture that allows leaders to avoid executing official orders but there are positive effects when providing an approved channel to air real or perceived grievances. Programs like the Any Mouse for safety or Request Mast for leadership issues have had a positive influence on curbing unwanted behavior. The assignments policy has several directives that should govern how the monitors assign orders but how can an organization track success without providing an outlet for properly reporting violations?

It is imperative for our leaders to realize that having increased ownership over their career path is a prominent feature of the complex decisions made by SNCOs. Each person must consider criteria like future career goals, their own prior experiences, guidance from mentors, and of course, family dynamics before deciding where to serve. It is unreasonable to expect anyone to care about a career more than the individual living it. The Marine Corps may begin to rebuild some of the lost confidence the current system has created by incorporating these two steps. It is a strategic imperative to begin considering how SNCOs are treated during the assignment process or there will continue to be retention issues. Each SNCO is responsible for not only completing his assigned mission but also leading and mentoring the next generation of warfighters—a duty that is sacred to most. However the current process pits the overarching values of the Marine Corps against those of the individual for a small convenience. The effects are felt in the longevity and quality of both family life and the legacy of leadership. There is no need to put SNCOs in conflict with those opposing wills, and with minor adjustments to the process, a middle ground can be reached.

"While our service never seeks change for change's sake, we have always embraced it when change had the potential to improve our lethality and effectiveness."

—38th Commandant, Gen Berger, Talent Management 2030



Great Talent Management

With great power (competition) comes great responsibility

by Maj Julia Weber & Maj Anne Boaden

'n the introduction to Talent Management 2030, Gen David Berger, the CMC, explicitly discusses the Marine Corps' current Industrial Age model of personnel management and what has changed in the United States since the model was established. What he alludes to, but does not discuss directly in Talent Management 2030, are the dramatic shifts occurring overseas that are driving changes to our National Defense Strategy. These changes in the balance of international power are the drivers behind the Marine Corps' planned transformation from a landbased, relatively low-tech, counterterrorism force to a high-tech, armed maritime reconnaissance force—one that is specifically designed to further the forward projection of U.S. naval power and enable sea control.1

In order to remain relevant in an era of great power competition and deliver the capabilities the CMC outlines in A Concept for Stand-in Forces, the Marine Corps must become more technologically capable—and must do so quickly.² The existing paradigms of recruiting, training, and promoting Marines will not produce the technologically capable force needed on the timeline available. The changes that the CMC outlines in Talent Management 2030 are the minimum needed to allow the Marine Corps to remain a credible threat to our competitors. Only by adopting flexible practices that are designed to attract and optimally apply available talent against prioritized problem sets will the Marine Corps be able to become the stand-in force that the United States both wants and needs.3

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The New Geopolitical Landscape

Over the past twenty years, the United States has been steadily burning through both national treasure and the Nation's will to engage in conflicts overseas via the wars in Iraq and Afghanistan. Meanwhile, China, Russia, Iran, North Korea, and a number of smaller nations have made astonishing technological advances in cyber, space, and other realms, and they show no signs of slowing down. At the turn of

the 21st century, U.S. politicians and strategists hoped that these growing nations would become responsible leaders, contributing to freer and more open societies, but that optimism has given way to recognize that they remain determined rivals.⁵ Their technological developments span both military and commercial fields and a simple look at some leading indicators starts to paint a worrying picture for the United States' ability to preserve the "long peace,"

"In the past two decades, China has risen further and faster on more dimensions than any nation in history. As it has done so, it has become a serious rival of what had been the world's sole superpower. To paraphrase former Czech president Vaclav Havel, all this has happened so quickly that we have not yet had time to be astonished." 4

—Graham Allison

which has existed between nuclearcapable nations since World War II. The following tables present a snapshot of the relative status of a number of national measures from publicly available data for China, Russia, and the United States from 2000 and 2020.

While the total population differences between China, Russia, and

the United States have not changed dramatically on a proportional basis between 2000 and 2020, the rise of China and Russia in these other measures is remarkable. This includes the gross domestic product, number of science, technology, engineering, and mathematics (STEM) graduates, number of internet users, and number

of semiconductors produced. In just twenty years, Russia and China have more than tripled their gross domestic product in relation to the United States. Together they have more than four times as many STEM graduates and internet users as the United States, and China alone is now exporting more than six times as many semiconduc-

Table 1. Leading Indicators from 2000 ⁶								
	China	Russia	Combined	Combined % of US	United States			
Population	1,262,645,000	146,596,869	1,409,241,869	499.4%	282,162,411			
GDP (in 2020 USD)	\$481,967M	\$259,710M	\$741,677M	7.23%	\$10,252,345M			
Total Exports (in 2020 USD)	\$253,092M	\$114,429M	\$367,521M	33.5%	\$1,096,111M			
Semiconductor Exports (in 2019 USD) ⁷	\$1,823M	\$46M	\$1,869M	32.2%	\$5,797M			
Active Duty Military End Strength	3,910,000	1,427,100	5,337,100	385.8%	1,383,214 ⁸			
Naval Fleet Size ⁹	693*	446	1,139	348.3%	327			
Tertiary STEM Graduates (per year) ^{10,11,12}	281,270	290,000**	571,270	234.5%	243,520			
Mobile Cellular Subscriptions	85,260,000	3,263,200	88,523,200	80.9%	109,478,031			
Number of Internet Users	22,222,552	2,887,958	25,110,510	20.6%	121,611,999			
% of Population Using the Internet	1.76%	1.97%	-	-	43.1%			

Table 2. Leading Indicators from 2020 ¹³								
	China	Russia	Combined	Combined % of US	United States			
Population	1,410,929,362	144,104,080	1,555,033,442	472.0%	329,484,123			
GDP (in 2020 USD)	\$8,027,719M	\$1,483,498M	\$9,511,216M	45.5%	\$20,893,746M			
Total Exports (in 2020 USD)	\$2,723,250M	\$378,635M	\$3,101,885M	146.1%	\$2,123,410M			
Semiconductor Exports (in 2019 USD) ¹⁴	\$34,785M	\$70.0M	\$34,855M	664.2%	\$5,248M			
Active Duty Military End Strength	2,185,000 ¹⁵	1,014,000 ¹⁶	3,199,000	238.0%	1,344,315 ¹⁷			
Naval Fleet Size ^{18***}	579	271	842	326.9%	260			
Tertiary STEM Graduates**** (per year) ¹⁹	1,447,330	264,600 ²⁰	1,592,330	421.9%	377,410			
Mobile Cellular Subscriptions	1,696,356,000	238,733,217	1,935,089,217	437.4%	442,457,000			
5G Cellular Sites	200,000	0	200,000	434.8%	46,000			
Number of Internet Users	996,116,129	122,488,468	1,118,604,597	379.8%	294,558,805			
% of Population Using the Internet	70.6%	85.0%	-	-	89.4%			

^{*}Does not include the 29 Supply Ships or the 230 reserve Landing Craft Mechanized/Landing Craft Utility (LCM/LCU) Vehicles listed in Jane's.

^{**}Estimated based on the percentage of the population in Russia aged 25-54 in 2016 with tertiary education [ref. 11], and the percentage of tertiary enrollees in STEM fields in Russia (~20 percent in the 2000s).

^{***}Only submarines and surface fleet "in service" ship counts are presented. Auxiliaries are not included. Some data are from 2020, and some are from 2021. In addition to the above, Russia has an additional 880 tankers, research, supply, firefighting, hospital, repair, tug, transport, salvage, and patrol ships listed as auxiliary ships in Jane's database. Likewise, the United States has an additional 501 ships listed as auxiliaries in Jane's database.

^{****}Data for the U.S. and China are from 2014. Data for Russia are from 2019. Russia's data were estimated based on the percentage of the population in Russia aged 25-34 in 2019 with tertiary education, and the percentage of tertiary education enrollees who are in STEM fields (~20 percent in the 2000s).

tors as the United States—a product on which nearly every piece of U.S. military equipment, other than a standard rifle, now depends. China's growing economy (in part funded by American consumerism) and increasingly educated population have enabled it to develop military equipment specifically designed to counter U.S. capabilities.

cer detection algorithms to millions of marketing and user data points used to drive business and investment decisions, to computer-aided testing and design of new semiconductors, solar panels, cars, and military equipment. Given that China has four times the U.S. population, four times as many STEM graduates, a significant indus-

If we take the time to consider the second-and thirdorder effects of the United States' decline in these leading indicators, the future looks especially grim.

Given the relative population sizes and near parity in education levels, if the United States plans to innovate its way back into global dominance, the U.S. population, U.S. businesses, and the U.S. military in particular will have to be *more than four times* as innovative as the Chinese and Russians. This is unlikely given both the declining quality of primary and secondary education in the United States and the shrinking portion of the U.S. population that is eligible to serve in the military. The measure of the portion of the U.S. population eligible to serve in the military (less than 30 percent of 17–24 year-olds) is an indicator of an overall decline in the health and education levels of the U.S. population.²¹ Increases in the rate of criminal convictions, the number of single-parent households, and the number of attention deficit hyperactivity disorder diagnoses among Americans signal a decrease in the productivity level of the general population and are factors that may preclude military service.

If we take the time to consider the second-and third-order effects of the United States' decline in these leading indicators, the future looks especially grim. Today, artificial intelligence and its sub-field of machine learning are enabling dramatic leaps forward in business, across scientific disciplines, and in military capabilities. These advances are dependent on access to vast quantities of data: from hundreds of thousands of x-ray images on which to train can-

trial base, and that it is nearly as "connected" 22 as the U.S. population, one can infer that China is generating data at a rate of four or more times that of the United States. While data may or may not be the new oil, it is unarguably a valuable resource that Russia and China are exploiting, especially given their lax privacy regulations as compared to the United States. 23 According to the U.S. National Science Foundation, China now generates more research publications annually than the United States does. 24

Looking at some of the specific actions being taken by these states, it is clear that they have aspirations and intentions beyond just defending their borders. Russia, despite a relatively weak economy, still considers itself a great power and seeks recognition as such. As evidenced by its 2022 invasion of Ukraine, it is willing and able to take military action to reinforce and expand its influence regionally and globally.²⁵ Russia's rapid annexation of Crimea in 2014 demonstrated its ability to effectively integrate electronic warfare, air defense, long-range precision fires, information operations, and cyber-attacks. ²⁶ The follow-on Russian intervention in Syria provided the Russians with the opportunity to further refine these skills in the vicinity of U.S. forces where they disabled U.S. EC-130 electronic attack aircraft and blocked U.S. drones from receiving GPS signals.²⁷ Since 2016, Russia has continued to develop electronic warfare and cyber

capabilities at a rate that exceeds that of the United States.²⁸ Now, every Russian armor or infantry brigade has an electronic warfare company attached to it.²⁹ Similarly, Russia has deployed antisatellite weapons and done so without regard to their long-term effects on both Russian and international operations in space.³⁰ While the result of Russia's current invasion of Ukraine remains to be seen, these adaptations have no doubt facilitated its limited success initially and are force structure changes the U.S. military has yet to similarly implement.³¹ When specifically considering the Marine Corps in comparison, most Marines do not have the security clearance needed to even get briefed on the full nature of the threats that foreign electronic warfare capabilities present to them and their equipment, much less the education needed to understand how to recognize and counter them.

China, like Russia, seeks great power status on a global scale. However, unlike Russia, for many years China downplayed its ambition to avoid drawing unwanted attention to itself while it built economic and military capacity in accordance with a long-term strategic plan. By 2049, the centennial of China's Communist revolution, China plans to be the world's only superpower: "unrivaled economically, militarily, and culturally."32 It plans to achieve this through a series of repeated five-year plans and other intermediate milestones, such as becoming the world leader for high-tech manufacturing by 2025 and becoming the country that sets new global technological standards by 2035.33 In keeping with the wisdom of Sun Tzu, it is likely that China seeks to become the dominant superpower without actually fighting. Rather, through continued economic expansion and investment in military capabilities that nullify U.S. advantages, China plans to present such a capable force that the United States and others will choose to defer to China, at least in the Asia-Pacific region, vice take up arms. The collapse of the Soviet Union and the subsequent rise of a democratic Eastern Europe was particularly motivating events for the Chinese Communist Party. Anti-American leaders in

Beijing used these events to frame the Tiananmen Square protests as a U.S. effort to "sow discord in the enemy camp" and justify investment in military capabilities specifically intended to counter U.S. strengths.³⁴

In the decades since the fall of the Soviet Union, China has invested heavily in the development of hypersonic weapons—missiles that are fast, low-flying, highly maneuverable, and can evade traditional U.S. missile defense systems. China is reportedly several years ahead of the U.S. in the development of these weapons, and GEN Mark Milley, Chairman of the Joint Chiefs of Staff, referred to a 2021 test by China of an orbiting hypersonic weapon as another "Sputnik moment" for the United States. 35 Orbiting hypersonic weapons can encircle the globe before striking their target and are thus highly unpredictable and difficult to defend against. China is also expanding its navy—which is arguably already technically on par with the U.S. Navy, installing hundreds of nuclear missile silos on the Chinese mainland and building electronic warfare stations on islands it has claimed or built in the South China Sea.³⁶ These electronic warfare stations are designed specifically to take out U.S. communication and navigation systems, potentially rendering military units within range deaf, dumb, and blind—making them sitting ducks ripe for missile attacks.³⁷

In addition to developing counters for U.S. command and control (C2) capabilities, China has also made significant headway in protecting its own C2 infrastructure. In 2016, China launched and successfully employed the world's first quantum communications satellite, essentially setting what will become the standards for quantum cryptographic key distribution.³⁸ Quantum-based encryption is currently considered unbreakable given the known limitations of particle physics. In addition to enabling unbreakable encryption, advances in quantum computing are also expected to render classical encryption methods obsolete as classical encryption will be decipherable with quantum computers.³⁹Currently, all of the U.S. government and U.S. military's secure voice and data

communications are reliant on classical encryption. This, too, should have been regarded as a "Sputnik moment" by the United States, but it went largely unnoticed by the American general population, which has been, and remains, distracted by domestic politics.

