



# MARINE CORPS Gazette

*Professional Journal of U.S. Marines*

FEBRUARY 2023 Vol. 107 No. 2

[www.mca-marines.org/gazette](http://www.mca-marines.org/gazette)



6 **When New Concepts and Capabilities Meet the Test of Major War**

*BGen Kyle B. Ellison*

16 **Introduction to the Marine Innovation Unit**

*Staff, MIU*

29 **Reconnaissance Over Fires**

*Capt Walker Mills & Maj Jacob Clayton*

54 **They Lynchpin of Force Design**

*Maj Ryan W. Pallas*

66 **F-35B and Its Multirole Abilities**

*Maj Evan Slusser*

A publication of the Marine Corps Association



**DON'T WAIT**

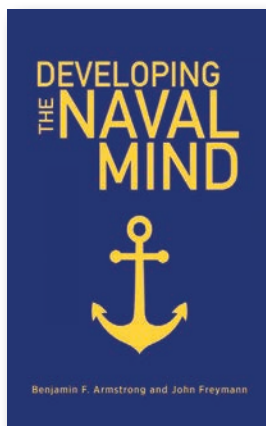
**ATTACK YOUR OPPORTUNITY >>> MRSOC.COM**



**29 Cover Article**  
*The Marine Corps should prioritize targeting forward as a critical contribution to the Joint Force. (Photo by Sgt Audrey Rampton.)*

**DEPARTMENTS**

- 3** Editorial
- 4** Letters
- 110** Books
- 112** Index to Advertisers
- 112** Writers' Guidelines



**110 Book Review**

The *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 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 • MEMBERSHIP INFORMATION & CUSTOMER SERVICE: Contact the Support Center, 1-866-622-1775. • ADVERTISING QUERIES: Contact Valerie Preletz at [advertising@mca-marines.org](mailto: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-MAIL ADDRESS: [gazette@mca-marines.org](mailto:gazette@mca-marines.org). • WEB ADDRESS: [www.mca-marines.org/gazette](http://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](mailto: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.

**IDEAS AND ISSUES**

**Innovation & Modernization**

- 6** When New Concepts and Capabilities Meet the Test of Major War  
BGen Kyle B. Ellison
- 8** EABO  
LtCol John T. Quinn II
- 12** Infantry Battalion Experiment-30 (IBX30) Phase I Results  
Capt Michael J. Hogan
- 16** Introduction to the Marine Innovation Unit  
Staff, MIU
- 19** Innovation Maneuver  
Staff, MIU
- 22** Deterrence by Detection—Is it a Thing?  
Capt Daniel Avery
- 25** Actually Competing  
Maj Eric Prentice
- 29** Reconnaissance Over Fires  
Capt Walker Mills & Maj Jacob Clayton
- 32** Space Marines?!  
Maj Julia Weber
- 36** Force Protection for Stand-in Forces  
GySgt Alfredo E. Andrade
- 39** Such Other Duties as the President May Direct  
Capt Michael Hanson
- 42** Proving Grounds  
Maj Chris A. Huff
- 48** Training for the Future  
Capt Walker Mills
- 51** Don't Call it a Comeback  
Capt Whitley Noel
- 54** The Lynchpin of Force Design  
Maj Ryan W. Pallas
- 63** Implications of "Hide and Seek" for a 21st-Century Stand-In Force  
1stLt David Robinson
- 66** F-35B and Its Multirole Abilities  
Maj Evan Slusser

**Ellis Contest Winners**

- 69** Pushing Lethality to the Edge  
Capt W. Stone Holden
- 74** Automation is a Marine's Best Friend  
Col Seth Milstein
- 80** More Than the Sum of Their Parts  
Maj Carl Forsling
- 83** Offensive Cyberspace Operations  
LtCol Arun Shankar

**Talent Management**

- 89** Talent Management  
Maj Eric Mattoon
- 92** Promote Ahead of Peers  
Mr. Michael Millican

**Strategy & Policy**

- 96** Answering the Taiwan Question  
Maj Andrew Krebs
- 101** The Sino Myopia  
Col Phillip G. Wasielewski

**Wargaming/Advertiser Content**

- 106** Gaining the Advantage  
Mr. Joseph Miranda & Dr. Christopher Cummins

# MARINE CORPS WRITERS WANTED

**TO CHALLENGE THE STATUS QUO AND PROVIDE  
THEIR INSIGHTS ON RADICAL CHANGE.**



## **THE MAJGEN HAROLD W. CHASE PRIZE ESSAY CONTEST**

Submit entries anytime  
from 1 January to 30 April.

See p.35 for instructions.

The writing contest is open to active duty Marines  
and members of the Marine Corps Reserve.



This content is sponsored by: **observer**  
Media Group Inc.



## President & CEO

LTGEN CHARLES G. CHIAROTTI, USMC(RET)  
www.mca-marines.org/gazette • 1-800-336-0291

**Publisher, Editor, & Chairman, Ed. Adv. Panel**  
COL CHRISTOPHER WOODBRIDGE, USMC(RET)  
c.woodbridge@mca-marines.org Ext. 163

## Deputy Editor

MAJ VIC RUBLE, USMC(RET)  
v.ruble@mca-marines.org Ext. 109

## Layout/Editorial Production Coordinator

CHARLENE K. MONROE  
c.monroe@mca-marines.org Ext. 139

## Assistant Editors:

WILLIAM TREUTING  
w.treuting@mca-marines.org Ext. 193

CARRIE EMERSON-COYLE  
c.emerson-coyle@mca-marines.org

## Publishing Assistant

TAI FRAZIER  
t.frazier@mca-marines.org Ext. 180

## Advertising Queries:

Contact: VALERIE PEREZ: 703-640-0107 or  
LEEANN MITCHELL 703-640-0169  
Advertising@mca-marines.org

## Editorial Advisory Panel

COL AARON A. ANGELL

COL MARIA J. PALLOTTA

COL BRIAN E. RUSSELL, USMC(RET)

LTCOL HARRY P. WARD, USMC(RET)

LTCOL SCOTT CUOMO

LTCOL GARY W. THOMASON, USMC(RET)

LTCOL NATHAN FLEISCHAKER

LTCOL JOHN T. QUINN II, USMC(RET)

LTCOL REID HOUCK

LTCOL JEFFREY CUMMINGS

MAJ JONATHAN P. BURGESS

MAJ AUSTIN M. DUNCAN

SGTMAJ SCOTT BURTON, USMC(RET)

1STSGT FORREST ALLEN

FEBRUARY 2023

## Editorial: Innovation and Modernization

This month's annual "innovation edition" of the *Gazette* offers insights and the most current ground truth reporting on the Corps' campaign of modernization, change and learning. Our authors from across the Corps examine ongoing innovation in areas required to implement the generational changes envisioned in *Force Design 2030*, *Expeditionary Advanced Based Operations*, and the *Marine Corps Concept for Stand-In Forces*. Above all, as progress continues, the Corps continues to learn and adapt to meet the challenges first articulated in Congressional testimony in June 2017 by then-Commandant Gen Robert B. Neller, where he made it clear that "the Marine Corps is not organized, trained, equipped, or postured to meet the demands of the rapidly evolving future operating environment." Drawing on concepts that have their roots in the "strike-teams" in Vietnam and the Hunter Warrior experiments of the 1990s, Gen Berger has rapidly implemented change to fill these capability gaps and to move-out on an urgent effort to modernize the force. This effort will continue to move forward, evolving in the years to come informed by experimentation, analysis, threat assessments, and the experience of those Marines and their leaders tasked with deploying and employing new capabilities, formations, and operating concepts. This month's *Gazette* provides a "snapshot" of progress to-date.

On page 6, the stage is set with a letter titled "When New Concepts and Capabilities Meet the Test of Major War" where BGen Kyle B. Ellison, the Commanding General of the Marine Corps Warfighting Lab, provides valuable historical context for the practical implementation of concept-based capabilities. A series of sixteen articles by Marines across the Corps follows exploring a broad range of subjects surrounding force design and modernization of the Corps capabilities. In addition to the articles featured on our cover, noteworthy offerings include on page 19, "Innovation Maneuver" by staff of the newly established Marine Innovation Unit looks at how the MIU leverages the unique skill-sets and flexibility of the Reserve Component to focus on developing solutions to specific challenges in the future operating environment. Constructive criticism and refinement of various aspects of future force design are also included in this edition including "Deterrence by Detection—Is it a Thing?" by Capt Daniel Avery on page 22, "Actually Competing" by Maj Eric Prentice on page 25, "Force Protection for Stand-in Forces" by GySgt Alfredo E. Andrade on page 36, and "The Lynchpin of Force Design" by Maj Ryan W. Pallas on page 54.

We also present the top four essays from the 2022 LtCol Earl "Pete" Ellis Essay Contest. This annual contest focuses on specific aspects of innovation and future war and this year's contest was prompted by how loitering munitions, semi-autonomous drones and cyberspace operations are changing the character of combined arms for the MAGTF. The first and second place winners are "Pushing Lethality to the Edge" by Capt W. Stone Holden on page 69 and "Automation is a Marine's Best Friend" by Col Seth Milstein on page 74. The two honorable mentions by Maj Carl Forsling and LtCol Arun Shankar follow starting on page 80.

Finally, in addition to this month's focus area we also present articles in the related subject areas of Talent Management and Strategy & Policy. In the latter area two authors present views of our Nation's pacing threat in "Answering the Taiwan Question" by Maj Andrew Krebs on page 96 and "The Sino Myopia" by Col Phillip G. Wasielewski on page 101. Understanding the purpose of a pacing threat and the details of U.S. policy regarding the PRC is fundamental to defining the military problem driving change in the Corps and the entire Defense Department.

Christopher Woodbridge

### “Trained to Go on Liberty”

I read with great interest Mr. Peter S. D’Arpa’s “Trained to Go on Liberty: Leadership, Survival, and the 4th Marine Regiment in the Philippines” in the November *Gazette*. In November 2021, I had the opportunity to present a podcast, *The Battle of Wake Island, 8–23 December 1941*, as part of the Krulak Center for Innovation & Future Warfare’s #BruteCast series. My intent was to use the Battle of

had died. That amounted to a death rate of 38.4 percent for all American POWs captured in the Pacific, or more than twice that for the Wake Islanders. The 25,580 American servicemen who surrendered in the Philippines made up the largest chunk of U.S. military personnel to enter Japanese custody. Capitulation became a death sentence for an estimated 10,650, or 41.6 percent, of them.

ers” that lasted throughout their entire captivity. Compare and contrast that with the lack of leadership shown by the officers of the 4th Mar in captivity.