In parallel with these technical advances, China's navy is expanding its routine operating areas, extending the influence of the Chinese Navy across the Indian Ocean to key ports in the Middle East and Africa, supplanting U.S. influence in these areas. 40 Closer to home, China is employing a maritime militia and deep-water fishing fleet to harass and intimidate its neighbors. This is a "force of vessels ostensibly engaged in commercial fishing but which in fact operate[s] alongside Chinese law enforcement and military to achieve political objectives in disputed waters."41 The maritime militia routinely "stakes out" islands in the East and South China Seas, giving credence to China's claims to the disputed territories. The militia also fishes en masse in other countries' exclusive economic zones, having depleted its own, and trains with China's navy to conduct mine-laying and reconnaissance activities. 42 Militia ships are outwardly indistinguishable from the regular fishing fleet except in action,

in the Pacific nor widely trained to use these tools. This would include highspeed transport vessels, advanced sensors, and either the computing power needed to locally process and interpret multiple sensor feeds or the ability to securely and undetectably transmit significant quantities of collected data back to C2 nodes for remote processing. These shortfalls are borne out by the DOD's own analysis: "Over the past decade, in U.S. war games against China, the United States has a nearly perfect record: we have lost almost every single time. The American people do not know this. Most members of Congress do not know this—even though they should. But in the Department of Defense this is a well-known fact."43

This is evident not just in wargames but also now in actual force-on-force training exercises the Marine Corps is carrying out against adversaries equipped similarly to China. 44 Marines from squad leaders up to regimental and division commanders are unable to grasp the complexities of multi-domain operations. Not only do they not understand the implications of adversary technology but they do not even understand the full suite of organic Marine Corps' capabilities or how to effectively employ them. The results on the train-

Marines from squad leaders up to regimental and division commanders are unable to grasp the complexities of multi-domain operations.

allowing them to engage in hostile activities and yet maintain deniability. Even without military equipment on board, the militia ships have the propensity to drastically complicate military maneuvers in the region by serving as reconnaissance and blockade elements.

The U.S. military, and in particular the Marine Corps, is currently outfitted and trained for small-arms combat with low-tech militia forces in a desert environment. The Marine Corps is neither outfitted with sufficient numbers of the types of tools it needs to help the Navy detect and counter Chinese aggression

ing field are massive casualties, including numerous incidents of fratricide, and defeat. For Marines, the traditional path to leadership positions that flows through a set series of "professional" military education programs and repeat assignments in operational units is notably devoid of advanced technological training. The consequences of this are evident in these exercises, if not yet on an actual battlefield.

In light of these advances and actions by our competitors, the CMC, with the support of the Secretary of the Navy and the Chief of Naval Operations, is gambling that the Marine Corps, with the financial support of Congress, can capitalize on its small size and enterprising nature to quickly re-invent itself in order to address the United States' critical need for a high-tech, low-signature, forward-based naval reconnaissance force. 45 Indeed, "for us to continue to spend hundreds of billions of dollars in the same ways, on the same things, would be the height of folly. It would be exactly what our opponents want us to do."46

The Marine Corps' Plan for Standin Forces

In December 2021, just one month after publishing Talent Management 2030, the CMC published A Concept for Stand-in Forces. This concept outlines how the Marine Corps will contribute to national defense in an era of great power competition as a part of a joint and/or allied force, rather than as a stand-alone MAGTF.47 The Marine Corps will serve as "the eyes and ears of the fleet and joint force ... helping to complete naval and joint kill webs ... extend[ing] the reach of the fleet and joint force from inside contested areas." By "gaining and maintaining contact (establishing target custody and identifying adversaries' sensors) below the threshold of violence," stand-in forces will be able to assist in "identifying malign behavior" and, if armed conflict does erupt, enable the joint force to both "attack effectively first and prevent the enemy from doing so."

In order to become the Joint Force's forward eyes and ears in the Pacific, the Marine Corps must invest in technology that increases its mobility in coastal regions, enables it to passively detect and track adversarial actors and targets, rapidly and automatically transmit data, and communicate with not just the Navy and Coast Guard but also the Army, Air Force, Space Force, and our allies and partners. Marine units, as primarily armed reconnaissance forces, will need sufficient firepower to protect themselves and deter aggression against them but not so much that adversaries can easily detect them or that it hinders their ability to pick up and move within minutes. Mobility will be required to both maintain custody of targets and avoid being targeted.

Since World War I, the mission of a Marine infantry unit has been to "locate, close with, and destroy the enemy."48 This paradigm was well supported by the oft-cited concept of "every Marine a rifleman." That paradigm is no longer sufficient in an era where our enemies are heavily invested in low-cost, long-range precision strike capabilities, and front lines no longer exist. A Marine and his rifle are no longer the "deadliest weapon in the world."49 A platoon of Marines, as currently equipped, is helpless and useless against an enemy who has the ability to use real-time satellite data to launch a precision missile strike from hundreds of miles away. The platoon of Marines would be identified and subjected to missile attacks before they even had the chance to locate, much less close with or destroy anything.

Currently, these skills mainly reside in our most senior non-commissioned officers, staff non-commissioned officers, and mid-grade officers. Given that these ranks form less than 30 percent of the Marine Corps, the upskilling and shift to a more mature, older force that the CMC calls for in *Talent Management 2030* is essential.⁵¹

Talent Management Requirements for Stand-in Forces

For the Marine Corps to be successful as a stand-in force, it must attract and retain more talented individuals with greater technical prowess, provide them with more advanced training and education, and ensure their skills and abilities are maximally employed. This is not an easy task. The U.S. Armed Forces are competing with industry and the tech sector for a shrinking slice of the population that is qualified to serve. In 2009, 75 percent of the U.S.

For the Marine Corps to be successful as a stand-in force, it must attract and retain more talented individuals with greater technical prowess ...

To be effective, not only must every Marine still be capable of operating a rifle for local force protection, but the small, distributed teams of Marines sent forward as Stand-In Forces must also be well-versed in operating and updating software-defined radios, controlling and repairing autonomous vehicles, and establishing and maintaining local 5G (or other) secure computer networks. These teams of Marines will operate radars and other sensors; connect to and direct spacebased collection, communication, and targeting assets; and manage power and fuel requirements given limited options for re-supply. To provide the Joint Force with an information advantage, the small teams of Marines deployed as stand-in forces will have to be subject-matter experts in all the high-tech tools required to contribute to information collection and dissemination.50

population aged 17–24 was *ineligible* to serve in the Armed Forces based on poor physical fitness, inadequate education, or prior criminal conviction.⁵² Since 2009, national averages in both physical fitness and education have continued to degrade, further reducing the percentage of the U.S. population eligible to serve.⁵³

As an armed maritime reconnaissance force, the Marine Corps will predominantly need individuals who can operate high-tech equipment, understand and repair computer systems and electronics, work effectively in teams, and adapt to rapidly changing scenarios in high-stress environments. Marine Corps platforms and equipment have and will continue to become more advanced. So too must their operators. No longer are motor transport Marines working on Humvee engines which are similar to tractors or pickup trucks. Now, Marines are working on Joint

Light Tactical Vehicles, which have as many electronic modules and hydraulic systems as military aircraft. Similarly, tactical radios no longer consist of a few transistors and an antenna. They involve, in a single package, multiple radios and antennae with each radio operating on different frequency bands with software-defined encryption states, and algorithm-controlled frequency and radio hopping. Even among combat arms career fields, the new concept calls for Marines to be trained on most, if not all, weapons available to the unit, to include small UAVs and loitering munitions.

recruits and keep them on board for longer, it is going to have to offer different incentives. Free college tuition and comprehensive healthcare, while certainly valuable, are no longer unique selling points. Amazon, Walmart, UPS, Home Depot, Starbucks, and even Waste Management number among the many corporations offering front-line employees college tuition and other incentives.⁵⁷ U.S. technology companies in particular, which are competing with the military for technical talent, are known for their comprehensive benefits such as guaranteed childcare,

... the Marine Corps must make it easy for individuals who already have desirable technical skills to join without restarting their careers or taking a significant pay cut.

The advanced level of skill needed to operate and maintain this equipment in remote environments with minimal re-supply options is not *and cannot be* fully developed by our current entry-level training programs. ⁵⁴ To address the Marine Corps' shortfall of technical talent, training pipelines and the length of service contracts must be extended to address additional training requirements. Alternatively, recruits must enter the Marine Corps with a higher level of skill and choose to stay for multiple tours.

Unfortunately, patriotism alone is no longer sufficient to attract and retain the number of talented individuals needed in the Marine Corps. Recent polls show declining confidence in the military by the U.S. population, with numbers down from $\overline{70}$ percent of the population having "great trust and confidence" in the military in 2018 to just 45 percent in 2021.⁵⁵ Additionally, when surveyed in 2015, over 80 percent of 18-29-year-old respondents indicated they would either "probably not want to" or "definitely not want to" serve in the military. 56 The Marine Corps has barely managed to hit its recruiting targets of late. As it looks to bring in more technically capable commuter reimbursement, family and parental leave, volunteer time off, gym memberships, paid cell phones, and more.⁵⁸ What they offer is on par with or better than the suite of benefits offered by the military.

To counter this, the Marine Corps must make it easy for individuals who already have desirable technical skills to join without restarting their careers or taking a significant pay cut. Currently, second lieutenants do not need to have served as sergeants before they can effectively serve as second lieutenants. After completing boot camp or Officer Candidates School, why would someone with advanced skills need to serve as a private before being able to serve as a staff sergeant? Or a lieutenant before serving as a major? The Marine Corps is not the only organization that develops leadership skills and the presumption that someone can only be an effective leader if they have diligently made their way through existing Marine Corps pipelines is preventing the Marine Corps from making the best use of the talent available. After earning the title Marine, the Corps must place Marines where their skills can be of most use, not force them through

rigid career and promotion pipelines designed to cater to the lowest skill level that the Corps will initially accept. To attract those with the needed technological abilities, the Marine Corps must provide options for qualified applicants to laterally enter at ranks commensurate with their skills and must move away from the requirement for all Marines to strictly follow traditional career paths in order to qualify for promotion.

To improve retention, the Marine Corps must make the reenlistment process automatic, and commanders must actively encourage Marines who are finishing their first and second terms of enlistment to stick around for the next one. When faced with repeated moves, being forced to live in rundown barracks with curfews, arduous administrative requirements, and, most importantly, little to no say in their career paths, schools, or assignment locations, it is not hard to understand why so many Marines choose to leave the Service, even if military take-home pay is on par with that for equivalent civilian jobs. The grass is greener on the other side of the fence.

The process changes that the CMC outlines in Talent Management 2030, such as matching recruits to MOSs that align with their talents and interests and providing Marines more say over what assignments they receive, are sorely needed to address these issues. While these concepts may be new to the Marine Corps, they are not new ideas. In 1869 John Stuart Mill posited: "[It] is not that all processes are equally good, and all persons are equally qualified for every task or trade; but rather freedom of individual choice is the only thing that leads to the adoption of the best processes, and puts each operation into the hands of those who are best qualified for it."59

Unless the strategic changes the CMC calls for in *Talent Management 2030* are implemented expeditiously and completely within the next two to three years, the Marine Corps will be unable to compete, and not just for talent. As Christian Brose argues in *The Kill Chain*, "The problem is not lack of money [or] lack of technology ... No, the real problem is a lack of imagina-

tion."60 U.S. competitors have developed asymmetric, high-tech capabilities that nullify the conventional ways of waging war. The Marine Corps must get creative in whom it recruits, how it employs Marines, and what tools it provides them with in order to present a credible threat to competitors in this era of great power competition. The United States may still want a Marine Corps, but without adopting improved talent management practices, the one she will have will not be worth much on the international stage.

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Command Advice

Leveraging SECNAVINST 1730.10a and the chaplain toward positive command outcomes

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ommanders intuitively sense the value of chaplains when they provide individual confidential care and advisement to their sailors and Marines. Despite this, the chaplain's skill set and value as advisors to the command tend to be not as fully understood, and, as a result, chaplains are too often underutilized and leveraged. Accordingly, this article briefly examines relevant Department of Navy (DON) policy, including SEC-NAVINST 1730.10A, Chaplain Advisement and Liaison, which establishes specific policy on the role of chaplains as advisors to commands. The goal is to offer practical suggestions and recommendations to Marine Corps commanders—specifically, how to maximize their chaplain's value and utility to the command regarding command advisement. In so doing, commanders will see tangible results of their chaplain building character, instilling core values, and optimizing warfighter readiness. Indeed, to the degree that command advisement impacts character development, chaplains meaningfully

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Tuckman's model on *forming, storming, norming, and performing* as a practical method for commanders to employ regarding command advisement and concludes with recommendations and central takeaways for commanders.

Building Character, Instilling Core Values, and Optimizing Warfighter Readiness

This section will chiefly focus on a brief review of SECNAVINST 1730.10A, Chaplain Advisement and Liaison.² In addition, it will also reference other guidance or doctrine pertinent to the discussion, such as

advises the command in three distinct ways (i.e., individual, command, and external advice). Of the three specific forms of advice provided by the chaplain, this article focuses specifically on *command advice*, that is, how the chaplain "advises the commander on all matters regarding the Command Religious Program (CRP), command climate, command morale, unit cohesion, and human factors within the command (command advice)."6

A commander's openness to command advice is the key to unlocking the value of their chaplain in the command to maximize positive command outcomes, including warfighter readiness while at the same time reducing destructive behaviors. Indeed, the chaplain's role in championing spiritual fitness as a function of command advice has gained increasing currency from leaders at the highest level of the Marine Corps, who see it as a vital resiliency factor that builds character, instills core values, and optimizes readiness.8 However, commanders do not always robustly understand this function of the chaplain, much to their detriment. As noted in a recent article on holistic health as a 21st-century military advantage:

[T]he importance of spiritual fitness in building toughness and resiliency is

... commanders will see tangible results of their chaplain building character, instilling core values, and optimizing warfighter readiness.

contribute toward the combat readiness and warfighter resiliency of sailors and Marines at all levels across the unit. Given that, the following discussion frames chaplain advisement within DON policy. After briefly reviewing policy, additional commentary and deliberation round out the analysis. To this end, the article applies Bruce W.

ALMAR 033/16, Spiritual Fitness, ALMAR 027/20, Resiliency and Spiritual Fitness, and MCRP 6-10.1, Spiritual Fitness Leaders Guide.³ With that said, SECNAVINST 1730.10A establishes DON policy on the chaplains' distinct role, not only as advisors to individuals but to the command.⁴ Specifically, the instruction delineates how the chaplain

expansive in its potential to support all of the priorities within the Commandant's Planning Guidance—that is, to build character and instill core values. However, spiritual fitness has largely remained within the undercurrents of knowledge and concern among senior officers. The result has been a dearth of meaningful discussion, let alone purposeful installation in any material way, at the individual or unit level in the Navy and Marine Corps. This contrasts with the mental, social, and physical components of overall fitness, which are widely understood, robustly framed, and integrated with the command.9

As the article makes clear, there tends to be a disconnect between many commanders engaging their chaplain within the command in their capacity as advisors and are thus not only underutilized as command advisors to the level the SECNAVINST 1730.10A envisions but fail to recognize or appreciate the impact this has within their command in terms of resiliency and readiness. ¹⁰

To link SECNAVINST 1730.10A with the leveraging of the chaplain toward better command outcomes even further is advanced by an examination of recent messaging from the 37th and 38th Commandants of the Marine Corps. While not policy per se, their two ALMARS set expectations consistent within the SECNAVINST 1730.10A regarding chaplain advisement within the command to achieve warfighter readiness. Gen Robert B. Neller, in ALMAR 033/16, Spiritual Fitness, asserted that spiritual fitness is critical to the Marine Corps. 11 Gen Neller stressed that "[r]esearch indicates that spiritual fitness plays a key role in resiliency [and] in our ability to grow, develop, recover, heal, and adapt. Regardless of individual philosophy or beliefs, spiritual well-being makes us better warriors and people of character capable of making good choices on and off duty."12 Gen Berger stated in ALMAR 027/20, Resiliency and Spiritual Fitness, that "[w] hile the importance of physical, mental, and social fitness are more recognizable, spiritual fitness is just as critical, and [it] specifically addresses my priority to build character and instill core values

in every Marine and Sailor. Character strengthens our collective warfighting spirit."13 Concerning long-standing policy and recent guidance, chaplains are uniquely positioned to assist commanders in developing, executing, and assessing spiritual fitness goals at the unit level. 14 Both Commandants make clear in their ALMARs that the importance of spiritual fitness toward readiness is the responsibility of the unit commander; the commander accomplishes this by leveraging the chaplain.¹⁵ However, if the commander proceeds in this fashion and adheres to policy, he must utilize the chaplain for command advisement. Spiritual fitness must therefore be emphasized more intentionally, robustly, and systematically by leaders at all levels in the DON to optimize warfighter readiness and attain a military advantage over the adversaries of the United States in the 21st century and beyond.¹⁶

Given their unique training and awareness of relevant instructions and policies, chaplains are uniquely qualified special staff officers to offer advice that may otherwise be missed. By leveraging the chaplain's unique perspective, commanders can build more spiritually fit sailors and Marines ready for combat or life challenges in garrison, with lower rates of destructive behaviors that contribute toward and shape a positive command climate. However, both commanders and chaplains often misunderstand the role of advisement. Commanders typically utilize chaplains in a reactive role—that is, to respond to crises when personnel have engaged in destructive behaviors. Commanders would be better served by using their chaplains to build resiliency and character proactively. Chaplains can expand the aperture to create healthy command climates encouraging proactive, protective behaviors. In this way, chaplains must operationalize their interaction with commanders by providing proactive command-level advisement on unit cohesion, morale, and spiritual fitness. Chaplains can assist commanders in shifting away from messaging that emphasizes what sailors and Marines should not do to develop them to do what they *should do*.

Forming, Storming, Norming, & Performing: Toward Chaplain Advisement

Commanders are developed through the ranks, gaining valuable insights through various experiences that build up their needed capabilities of leading the unit in accomplishing the mission. However, specifically regarding spiritual fitness, there are few opportunities to employ a chaplain during this time of leadership development in an advisement role before taking command of a battalion or squadron as the commanding officer. This largely inescapable dynamic slows the momentum in building a solid chaplain/commander partnership needed to build a culture of spiritual resiliency and position the command in a proactive character development mode. To avoid this, commanders should fully integrate their chaplains assertively as team members to demonstrate their voice within the small, entrusted inner circle of advisors (i.e., the executive officer and sergeant major). As part of this team, the advisement voice of the chaplain may stand outside the normal information flow the commanding officer usually hears and can be of extreme value as the commander makes critical decisions. The following paragraphs provide a structure that commanders can use to understand the utilization of their chaplains in the advisement role. One way of looking at this issue is through the forming, storming, norming, and performing framework of small-team development, developed by Bruce Tuckman in 1965.¹⁷

Forming

Teams do not simply "materialize"; rather, they are *formed*. Team members begin to share common interests and pursue shared goals while developing a sense of belonging. ¹⁸ This is led by the commander, who understands the unique value of the chaplain when actively forming their team by including the chaplain along with the executive officer and sergeant major as core advisors to the command. In addition, there should separately exist a commander/chaplain partnership. This relationship is critical in forming as it sets the

conditions of a healthy organizational culture, with the chaplain entrusted to speak freely and from a unique perspective. The chaplain needs to understand the commander's priorities and be given permission to enter a privileged relationship to speak freely on all subjects impacting the commander. Ideally, the commander would give permission and welcome the chaplain's mentorship on how to best employ their capabilities to facilitate the commander's priori-

cess (i.e., "sustain the transformation").

• Key audience: The individual sailor or Marine, especially those who just transferred or are new to the unit.

Storming

The storming stage is where chaplains are instrumental in a commander's decision-making process. Often the chaplain's involvement comes later in the storming stage in a reactionary ca-

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ties. This communication allows for a unity of effort in establishing the commander's desired culture envisioned for the unit.

Understanding the commander's sense of the unit's strengths and weaknesses will help the chaplain not only advise but also administer the programs best suited toward institutional and organizational goals to enhance overall health and warfighter readiness. ¹⁹ Chaplains build culture and character at this level by:

- Connecting individual sailors and Marines to their *why* by helping them develop a warrior ethos rooted in their belief systems and supported by their connections with those who have offered enduring support throughout their life (family, friends, communities of origin).
- Conveying the core values of the Sea Services (Honor, Courage, and Commitment) that serve as the foundation of cultural norms and that connect the *why* of the individual with the mission of the unit (and more broadly speaking, the Marine Corps and Navy) in an integrative process.
- This first stage is the primary focus for officers and enlisted accession training. It must be sustained in the FMF, ideally as part of the command indoctrination and onboarding pro-

pacity. If the forming stage is productive, chaplains can be employed proactively in the storming phase to reinforce an organization's resilience through tension and conflicts. The commander/chaplain team's clear understanding of organizational goals allows for quick consensus about resolving issues and applying the proper resources. Chaplains build culture and character at this level by:

- Conducting small-unit-level training that emphasizes the need for small-unit integrity at the fire team/squad, work-center level, etc. This training should be dynamic and encourage individuals to come together as a group to accomplish the mission and explicitly addresses the need for transparency and trust among all members of the group, ensuring that all members feel that they have a voice and that their voice will be both heard and acknowledged while reinforcing the formal leadership roles that provide structure to the unit.
- Note: Because the flow of individuals in and out of commands is constant, commands must pay careful attention to this step as an ongoing process.
- Key audience: The small unit as a

Norming

To facilitate the norming of the commander/chaplain team, incorporating the chaplain into the command team and interweaving the chaplain's advice into the daily battle rhythm allows for the chaplain to influence the decision-making process to proactively build resilience within the organization. Familiarizing subordinate leaders with the mentorship of the chaplain in decision making allows subordinate leaders to make more comprehensive decisions that will foster the desired organizational culture. It also exposes junior leaders on how to employ chaplains. Marine Corps leaders at all ranks need to foster knowledge and experience with chaplains as they progress in their careers. Chaplains build culture and character at this level by:

- Providing training on healthy communication practices and managing conflict.
- Providing training that links Marine Corps core values to cultural norms. This should stress positive behaviors and character building that is done, not as an individual but as a group, leading to higher group cohesion and a group warrior ethos. This warrior ethos will align with the commander's intent (or vision). It will adhere to Navy and Marine Corps standards for warrior toughness/total fitness, addressing the mind-bodyspirit triad of individuals and groups alike. One might say that at this level, the group defines its collective fighting spirit. Ideally, the chaplain will advise small-unit leaders and equip them to take the lead on this training.
- Key audience: Non-commissioned officers and junior officers should be the focus of chaplains' training on character at the Lance Corporal Seminars, Corporal's Courses, and wardroom training.²⁰

Performing

Ideally, as the commander/chaplain team moves into the performing stage, positive organizational culture is maintained while organizational goals are achieved. Subordinate leaders understand the full breadth and depth of resources a chaplain can apply as needed. As the team works to accomplish its mission, the distinction between individual performance and the unit's success begins to blur. The integration of the commander/chaplain team is fully synergized with the ability to ebb and flow to facilitate a healthy organizational culture. Chaplains build culture and character at this level by:

- Coaching/Mentoring: As staff noncommissioned officers and officers lead their units, they are empowered to identify and address problems/conflicts within their command, and the chaplain, as a coach, provides advisement as needed.
- Key audience: Staff non-commissioned officers and officers.

With the desired interpersonal outcomes of the following:

- Inclusion: personnel feel an increased sense of belonging to the unit; the group is forged by building character, instilling core values, and optimizing warfighter readiness.
- Control: personnel feel that they have a voice and can influence the group; this leads to shared responsibility among unit members, and group identity coheres to shared values.
- Affection: personnel feel a positive attachment to the group.
- Organic result: A tougher, more resilient team with a shared identity rooted in its warrior ethos, where individuals have their voices heard and values integrated with institutional values. This increased sense of belonging creates an environment where people do the right things, with their behaviors/actions aligning with the cultural norms of the institution. Ultimately, this leads to a decrease in destructive behaviors, thus reducing the stress on service providers (especially mental health). ²¹

Conclusion

Navy chaplains gain unique insight from open access to all spaces and through conversations with sailors and Marines across all ranks and shops. As a result, the chaplain has a unique perspective and a valuable understanding of the command and its morale to offer the commander. Indeed, so important is command advisement

that SECNAVINST 1730.10A states that the Chief of Naval Operations exercises oversight to ensure its compliance throughout the Navy while the Commandant of the Marine Corps is to do the same throughout the Marine Corps. DON operations depend upon integrated teams of individuals coordinating their activities to contribute to group decision making, unit performance, and operational effectiveness. Forming, storming, norming, and performing provide the commander with a well-understood methodology for onboarding the chaplain to the advisory team. In the end, implementing SECNAVINST 1730.10A leverages the chaplain for maximum impact resulting in better command outcomes that increase the competitive advantage of the unit by building character, instilling core values, and optimizing warfighter readiness.

Notes

- 1. Within the Navy, the pressure to increase the commanders' literacy is becoming more urgent with the recently announced Chaplains Afloat Initiative. See Geoff Ziezulewicz, "The Navy is Making Chaplains a Permanent Part of Destroyer Crews," New York Times, January 12, 2022, https://www.navytimes.com/news/your-navy/2022/01/12/the-navy-is-making-chaplains-a-permanent-part-of-destroyer-crews. The initiative to increase the chaplain corps by 90 and staff every destroyer by 2025. Typically, there used to be only one or two chaplains per 6-ship strike group. See also https://seapowermagazine.org/chaplain-admiral-navy-growing-chaplain-force-by-90-to-staff-destroyers.
- 2. Department of the Navy, SECNAVINST 1730.10A, Chaplain Advisement and Liaison, (Washington, DC: 2018).
- 3. Gen R.A. Neller, ALMAR 033/16, Spiritual Fitness, (Washington, DC: 2016); Gen D.H. Berger, ALMAR 027/20, Resiliency and Spiritual Fitness, (Washington, DC: 2020); and Headquarters Marine Corps, MCRP 6-10.1, Spiritual Fitness Leaders Guide, (Washington, DC: 2023). Other relevant documents that are pertinent to the commander include Department of the Navy, SECNAVINST 1730.7E, Religious Ministry Within the Department of the Navy, (Washington, DC: 2019); Department of the Navy, OPNAVINST 1730.1F, Religious Ministry in the Navy, (Washington, DC: 2022);

Headquarters Marine Corps, MCO 1730.6F W/ADMIN CH, Religious Ministry in the Marine Corps, (Washington, DC: 2018); and Director of Religious Ministries, Strategic Plan 2023, (Washington, DC: 2023).

- 4. SECNAVINST 1730.10A. The purpose of the instruction is to establish "policy on the role of chaplains as advisors to commands and individuals, and their derivative task as command liaisons." Ibid. The SECNAVINST discussion on chaplain liaison is beyond the scope of this article.
- 5. Ibid. The third form of advice pertains to the chaplain advising "commanders on the effect of religion on military operations, within the boundaries of their non-combatant status (external advice)." This form is beyond the scope of this article.

6. Ibid.

7. See D.A. Daigle, D.V. Goff, & H.G. Koenig, "Holistic Health as a Twenty-First Century Military Strategy: Stoic Philosophy and Spiritual Fitness for Optimizing Warfighter Readiness," *Expeditions with Marine Corps University Press*, March 2023, https://doi.org/10.36304/ExpwMCUP.2023.03.

8. Ibid.

9. Ibid.

- 10. Within the Navy, Prospective Commanding Officers currently undergo a seventeen-week training regimen to prepare for command. *See* Navy Leader Development Framework: (https://media.defense.gov/2020/May/18/2002302036/-1/-1/1/NLDF3MAY19. PDF).
- 11. ALMAR 033/16, Spiritual Fitness.
- 12. Ibid.
- 13. ALMAR 027/20, Resiliency and Spiritual Fitness.
- 14. See Willow Marshall, "Chaplain of the Marine Corps Reinforces Resiliency, Leadership with 1st Marine Division," Marines, April 21, 2023, https://www.marines.mil/News/News-Display/Article/3370054/chaplain-of-the-marine-corps-reinforces-resiliency-leadership-with-1st-marine-d. Rear Adm. Carey Cash, the chaplain of the Marine Corps, visited with leaders from across 1st MARDIV to reinforce and introduce resilience practices and promote leadership engagement. Cash offered a lesson of transcendence and spiritual readiness

to senior officers and staff noncommissioned officers and emphasized that chaplains are not just to be used as a faith-based resource but as a way to help Marines and sailors be a part of something bigger that the new generation of Marines and sailors desire. He recognized the spiritual impact in leadership among historical leaders like James Stockdale, Chester Nimitz, Richard Antrim, Bernard Montgomery, and James Mattis and closed with "Remember, it was the Marine Corps and senior chaplains who codified honor, courage, and commitment."

15. Department of the Navy, OPNAVINST 1730.1F, *Religious Ministry in the Navy*, (Washington, DC: 2022); and Headquarters Marine Corps, *MCO 1730.6F W/ADMIN CH, Religious Ministry in the Marine Corps*, (Washington, DC: 2018).

16. See D.A. Daigle, D.V. Goff & B. Lawrence, "From Character to Courage: The Importance of Spirituality in Maximizing Combat Readiness and Warfighter Resiliency of Marines in the 21st Century," *Marine Corps Gazette*, 106, No. 11 (2022). 17. See e.g., D.A. Bonebright, "40 Years of Storming: A Historical Review of Tuckman's Model of Small Group Development," *Human Resource Development International*, 2010, DOI: 10.1080/13678861003589099. The Tuckman model was created in 1965 by Bruce W. Tuckman's seminal work that hypothesized the stages of *forming, storming, norming*, and *performing* of group dynamics. The usefulness and practicality of the model in the workplace have been verified as having significant value to organizations facing the challenges of today.