Maj Devereux’s leadership is not only evident in the higher survival rate of the Wake Island Marines while in captivity; it is apparent in how combat effective the Wake Island garrison was compared to the 4th Mar in the Philippines. Mr. D’Arpa states that the 4th Mar “served in Manila peacefully for one week” before the war started; were not prepared as well as they should have been for combat, and once informed of the raid on Pearl Harbor, most “went about [their] business as though nothing was happening.” A lack of officer leadership indeed. Contrast that with Maj Devereux, who had less than two months from the time he arrived on Wake Island with his Marines to build a formidable outpost from the ground up until the Japanese attacked Pearl Harbor. Devereux and his Marines, and some of the civilian contractors, worked feverishly every day to prepare Wake for the attack they knew was coming and were at their battle stations when the first Japanese air attack occurred. On 11 December, when the Japanese attempted their first landing, Maj Devereux and his Marines accomplished something unprecedented in World War II—defeating an amphibious assault at the water’s edge. Morale remained high at Wake Island until the very end. In fact, during the second, and successful, Japanese attempt to take Wake Island on 23 December, some of the Marines were shocked at being told to surrender—believing they were winning the battle, as they had the first time.

Mr. D’Arpa states that “a unit without leadership is not a unit at all.” The performance of the Wake Island Marines under Maj Devereux’s leadership and the lack of officer leadership within 4th Mar demonstrates Mr. D’Arpa’s point.

**Maj Skip Crawley, USMCR (Ret)**

## In prison pens across East Asia, Leathernecks withstood confinement more successfully than other American servicemen.

Wake Island as a historical case study of defending an advanced base in the context of Expeditionary Advanced Base Operations. While conducting research for *The Battle of Wake Island #BruteCast*, I learned that the Wake Island Marines had a significantly lower death rate as POWs than all other Allied or American POWs captured by the Japanese early in the war. From *Victory in Defeat: The Wake Island Defender in Captivity 1941–1945* by Gregory J. W. Urwin, one of the sources I used for the #BruteCast:

The 403 Wake Marines to escape death in battle composed the bulk of the atoll’s military POWs, and just 17, or 4.2 percent, never saw home again...

The Japanese army and navy snared some 95,000 American, British, Canadian, Australian, and New Zealander servicemen. More than 28 percent of those prisoners died in captivity, a revelation that casts the Wake Islanders’ lower POW casualty figures in a decidedly favorable light. The Wake POWs look even more impressive stacked up solely against their fellow countrymen. Thirty-three thousand, five hundred and eighty-seven American soldiers, airmen, sailors, and Marines fell into Japanese hands. By the time peace returned to the Pacific, 12,909 of those Yanks

The presence of the North China Marines and their brothers from Wake embedded a large and powerful cadre within the Shanghai War Prisoners Camp whose discipline and cohesion set the tone for all the other inmates. In prison pens across East Asia, Leathernecks withstood confinement more successfully than other American servicemen. Even in the Philippines, Marines stuck together and achieved a survival rate of 68.2 percent—10 percent higher than their Army comrades. *The Wake and North China Marines outdid that feat with their combined survival rate of nearly 96 percent. That fell just 1 percent below the survival rate of American troops taken in North Africa and Europe, where Hitler’s Wehrmacht endeavored to treat Yanks and Britons according to the Geneva Convention.* (Italics added.)

The above was directly attributable to the leadership of Maj James Devereux, CO of the Wake Island Marines. According to Bill Sloan, author of *Given Up for Dead: America’s Heroic Stand at Wake Island*, Maj Devereux “was with most of the other Wake prisoners throughout the endless days at Woosung and the agony of the Mount Fuji project. He maintained a sense of both camaraderie and discipline with the military prison-

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](mailto:gazette@mca-marines.org). Written letters are generally published three months after the article appeared.

The entire *Gazette* is now online at [www.mca-marines.org/gazette](http://www.mca-marines.org/gazette).

# HENRY REPEATING ARMS HONORS AMERICA'S

# MILITARY



Henry Repeating Arms, one of America's leading firearms manufacturers, is forever grateful to the men and women who answered the call of duty in service to the United States of America and the organizations that help support them and their families.



From D-Day veterans of World War II to Congressional Medal of Honor recipients, CEO and Founder Anthony Imperato has presented rifles to some of America's most courageous military heroes and donated well over \$1 million to veterans organizations large and small.



To learn more about Henry Repeating Arms, it's Made in America rifles and shotguns, and its dedication to America's military veterans, scan the QR code below or visit [henryusa.com](http://henryusa.com).



## HENRY PROUDLY SUPPORTS:

## AND MANY MORE!



1. Anthony Imperato presenting rifles to Medal of Honor recipients Ty Carter and Don Jenkins, D-Day veteran George Krakosky, and 39-year veteran of the Air Force and Air National Guard, Linda Becker.
2. Henry Repeating Arms presenting a \$100,000 check to The Journey Home Project, which Anthony Imperato then doubled for the chance to sing backup during "The Devil Went Down to Georgia."
3. Anthony Imperato with American war hero and 1936 Olympics runner Louis Zamperini at his home.
4. Henry Repeating Arms presenting a \$50,000 check to the Disabled American Veterans organization.
5. Henry Repeating Arms presenting rifles to USS Indianapolis survivor Edgar Harrell and ten other distinguished veterans.
6. Anthony Imperato presenting rifles to veterans including Sgt. Omar Avila and three World War II veterans; Don Burwell, Wezlet Sanders, and Al Hutchcraft.
7. Anthony Imperato presenting a \$50,000 donation to the Building Homes for Heroes organization.
8. American D-Day hero, Ray Lambert, picking up his donated Henry Military Service Tribute Edition rifle.
9. Henry Repeating Arms presenting a \$50,000 donation to the American Legion.



**A MESSAGE FROM THE COMMANDING GENERAL  
MARINE CORPS WARFIGHTING LABORATORY**

WHEN NEW CONCEPTS AND CAPABILITIES MEET THE TEST OF MAJOR WAR

Eighty years ago, the final act of the Battle of Guadalcanal (Operation WATCHTOWER, 7 August 1942–9 February 1943) was playing out in the Southwest Pacific.

The six-month struggle had taken on epic proportions, as both the Allied and Imperial Japanese leadership committed nearly all available resources to win what both sides recognized as a potentially decisive test of arms. For the Navy and Marine Corps, Guadalcanal represented the hard but successful first major test of new concepts, doctrine, equipment, and organizations, some of which had been under development and testing for two decades. Operation WATCHTOWER was launched on very short notice in response to the Japanese seizure of Tulagi Island in the lower Solomon Islands chain in April 1942.

When intelligence indicated that the Japanese had begun to build an airfield on nearby Guadalcanal, the focus shifted to the nearly complete airstrip there, and plans were adjusted mid-stride. The operation, launched in early August 1942 at the direction of the Joint Chiefs, was to seize both islands before the Japanese could further strengthen their defenses, using a hastily organized Joint Expeditionary Force under VADM Jack Fletcher. This effort—born out of the opportunity presented after the battles at Coral Sea and Midway—turned into a critically important and ultimately successful first counteroffensive by the hard-pressed Allies.

As Guadalcanal was declared secure in February 1943, Allied commanders and planners put the finishing touches on the next offensive: Operation CARTWHEEL. CARTWHEEL was designed to advance “up the slot” through the Solomons and, in conjunction with Allied forces under GEN MacArthur in the Southwest Pacific fighting up the northeast coast of Papua New Guinea, push Imperial Japanese forces away from Australia. Commanders and their staffs viewed the major Japanese base at Rabaul on the eastern tip of New Britain Island as the key objective of the operation.

Throughout 1943, and covered by growing Allied air and naval power, Allied ground forces were used in short, sharp amphibious assaults on both sides of the Solomon Sea, bypassing wherever possible known Japanese concentrations in New Guinea on the southwest edge and the Solomons chain on the northeast. These dual drives would involve numerous large and small landings, capped by those at Cape Torokina on Bougainville in November 1943 and Cape Gloucester on New Britain in January 1944. Their success neutralized Rabaul and capped the major allied actions in the South Pacific.

The extraordinary history of the larger effort, running from initial organization and planning of the naval force in July 1942 through early 1944, was documented in detail by the Marine Corps Historical Branch, G-3 Division, Headquarters Marine Corps in its first and second volumes of *The History of U.S. Marine Corps Operations in World War II*, respectively subtitled *Pearl Harbor to Guadalcanal* and *The Isolation of Rabaul*. Among other things, these volumes highlight the key Allied and adversary decisions, the ebb and flow of the campaigns, and the remarkable array of units and capabilities devoted to the expanding fight. Of note to contemporary force designers is how many of these were repurposed or employed well outside their normal operating mode. Finally, these volumes convey the extraordinary determination and valor of Marines, sailors, and soldiers of the Allied team during those trying months.



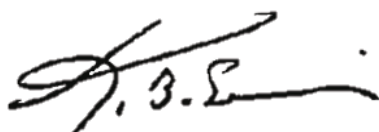
For today's Marines, the many hard-learned lessons of that period inform our understanding of the future. The circumstances of 1942–43 remind us that the FMF must be responsive to the changing strategic context. Evolving geopolitical conditions and technological advances dictate that our Force Design choices account for a broad range of threats and challenges. We must balance our ability to address the most concerning near term ones with the imperative to be ready to respond in any clime and place. This is an incredibly difficult task, but our Corps has a tradition of accomplishing such things.

The Marine Corps Warfighting Laboratory/Futures Directorate remains committed to conceiving of and contributing to the development and realization of the most lethal, persistent, and resilient FMF possible. Driven by national and defense guidance, and informed by statutory functions and composition, our activities are designed to ensure the FMF wields modern and relevant capabilities across a broad range of military operations. The example of eighty years ago, which started as a relatively modest naval step to block further enemy gains, grew to a truly a joint and combined effort. This ultimately involved multiple amphibious assaults, defensive counter-air, deep air strikes, coast watchers, close infantry combat, air, and sea interdiction of enemy sea lines of communication, anti-surface and anti-submarine warfare, air and sea search and rescue, and hundreds of minor tactical actions by light forces as they sought to sense and make sense of enemy intentions and actions. A plausible future conflict will feature variants of all of these, and more.