18. R. Cartwright, "Team development" in *Mastering Team Leadership, Palgrave Master Series* (London: Palgrave, 2002).

19. Expeditions with Marine Corps University Press.

20. Each year, Navy and Marine Corps commands must complete a Defense Organizational Climate Survey. Chaplains can be essential members of this team in preparing survey questions and then administering the survey. The chaplain should be part of the post-survey team to identify areas of concern and help the com-

mander interpret the voice of the unit. Advice on how to proceed and fix identified problems noted will be a key value-added contribution of the chaplain.

21. See W. Schutz, *The Interpersonal Underworld* (Palo Alto: Science & Behavior Books, 1966).

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War as an Inner Experience

A century after *Storm of Steel*, what Ernst Jünger can mean to Marines by LCDR Anthony Becker, MD

mong certain corners of online culture, there is a resurgent interest in a German author-soldier-philosopher by the name of Ernst Jünger. Young people, mostly men, are sharing reading recommendations, statements of admiration, and humorous memes involving the writer, who is largely excluded from traditional English-speaking education despite his prominence in German literature. This article seeks to explain why Marine leaders would do well to gain familiarity with this name, recognize the psychological forces from which this new interest arises, and consider the lessons drawn from his life and thought in their own reflections on war.

A Brief Biography

The course of Jünger's life is as relevant to his appeal as his writing. Jünger was born in 1895 in southern Germany as the eldest of six siblings and spent most of his childhood in boarding school where he developed an affinity for adventure novels and the natural world. His father, a wealthy industrialist, disapproved of Ernst's eagerly leaving home for the French Foreign Legion in 1913 and leveraged his political connections to have him

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"Long periods of peace and quiet favor certain optical illusions. Among them is the assumption that the invulnerability of the home is founded upon the constitution and safeguarded by it. In reality, it rests upon the father of the family who, accompanied by his sons, appears with the ax on the threshold of his dwelling."

—Ernst Jünger, The Forest Passage



Ernst Jünger wearing the "Pour Le Merite," the German Empire's highest military award. (Photo from Wikimedia Commons.)



A collection of online memes from umlaut Jünger's recent young admirers.

returned from the Legion—on the basis that his son was still a minor. A year later, a newly adult Jünger volunteered for enlisted service at the outbreak of the First World War.

His service for the German Empire during the war was kinetic and decorated. He served initially with a fusilier regiment, manning the trench lines under constant, oppressive artillery fires. He was wounded for the first time in April 1914 and after his convalescence trained as an officer. He returned to the trenches as a company commander where he quickly gained a reputation for a bold, aggressive leadership style. Combat in the trenches could bring opponents to hand-to-hand engagement, and Jünger was known for daring maneuvers in the capture of further ground—line

by hard-won line. He spent months at the Battle of the Somme, where other literary and historical figures would also fight, including JRR Tolkien and a then-unknown corporal, Adolf Hitler. Across his time in the Great War, Jünger would eventually suffer fourteen separate injuries from both shrapnel and bullet wounds, including a grazing shot to the head. He was awarded a series of military honors and would eventually become the last living recipient of the *Pour Le Merité*, the Empire's highest military award.

Throughout the war, he kept detailed notes on both the events and his internal reflections on the phenomena he observed day to day. After the war, he published his account in the work that brought him national attention

titled *In Stahlgewittern*—in English, *Storm of Steel* (1920).² The book, his most remembered today, received both critical and commercial success at the time and prompted a series of other war memoirs, including the more introspective, philosophical work from which this article borrows a title, *War as an Inner Experience* (1922).³ These works established Jünger as a writer and thinker amidst the turmoil of the Weimar era leading into Hitler's rule.

A dedicated nationalist, Jünger nonetheless was among the most wellknown, though nuanced critics of Hitler's regime. He was admired by many among the Reich's leadership and Hitler himself for his writing and was offered (though steadfastly refused) a seat in the Reichstag in the early 1930s. He never joined the Nazi party, much to the frustration of its leaders. He very publicly withdrew from his regiment's veterans' organization when its Jewish members were expelled. 4 His preceding literary reputation permitted his short novel On the Marble Cliffs (1939) to be passed through the censors' review for publication, but the work was quickly recognized afterward to be an allegorical condemnation of the character of the new authoritarian government.⁵

Jünger, a captain in the German Army at that time, spent most of the war on orders in an administrative capacity in Paris. There, in addition to mingling with intellectuals such as Cocteau and Picasso, he became peripherally involved in the Stauffenberg bomb plot, known as "Operation Valkyrie," to assassinate the Fuhrer. Jünger was meticulous in avoiding documentation of oppositional efforts or communicated such only in coded language. After the plot failed, the resulting lack of evidence together with his stature in the public earned him only dismissal from his status as an officer, rather than execution. Many of the Fuhrer's advisors urged Jünger's elimination, but Hitler himself, either out of adversarial respect or political savvy, held that "Nothing must happen to Jünger."6 Nonetheless, Jünger's eldest son and fellow soldier, Ernst Jr, was in reprisal charged for "subversive discussions" and transferred from his regular unit to a penal battalion fighting in Italy. He was killed a month later, recorded as dying in combat, although Jünger's correspondence and the nature of his injuries suggest his death was at the hands of the secret police.

After the Second World War and through the difficulties of post-war Germany, Jünger's writing shifted from a previous focus on the experience of war and the influence of technology toward more central themes of understanding and developing personal agency in times of immense external pressures. His book The Forest Passage (1951) coined the concept of the "Forest Rebel" as a practice and mindset to develop personal will against the dual threats of deindividuation and deracination present in modernity. He later considered the nature of consciousness itself and its altered states in Approaches (1970), which was partially informed by his close relationship with Albert Hofmann, the inventor of LSD.8

Jünger's esteem among German academics would waiver over the decades, in part due to his firmly held beliefs against democratic processes and modernity; however, by his death in 1998, he was firmly regarded as one of the most influential writers in the language in the twentieth century. Across a 102-year lifespan, he lived to see warfare transition from the last days borne on horseback to the first days borne via satellite. Now, a quarter century after his death, his name is again on the minds of military-aged men. The question arises—why?

A Different Approach

Many readers of the Gazette may already have a familiarity with Jünger, but most young people will likely not have had any exposure to his life history or writing through their formal years of education. Jünger's exclusion is partially explained by educators' concern regarding lending credibility to his criticisms of democracy. However, his contrasting presentation of the experience of war against the commonly pessimistic portrait drawn by others may also be difficult to teach. Storm of Steel is often held in comparison to the work by another German veteran of the Great War, Erich Maria Remarque's All Quiet on

the Western Front. The classic All Quiet forms a major point in a constellation of works both in literature and popular media presented to students about the nature of war—as chaotic, largely senseless, motivated by misguided principles or values, and ultimately irreversibly damaging to the combatants on both a societal and individual level. In this view, nothing good can come of it. Recent popular films and novels, such as Hurt Locker or Jarhead, affirm this portrayal and its attendant moral and political implications.

Jünger takes a different approach. As a memoir, Storm of Steel is largely without major moral or political commentary but rather presents a breakneck recounting of the clamorous and harrowing experience of trench warfare itself. Jünger does not shy from the horrors of combat or glorify the experience of victory. At one point, he describes setting about digging new trenches and encountering layers of the corpses of the previous fallen, like geological strata under no man's land. Ultimately, the memoir is written with the obvious knowledge of Germany's loss. But beginning in *Storm* and more fully developed in War as an Inner Experience and his later writing, Jünger offers a view that contrasts with Remarque's of how this experience should be interpreted.

Jünger writes in War as an Inner Experience, "The war is a great school, and the new man will be of our make. [...] Perhaps we are sacrificing ourselves for something insignificant. But no one can take away our value. It is not what we fight for that is important, but how we fight, [...] the commitment of the person, even if it for the smallest idea, weighs heavier than all the brooding about good and evil." In this and other passages, Jünger details his understanding of war as transformative and transcendental. He frames the process of mobilization of a nation as parallel to a complete, individual mobilization of spirit and understands this process as revelatory toward the limits of man and the nature of the self. Jünger sees this process of discovery as a possible good arising from horror and suffering, overlooked by the view characterized by Remarque.

In addition to his military and literary pursuits, Jünger was a fervent, published entomologist, spending time even during his war years collecting and cataloging beetles and bugs. This practice of observant focus, delineating the common and differentiating features of one creature to another, translated to his observations about war and the creatures (himself among them) who were crawling at its urging to the utmost of their capacity to endure and fight. Jünger esteemed the acts of stunning heroism, the dogged resolve, and the simple will toward life he observed in combat. He saw personal value in the self-overcoming these circumstances require. Importantly, he extended this esteem to those fighting on both sides of no man's land. In Storm of Steel he writes, "Throughout the war, it was always my endeavor to view my opponent without animus, and to form an opinion of him as a man based on the courage he showed." In many passages, he details a sense of admiration for his adversary when noting their own daring strides on the battlefield. Jünger witnessed and valued the highest nature of man drawn out by these extremes of experience. Furthermore, he anticipated the amplifying effects of technology and scale as making these extremes all the more excruciating, yet exalting for the individual.

Therefore, Jünger and Remarque do not disagree on the contents of their experiences but rather on their meaning. While Jünger's general attitude is not unique to him—indeed it is echoed among many writers from the Greeks to Nietzsche—it is clearly *not* the prevailing or preferred understanding of the meaning of war handed to the upcoming generation of young people and future Marines. Jünger strikes these new readers with an abrupt and provocative new light on this thread of history. For the young person rightly dispositioned, this new light yields the same feeling as when one suddenly recognizes a new interpretation of an optical illusion—what was previously apparent now is an entirely different object and viewed with an unexpected clarity that prompts the question of why this new interpretation was not visible all along. But this sense of surprise when encountering a new view of the meaning of war is not enough on its own to explain the new interest in Jünger described above; other reasons must exist to make this view appealing.

Why Jünger, Why Now

My own interest in Jünger derives largely from my role as a military psychiatrist. As an Operational Stress Control and Readiness provider, much of my day-to-day work is a function, not so much of the particular stressors and challenges of life as an enlisted or commissioned Marine, but of the cultural and metaphysical milieu that my young patients find themselves in. There is talk across the Corps, and indeed the Nation at large, of a mental health crisis. Depression, self-harm, and suicide rates are increasing at a historic rate among the young and certainly do not spare the military population. Arrays of possible explanations are offered by scientists, doctors, clergy, etc. Certainly, there are unique challenges to the past several decades, but it is difficult to ascribe the current trends solely to economic or violent hardship—especially when viewed in comparison to the kind of historical hardship that Jünger endured. These trends are occurring despite (or perhaps because of) a greater-than-ever emphasis on safety. The insistent effort to shield young people from hard criticism, offensive speech, and physical adversity is stronger than ever. Schools, parents, and even therapists are advising that young people avoid what is dangerous, or even simply difficult, in order to "stay safe." Jonathan Haidt and Greg Lukianoff describe this dominating philosophy of "safetyism" and its potential costs in their book The Coddling of the American Mind.10

There are many who view the current circumstances and characterize the current episode fundamentally as a crisis of *meaning* and where to find it. Pew survey results show, year after year, the sources in life wherein persons find meaning shifting away from long-standing centers of religion or spiritual tradition. ¹¹ I suspect Marine leaders reading this article to be familiar with a macabre sense of humor as well as a proud, juvenile nihilism that seems to

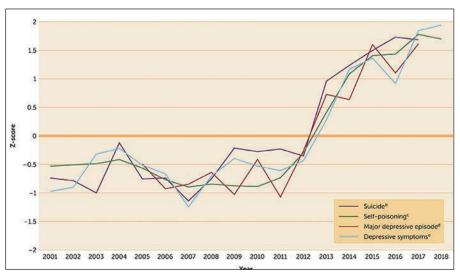
course along many junior ranks. Life is viewed as a joke, history a fairy tale, and suicide is often a punchline. This attitude is illustrated in brightly colored cartoon images in the popular animated series *Rick and Morty* wherein a title character explains at the emotional peak of a season to a loved one that "Nobody exists on purpose. Nobody belongs anywhere. Everybody's gonna die." The writers' prescription? "Come watch TV."

Jünger would tell you this prescription is wrong. He implores one to abandon *safety* as a value and to search for *meaning* in the self-exploration and transformation that can occur in hardship, and he claims that war can be a venue for this search. If we are to loan any credence to this claim, it can be based on the collateral that Jünger's own life provides. He lived history more than most, threading a needle between a sense of a duty to country and a duty to oppose a tyrannical leader. He placed himself at immense personal risk and suffered devastating loss. But the freedom to make such difficult choices, as well as his will to translate that experience to strength, shines through in his writing and demonstrates the principle of growth from hardship in action. It is hard not to imagine that his interpretation of the experience of 1914–1918 enabled his capacity for individual freedom and depth of thought for the remainder of his century of life.

The quote at the beginning of this article referencing the father and son defending their home encapsulates the sense of self-efficacy Jünger promotes in embracing one's ability to meet danger in fulfilling a sense of obligation; the quote is also one of the more popular excerpts shared by those newly interested in the author. This image directly contradicts the fundamental implication of safetyism, which is the errant claim that an authority (whether the constitution, a teacher, a parent, or the police) will always be there to rescue one from danger, therefore we should prescribe avoiding all danger entirely. Clearly, the suffering and behaviors of young people today are evidence that such prescriptions have something absent—something critical and costly. Jünger's appeal is explained by how his thought and example arise to address that absence.

Caveats and Conclusion

Many might rightfully note that the experience of war clearly does not have the same effect on each participant, and ultimately, few report it as transformative or transcendental. Again, in my daily work as a psychiatrist, I work with those who are very right to describe it as psychologically damaging. I nonetheless wonder how much the prevailing cultural understanding of war feeds into this outcome. In the cognitive model of how PTSD occurs, many of the symptoms of re-experiencing,



Normalized data from Dr. Twenge's research on female adolescents and their rising mental health concerns. (Figure provided by author.)



The President of the German Bundestag, Dr. Philipp Jenninger, welcomes the writer Ernst Jünger in his official villa in Bad Godesberg. (Photo by Ludwig Wegmann.)

hypervigilance, and increased startle response are thought to be secondary to deep, underlying beliefs about the world or the inciting event. 12 Thoughts like "the world is dangerous," that "I am a bad person for what I did," or that "I am broken" form a point where the mind gets stuck in a state of perceived threat and the syndrome develops. It is also true that expectancy effects govern so much of the quality of an experience a person undergoes; it is reasonable to claim that a person expecting to be psychologically damaged from an experience is much more likely to be so.¹³ It may be possible that cultivating an attitude that approaches extreme, traumatic experiences from an observantly curious, exploratory, but not necessarily glorifying perspective (i.e. a perspective open to the possibility of growth from hardship rather than a forgone pessimism) might lessen the likelihood of forming such negative underlying beliefs that contribute to later symptoms.

Additionally, there is an argument to be made that the "inner experience" Jünger emphasizes may not be available on the modern battlefield in the same way as it was in 1914, now that war is fought relying on distancing technologies and more abstract concepts. It may be more difficult and less visceral to observe daring acts of heroism in strategic space operations or in the information environment than in the depths of the trenches at the Somme. Even by 1943, Jünger lamented in his personal journals

that "ancient chivalry is dead; wars are waged by technicians." Were Jünger alive today, it would be interesting to ask how these changes might alter his view of the meaning of war.

However, war changes, Jünger's life will remain a landmark in its development, perhaps not primarily in its external, technical execution, but in its internal, individual interpretation. So, if you happen across a young Marine with his nose in a book or her phone displaying a meme with Jünger's name on it, I would encourage an attitude of curiosity about their own *inner experience* and about how your mutual work in the modern practice of war is shaping it before you.

Notes

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Inter-Service Investment in the Future Force

Marine Detachment, U.S. Army Maneuver Center of Excellence by LtCol William J. Patrick

early four years ago, in initial guidance to the Deputy Commandants, Marines across the FMF, and those in the supporting establishment, Gen Berger emphasized, "Our force must be an integral element of the Joint Force, able to combine people, processes, and programs to execute globally integrated operations."1 The publication of the 38th Commandant's Planning Guidance (CPG) in 2019 started an intellectual renaissance not only at the highest levels of our institution but all the way down the rank and file. This near-philosophical movement has reexamined the purpose for our existence, illustrated the stark reality of how our current capabilities match up to potential future operating environments, and set a course to align the Marine Corps' capabilities to the priorities set in the National Defense Strategy while serving as a catalyst for creative thought inside our Service and setting the example for bold change during an interwar period inside the DOD and other Services.² Following the CPG, the Commandant released Force Design $2030 (FD2030)^3$ and supporting concepts such as Talent Management 2030 (TM2030),4 and Training and Education 2030 (TE2030).5 Although sharing common ground with some national security experts advocating for urgently necessary legislative and defense establishment change to deter or defeat our adversaries,6 there are elements of these concepts that have come under consistent public criticism by some widely known subject-matter experts and legendary retired Marine general officers.7



McGinnis-Wickam Hall is the headquarters for the Maneuver Center of Excellence. (Photo by John D. Helms.)



The historic Infantry School building built in 1935. (Photo by John D. Helms.)

>LtCol Patrick is an Infantry Officer and currently serving as the Commanding Officer, Marine Detachment, U.S. Army Maneuver Center of Excellence. One does not need to be a proponent of these concepts to recognize that they contain universal fundamentals that are timeless elements of the very foundation of contemporary principles of war, such as the value of the Joint Force, combined with strong alliances and partnerships: "Our wargames have

shown that in any great power conflict, our alliances are an essential factor to achieving success ... We must work with them in peace to be ready to partner with them in war."8 Whether critical or fanatical about FD2030, both detractors and supporters alike can universally recognize the combined scope, scale, complexity, and depth of dynamic change across many important pillars of our institution poses a considerable challenge to the capacity of both our financial and human resources. In our current fiscally constrained environment, and with manpower reductions to the supporting establishment where a great deal of change must be codified in areas such as training, education, doctrine, modernizing readiness standards, and learning environments, we must look to adopt existing best practices and models of success from within the Joint Force when beneficial.

Investing in the Future Force via the U.S. Army Maneuver Center of Excellence

As the Marine Corps continues to experiment with, iterate, implement, and institutionalize the *CPG*, *FD2030*, and their supporting concepts, we do not need to look very far for proven ways

generating warfighting readiness, developing future force capabilities, and enhancing joint interoperability for the FMF through joint, allied, and partner nation integration during the training of advanced warfighting skills aboard the MCoE.

Marine Detachment, Maneuver Center of Excellence

Located at newly redesignated Fort Moore, GA (formerly Fort Benning),⁹ the MARDET, MCoE is a Marine Corps training command that generates warfighting readiness for the FMF and the Joint Force by providing and maintaining a professional instructor cadre that enhances the preparation, throughput, proficiency, and certification of students in advanced warfighting skills. As a matter of historical precedent, the Commander, MAR-DET, MCoE also serves as the senior Marine representative to the CG of the MCoE, the Commandant of the Infantry School, the Commandant of the Armor School, and further represents all Marine Corps equities and interests aboard the Maneuver Center while serving as a conduit between the Army and the Marine Corps on mutually relevant and beneficial topics.

Historically, this relationship began about 100 years ago in the 1920s as Marine students attended schools and courses at the Infantry School.

to improve our current state as we move toward the desired state. Taking a hard look at what has been successful in our sister-Services can provide effective, economical, and successful examples of best practices that create needed warfighting readiness and lethality in a resource-constrained environment. A demonstrative example of some of the benefits associated with our inter-Service collaboration with the Army is the Marine Corps Detachment, U.S. Army Maneuver Center of Excellence (MARDET, MCoE). The MARDET, MCoE invests in the future force by providing a professional instructor cadre,

Historically, this relationship began about 100 years ago in the 1920s as Marine students attended schools and courses at the Infantry School. Marines started as students, focused on broad resident infantry professional military education, and later began to be assigned as instructors at Army schools. Shortly after World War II, the Commandant of the Marine Corps permanently assigned a lieutenant colonel to the Infantry School at Fort Benning as an amphibious operations instructor and the senior Marine representative of the Commandant of the Marine Corps. During the Korean War era, Ranger

School was created, and for decades the Marine Corps sent Marines to this school. From the 1960s to the 1990s, as a Service, we evaluated and utilized best practices, tactics, techniques, and procedures developed by Ranger School and selectively implemented elements of this program of instruction throughout the entire collection of Marine Corps infantry leadership schools.

As an example of providing quality instructors to the supporting establishment, after completing his battalion command tour with 2/4 Mar in Vietnam, Gen P.X. Kelley, then a lieutenant colonel, served at this command as the senior Marine representative of the Commandant of the Marine Corps. A few years later, as a captain, MajGen James E. Livingston, who earned the Medal of Honor (also with 2/4 Mar) for heroic actions during the Battle of Dai Do, served with the command as an instructor at the Infantry School. In 2011, as a result of congressionally authorized base realignment and closures, the Army's Armor Center of Excellence at Fort Knox was relocated to their Infantry Center of Excellence at Fort Benning. During that process, the Marine Corps' Tank Detachment at Fort Knox joined the Marine Corps Infantry Detachment at Fort Benning, and the Army established both the Infantry School and Armor school under a new common higher headquarters titled the MCoE.

After considering elevating the command, the larger armor-focused MAR-DET took the reins as the senior Marine representative, ending a 90-year period where the Marine Corps' exclusive focus at the MCoE was infantry. Over the last few decades, during the Global War on Terror, and to the present, it could be estimated that the limited extent of what the Marine Corps obtains from the MCoE is airborne "jump school" quotas. This estimation, however, would be an uninformed and simplistic view that grossly understates the value of inter-Service integration with the MCoE, lacking comprehension of its enormous potential. There are numerous, wide-ranging, and profound areas of overlapping interest that exist in ground combat operations, basic

and advanced infantry skills training, capability development, doctrine, experimentation, testing, evaluation, and acquisitions that have legitimate applicability and should be of genuine interest to the Marine Corps.

Since 2021, the MARDET, MCoE has been focused on what schools provide the Marine Corps the most benefit toward FD2030. In 2022, the MAR-DET, MCoE realigned to become an additional O5-level subordinate command of the School of Infantry-East to functionally align to and complement the infantry training mission of the Schools of Infantry. Although not well known, the Marine Corps has fostered and benefited from inter-Service interoperability at the MCoE for generations of Marines over nearly a century. With minimal investment in manpower resources, commands like MARDET, MCoE could take inter-Service integration to the next level, aiming to accomplish the spirit and intent of the Commandant's guidance when he prescribed, "we must better integrate ... and work more effectively with other elements of the Joint Force."10

Why Invest in Army Training and Education?

There are numerous examples of how "The Few, The Proud, The Marines" have higher standards in certain areas than a traditional land component soldier. In many cases, our unique functions as an amphibious and naval expeditionary force-in-readiness combined with our exclusive capability of the MAGTF provide bona fide reasons that Marines should train and educate their own at purpose-built, permanent schoolhouses. However, there are situations where the Army, as the executive agent for doctrine, training, and acquisitions for a particular capability within the DOD such as airborne operations where it would be fiscally unwise and too resource intensive for the Marine Corps to duplicate a purpose-built and permanent school. The primary reason to utilize Army schools is to avoid duplicating the entire program of instruction and all the connected costs associated with developing and maintaining such a redundant capability unless it is necessary. The point of the Army owning doctrine in a particular area cannot be underemphasized and is not restricted to airborne operations. Whether it is doctrine for heavy-tracked armor, wheeled light-armor operations and vehicle platforms, mortar and machinegun gunnery, or simply shared publications and manuals, the Marine Corps heavily relies upon and should fully integrate with the Army for all MCoE-produced ground combat operations and range and training area doctrine.

A couple of storied examples of the benefits of the Marine Corps using Army training and education schools, courses, and materials are easily illustrated by our continued use of historical examples provided in *FMFRP 12-2*, *Infantry in Battle*. First published by the Infantry School in 1934 and updated in 1938, the Marine Corps republished this text to familiarize students with relevant examples of the realities and principles of war during peacetime.¹¹ Perhaps even more widely recognized are our respected Marine Corps Leadership Traits and Principles taught in leadership classes all across our institution. These traits and principles are immensely powerful at assisting an individual with improving upon their personal value set and subscribing to our professional values. However, these

traits and principles were originally developed and published by the Army and likely made their way into our lexicon after having been embraced by Marine Corps students and staff at the Infantry School. Aside from other historical examples, there are two significant reasons we should invest heavily in Army schools at the MCoE.

First, it is an extraordinarily sensible financial investment. In a fiscally uncertain environment—especially as our future force design requires significant investments to be made in testing, evaluating, and fielding new systems, platforms, technologies, as well as all the installations and logistics costs that are tied to these investments—it is wise to find economical ways to achieve all our warfighting readiness requirements.¹³ One of the most illustrative examples of being economical is the Marine Corps' process for obtaining airborne quotas. The Marine Corps would have to spend an exorbitant amount of time analyzing the doctrine, organization, training/ education, materiel, leadership/communication synchronization, personnel, facilities, and cost requirements to establish a sufficient training organization that could be trained, staffed, equipped, certified, organized, and fully resourced to replicate the Army's Airborne School.¹⁴ The flight hours alone would be an astounding cost, not to

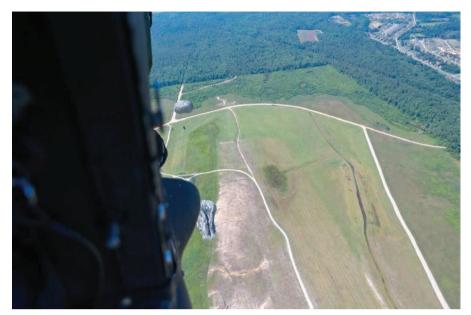


An instructor inspects and tests parachute functionality from the 250-foot tower at Airborne School. (Photo by Patrick A. Albright.)

mention no unit in the DOD submits more OPREP-3 SIRs than Airborne School.

Conveniently, by providing four experienced reconnaissance staff noncommissioned officers to serve on the airborne and jumpmaster instructor cadre, the Marine Corps receives hundreds of quotas to these schools that serve the needs of the Reconnaissance and MARSOC communities of interest via an effective inter-Service agreement. This inter-Service agreement requires utilizing a complex input and adjudication process between the Marine Corps and the Army, yet sufficient numbers of quotas can be allocated to the Marine Corps as long as they are efficiently utilized and the instructor requirement is fully sourced. Recently, the Commandant emphasized that the Marine Corps will seek additional airborne quotas to serve as talent management incentives. 15 The MARDET, MCoE is currently working closely with Training Command (TRNGCMD), Training and Education Command (TECOM), Plans, Policies, and Operations (PP&O), and Marine Manpower Division to meet the Commandant's intent by permanently maintaining the necessary subject-matter expert structure to enable a corresponding increase in airborne quotas that will directly support TM2030 retention efforts.

The second reason we ought to invest heavily in the advanced warfighting course portfolio of schools and courses at the MCoE is because the Army is truly a world-class learning organization. The MCoE and its Infantry School have excellent ground-combat-element schools, courses, leadership, staff officers, training areas, and their ground doctrine, weapons system acquisition, soldier lethality, close combat lethality task force, holistic health and fitness, capability development and integration, and experimentation efforts are all collocated and integrated aboard the MCoE by design. To further illustrate the quality and value of this type of inter-Service integration, the MARDET, MCoE currently provides one infantry Marine officer in the rank of major to serve as an instructor at Maneuver Captains Career Course (MCCC), which is



A Marine jumpmaster instructor conducting a UH60 spot jump while participating in the Army's Jumpmaster of the Year competition. (Photo by Markeith Horace.)

the Army career-level school equivalent of Expeditionary Warfare School. In exchange for that one officer, the Marine Corps receives thirty quotas for resident career-level schools each year. Not only does this equal the number of infantry officers sent to resident Expeditionary Warfare School in a typical academic year, but it is the equivalent of six infantry battalions' worth of company commanders receiving topnotch resident

PME prior to assuming command of a warfighting formation. MCCC lacks a concentrated focus on amphibious and expeditionary operations, but what it lacks in intensive MAGTF operations, it makes up for with six months of first-rate instruction in planning infantry company and battalion-level operations and arguably produces a more technically and tactically proficient company commander.



A Marine serving as an instructor at the Army's Maneuver Captains Career Course. (Photo by CPT Tacori Barnett.)