In the pages that follow, Marine Corps Warfighting Laboratory/Futures Directorate personnel and others discuss ongoing Marine Corps efforts to conceptualize, design, evaluate, produce, and sustain a FMF that will succeed in a 21st-century version of a broad, deep, and deadly war. It is a sobering topic, but it must be addressed. Our present focus centers on the likely missions and necessary composition of Stand-In Forces, and the operational concepts and required capabilities to execute Reconnaissance/Counter-reconnaissance missions and Expeditionary Advance Base Operations. While these are clearly applicable in the Pacific, they are designed to be employable in contested regions across the globe.

Per national guidance, Marines are committed to standing with allies and partners in competition and conflict. Our immediate Force Design choices underscore our seriousness of purpose regarding this direction. In an ideal world, the development and fielding of such forces will serve to help dissuade and deter unwanted conflict. However, as a Service that is founded as an Expeditionary force-in-readiness, our ultimate task is to prepare for the worst case. We must develop capabilities and capacities which will increase the likelihood of success in joint and naval operations during major war. Such a conflict will be a combined arms one, waged across all domains, and with many actions executed before the first kinetic round is launched. This is the fight we must be prepared for, and a wider array of capabilities is necessary if we are to win our part.

Finally, the fundamentals of maneuver warfare remain at the center of our Force Design effort. Much like the Marine experience of 1942–43, early battles and operations may be defensive due to circumstance, but the means to translate success in the defense into effective offensive operations will be sustained and improved. Even as we develop, refine, and field Stand-In Force capabilities, we are working with Joint, Navy, and allied partners to enhance littoral strike capabilities and enhance littoral mobility and maneuver in contested battlespace. A centerpiece of this effort is our ongoing development of a 21st-century amphibious operations concept in close cooperation with the Navy. We are confident that these many related efforts are bearing fruit, and the Marine Corps of the mid-21st century will remain relevant, ready, and effective across the range of conflict



K.B. ELLISON  
Commanding General,  
Marine Corps Warfighting Lab

# EABO

An update

by LtCol John T. Quinn II

In January 2021, the Marine Corps published the *Tentative Manual for Expeditionary Advanced Base Operations* (TM EABO), part of a logical progression of concepts and related works that recognize the changing global security environment. An unclassified work, it was developed “to [help] test, refine, and codify the classified *Concept for Expeditionary Advanced Base Operations* signed in March 2019 by the Chief of Naval Operations and the Commandant of the Marine Corps, as well as to inform force design and development.” Like its predecessor of 1934—the *Tentative Manual for Landing Operations*—it anticipates a threat and puts forward a conceptual approach to addressing the military problem posed by that threat.

## Laying the Foundation

Over the past decade, the DOD and wider national security community began to address a variety of growing concerns beyond those which had dominated the years after the attacks of 11 September 2001. American strategists began focusing on the People’s Republic of China’s rapid buildup of its military capabilities and capacity and a noticeable change in its behavior and rhetoric.<sup>1</sup> An early manifestation of this change was the People’s Republic of China’s construction and militarization of half a dozen airfields on disputed reefs in the South China Sea. Defense officials came to understand this as an important advancement of the People’s Republic of China’s anti-access/area denial strategy aimed to intimidate its regional neighbors and box out U.S. and allied military forces.

Marines paid close attention to these concerns and worked on concepts such as *Expeditionary Force 21* and *Distributed STOVL* [*Short Take Off and Ver-*

**>LtCol John T. Quinn II (Ret) served as a Communications Officer and is currently the Director of Concepts Branch, Concepts and Plans Division, MCWL/Futures Directorate.**

*tical Landing*] *Operations* to address important aspects of the emerging threat. Still, ongoing operations in Afghanistan and counter-violent extremist organization activities in other regions remained a priority, joined by contingency MAGTF deployments in the wake of the 2010–11 Arab Spring unrest and rotations to the western littorals of the Black Sea after Russia’s seizure of Crimea in 2014. These efforts competed for limited time and resources with *rebalance to the Pacific* initiatives

that implicitly acknowledged the changing security environment.

The naval conceptual effort to address emerging threats gained significant traction with the development of the Navy and Marine Corps *Littoral Operations in a Contested Environment*. The *2018 National Defense Strategy* took the unusual step of focusing the Services on specific threats and missions and this, in turn, clarified for Navy and Marine leaders, conceptualists, developers, and planners the type of forces they needed to meet the threats of the 2020s and 2030s. Building on the 2018 *National Defense Strategy* foundation and explicit priorities, the Navy’s *Distributed Maritime Operations* of January 2019 quickened the pace of efforts concerned with emerging threats associated with near-peer competition and conflict. With the Pacific squarely in their sights, the Naval Services produced an



**Marines train soldiers from the Romanian Army as part of the Black Sea Rotational Force to help increase the military capabilities of partner nations in the Black Sea, Balkan, and Caucasus regions. (Photo by SSG Lawrence Roscoe Washington Jr.)**

extraordinary array of strategic and conceptual documents to include *Expeditionary Advanced Base Operations* (2019), *Naval Doctrinal Publication 1, Naval Warfare* (April 2020), and *Advantage at Sea* (December 2020). The Marine Corps ultimately produced derivative documents—*TMEABO* (February 2021) and *Concept for Stand In Forces* (December 2021)—that drilled down to more specific descriptions of the hypothetical ways and means by which Marines must set conditions in competition, evolving crisis, and combat.

### Validating a Hypothesis

A concept is a succinct statement that describes how a problem will be solved or an opportunity exploited *if* sufficiently developed. In the case of military operating concepts, this should be stated as an unambiguous *hypothesis* to be examined rather than as a presumed solution to a problem. EABO started as just such a hypothesis, identifying a military problem to be solved and describing a plausible combination of ways and means to assist a naval commander in accomplishing operational and campaign ends. In this specific case, the Marine Corps hypothesized that an advanced force could be constituted in expeditionary bases or positions in the archipelagic littorals often within range of an enemy's weapons. From such a posture, the advanced force would assist a naval commander with screen, guard, or cover actions to support sea control, conduct sea denial, or enable fleet sustainment.

The purpose behind the *Tentative Manual for EABO* was to provide sufficient detail so that scenario developers, wargamers, and experimenters could test the basic hypothesis to either prove or disprove it. This testing process entailed the development of a variety of candidate new capabilities and their purposeful integration into existing or new tactical formations. The Marine Corps Warfighting Laboratory/Futures Directorate crafted scenarios in which to employ these candidate formations and executed varied wargames set in those plausible futures. Concurrently, the Marine Corps Warfighting Labo-

ratory/Futures Directorate rigorously prototyped key components of proposed new systems. While great strides have been made through this process, the Marine Corps recognizes that there is no final answer; concepts and technology will continue to evolve and thus all these efforts will remain active.

Since the publication of *TMEABO*, the Deputy Commandant for Combat Development and Integration, which includes the Marine Corps Warfighting Laboratory/Futures Directorate, the Capabilities Development Directorate, and the Operations Analysis Directorate, has conducted dozens of wargames and experiments, and uncounted numbers of engagements with other U.S.

test and refine tactics, techniques and procedures. Mobility, logistics and communications have been areas of particular focus, as the difficulty of emplacing, maneuvering, and sustaining small units in the contested littorals is quite evident to the Marines and sailors who operate in these regions.

Although critics have expressed concern that EABO is too narrowly focused on one region (i.e., the Indo-Pacific), this is not the case. Our wargames and experimentation conducted to date are affirming the demand signal in multiple theaters for Marine Corps forces operating as the forward edge of a naval expeditionary force, which contributes to coalition and joint sens-

---

**... the Marine Corps has participated in naval and joint venues to integrate EABO and SIF contributions into visions for coalition and joint campaigns.**

---

Services, allies, and industry partners. This wide network has been a key part of a coherent process designed to determine the validity of the concept and to identify and refine the concept-required capabilities most necessary to bring it to fruition. Most importantly, the process has included Marines from units and levels of command across the FMF at every step.

- At the MARFOR level, commanders and planners have embraced EABO and have begun to incorporate key elements of the concept into exercises, operations and plans of the geographic combatant commands.
- At the MEF and major subordinate command level, key personnel are thoroughly engaged with the Warfighting Lab in the extensive wargaming and experimentation process for the Marine Littoral Regiment, the future infantry battalion, and other EABO and Stand-In Force (SIF) design and development efforts.
- At the battalion and squadron level, Marines have answered the Commandant's challenge to use their imagination and unit resources to develop,

ing, fires, and maneuver across multiple domains. These analytic activities include Service-centric events to develop foundational materiel and non-materiel capabilities and to refine operational concepts of employment. Building on this foundation, the Marine Corps has participated in naval and joint venues to integrate EABO and SIF contributions into visions for coalition and joint campaigns.<sup>2</sup>

The analytic campaign to validate, refine, or refute elements of the EABO and SIF concepts has been comprehensive and rigorous. Whether on specific unit designs or proposed equipment sets, various testing and experimentation outcomes—whether successful or not—contribute to our Service's understanding of the requirements of the Joint Force and our ability to deliver on these demands. One of the key challenges for analysis entails generating capabilities optimized to contend with a peer adversary in a specific theater while preserving capabilities applicable globally against a range of threats and contingencies involving both state and non-state opponents.



Marines conducted a SIF exercise on Okinawa, Japan, involving all elements of the MAGTF focused on strengthening multi-domain awareness, maneuver, and fires across a distributed maritime environment. (Photo by Cpl Davin Tenbusch.)

Marine Corps SIF are uniquely suited by design, composition, and service character to operate as the leading edge of U.S. forces within contested zones. Credible analysis has revealed that there are specific demonstrated capabilities which contribute to the central hypothesis of SIF and EABO. These include:

- The ability to employ sensors and processors to collect against joint and naval intelligence priorities to enhance theater situational awareness.
- The ability to employ sensors out to extended ranges to hold targets at risk in multiple domains with simultaneity, and to transmit target quality data to coalition, joint, and naval fires agencies.
- The ability to build partnered capacity and leverage partnered capabilities in multiple theaters.

Marines and sailors are *operating to know* the contested environment and building capacity in CONUS and overseas every day. The Corps is pursuing technical solutions to the most pressing challenges at an accelerated pace and in an iterative manner to deploy, assess, refine, and redeliver capability as quickly as possible. These contributions can enable coalition, joint, and naval maneuver and close kill webs against our most capable adversaries. The EABO

Concept is proving to be of great value to naval campaigning and to the wider warfighting effort of the Joint Force. The Service must now refine force capabilities and concepts of employment that will provide the persistence and proximity necessary to achieve what these concepts have proposed.