Inter-Service Quotas through TIP and Service Manning Decision Review

As part of the aforementioned inter-Service agreement, each fiscal year the Marine Corps receives hundreds of advanced warfighting course quotas for the infantry, reconnaissance, MARSOC, and assault amphibian communities. Although numbering in the hundreds, these are high-demand, low-supply quotas that scarcely meet current FMF demand. In exchange for these quotas, the Marine Corps provides a specified number of Marines who are MOS-qualified and later certified as professional instructor cadre at select Army schools in a manner that is similar to that of a combat instructor at our Schools of Infantry. MCoE quotas are sought out by members of the Army, Navy, Air Force, Space Force, Special Operations Command, other elements of the Joint Force, and the Marine Corps. All requesting agencies go through a rigid and structured futureoriented process to obtain allocations. For the Marine Corps, TECOM manages the Service's Training Input Plan (TIP) for internal Marine Corps schools and courses, as well as for sister-Service schools. For MCoE schools, TECOM tasks PP&O (assisted by MARDET, MCoE) to utilize their expertise and role as occupational field sponsors to seek and obtain FMF input on what sister-Service schools the Marine Corps should invest in and provide a precise estimate on the number of quotas required by the FMF. For the Army, this process is managed at the Service-level via their annual Service Manning Decision Review process. When considering inter-Service allocations, the Service Manning Decision Review and its adjudication panel look at the Marine Corps' TIP inputs, compare it to the total number of requests, and the corresponding utilization rate of the previous three fiscal years. Failing to keep high utilization rates is the main reason the Marine Corps loses quotas to important inter-Service schools. From 2018–2020, the Marine Corps had airborne utilization rates fall as low as 56 percent, and consequently, the past trend of poor utilization decreased Service allocations

by one-third (down from 627 to 411 quotas) over a three-year span. These utilization trends have been radically reversed by analyzing no-shows, failures, and unused quotas and implementing new business rules. For the last two fiscal years, utilization has remained at 97 percent and has already resulted in a correspondingly significant increase in allocated airborne quotas (up from 411 to 512 quotas) by fiscal year 2025. By reversing negative utilization trends and maintaining sufficient quality and quantity of airborne instructor cadre, the Marine Corps can increase utilization, optimize production, and increase airborne quota allocations in support of TM2030 retention incentives.

MARDET, MCoE Warfighting Course Portfolio

In 2021, after nearly a century of inter-Service integration with the Army's Infantry School, the *CPG* and *FD2030* changed the leadership structure of MARDET, MCoE from armor back to an infantry-focused training command. This Service-directed change in mission and focus provided the purpose and motivation to redefine the command mission, develop a framework to increase utilization, optimize production, generate FMF warfighting readi-

ness, and analyze the entire portfolio of advanced warfighting courses offered at the MCoE. The simple criteria for analysis were which courses provided the best return on investment, and produced skills that would be valuable to the future force infantry community. From 2011 to 2021, the primary focus of MARDET, MCoE was the production of officers and enlisted tank crew and leaders, as well as the development of enlisted tank maintenance capability. From late 2021 to early 2022, working with TRNGCMD, TECOM, and PP&O the MARDET, MCoE presented recommendations and options that led to CG, TRNGCMD, PP&O, and TECOM's endorsement to reduce some legacy school requirements and redirect those fiscal and human resources to courses that had strong potential to benefit the infantry communities with respect to future force design. Essentially, significant observation and analysis of multiple programs of instruction revealed that Ranger School was no longer valid or needed Marine Corps training requirement. Simultaneously, this study indicated that previously unutilized or underutilized schools such as Reconnaissance and Surveillance Leader, Scout Leader, and Cavalry Leader provided needed capabilities in support of



Medium Caliber Weapons System demonstration by the Army Armament Research, Development and Engineering Center aboard the MCoE. Nearly identical to the 30mm cannon on the future amphibious combat vehicle, the Medium Caliber Weapons System is designed to enhance the accuracy and lethality of the M1126 Stryker Combat Vehicle. (Photo by Patrick A. Albright.)

FD2030 and should receive additional emphasis and investment.

As an example of the total cost of ownership doctrine, organization, training/education, materiel, leadership/communication synchronization, personnel, facilities, and cost analysis, as well as decisions made to not duplicate effective Army schools, a few years ago the Assault Amphibian (AA) community invested in providing an instructor to the Master Gunner Common Core course. This investment was made by the AA occupational field to develop an internal Marine Corps school program of instruction and instructor cadre. Quickly, the AA community recognized that with current fiscal realities, the best solution was to provide one instructor in exchange for the needed subject-matter expert certification and perhaps never fully realize the standalone Marine Corps school capability. Master Gunner Common Core is a tough gunnery planning and sustainment training prerequisite for the Army's platform-specific Master Gunner Courses. The course develops master gunners that can plan and execute battalion-level live fires and develop long-term sustainment training—essentially a "gunner-light" capability. As the Marine Corps began testing and fielding the Amphibious Combat Vehicle, the MARDET, MCoE worked with PP&O, CD&I, and the Advanced Amphibious Assault program manager to study the Stryker Master Gunner course as a pathway to developing an instructor cadre for the eventual fielding of and training with the 30mm cannon variant of the Amphibious Combat Vehicle. Our first instructor has graduated Stryker Master Gunner, and the Marine Corps will begin receiving quotas a couple of years in advance of the fielding. Since the MCoE is the doctrinal hub for these weapons systems and platforms, it provides the senior Marine instructor at Stryker Master Gunner an immediate doctrinal connection to the source and provides the FMF with a useful point of contact. A similar concept can be employed within the Light Armored Reconnaissance community, especially if *FD2030* were to eventually arrive at a common platform for the Amphibious

Combat Vehicle and future amphibious reconnaissance vehicle where the occupational fields could essentially be combined and both mission sets merged.

Upon the conclusion of *FD2030* focused analysis, the MARDET, MCoE's Warfighting Course Portfolio expanded its focus across a broad range of schools and courses that includes Airborne, Airborne and Air Delivery, Jumpmaster, Reconnaissance and Surveillance Leader, Infantry Mortar Leader, Scout Leader, Cavalry Leader, Master Gunner, Stryker Master Gunner, Ranger, Pathfinder, Maneuver Captains Career Course, and the Western Hemisphere Institute for Security Cooperation. To assist commanders in making informed choices on their warfighting course investments, a detailed Warfighting Course Portfolio that advertises all advanced warfighting courses at the MCoE has been distributed to MEF, division, and regimental operations sections.¹⁶

Instructor Certification and Incentivization

Serving as an instructor at Army schools is professionally rewarding and provides a significant return on investment upon return to the FMF. Reconnaissance Marines typically leave with additional career and occupational field-enhancing schools and qualifications. The Marine instructor at the Army's Infantry Mortar Leader Course was selected as the Army's Master Trainer. After significant recognition within the Infantry School, MCoE, and TRADOC, this Marine was selected as the Marine Corps' instructor of the year for fiscal year 2021. Instructor certification is time intensive, demanding, and requires commitment, but the Army recognizes and rewards talent regardless of Service affiliation. Instructors serve OPCON to their Army schools during all academic hours, and when the appropriate conditions are met in SECÑAV and Marine Corps policy, instructors are eligible for and receive Department of the Army personal decorations. At MCCC the Marine instructor is surrounded by the Army's top talent, as they see the importance of identifying high-performing, key, and developmental billet complete officers for assignment to the Army's Project Warrior program. This program selects high-quality, company-grade officers to serve as company commanders, with a follow-on utilization tour as an observer, coach/trainer at their combat training centers. Upon successful completion of an assignment as an observer, coach/trainer (similar to TTECG at the MCAGCC), Project Warrior officers return to Captain's Career Course resident schools to serve as faculty advisors and share lessons learned from leading and training the Army's operating forces. This program is nested with the Army's Talent Based Career Alignment (TBĆA) program. 17 These soldiers are highly competitive for promotion and are typically selected to attend intermediate-level school after their tours as faculty advisors. Similarly, the Army has a formal and credentialed instructor certification process that focuses on adult learning and the experiential learning model. This is paired with a badge program where an instructor can achieve basic, senior, and master instructor certifications. Programs such as this, as well as Project Warrior and the Army's TBCA program, offer points of reference for ongoing *TE2030* efforts.

Joint, Inter-Service, Allied, and Partner Nation Integration and MCoE Conferences

Each year, the MCoE holds a Maneuver Warfighter Conference focused on the future operating environment, current operating concepts, peer and nearpear adversary challenges, and features world-class guest speakers. This forum is attended by a wide range of general officers including multiple Army fourstars. The past two years have been exceptionally relevant and focused on China and Russia while also serving as an industry conference. Marine seniorleader participation has been sought, and if not due to emerging priorities, the CG of Marine Corps Warfighting Lab (MCWL) would have been a panelist and speaker in early 2022. On a similar note, after senior Marine representative engagements with the CG and Chief of Staff of the MCoE on FD2030,

the future infantry battalion, and the development of the Infantry Marine Course, Senior Leaders at the MCoE proposed an annual Infantry Summit. This summit was executed in May 2022 and was designed to allow key leaders from the Army and Marine Corps, as well as allied and partner nations, to share infantry training processes, best practices, and challenges. The two-day summit consisted of presentations and discussions with representatives from MARDET, MCoE; SOI-E/SOI-W, Infantry Training Battalions; U.S. Army Infantry School; the Republic of Korea Army; German Army; Royal Australian Infantry; Royal Netherlands Army; British Army; French Army; Brazilian Army; and Chilean Army. Each presenter described their Service's infantry training progression, best practices, and challenges. The discussion topics covered training for large-scale combat operations, the future operating environment, optimizing human performance, 21st-century learning, and efforts to reduce attrition. The MCoE is currently planning to conduct both its annual Maneuver Warfighter Conference and Infantry Summit later this year.

Areas MCoE Integration Could Assist with *CPG*, *FD2030*, *TM2030*, and *TE2030*

The MCoE offers many ideas that merit further exploration and consideration that could benefit the implementation and institutionalization of the *CPG*, *FD2030*, *TM2030*, and *TE2030*. One future focus area could be working with the Army on infantry and tank integration during training aboard the MCoE, an idea generated by Advanced Infantry Training Battalion-East. It has been stated in FD2030 that armor capability will continue to be provided by the Army, and Marines typically affirm that Marine infantry integrates with tanks in a manner that is different from the Army.¹⁸ Another potential area to evaluate is MCoE annual competitions. In 2001, a Marine instructor with the MARDET, MCoE became the only Marine to ever place first in the Army's Best Ranger competition. 19 In the last couple of fiscal years, the Marine Corps has fielded sniper teams for the MCoE's Best Sniper competition, and this year the MARDET, MCoE has worked with PP&O and the FMF to field teams for the Best Mortar Competition. The MCoE also has a Best Squad Competition, and in the same spirit, the potential for including the winner of the Marine Corps' Super Squad competition in this inter-Service chal-

to be adequately covered by field-grade officers and senior staff NCOs. The purpose was that this new combined infantry and armor detachment would go from being a representative to a one-star to a two-star, adding more equities and larger staffs, thus requiring more effective coordination. Equally important in the previous planning to elevate this command to an O6 headquarters

The scope, scale, and cost of FD2030 and all supporting concepts require a gargantuan effort by Training and Education Command ...

lenge is under evaluation. Doctrine is a topic that surfaces frequently, and there are likely existing formal and informal established relationships for doctrine between the Marine Corps and MCoE, but evaluating the ability to integrate with and collocate a Marine with the MCoE's Directorate of Training and Doctrine may be of benefit to *TE2030* efforts

Important Relationships

It was previously noted that the Commander, MARDET, MCoE serves as the senior Marine Corps representative to multiple Army general officers, and in 2021, CG, TRNGCMD added strengthening the relationship with the 75th Ranger Regiment to that list of esteemed organizations. Likewise, there are significant relationships with three training brigade commanders, the Commandant of the Western Hemisphere Institute for Security Cooperation, where the Marine Corps owes a joint instructor billet, and the director of MCCC. From 2005–2011, prior to the Marine Corps combining its infantry and armor detachments in 2011, there was significant consideration given to elevating the MARDET, MCoE to an O6-level command with a significant number of action officers assigned as enablers from MCWL, TECOM doctrine, and SYSCOM. Correspondingly, the headquarters structure was postured to grow to allow all of the focus areas in this article

was the idea that the MCoE was the doctrinal hub for all ground combat operations and systems as the Army is the DOD'S executive agency, and the Army's Futures Command has its Maneuver Capabilities Development and Integration Directorate (think GCE portion of CD&I) located at the MCoE with responsibilities that mirror many HQMC CD&I, PP&O, and MCWL functions.

The scope, scale, and cost of *FD2030* and all supporting concepts require a gargantuan effort by Training and Education Command as evidenced by the directed actions in TE2030.²⁰ A way of reducing this cost is as the Commandant said, "We will leverage the investments other Services have made as a fast follower."21 Similarly, the supporting establishment has long felt the lack of fiscal and human resource prioritization that is encompassed by the Commandant's recognition of the same when he said, "TECOM leads doctrinal development for our Corps, but we have not adequately resourced it to accomplish this critical task—that must change."22 A textbook starting point is the MCoE. Significant joint, allied, and partner nation force integration occurs in training at the MCoE. Marines train with Army, Navy, Air Force, and special operations forces, as well as over 100 different allied and partner nations while attending advanced warfighting courses at the MCoE. Through joint integration in training, education,

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course attendance, mastery, and certification in warfighting skills, the FMF increases its warfighting readiness and enhances its joint interoperability. With a nominal current investment of only 23 assigned personnel, the MARDET MCoE directly contributes to the training of more than 14,000 soldiers, sailors, airmen, Marines, and allied and partner nation leaders from over 100 countries each year. In the highlighted cases of airborne, where a single reconnaissance staff sergeant assigned as an instructor currently equates to the Service receiving more than 100 jump school quotas, and at MCCC where a modest investment of a single major's salary and entitlements produces outsized returns by providing world-class resident PME to five infantry battalion's worth of company commanders each year, it is important to compare and contrast the total cost of ownership if we conducted these schools and courses internal to the Marine Corps. Not only are these small investments delivering disproportionately positive results, but they deliver a huge value in cost savings to the Service. A comprehensive analysis of the total cost of ownership airborne alone would cost the Marine Corps millions of dollars each year. Army schools benefit the FMF, and moderate investments in additional resources could further expand the value to the FMF and the supporting establishment as well as support TM2030 and TE2030. Just as the Commandant-provided guidance that adding Marine structure to Maritime Operations Centers at numbered fleets would benefit Naval integration,²³ the benefits of adding structure to select inter-Service billets in areas such as the MCoE's Maneuver Capabilities Development and Integration Directorate, Maneuver Battle Lab (GCE portion of MCWL), and Directorate of Training and Doctrine (GCE doctrine, T&R, and formal instructor certification) could greatly benefit our FD2030 and TE2030 implementation efforts.²⁴

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Do Not Train to Beat Somebody, Train to Beat Everybody

Fundamental lessons for our junior officers and SNCOs

by Capt Joseph G. DiPietro

ilitary professionals always want to talk about China, and certainly, China is an important topic, but what if the next fight is against someone else? As long as we stick to the basics, it does not matter.