### The Next Steps

Since its publication, TM EABO has served its stated purpose: to help test, refine, and codify the *Concept for Expeditionary Advanced Base Operations* as well as to inform force design and development. With some modifications, it should soon be ready for its transition to capabilities planning and solution implementation across the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities, and Policy including incorporation into Marine Corps Doctrine and Training publications. Nearly two years of rigorous evaluation indicates that the hypothesis behind EABO is sound, and that the concept’s proposed ways and means can contribute meaningfully to the military problem at hand. Joint Force commanders, Service partners, and allies see the great benefit of the EABO concept, and all are eager to work closely with the Corps

as it fields important EABO capabilities.

Even with the positive results to date, important actions remain to be accomplished on the road to implementing the EABO concept. As with the classified Joint Warfighting Concept and our own concepts, much of the related experimentation, prototyping and program development will reside in the classified sphere, and thus most Marines will only catch a glimpse of individual elements in the larger effort. Due to the nature of modern military competition, some concept required capabilities will be demonstrated to promote deterrence, and others will only be revealed in crisis or conflict in order to preserve an operational advantage. In accordance with strategic guidance, we are first and foremost intent on helping to deter potential aggression and contribute to integrated deterrence. If deference fails, we want an adversary to be unpleasantly surprised by the EABO-driven capabilities and capacities that Marines and the rest of the Joint Force bring to the fight.

### Notes

1. Perhaps the earliest comprehensive unclassified discussion of this challenge was a monograph produced in May 2010 by the Center for Strategic and Budgetary Assessment in Washington, DC: Jan Van Tol, Mark Gunzinger, Andrew Krepinevich, and Jim Thomas, *AirSea Battle: A Point-of-Departure Concept*, (Washington, DC: Center for Strategic and Budgetary Assessment, 2010).

2. Scott Cuomo, “On-the-Ground Truth and Force Design 2030 Reconciliation: A Way Forward,” *War on the Rocks*, July 12, 2022, <https://warontherocks.com/2022/07/on-the-ground-truth-and-force-design-2030-reconciliation-a-way-forward>; and MajGen Francis L. Donovan, “Task Force 61/2: A Model for Naval Warfighting,” *USNI Proceedings*, June 2022, <https://www.usni.org/magazines/proceedings/2022/june/task-force-612-model-naval-warfighting#:~:text=TF%2061%2F2%20provides%20the,Corps%20Force%20Design%202030%20efforts>.





# SAVE THE DATE: JUNE 27-29, 2023

WALTER E. WASHINGTON  
CONVENTION CENTER, D.C.



REGISTRATION OPENS **1 APRIL**



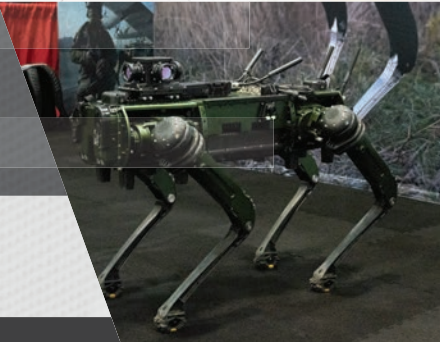
To register or for more information, go to  
[marinemilitaryexpos.com/  
modern-day-marine/home](https://marinemilitaryexpos.com/modern-day-marine/home)

Or scan this QR code






## PLANNED SHOW HIGHLIGHTS:

- A three day platform of professional development content and presentations from senior leaders from the USMC, DOD and industry partners.
- A Congressional Breakfast
- Wargaming Convention
- Military Spouse Employment Resources and Information Event
- Non-Commissioned Officer Leadership Symposium
- Inspirational and motivational leadership speakers



To showcase your products and services, please contact:  
Jaymie Nielsen at 980.328.8801 or [jaymie.nielsen@emeraldtx.com](mailto:jaymie.nielsen@emeraldtx.com)

For more information, please visit [moderndaymarine.com](https://moderndaymarine.com)

FOLLOW US:  [moderndaymarine](https://www.facebook.com/moderndaymarine)  [@moderndaymarine](https://twitter.com/moderndaymarine)  [moderndaymarine](https://www.instagram.com/moderndaymarine)

Modern Day Marine is not open to the public. All registrants must provide proof of identity with a Government issued photographic ID and must demonstrate that they have an "identifiable relationship" with the Marine Corps.

The Department of Defense, the Department of the Navy, or U.S. Marine Corps does not endorse any company, sponsor or their products or services.



# Infantry Battalion Experiment-30 (IBX30) Phase I Results

NeXt-file released

by Capt Michael J. Hogan

In November, the Marine Corps Warfighting Laboratory (MCWL) released the *FD2030 Update: Infantry Battalion Experiment* for Service-wide consumption.<sup>1</sup> This publication was the culmination of two years of work within the lab and all three MEFs and concisely presents the infantry battalion experimentation (IBX30) effort's findings thus far. But before explaining the document, it is worth starting at the beginning, with the Commandant's sweeping *Force Design 2030 (FD2030)* initiative.

As a component of Gen Berger's *FD2030* effort, in 2020, an integrated planning team (IPT) developed the design of the future infantry battalion. Starting from the principles articulated in the *Commandants' 2019 Planning Guidance, FD2030*, and *The Case for Change*, the IPT envisioned a battalion comprised of "highly trained and educated, competent, mature Marines, [equipped] with state-of-the-art weapons and equipment" that would distribute its forces to execute offensive, defensive, and expeditionary operations against a peer adversary.<sup>2</sup> The battalion reflected a shift towards peer competition, the growing maturation and proliferation of adversary long-range precision fires, the proliferation of drones and loitering munitions, and the influence of electromagnetic and cyber warfare capabilities. The 735-Marine formation dramatically altered the infantry battalion, inserting new capabilities at lower echelons, divesting of

**>Capt Hogan is a 1302 Combat Engineer Officer assigned to the Marine Corps Warfighting Laboratory. After serving his first tour at 1st Combat Engineer Battalion, he has spent the past two and a half years working as an integral part of the lab's Infantry Battalion Experiment 2030 team.**

significant structure and personnel, and relying on new concepts such as a more mature MARSOC-like Marine and an arms room.<sup>3</sup>

After seeing the new design, the CMC published an *FD2030* update and tasked MCWL with validating IPT assumptions and analyzing the proposed size and composition of the future infantry battalion, initiating IBX30 Phase I.

## Background: What Was IBX30 Phase I?

To test and refine the IPT's 735-Marine formation, MCWL conducted a series of experiments including modeling and simulation, wargames, and live-force experimentation. All these events examined the experimental focus areas of sustainment, command and control (C2), sensing, and lethality. Working in tandem with other components of Headquarters Marine Corps and by, with, and through FMF partners, MCWL developed a deliberate and iterative experiment plan to test the design that included three battalions, one from each MEF. 1/1 Mar, 1/2 Mar, and 1/3 Mar each experimented with slightly different tables of equipment and organization, testing different components of the original design.

Over the last two years, MCWL conducted eleven live-force experiments in three countries and five states in diverse weather conditions, mountainous terrain, and desert and jungle environments. Experiment locations included Twentynine Palms, CA; Camp Lejeune, NC; the Pohakuloa Training Area, Kaneohe Bay, and Marine Corps Training Area Bellows, HI; Okinawa, Japan; Yuma, AZ; San Clemente Island, CA; Northern Luzon, Philippines; and Fola Mine, WV. The diverse experiments stressed different parts of the design and allowed collection from the squad to battalion echelons, across the warfighting functions, and against the infantry battalion's core mission essential tasks.

Throughout all experiments, MCWL listened to, observed, and collected feedback from the experimental units and other partners, consolidating that information for analysis and to generate conclusions about the design. The analyses and evaluations provided information and insights on the effectiveness of the 735-Marine design and how it might fight in the future. After producing multiple reports, briefs, and studies, IBX30 Phase I ultimately culminated in a decision by the Commandant in June 2022.



**Marines engaged in the IBX30 experimentation effort employ emergent technologies to increase situational awareness, C2, and lethality in distributed operations.** (Photo by LCpl David Intriago.)

### Observations: What We Saw

Many of MCWL's observations directly related to the battalion's design, feeding recommendations on how to alter personnel structure or equipment to optimize the unit for the present and future. These included needing more bandwidth for communications and administrative tasks, a shortage of personnel within the 81mm mortar platoon, and friction created by a lack of a dedicated ground-intelligence, surveillance, and reconnaissance unit among others. These observations fed MCWL's recommendations to the CMC but do not capture everything we saw. A large part of the experimentation included re-imagining how an infantry battalion will fight with the new organization and capabilities.

The new formation is flooded with new capabilities including company-level signals intelligence and electromagnetic warfare, squad-level organic precision fires, Group 2 UAS, and lighter, more agile tactical mobility. These transformative capabilities bring aspects of warfare down to the tactical edge at unprecedented density and levels of integration, giving a company the ability to understand and leverage the spectrum during operations, effectively placing a new dimension of war at their

fingertips. But sifting through all of the changes, the analysis team identified three fundamental components of the battalion's future employment that describe how it should fight: interchangeable C2 nodes, hunter-killer pairing at echelon, and hub and spoke operations. While not comprehensive, these ideas underpin the conceptual shift in how

---

### **The new formation boasts a dramatic increase in precision fires**

...

---

the infantry battalion of the future will fight and illustrate why it will be decisive on the future battlefield.

Interchangeable C2 refers to how company and battalion command centers operate and relate to one another. On the future battlefield, survivability will depend in large part on reducing a unit's signature and improving its mobility, enabled by the ability to shift command and control of an area of operations. The design increases company staff capacity and communications

capabilities, allowing for companies to control battalion battlespace for a limited duration, ultimately providing the battalion with five C2 nodes. Redundancy is a must, so the design leverages the companies for C2 redundancy, increasing the formation's resilience and survivability.

The company's increased C2 capacity is both required by and facilitates hunter-killer pairing at echelon. In this context, hunters are sensing assets, and killers are kinetic weapons, generally a UAS and a loitering munition, respectively. The new formation boasts a dramatic increase in precision fires capabilities, and ensures the employing units retain the organic capability to find targets for these weapons. This results in loitering munitions at the squad, platoon, company, and battalion level with UASs at the same echelon that match the munition's duration and range. The munitions gradually increase in capability, from anti-personnel to anti-armor. Together these systems enable every unit to precisely engage an enemy from—and into—defilade and organically counter otherwise overwhelming enemy direct-fire.

Hub and spoke operations refer to the ability of any unit to take control of either UAS or loitering munitions post-launch. Because Marines at the tactical edge can take terminal control of loitering munitions, employing a higher echelon system is simplified. The squad can bring all the company's firepower, itself dramatically increased, to bear on the enemies it can see, adapting to real-time changes. All these changes, in the context of more distributed operations, alter our understanding of mutual support. The company can launch an anti-armor loitering munition and send it 40km across land or water to a platoon or squad that takes control and strikes a target. Hub and spoke operations are a foundational tactic enabling distributed operations.

These three concepts paint the picture of a dispersed and distributed battalion surviving by limiting physical mass and constantly moving, leveraging, and communicating the findings of its wealth of sensors to open and close kill webs and empowering its unit leaders

with sensors and precision fires across great distances. The vision reflects the Commandant's demand to counter the adversary's precision fires and sensing regimes with independent and capable subordinate units, resiliency in the formation, and broad employability of sensors and fires across the unit.

### The Commandant's Decision

Combining these more conceptual observations on the shift in how the infantry battalion fights with concrete notes on how the units performed, MCWL coalesced its two years of experimentation into recommendations briefed at the Ground Board, a collection of general-officer level stakeholders in the ground combat element and Headquarters Marine Corps, in May 2022. With Ground Board approval, the recommendations were forwarded to the CMC for a final decision. Once decided, the changes were formalized in a memorandum from Deputy Commandant, Concept Development and Integration.

The approved recommendations include establishing an organic battalion ground intelligence, surveillance, and reconnaissance unit (the scout platoon); adding one ammunition Marine per tube within the 81mm mortar platoon; retaining the 0352 and 0331 MOS's while adding a machinegun section and re-organizing company-level crew-served weapons; returning key enablers to headquarters and service company; and removing one Marine from each rifle squad. These recommendations resulted in a battalion staffing level of 811 Marines.<sup>4</sup>

Taken together these changes address observations from experimentation on where the 735-Marine battalion cut existing structure too deeply when aligned against current manning, training, and equipping capabilities of the Corps. With the CMC's decision and execution of these intermediate changes Service-wide, the Marine infantry battalion will remain lethal in the conflicts of the present day and the future.

### Ongoing Experimentation

After accepting these recommendations, the CMC directed MCWL to

continue experimentation with the 811-Marine battalion during IBX30 Phase II. To achieve the optimal force by 2030, we must continue iterating on the infantry battalion's design, perfecting it over time and continued effort. Phase II has already begun and will continue for the next three years. But as MCWL focuses efforts on 2/7 Mar and 3/4 Mar, we will continue to listen to feedback from the broader fleet.<sup>5</sup> While focused experimentation can produce data and concentrated specific findings, fleetwide experimentation will continue to drive the Marine Corps forward. It is for this reason, to unlock and encour-

---

## Across the Corps, all ... Marines have a stake in FD2030's success.

---

age units across the Marine Corps to experiment on their own, that MCWL released its NeXt File on IBX Phase I, the location of which can be found in MARADMIN 618/22.<sup>6</sup> Additionally, reports from Phase I of experimentation are accessible on Intelink.<sup>7</sup>

The final result of IBX Phase I reflects the original vision of a distributed-operations capable formation while mitigating risk by accounting for the pace of institutional change. The 811-Marine design incorporates new capabilities to stay ahead of changes in modern war, without reducing our capacity in the most basic and fundamental infantry missions today. As the FMF transitions and adapts to the new battalion, experimental exercises, reports, and feedback will help optimize this new design and inform the Service about the unit's capabilities and how to obtain the best tactical results. MCWL will continue to experiment, but the FMF will drive the Marine Corps forward.

This refinement of the infantry battalion will continue concurrently with another *FD2030* priority: the Marine Littoral Regiment. The current Service focus is experimenting with and refining the Marine Littoral Regiment

design while establishing future Marine Littoral Regiments. MCWL's IBX Phase II experimentation, data collection, and analysis directly contributes to the concurrent effort with Marine Littoral Regiment experimentation given the battalion's role as the base unit of the Littoral Combat Team. Together, these lines of effort will feed MCWL's recommendations for and the Service's refinement of the future force.

There remains much work to shape the Service, and the more all Marines contribute to the solution, the faster it will happen and the better the results will be. Across the Corps, all units, organizations, and Marines have a stake in *FD2030*'s success. This is the Marine Corps our country is counting on to compete, deter, and win America's future battles.

---

### Notes

1. Headquarters Marine Corps, *MARADMIN 618/22, Update to MCWL Information Sharing with the Fleet Marine Force*, (Washington, DC: November 2022).
2. Integrated Planning Team, Draft Infantry Battalion Design IPT Report dtd 5 May 20.
3. Ibid.
4. Headquarters Marine Corps, *Marine Corps Bulletin 3120, Marine Corps Global Force Management and Force Synchronization*, (Washington, DC: August 2020).
5. Headquarters Marine Corps, *Warning Order to Force Design Infantry Battalion/CMC PPO POF, 08/09/2022, 18:33:33*, (Washington, DC: August 2022).
6. The IBX30 Phase I X-File is currently available for anyone with a .mil address. To read the full X-File follow the link found at <https://www.marines.mil/News/Messages/Messages-Display/Article/3227550/update-to-mcwl-information-sharing-with-the-fleet-marine-force>.
7. Location of all IBX Phase I Reports: [https://intelshare.intelink.gov/sites/mcwl/ExDivReports/\\_layouts/15/start.aspx#](https://intelshare.intelink.gov/sites/mcwl/ExDivReports/_layouts/15/start.aspx#).





YOUR #1 SOURCE FOR MILITARY REFERENCE

# SMARTbooks

**SMARTbooks:** Reference Essentials for the Instruments of National Power (D-I-M-E: Diplomatic, Informational, Military, Economic).

**SMARTbooks** can be used as quick reference guides during operations, as study guides at education and professional development courses, and as lesson plans and checklists in support of training.

Recognized as the doctrinal reference standard by military professionals around the world.

## WHAT IS A SMARTbook?

### MAGTF SMARTBOOK



### Operations & Planning

Guide to Planning & Conducting Marine Air-Ground Task Force Operations

The Lightning Press  
Milburn & Wade

### MEU13 SMARTBOOK



### the MARINE Expeditionary Unit

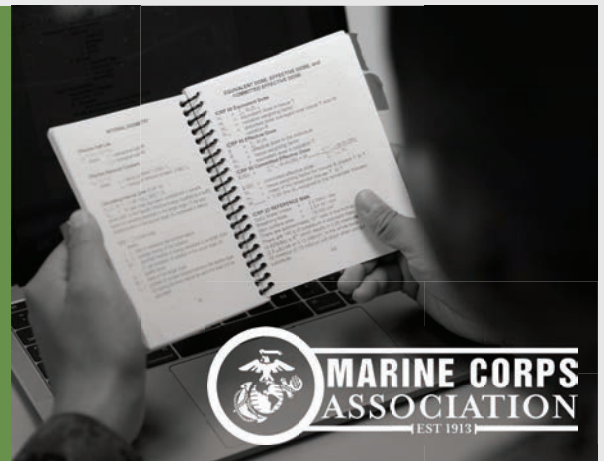
Guide to Battle Staff Operations & the Rapid Response Planning Process

The Lightning Press  
Norman H. Wade

## MCA IS HERE TO HELP

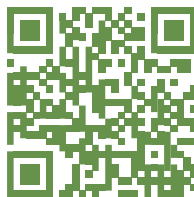
MCA members will receive **10% off their purchases** from The Lightning Press SMARTbooks website. Use code **SMART-MCA-10** for your order.

The MCA will also work with any unit or school on funding discounted bulk order of 50 or more copies. Call the MCA Foundation at (866) 622-1775 or email [mca@mca-marines.org](mailto:mca@mca-marines.org) for more information.



**MARINE CORPS ASSOCIATION**  
EST. 1913

GET YOUR EDGE.  
ORDER TODAY.



Web: [www.TheLightningPress.com](http://www.TheLightningPress.com)

Email: [SMARTbooks@TheLightningPress.com](mailto:SMARTbooks@TheLightningPress.com)

24-hour Order & Customer Service: 1-800-997-8827

Mobile: 863-409-8084



**The Lightning Press**  
INTELLECTUAL FUEL FOR THE MILITARY

# Introduction to the Marine Innovation Unit

A primer on the origins, mission, and operations of MIU

by Staff, MIU

While Marines continue to serve honorably in counterterrorism and counter-insurgency missions, great power competition now predominates Marine Corps and joint planning. The CMC’s response to the new great power competition paradigm, *Force Design 2030*, represents a sea change in Marine Corps operations and force structure. *Force Design 2030*’s boldness and scope harken back to *Advanced Base Operations in Micronesia*, an evolutionary vision for naval doctrine forged by LtCol “Pete” Ellis and championed by LtGen John LeJeune in the 1920s. Ellis and LeJeune’s decades of foresight ensured that the Marine Corps would be relevant and ready to fight a new type of war in the Pacific when the time came. This innovation ultimately helped deliver democracy’s victory over authoritarianism in World War II.

More than one hundred years later, the United States and its allies once again face a pernicious authoritarian adversary in east Asia. Compared with Ellis and LeJeune, our luxuries are inverted. We are fortunate to have a CMC proactively driving change from the top and not have to rely on the prescience of a troubled genius. But we would be dangerously naive to think that we might have twenty years to implement today’s good ideas. The Service-wide effort to realize *Force Design 2030* will be intense and ongoing. Marines operating under the Stand-In Force paradigm will need to fluently employ advanced capabilities leveraging artificial intelligence, robotics, next-generation sensors, and electronic warfare. Marines will need to act independently and decisively in



Figure 1. Marine Innovation Unit logo. (Logo provided by MIU.)

acutely complex and ambiguous operational environments, becoming more technically proficient, psychologically mature, and tactically enterprising. This new paradigm will require a “field to learn” mentality to rapidly deliver new capabilities to the operating forces for experimentation. Critically, it will require an evolution in Marine talent management.

The Marine Innovation Unit’s (MIU) mission is to support these talent management and capabilities development needs by leveraging the rich, untapped lode of talent found in

the Marine Forces Reserve. The original concept for MIU, embodied in the “Unit 1775” white paper in June 2021, sought to create a new reserve unit that could help the total force accelerate doctrinal objectives from *Force Design 2030*, *Talent Management 2030*, and the *MARFORRES Campaign Plan 2030*. HQMC leaders moved aggressively to develop and refine the Unit 1775 concept, and MIU was established through *Marine Corps Bulletin 5400* in March 2022.