The Marine Corps must be ready to fight and win against anyone, anytime, anywhere. It cannot be focused on a single threat, region, or battlefield. It must remain trained to establish footholds, patrol bases, firing points, logistics hubs, and command and control locations on short notice and in violent manners. Marines must be ready to close with and destroy the enemy, any enemy, in the most difficult environments and with minimal supervision. That is what makes this organization special, important, and dangerous against evil.

Georgia Head Football Coach Kirby Smart is one of the most dominant coaches in sports, and also one of the best messengers in the game. Marines could easily take his words like "we will never be hunted" to heart. The message that resonates the most with Marines should be, "We're not practicing to beat somebody; we're practicing to beat everybody."

Beat Everybody

The Marine Corps beat everybody it faced in Belleau Wood. The Marine Corps beat everybody it faced on Guadalcanal. The Marine Corps beat everybody it faced in Fallujah. The Marine



Marines with India Company, 3/7 Mar, Marine Rotational Force-Darwin 22 approach a support by fire position during a platoon live-fire attack as part of Exercise Darrandarra 22. (Photo by Cpl Cedar Barnes.)

Corps will beat everybody it faces in any future fight, but it must remain focused on beating everybody and not beating only somebody. Critical to that success is the reiteration of Marine Corps basics like *leadership*, *fitness*, and *combined arms*.

Marine Corps leadership is the trait most distinguishable across the DOD and the backbone of success against any adversary. Decentralization, bottom-up refinement, and commander's intent all play significant roles in mission accomplishment for the Marine Corps. Ensuring the Marines are educated, trained, and equipped to complete every task is the most notable measure of taking care of Marines, and unit leaders must remind themselves and their staffs of that constantly. Marine Corps leaders must regularly ask three questions: Are my Marines familiar with the problem? Did my Marines experience this problem in training? Do my

>Capt DiPietro is the Deputy Communication Director for 1st MarDiv. He previously served as the Communication Director for Marine Rotational Force-Darwin 22 and as a Tank Officer at 1st Tank Battalion.



Marines locate target points during Exercise GARNET RATTLER. (Photo by LCpl Juan Torres.)

Marines have what they need to solve the problem? If the answer to any of those questions is *no*, the leader failed. Marine Corps leaders typically answer yes and ensure Marines can fall back on their experience rather than try to rise to a challenging situation. Marines must be stressed so much in training that the real thing seems easy, just like a football team makes practice harder than a game. The Marine Corps' ability to lead and trust small units in unique situations makes it lethal against every possible adversary and in every possible environment.

Fitness is a requirement necessary to accomplish quality leadership, but fitness is not limited to physical aspects. Physical fitness is a priority for the Marines and always will be. Marines must be comfortable with and capable of carrying heavy weapons over long distances with little or no mobility support. It is hard to imagine a conflict where physical fitness is not a requirement and advantage for Marines, but it is no longer the only measurement of fitness required to be successful. Mental, emotional, and spiritual fitness training must become part of every unit's battle rhythm to better develop our personnel. This training does not make a unit soft or weak but instead brings a unit or team closer together, more cohesive, and better prepared to take on the challenges of the future. Marines who understand themselves, their peers, their leaders,

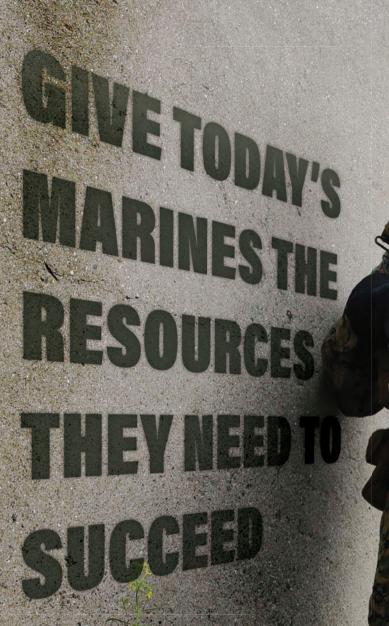


Marines with Charlie Battery, 1/11 Mar, fire lightweight howitzers during on Marine Corps Air Ground Combat Center. (Photo by LCPI Earlk Barton.)

to compete against the atrocities of the world. A Marine who is comfortable with his or her spiritual place in life is infinitely more lethal than one who is not.

The combined-arms dilemma remains the warfighting goal of the Marine Corps, and as technology and capabilities evolve, Marine leaders need an even broader combination of weapons and tactics to defeat every potential adversary. From a fire team utilizing a 40mm grenade for suppression to allow a rifleman into effective small-arms range, to a battalion landing team closing with an objective following a firesupport series, commanders and unit leaders must never forget to maximize lethality, redundancy, and tempo in every plan. The Marine Corps' ability to strike every target with violence leads to a greater fear of the enemy, a point the Service must continue to highlight at every opportunity. Every potential opponent must know a Marine can and will suppress and destroy him. However, that promise is empty if the Service does not continue developing more tenacious and effective warfighters. The punches every Marine throws must be quick and deadly, regardless of MOS or billet. These punches will only continue to become more effective as information effects better align with firepower on the battlefield. The ability of Marines to make an adversary choose how they die is the foundation of Marine Corps warfighting and the reason Marines will win against every enemy on the battlefield.

Undoubtedly, China and other actors pose significant challenges to the Marine Corps, the Naval Service, and the U.S. Constitution. At the tactical level where most Marines work, dedication to principles such as leadership, fitness, and the combined arms dilemma is more important than planning or training for a single possibility. A well-educated, well-trained, well-equipped team with quality leadership will overcome every challenge and will continue to keep the United States free from tyranny. The Marine Corps cannot train to beat somebody, it must train to beat everybody. **US**МС







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Tactical Combined Arms

Operation ANACONDA, Afghanistan 2003 by Mr. Joseph Miranda

attles in the 21st century involve all arms. Unexpected tactical circumstances can require commanders to improvise new battle plans on the spot. One example of this is from Operation ANACONDA, a series of actions fought by U.S.-Coalition forces against al-Qaeda and the Taliban at the Shah-I-Kot Valley in Afghanistan in March of 2002. Decision Games published a wargame on this battle, Operation Anaconda, appearing in Strategy & Tactics magazine #276.

In the Shah-I-Kot

Following the 11 September 2001 attacks against the World Trade Center and the Pentagon, the United States and its Coalition partners launched Operation ENDURING FREEDOM, the main mission of which was to destroy the responsible forces. ENDURING FREEDOM began with a Coalition air assault into Afghanistan to attack bases of the al-Qaeda network and the ruling Taliban movement. Initial operations proved successful in seizing and establishing forward bases within Afghanistan, but the mission of capturing top enemy leaders was still to be completed. One target was in the bases centered in the Shah-I-Kot Valley in eastern Afghanistan, bordering Pakistan (spelled variously, such as "Shahikot" or "place of the king").

U.S. Central Command (CENT-COM), responsible for operations in the Middle East, ordered an operation to clear the Shah-I-Khot. Preliminary intelligence operations indicated that there were anywhere from 150 to 1,000 enemy fighters in the valley and surrounding hills. In the past, intelligence had overestimated the number of enemies in targeted areas, so staff plan-

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ners went with the lower estimate. The United States and its Coalition partners to included elements from NATO, Australia and New Zealand, and friendly Afghan Military Forces (AMF). The command for Coalition forces for the Shah-I-Kot operation was with Combined Joint Task Force (CJTF) *Mountain*, under GEN Franklin Hagenbeck, and the staff of the 10th Mountain Division. The overall operation was codenamed ANACONDA, evoking the anticipated envelopment and crushing of the enemy.

CJTF Mountain's primary maneuver unit was Task Force Rakkasan with one infantry battalion from the 10th Mountain Division and two more from the 101st Airborne Division (Air Assault). Special operations forces from various Coalition countries were committed and organized as Task Force 64, Task Force K-Bar, Task Force Bowie, and Task Force Sword (aka Task Force 11). There were also a thousand or so militia from the Eastern Alliance AMF in Task Force Dagger. These troops were advised by operational detachments from the 5th Special Forces Group. Also involved in ANACONDA was a CIA element.

ANACONDA commenced on 2 March 2002 with Coalition forces moving into the Shah-I-Kot via air assault, ground movement, and infiltration. Right from the start, the operation ran up against Clausewitzian friction factors. The truck column transporting the AMF contingent was hit in a "friendly fire" incident. AMF

morale collapsed and their militia fell back to the town of Gardez—outside of the area of operations. The main force for the battle now turned to Task Force Rakkasan, which was originally intended to be the "anvil" (blocking echelon) to Dagger's "hammer" (assault force). Rakkasan was a light brigadesized formation. Its fire support was originally to be provided by helicopter gunships, artillery being ruled out by CENTCOM as risking civilian casualties, something to be avoided in the politically charged atmosphere of ENDURING FREEDOM.

Nonetheless, the operation was still a go. Rakkasan's troops and the Coalition special operators went over to the attack. As the battle developed, it became apparent that the enemy was much stronger than anticipated, up to 1000-1500 in the valley, supported by dug-in heavy weapons and initially gaining something of a fire superiority.

Fortunately for CENTCOM, the troops on the ground quickly took action. The troops set up an impromptu fire coordination network, calling in available airpower from U.S. and French air forces in the theater. Technology proved a deciding factor with forward air controllers utilizing GPS, laser designators, and satellite-linked communications. Meantime, CENTCOM flew in reinforcements, including Task Force Commando assigned a Canadian battalion to reinforce Rakkasan while Marines piloted AH-1 Cobra gunships for additional fire support. From elsewhere, AMF Northern Alliance troops

added their strength to the battle. Hard fighting followed on ridgelines, in caves, and down into the valleys.

On 18 March, CENTCOM Commander GEN Tommy Franks declared the Shah-I-Kot secured. Al-Qaeda and Taliban killed in action were 500 to 750. The United States lost 58 killed and wounded, with other Coalition and Afghan forces losing an indeterminate amount. The Coalition victory was in large part due to the initiative and improvisation of the troops on the ground, in the face of considerable fog of war and friction factors.

Modeling Chaos at the Tactical Level

Decision Games' Operation ANA-CONDA is a two-player game in which one side controls al-Qaeda forces (including the Taliban contingent). The other player controls the various CENTCOM task forces. The game map covers the Shah-I-Kot Valley at the tactical scale. Units are squads, platoons, and companies, with some special markers. Combat is by ranged fire, close assault, and airstrikes.

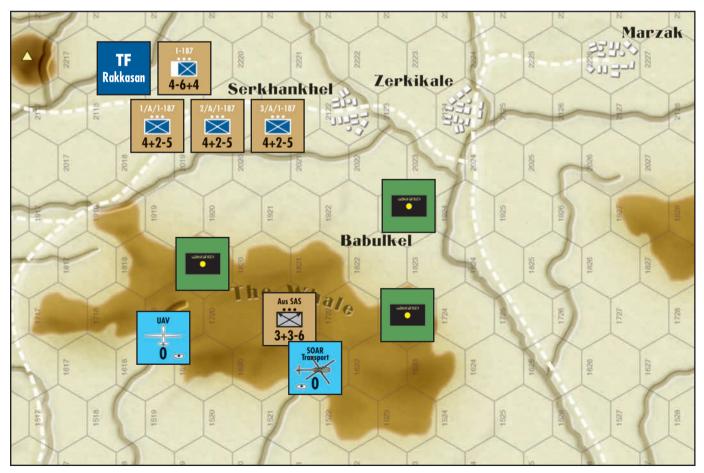
The central game system for Operation ANACONDA models command control. Al-Qaeda forces are divided into three sub-commands (arbitrarily designated as A, B, C). For the Coalition there are Task Forces Rakkasan, Dagger, Commando, 64, and 11. This reflects the rather complex command lines for the operation. Task Force 11 (codenamed Sword) was not directly controlled by CJTF Mountain—it was under CENTCOM. What this means

is that while each player can potentially concentrate much combat power, they will be constrained by getting all their contingents to act together.

The command system is simulated through players randomly picking markers by each activating a single subcommand (or Task Force). The player then can conduct maneuver, recon, and fire operations with that one sub-command. Players are placed in the situation of their historical counterparts, with an incomplete picture of the battle area and dealing with various coordination breakdowns.

Each side has asymmetrical advantages. Al-Qaeda forces have a fog of war status, with their counters placed face down on the game map. The Coalition can determine their strength and disposition by conducting intelligence, surveillance, and reconnaissance or by engaging them in combat (recon by fire). This means running into anything from an enemy heavy weapons platoon to IEDs (improvised explosive devices) and even civilians (with the potential for

Recon on the Whale. The Whale is a hill dominating the middle of the Shah-I-Kot map. Two al-Qaeda units are positioned on the hill line. Another al-Qaeda unit is in the village to its north. Elements of Task Force Rakkasan—U.S. A Company, 187th Airborne Infantry—takes up position to the north to provide fires and clear the enemy position. Australian SAS has been helicoptered in to conduct a recon in force. A UAV provides intelligence, surveillance, and reconnaissance.



IDEAS & ISSUES (WARGAMING/ADVERTISER CONTENT)

collateral damage and political ramifications). The Coalition has available various methods for intelligence, surveillance, and reconnaissance, including UAV drones, satellites, helicopter recon, and on-the-ground with special operations forces and sniper teams.

The Coalition has a major advantage with air support. Air support is flexible, with everything from AC-130s to B-52s capable of supporting Coalition sub-commands owing to networking technologies. There is also the potential for friendly fire with adverse effects on morale. This can cause Coalition Afghans to break off the action and fall

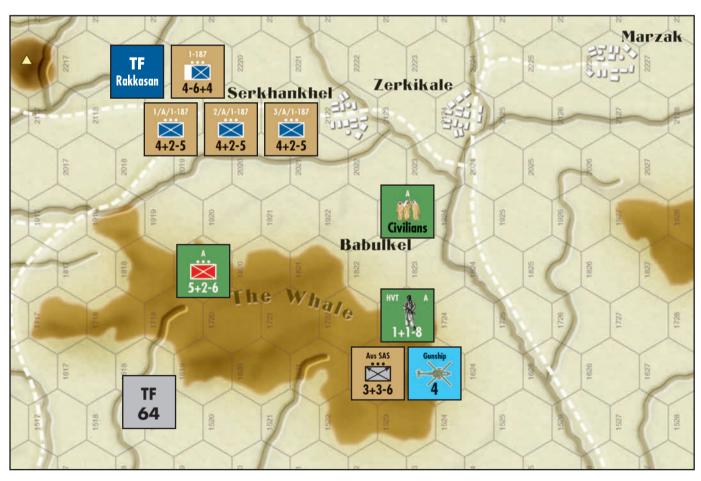
back on Gardez off the map, though other Afghans can come in as well as needed reinforcements.