As the newest unit in the Marine Corps, MIU seeks to prove a simple yet profound thesis—that warfighter talent and warfighting capabilities are symbiotic and inseparable. Since its inception, MIU’s defining characteristic has been innovation and experimentation with talent management. The founding members of the unit were a group of volunteers from several existing reserve units who took on an unprecedented challenge: reaching out to the entire reserve component with the Unit 1775 message, rapidly filtering through more than 650 initial applicants, and then hiring a small group of the most qualified candidates to achieve initial operational capability. This task was accomplished through both new and familiar methods, including the use of mass emails,

**>The Marine Innovation Unit is a newly activated unit designed to accelerate advanced capabilities, transform Naval Service capacity for technology employment, and retain and invest in highly skilled Marines in support of Force Design 2030 and the CMC’s initiatives. MIU is an all-volunteer team from diverse backgrounds working in advanced technology, academia, and makerspaces. MIU serves as an in-demand, force multiplying, supporting entity to total force goals with exponential emphasis on capabilities that transition in a timely manner focused on outcomes.**

a commercial recruiting software platform to manage an ever-growing mountain of candidate data, and a grueling series of talent boards. This first iteration of the MIU recruiting and talent management model, termed “Talent Management 1.0,” will be refined and improved upon as MIU moves toward full operational capability.

Talent and capabilities symbiosis is a *two-birds, one-stone strategy*, and MIU has already won some early tactical victories with this approach. Working in small, cross-functional teams prior to MIU’s official standup, “MIUers” from both the active and reserve components made a concrete positive impact on important Marine Corps problems across various warfighting functions: complex eco-

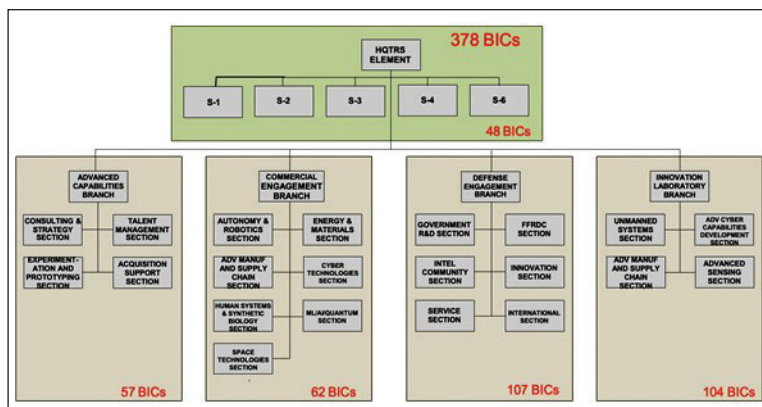


Figure 2. MIU branch structure as of December 2022. (Figure provided by MIU.)

nomic analyses of unit relocations, providing a small Unmanned Aerial System Red Cell, and building a program framework for Marine Forces Reserve small craft projects. These quick wins prove the viability of the total force talent management concept—that the Reserves are an underutilized talent pool that can provide unique resources at

the speed of relevance to reinforce active component goals. A notable revelation from this period was that giving talented reservists the opportunity to tackle these types of problems makes them want to stay in, or return to, the Marine Corps. *Innovation attracts talent, and talent drives innovation.*

Proven concepts should evolve and scale. Since reaching initial operational capability in August 2022, MIU has adopted a simple, flexible organizational structure to help deliver future success and grow beyond what it has merely done well in the past. MIU recruits and organizes Marine talent within five branches: Advanced Capabilities, Commercial Engagement, Defense Engagement, the Innovation Lab-

## Partner Up to Pay Down Credit Card Debt



Your accountability buddy has arrived! Get a **low intro APR** when you transfer a credit card balance to a Navy Federal *cashRewards*, **GO REWARDS**® or Platinum credit card. Let us help you shed debt!

**NAVY FEDERAL** Credit Union  
 ARMY  
 MARINE CORPS  
 NAVY  
 AIR FORCE  
 SPACE FORCE  
 COAST GUARD  
 VETERANS

Our Members Are the Mission

Transfer Today

Visit [navyfederal.org/Btoffer](https://navyfederal.org/Btoffer) to take advantage of these special offers.



Navy Federal is insured by NCUA. © 2022 Navy Federal NFCU 14204 (12-22)

oratory, and Headquarters. Advanced Capabilities provides technology SMEs to consult and advise the acquisitions community on capabilities development issues. Commercial Engagement acts as tech scouts, mapping industry players and keeping decision makers informed about new technology developments in the commercial sector. Defense Engagement helps accelerate the articulation, development, and manifestation of warfighter requirements in the Ma-

domain command and control, coding, and software development. As an example, MIU relaunched the Marine coders initiative, providing in-demand coding support services to key user groups.

• **Data Management & Integration.** The data team provides leadership, advice, and knowledge of best practices to help the Marine Corps enable *Force Design 2030* by efficiently managing data. The lines of opera-

a specific mission set, each MIU engagement is served by a task-organized engagement team combining the skills and expertise of Marines across MIU branches. For example, a data visualization problem may include MIU'ers with management consulting experience to frame the problem, a data scientist from the commercial sector, a member with intimate knowledge of other DOD and U.S. Government efforts, and an acquisition professional who understands alternative development pathways. MIU fills a much-needed gap in underemphasized parts of the talent continuum with highly talented, flexible, and impactful Marines who provide an *up-and-out capability* to the Corps' *down-and-in Force Design* and *Talent Management 2030* goals as a supporting establishment.

By moving the needle in each of these areas, MIU can provide the Marine Corps with a unique and versatile resource, offering specialized academic, commercial, and government expertise at little to no additional cost to the Corps. Moreover, by recruiting and retaining exceptional Marines with the offer of worthy challenges, MIU can help validate the extraordinary vision for the future force found in *Talent Management 2030*. This is the first step towards better talent management for the reserve component and can inform talent management for the active component in the long term. This talent evolution, like *Advanced Base Operations in Micronesia* before it, is just the latest foray in the Marine Corps' proud tradition of adaptation. We find a way to win because we are willing and able to adapt—to practice innovation maneuver. In the arc of history, and particularly against adversaries who continue to evolve their own capabilities and approaches, innovation is democracy's secret weapon. The Marine Innovation Unit has landed, and we are ready to help. We welcome the opportunity to connect with innovation stakeholders across the Active and Reserve components and can be reached at [miu\\_engagement@usmc.mil](mailto:miu_engagement@usmc.mil).




---

**Since reaching initial operational capability in August 2022, MIU has adopted a simple, flexible organizational structure to help deliver future success ...**

---

rine Corps acquisitions pipeline. The Innovation Laboratory provides direct, applied research and development support for emerging technologies to the active component. These four branches are run by Reserve personnel and supported by an exceptionally talented and entrepreneurial Headquarters Branch staffed primarily by active-component Marines. Moreover, these capabilities come with a very small price tag to the institution as Reserve Marine participation in these activities is consistently funded every fiscal year.

Drawing from each of these branches, MIU employs engagement teams along several lines of operation as a cross-matrixed organization:

- **Talent Management.** Focusing primarily on the reserve component, the Talent Management line of operation pursues new methods and policies to attract, recruit, retain, develop, and return Marines back to the total force. This includes strategic messaging and recruiting capabilities, building up the data ecosystem for talent management, and engaging on component-wide issues with key groups like the Reserve Policy Board and the Talent Management “X” or TMX initiative.
- **CSISR-T.** This team focuses heavily on cyber capabilities and digital transformation of the total force. Projects include cyberspace operations, information operations, multi-

tion focus its efforts on the Marine Corps' operational and analytical infrastructure, as well as data discovery, collection, storage, quality, security, visualization, and machine-aided decision support tools.

• **Contested Logistics.** This team focuses heavily on expeditionary problem sets for the total force including supply chain resilience for Stand-In Forces, golden hour medical evacuation challenges, and energy availability in distributed environments. MIU'ers recently supported wargaming efforts related to this focus area.

---

**In the arc of history ... innovation is democracy's secret weapon.**

---

• **Capability Experimentation.** This team seeks to supercharge key aspects of the capabilities development pipeline, including the *transition* of capabilities to the fleet. Key technology focus areas include advanced additive manufacturing, small UAS, technical capability assessments, and wargaming support in direct support of the Marine Corps Warfighting Laboratory.

Much like selecting capabilities in a Special Purpose MAGTF to address

# Innovation Maneuver

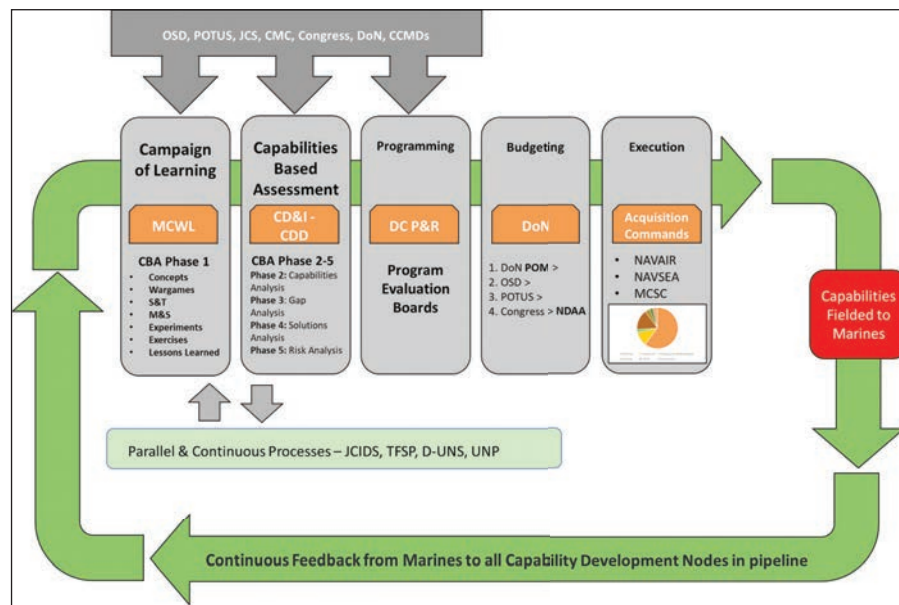
A vision for evolutionary change in Marine Corps acquisitions

by Staff, MIU

Imagine we are living in the year 2014. The Seattle Seahawks have won their first Super Bowl title. Dubstep music is nearing the height of its power, much like the Islamic State, which has captured Raqqa and Mosul. A civil war in Ukraine, combined with Russia's invasion and occupation of Crimea, has stunned Europe. World leaders are deeply concerned about the spread of a lethal and highly contagious virus—Ebola. The United States-led coalition in Afghanistan is still waiting expectantly for its nation-building project to turn a corner, and COIN is the catchphrase of warfighting. This is the world, eight years ago, where many of the capabilities of today first entered the Marine Corps capabilities development (CD) pipeline.

The timeline to develop and field new capabilities in the Marine Corps is about eight years—and often longer.<sup>1</sup> This cycle time is not only unacceptable but incompatible with the vision of *Force Design 2030*. The relentless pace of change in technology and warfare, led by commercial firms and U.S. adversaries, threatens to leave Marine warfighting capabilities behind. Meanwhile, Ukraine is conducting battlefield experimentation every day with dual-use technologies and creative tactics, proving a viable path for the very capabilities and concepts that often languish in our own pipeline. It has become painfully obvious that the Marine Corps' current requirements and acquisition process cannot keep pace with the speed of warfighting relevance.

The solution to this problem is inseparable from Marine Corps culture, history, and doctrine: maneuver warfare. We must take decisive action now, not only on the battlefield but in the way we conduct CD; we must embrace innovation maneuver. Innovation ma-



**Figure 1. The Marine Corps Force Development "racetrack." This streamlined graphic shows the skeleton of the process, including the major stakeholders and contributors of each phase of PPBE. (Chart provided by author.)**

neuver, like maneuver warfare, accepts chaos, uncertainty, and risk in making faster decisions with incomplete information. Innovation maneuver means fast experimentation, fast learning, and fast pivots when hypotheses fail. The good decisions made through this iterative process far surpass the temporary setbacks from the inevitable failures and mistakes. Inaction is far worse than hasty or premature action.

The difference between the kill chain and kill web concepts helps illustrate the difference between innovation maneuver and the status quo in the CD pipeline today. Kill chains unite OODA loops for intelligence, command and control, and fires in a relatively linear process. Like the existing requirements and acquisition system, the existing kill chain concept has been a historically useful construct. Now, that historical usefulness is beginning to hold back something new and

better. The kill web concept envisions a resilient, distributed mesh of sensors, networks, and weapons systems that provide commanders with superior situational awareness, command and control, and fires. The kill web is highly focused but not entirely linear. It collects and processes far more information than the kill chain without sacrificing relevance, tempo, or outcomes.

Above all, the kill web enables maneuver warfare by radically shortening the OODA loop and increasing decision space for leaders. For the force development ecosystem, this means faster and better OODA cycles for military readiness. This is the essence of innovation maneuver. If the Marine Corps can foster a culture of innovation maneuver and create true kill web conditions for CD, then we can destroy the tyranny of eight-year cycles. The goal must be to compress the acquisition cycle, target-

ing gaps and bottlenecks in the bureaucracy with tactical actions in the short term and policy (or legislative) changes in the long term. We must make Marine Corps CD culture like Marine Corps culture—ruthlessly rapid and aggressively creative, with a penchant for the 70 percent solution.

In the short term, stakeholders across the Corps can practice innovation maneuver through tactical actions that do not require additional enterprise-wide permissions, consensus, or acts of Congress. The first of these should be the embrace of Cross Functional Teams (CFTs) for CD. Wherever possible, leaders should consider breaking up siloes of specialists who all focus on the same topic or share the same expertise, creating task-organized CFTs focused on specific concepts within a thematic capability umbrella, such as autonomous vehicle resupply for contested logistics.<sup>2</sup> At present, we have systems engineers, project managers, wargamers, requirements managers, and contracting experts sitting in different siloes scattered across MCB Quantico, along with operational subject-matter experts (i.e., the end users of the capability) somewhere out in the fleet. We need an enlightened leader to step forward and experiment with co-located groups of CD subject-matter experts led by a hard-charging O-3/O-4 project officer. If this seems controversial, keep in mind that the ultimate allegory for the CFT is the MAGTF; leading defense technology teams such as the Defense Innovation Unit and Project Maven have long since adopted the CFT framework.

CFTs pair well with liaison officers and tech scouts. The U.S. Government and allied nation CD enterprise has a lot to offer the Marine Corps. The best way to avoid redundant, wasteful acquisitions is to place Marine LNOs at key nodes in the other Service branches, the intelligence community, and in the Office of the Secretary of Defense organizations. This LNO network can help the Marine Corps take advantage of experimentation, prototyping, wargaming, and other CD tasks already completed by others. If other organizations in the ecosystem already have test data or fielding authorities for relevant capabilities,

the Marine Corps must take advantage of those opportunities to shortcut its own CD process. Likewise, tech scouts can help the Corps find and exploit relevant dual-use technologies that have already been developed, tested, and fielded by the commercial sector with private funding. Work smarter, not harder.

The combatant commands are heavily invested in the ongoing Global Information Dominance Experiment—series—increased FMF and HQMC participation in these types of experiments and exercises could help the Marine Corps CD pipeline target and leverage Joint all-domain command and control investments already made by others. Overall, the goal with this should be to democratize and expand the Marine Corps experimentation process beyond the halls of Quantico—something that the Rapid Capabilities Office has shown great leadership in managing (and without creating stray voltage from excessive decentralization) thus far.

Changing the performance metrics and incentives for portfolio managers in the requirements and acquisitions pipeline presents another opportunity. Portfolio managers can and should behave more like early-stage venture capital investors; they should be rewarded for making good investments in promising capabilities that are fielded quickly for experimentation, and then scaled up across the total force. This means taking a calculated risk and being willing to pivot to new projects and solutions if it means a better capability, fielded faster.

Analysis of Alternatives (AoA) presents yet another promising target. With the current CD cycle tempo, capability experimentation can take two years or more. It should come as no surprise that when we conduct an Analysis of Alternatives on a capability from two or more years in the past, we find that its technological basis is outdated or obsolete. Instead of treating Analysis of Alternative obsolescence findings as a reason to go back to the drawing board, stretching out the CD cycle time even further, we should give CD stakeholders the autonomy to conduct proof-of-concept experimentation and then use the results to go buy the cutting-edge version of the relevant capability.

Finally, the defense acquisitions processes need to be streamlined, along with overarching Federal Acquisition Regulations (FAR) system reform and modernization. These means policy or legislative actions at the Service, department, and Congressional levels. Inspiration for FAR reform, which will undoubtedly be a lengthy and complex process, can be drawn from the Base Realignment and Closure campaign undertaken between 1988 and 2005. As with the FAR and the current Marine Corps CD pipeline today, Base Realignment and Closure sought to make hard choices about Cold War-era national security investments and processes which simply were not serving the interests of the United States any longer. The Marine Corps can catalyze the defense acquisitions process and FAR reform by agitating for change at the Service level while building a coalition of leaders from other Service branches to attack the problem on a federal scale.

The need to overhaul a broken acquisitions system is not unique to the Marine Corps; this pain is felt acutely throughout the DOD and the larger national security community. However, through its proud tradition of adaptation and the current momentum of *Force Design 2030*, the Marine Corps may be uniquely suited to experiment with radically new and different structures for CD. If senior defense and Congressional leaders are willing to match the bold steps already taken by Gen Berger, the current unacceptable status quo of Marine CD could provide a catalyst for real change across the defense enterprise. The time has come for the Marine Corps CD pipeline to start looking like the rest of the Corps—fast, courageous, and decisive

**Notes**

1. United States Government Accountability Office, *Report to Congressional Committees—Weapon Systems Annual Assessment*, (Washington, DC: June 2021).

2. Thematic grouping of CDs within CFTs can reinforce the early promise of the Family of Systems approach proven by Defense Innovation Unit and already being experimented with at SYSCOM.





# SUPPORT CENTER



**The Support Center** is here to improve service to our members and shoppers at The MARINE Shop and The Marine Corps Association! If you have any questions regarding your membership or a purchase from The MARINE Shop, please contact us at the following:

1-888-237-7683  
mca@mca-marines.org or  
customerservice@mca-marines.org



# Deterrence by Detection—Is it a Thing?

Not really ...

by Capt Daniel Avery

The CMC has been writing and speaking recently about “deterrence by detection.” In *A Concept for Stand-In Forces* (November 2021), he identified deterrence by detection as one of the primary ends of Stand-In Forces, on par with well-established concepts like seizing the initiative and attacking effectively first.<sup>1</sup> He highlighted the concept again while speaking at a conference in February 2022, identifying the impending Russian invasion of Ukraine as a use case.<sup>2</sup> In light of the CMC’s recent interest and our glaring failure to deter war in Europe, naval professionals should give the concept more scrutiny. What is deterrence in the first place? Is deterrence by detection really a thing? And if it is, then how and why did it fail to deter Russia from invading Ukraine?

## A Strategy of Deterrence: Ends, Ways, and Means

A strategy of deterrence is one in which an actor’s end is to prevent their adversary from doing something that they otherwise would through threats.<sup>3</sup> Deterrence is the converse of coercion, in which an actor threatens their adversary into doing something that they otherwise would not. For example, an older brother threatening to beat up his younger brother if the younger brother touches his stuff is engaged in deterrence (e.g. don’t touch my stuff, or else), whereas a mother threatening to withhold her daughter’s allowance until she picks up her room is engaged in coercion (e.g. you’d better pick up your room, or else).

Classically, deterrence is achieved in two ways: denial and/or by punish-

**>Capt Avery is currently serving as an Intelligence and Information Operations Planner on the staff of U.S. Seventh Fleet. He previously served as an Intelligence Officer with 1/1 Mar (2018–2020) and 1st Combat Engineer Battalion, 1st MarDiv (2016–2018). He graduated from Ohio State University in 2015 with a BA in International Relations.**

ment.<sup>4</sup> Deterrence by denial works by convincing an adversary that the thing they want to do would not be successful and therefore should not be attempted at all. Deterrence by punishment works by convincing an adversary that, even if they succeed in doing what they want, they will face retaliation so severe that it will not have been worth it in the first place. For example, a police officer patrolling the neighborhood to catch criminals in the act is deterring by denial (e.g. not on my watch), whereas a prosecutor pursuing the maximum sentence in each court case is deterring by punishment (e.g. do the crime, do the time).