Another aspect of airpower is air mobility. The Coalition can move units across the map via helicopter. This is useful in assaulting remote locations such as mountain tops and evacuating forces out of tight spots.

Players need to manage a wide range of battle factors. Engineers can remove IED markers from the map. Casualties can be medevaced by helicopter. Psychological operations units can amplify a tactical victory by exploiting media. The Coalition can call in Task Force Commando as a special reinforcement.

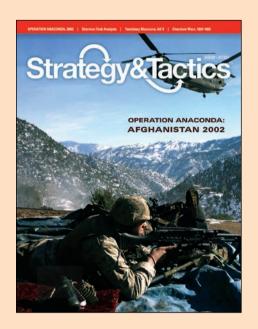
Each side scores victory points by eliminating enemy forces. Especially critical for the Coalition is eliminating high-value targets representing key al-Qaeda and Taliban leaders. As commander players take control in a chaotic situation to win in *Operation Anaconda*.



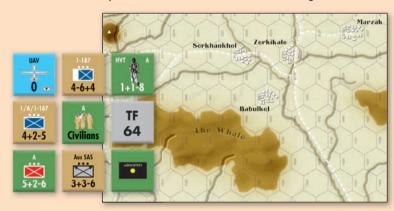


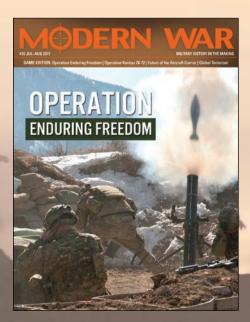
Assault on the Whale. Recon has shown an al-Qaeda infantry platoon (red unit) and a high-value target on the Whale. Civilians are in the village to the north. The Coalition player picks the Task Force 64 command marker which activates the Australian SAS. The SAS then closes in to eliminate the high-value target, supported by fires from a helicopter gunship unit.

Strategy&Tactics Press



Operation Anaconda is a two-player game, with one player commanding Coalition forces, and the other al-Qaeda. Combat in the game is quasi-tactical in that units fire at enemy targets at range. Additionally, the Coalition player has access to various types of fire support, such as airstrikes. However, owing to the chaotic nature of the battle, fire support, as well as various reinforcements appear at random. The al-Qaeda player has the advantage of his units being deployed face down so that the Coalition player must use intelligence surveillance reconnaissance to reveal them. Game play becomes a tense contest between asymmetrical forces in the mountains of Afghanistan.





Enduring Freedom is an operational level simulation of the US-Coalition invasion of Afghanistan in the wake of the 11 September 2001 terrorist attacks in New York and Washington. Enduring Freedom is a solitaire game; the player controls the forces of the Coalition (US, NATO, and the Northern Alliance). The game system controls the opposing Islamist forces (al-Qaeda, the Taliban, and Pakistani volunteers). The objective of the game is for the Coalition to destroy al-Qaeda and establish the basis for a stable Afghanistan such that a new civil war will not break out later. The game covers the period of October 2001 (the initial US invasion) to March 2002 (the conclusion of Operation Anaconda).



We Don't Want You, Uncle Sam

reviewed by Col Joel Schmidt

att Weiss' We Don't Want You, Uncle Sam is a must-read for middleaged lifers who just cannot understand why the younger generation of Americans does not want to join the military. Weiss is a self-professed Gen Z'er with a unique understanding of both Gen Z and the military professional walks of life. This enables Weiss to propose some both common and out-of-the-box ideas to enable the recruitment and retention of a younger generation whose values are as exceptional as the greatest generations—just different. While Weiss admittingly has a conservative bias, his academic experience and open mind enable him to think and present potential changes to the value proposition of Service that many may miss.

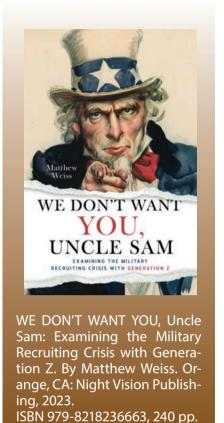
Weiss organizes his thinking into four parts: Recruiting Fundamentals, Workforce Parity, Sociocultural Influences, and Scope of Service. He approaches the problem as a business scholar and has done exceptional research to support his proposals. Although the research spans numerous fields of study, he ties them together with a focus on Gen-Z'ers in a way that only a Gen-Z'er can.

In part 1, Weiss analyzes the evolution of military service related to work in the modern era. He substantiates that the evolution of work and value for work is different than in previous generations, especially since the inception of the all-volunteer force.

Part 1, chapter 1; Part 2, chapter 7; Part 3, chapters 12 and 16; and Part 4, chapter 18 are perhaps the most important because they outline the *why* behind how Gen-Z'ers view the value proposition of service in the military. The elements presented in these chap>Col Schmidt currently serves as the Chief of Staff for III MEF.

ters help the reader think about why military service is failing to appeal to Gen-Z'ers. With each of these chapters and others about how to increase the value proposition of service to Gen-Zers, Weiss follows a logical manner of presenting and analyzing the challenges via research and then laying out proposals to address the challenges. Admittedly, Weiss points out that his proposals are ideas, not the answer. Weiss' humble approach to his writing compels the reader to lend more value to the author's presentation of ideas.

My only criticism of the totality of the book is Weiss may already be indoctrinated to the idea of service, which inhibits his ability to creatively think about the truly recalcitrant Gen Z'er who despises the idea of service for many of the reasons Weiss highlights. It is evident that Weiss is a patriot who has bought into the idea of service. This is reflected in several chapters but is most evident in Part 4. As an older Marine who fully bought into service decades ago, I found the ideas he promoted in Part 4 as potentially feasible solutions to improving the recruitment and retention of the Gen-Z generation to prepare for a coming war. I think his position that there is a coming war is not a common truth for many potential candidates for service. Clearly, as Weiss has expressed, we have a bipolar political society that naturally creates distrust among authorities and the population. In the case of recruiting and retention, the military is part of the au-



thorities, and Gen-Z'ers are the population. Weiss discusses this in Chapter 14. The reason this is so important is because even if we can make the value proposition of service appeal to Gen-Z'ers via the author's proposal, the underlying distrust with a potential employer, the government, creates a barrier to entrance. I argue once the barrier of entrance is overcome, the importance of leadership and return on your investment is the next book that Weiss must tackle.

Admittedly, Weiss is new to the game of military service, but in short order of a very full life, the author is gaining the experience and observations to explore what must come next in his writings: how to market the what's-in-it-for-me value proposition of serving. Going beyond the value of serving your government and tapping into the value of doing something more than just a job or career. Service is a calling that reaches the peak of Maslow's hierarchy that we must learn to market to the next generation of service members. **US**WIC

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11. Known Bondholders, Mortgagees, and Other Security Holders O	wning or Holding 1	Perce	int or N	More	of T	otal	Amou	nt of Bonds, Mortgages, or
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. Publication Title			14. Issue Date for Circulation Data Below			
Gazette Estent and Nature of Circulation			09/01/2023			
			Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date		
a. Total Numb	or of	Copies (Net press run)	9376	9088		
	(1)	Mailed Outside-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies)	101	81		
b. Paid Circulation (By Mail and Outside the Mail)	(2)	Mailed In-County Paid Subscriptions Stated on PS Form 3541 (Include paid distribution above nominal rate, advertiser's proof copies, and exchange copies)	9716	9627		
	(3)	Paid Distribution Outside the Malls Including Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid Distribution Outside USPS®	1286	1141		
	(4)	Paid Distribution by Other Classes of Mail Through the USPS (e.g., First-Class Mail [®])	26	23		
c. Total Paid D	District	button (Sum of 15b (1), (2), (3), and (4))	11129	10872		
d. Free or Nominal	(1)	Free or Nominal Rate Outside-County Copies included on PS Form 3541	0	0		
Rate Distribution (By Mail	(2)	Free or Nominal Rate In-County Copies Included on PS Form 3641	129	129		
and Outside the Mail)	(3)	Free or Nominal Rate Copies Mailed at Other Classes Through the USPS (e.g., First-Class Mail)	77	71		
	{4}	Free or Nominal Rate Distribution Outside the Mail (Carriers or other means)	346	393		
e. Total Free o	or No	minel Rate Distribution (Sum of 15d (1), (2), (3) and (4))	552	593		
f. Total Distrib	ution	(Sum of 15c and 15e)	11681	11465		
g. Copies not	Distri	ibuted (See Instructions to Publishers 84 (page 83))	34	59		
h. Total (Sum	of 15	M and g)	11715	11524		
L Percent Paid (15c divided by 15f times 100)			95.27%	94.83%		

If you are claiming electronic copies, go to line 16 on page 3. If you are not claiming electronic copies, skip to line 17 on page 3

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18. E	ectronic Copy Circulation		Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Dat
8.	Paid Electronic Copies	-	22385	24337
b	Total Paid Print Copies (Line 15c) + Paid Electronic Copies (Line 16a)	-	33514	35209
c.	Total Print Distribution (Line 15f) + Paid Electronic Copies (Line 16a)	-	34066	35802
d	Percent Paid (Both Print & Electronic Copies) (16b divided by 16c × 100)	•	98.38%	98.34%
1,000	I certify that 50% of all my distributed copies (electronic and print) are paid at	oove a nomina	al price.	
17. P	ublication of Statement of Ownership If the publication is a general publication, publication of this statement is required. V			lion not required.
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Editorial Policy and Writers' Guidelines

Our basic policy is to fulfill the stated purpose of the *Marine Corps Gazette* by providing a forum for open discussion and a free exchange of ideas relating to the U.S. Marine Corps and military and national defense issues, particularly as they affect the Corps.

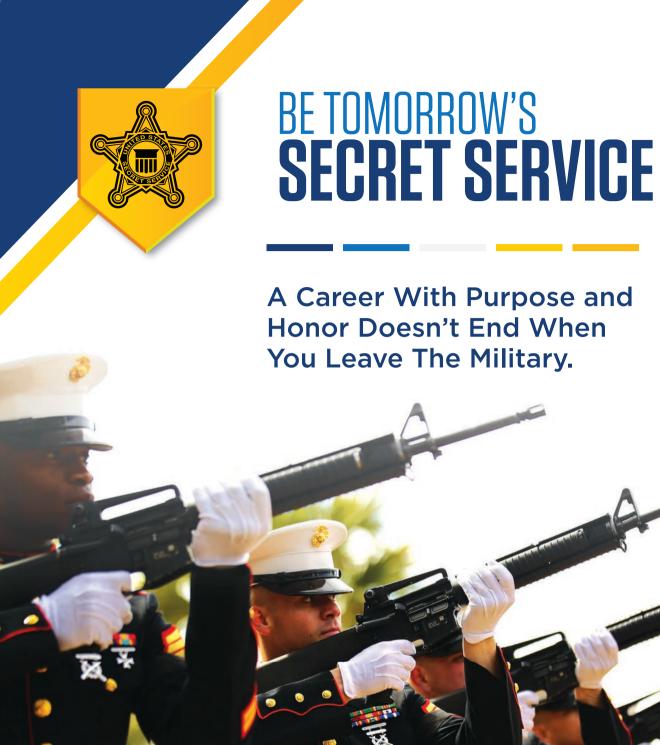
The Board of Governors of the Marine Corps Association has given the authority to approve manuscripts for publication to the editor and the Editorial Advisory Panel. Editorial Advisory Panel members are listed on the Gazette's masthead in each issue. The panel, which normally meets as required, represents a cross section of Marines by professional interest, experience, age, rank, and gender. The panel judges all writing contests. A simple majority rules in its decisions. Material submitted for publication is accepted or rejected based on the assessment of the editor. The Gazette welcomes material in the following categories:

- Commentary on Published Material: The best commentary can be made at the end of the article on the online version of the Gazette at https://www.mcamarines.org/gazette. Comments can also normally appear as letters (see below) 3 months after published material. BE BRIEF.
- Letters: Limit to 300 words or less and DOUBLE SPACE. Email submissions to gazette@mca-marines.org are preferred. As in most magazines, letters to the editor are an important clue as to how well or poorly ideas are being received. Letters are an excellent way to correct factual mistakes, reinforce ideas, outline opposing points of view, identify problems, and suggest factors or important considerations that have been overlooked in previous Gazette articles. The best letters are sharply focused on one or two specific points.
- Feature Articles: Normally 2,000 to 5,000 words, dealing with topics of major significance. Manuscripts should be DOUBLE SPACED. Ideas must be backed up by hard facts. Evidence must be presented to support logical conclusions. In the case of articles that criticize, constructive suggestions are sought. Footnotes are not required except for direct quotations, but a list of any source materials used is helpful. Use the Chicago Manual of Style for all citations.
- Ideas & Issues: Short articles, normally 750 to 1,500 words. This section can include the full gamut of professional topics so long as treatment of the subject is brief and concise. Again, DOUBLE SPACE all manuscripts.
- Book Reviews: Prefer 300 to 750 words and DOUBLE SPACED. Book reviews should answer the question: "This book is worth a Marine's time to read because..." Please be sure to include the book's author, publisher (including city), year of publication, number of pages, and the cost of the book.

Timeline: We aim to respond to your submission within 45 days; please do not query until that time has passed. If your submission is accepted for publication, please keep in mind that we schedule our line-up four to six months in advance, that we align our subject matter to specific monthly themes, and that we have limited space available. Therefore, it is not possible to provide a specific date of publication. However, we will do our best to publish your article as soon as possible, and the Senior Editor will contact you once your article is slated. If you prefer to have your article published online, please let us know upon its acceptance.

Writing Tips: The best advice is to write the way you speak, and then have someone else read your first draft for clarity. Write to a broad audience: Gazette readers are active and veteran Marines of all ranks and friends of the Corps. Start with a thesis statement, and put the main idea up front. Then organize your thoughts and introduce facts and validated assumptions that support (prove) your thesis. Cut out excess words. Short is better than long. Avoid abbreviations and acronyms as much as possible.

Submissions: Authors are encouraged to email articles to gazette@mca-marines.org. Save in Microsoft Word format, DOUBLE SPACED, Times New Roman font, 12 point, and send as an attachment. Photographs and illustrations must be in high resolution TIFF, JPG, or EPS format (300dpi) and not embedded in the Word Document. Please attach photos and illustrations separately. (You may indicate in the text of the article where the illustrations are to be placed.) Include the author's full name, mailing address, telephone number, and email addresses—both military and commercial if available. Submissions may also be sent via regular mail. Include your article saved on a CD along with a printed copy. Mail to: Marine Corps Gazette, Box 1775, Quantico, VA 22134. Please follow the same instructions for format, photographs, and contact information as above when submitting by mail. Any queries may be directed to the editorial staff by calling 800-336-0291, ext. 180.



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