The means of deterrence are often characterized as “The Three Cs”: capability, credibility, and communication.<sup>5</sup> Capabilities are the people and things necessary for an actor to do what they are threatening to do. Actors have a range of capabilities across all instruments of national power—diplomatic,

informational, military, economic, and so on. Credibility is the adversary’s perception of whether or not the actor will actually carry out their threat. This depends largely on a combination of the actor’s aforementioned capabilities (as perceived by the adversary) and reputation (the actor’s history of staying true to their word). Communication must take place between the actor and their adversary so that threats can be expressed clearly, responses can be measured, and adjustments can be made throughout a crisis. An actor must convince their adversary that they really will carry out their threats if deterrence fails. Because of these interdependencies, all three Cs are critical to the success of any deterrence strategy.

With this in mind, the fundamentals of deterrence theory can be overlaid with the fundamentals of strategy (e.g. alignment of ends, ways, and means) to create a model of deterrence strategy (Figure 1).

<u>Ends</u>	<u>Ways</u>	<u>Means</u>
<ul style="list-style-type: none"> <li>Deterrence</li> </ul>	<ul style="list-style-type: none"> <li>Denial</li> <li>Punishment</li> </ul>	<ul style="list-style-type: none"> <li>Capability                             <ul style="list-style-type: none"> <li>Diplomatic</li> <li>Informational</li> <li>Military</li> <li>Economic</li> </ul> </li> <li>Credibility                             <ul style="list-style-type: none"> <li>Perceived Capability</li> <li>Reputation</li> </ul> </li> <li>Communication</li> </ul>

Figure 1. A model of deterrence strategy

Figure 1. (Figure provided by author.)



### Deterrence by Detection?

How does “deterrence by detection” fit into this? Deterrence by detection is an alternative deterrence strategy proposed in 2020 by Dr. Thomas Mahnken and his co-authors of the Center for Strategic and Budgetary Assessments.<sup>6</sup> It has also been referred to as *name and shame*. Mahnken et al argue that “potential aggressors are less likely to act if they know they are being watched,” and that “if Chinese and Russian leaders believed that U.S. and allied UAS might detect signs of aggression early enough and with enough clarity to spur an effective response, they might assess that the prospects of success were too uncertain and the potential costs were too great to warrant action,” and that the United States and our allies and partners should therefore invest in “an ISR network [made up of] visible, ubiquitous, affordable, and interoperable” Group 4 and 5 UAS. Effectively, Mahnken et al propose “detection” as a way of achieving deterrence on par with denial and punishment, and highlight Group 4 and 5 UAS as a means of doing so.<sup>7</sup> A compelling argument, but let us examine the central ideas in detail.

Are potential aggressors actually less likely to act if they know they are being watched? Mahnken et al frame this as self-evident and use relatable parenting and policing analogies to demonstrate this point, but any parent or police officer would say that it is not that simple at all. An actor must, first and foremost, actually threaten to deny or punish their adversary’s behavior and then be prepared to carry out those threats if the adversary calls their bluff. Detecting an adversary’s plans and intentions without communicating a credible threat may even encourage that adversary to continue down that path if they perceive the actor to be tacitly accepting or consenting to the situation. Even worse, communicating threats that an actor cannot or will not follow through on may lead an adversary to miscalculate by making it more difficult for them to distinguish between credible and empty threats. Parents know that observing their children’s misbehavior without correcting it just encourages worse behavior in

the future, and a community whose police officers stood by and watched crime run rampant would correctly think those police officers were failing in their most basic responsibility—to actually do something about it.

The authors implicitly acknowledge this truth with their next central idea. If Chinese and Russian leaders believed that U.S. and allied UAS might detect signs of aggression, would they actually assess their prospects of success to be too uncertain and the potential costs to

### **Deterrence by detection is an alternative deterrence strategy proposed in 2020 ...**

be too great to warrant action? Maybe, but a few steps are missing here, namely the communication of a credible threat to deny or punish to force Chinese or Russian leaders to reassess the situation and find it too uncertain, risky, or costly to carry on. As to whether Group 4 and 5 UAS would improve our ability to detect adversary plans and intentions that we want to deter; certainly, but detection is the initial step in a strategy of deterrence, not the penultimate one. Incorporated into our previous model in Figure 2, we can see that while Group 4 and 5 UAS do enable detection (under means), the concept remains several steps removed from the end of deterrence. Detection is just one of many capabilities that are necessary but not sufficient, and the concept developed by Mahnken et al does not substan-

tially update the classical strategies of deterrence by denial and deterrence by punishment.<sup>8</sup>

### Ukraine as a Case Study of Deterrence Failure

How did deterrence by detection work out in Ukraine? Russia’s invasion is an unambiguous failure of deterrence, but at what point or points in our model did the failure occur?

By all public accounts, the U.S. intelligence community performed well from early on in the crisis, detecting Russian plans and intentions and affording policymakers as much decision space as possible. The end of the U.S. Government was certainly to deter a Russian invasion, but by publicly and consistently communicating that a military response was out of the question, the President limited the ways in which he could deter to punishment, primarily through economic and diplomatic instruments. Unfortunately, economic and diplomatic capabilities cannot take the field of battle to deny an adversary their military objectives once they have committed to taking them. Analysts and historians will be writing for years to come about the finer points of U.S. decision making and Russian miscalculation, but assuming for now that threats of punishment could have ever been effective in deterring Russia, what about U.S. capability, credibility, or communication made those threats ineffective?

Whether or not U.S. military capabilities could have effectively punished Russia outside the theater of war, President Biden’s public prohibition on the use of military force removed that instrument of national power from Russia’s calculus. Despite skillful use

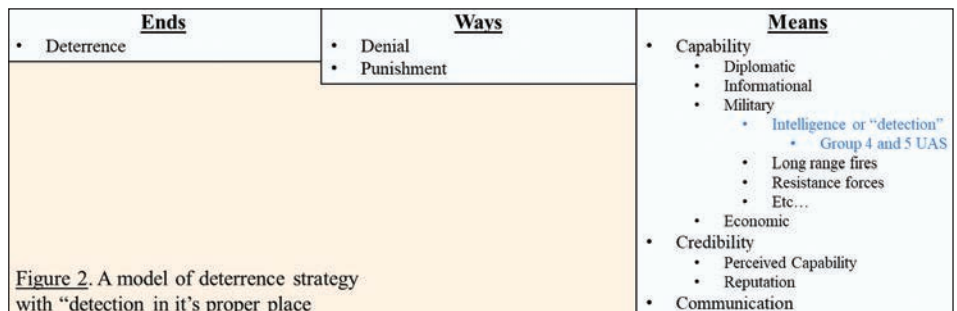


Figure 2. A model of deterrence strategy with “detection in it’s proper place

Figure 2. (Figure provided by author.)

of the information environment and the herculean efforts of both the intelligence community and diplomatic corps, the diplomatic instrument was unable to align the responses of EU and NATO members until after the invasion began, to say nothing of failing to convince Ukrainian leadership that Russia would invade until mere days prior. Given this public lack of consensus among the United States, the EU, NATO, and Ukraine, Russia likely viewed U.S. economic instruments as much less capable than they would have otherwise, making our threat to impose catastrophic sanctions lack credibility. In summary, if there was a failure of capability, it occurred in the diplomatic instrument, which was unable to take advantage of a favorable information environment and neutered the threat of punishing economic sanctions that formed the core of the U.S. deterrence strategy. There was certainly no failure of detection. If there was a failure of credibility, it was in the credibility of those economic threats given the diplomatic situation at the time. And if there was a failure of communication, it was in the deliberate decision, made by the high-

est levels of U.S. political leadership, to communicate that military force would not be used to directly oppose Russia’s invasion of Ukraine.

**So What?**

Mahnken et al caveat their concept with the statement that it is designed to deter opportunistic aggression, the kind of fait accompli that have much more limited goals than Russia’s seem to have been in Ukraine, but therein lies the problem. The concept may have some utility, but only at the low end of the spectrum of conflict, and even then it oversells the inherent value of detecting an adversary’s plans and intentions. In all cases, detection must be linked to other capabilities across all instru-

***We have to get it right next time, and deterrence by detection is not it.***

ments of national power, including the military instrument, to inform credible threats which are communicated to the adversary to achieve deterrence. The Group 4 and 5 UAS which the authors advocate for have undeniable tactical and operational value, but their impact on deterrence strategy is marginal at best.

The Naval Services are in the business of deterrence. Accordingly, naval professionals are brushing up on their International Relations theory, which is hard enough without having to sort through conflated ends, ways, and means, delinked fundamental elements, and presupposed solutions. We should stop muddying the waters with deterrence by detection. Observers may have been pleasantly surprised by the incompetence of Russia’s military and the heroism of Ukraine’s resistance, but we cannot assume that our allies and partners will overachieve and our adversaries will underperform so dramatically in future conflicts. We may be here again sooner than we would like,

but in East Asia, with a much stronger adversary, much weaker alliance coordination mechanisms, and a much more economically integrated region. We have to get it right next time, and deterrence by detection is not it.

**Notes**

1. Gen David H. Berger, “A Concept for Stand-In Forces,” *Proceedings*, November 2021, <https://www.usni.org/magazines/proceedings/2021/november/concept-stand-forces>.
2. Justin Katz, “Berger Calls for ‘Deterrence by Detection’ in Light of Russia-Ukraine Tensions,” *Breaking Defense*, February 8, 2022, <https://breakingdefense.com/2022/02/berger-calls-for-deterrence-by-detection-in-light-of-russia-ukraine-tensions>.
3. Project on Nuclear Issues, “Deterrence 101,” *Nuclear Network*, December 8, 2021, <https://nuclearnetwork.csis.org/projects/deterrence-101>.
4. Ibid.
5. Ibid.
6. Thomas Mahnken, Travis Sharp, and Grace Kim, “Deterrence by Detection: A Key Role for Unmanned Aircraft Systems in Great Power Competition,” *Center for Strategic and Budgetary Assessments*, April 14, 2020, <https://csbaonline.org/research/publications/deterrence-by-detection-a-key-role-for-unmanned-aircraft-systems-in-great-power-competition>.
7. A summary of Mahnken et al’s work is available here: Thomas Mahnken and Grace Kim, “Deterrence by Detection: Using Surveillance to Pre-empt Opportunistic Aggression.” *NATO Defense College*, January 14, 2021, <https://www.ndc.nato.int/news/news.php?icode=1518>.
8. Emily Harding, “Bad Idea: Deterrence by Detection.” *Defense 360*, December 3, 2021, <https://defense360.csis.org/bad-idea-deterrence-by-detection>.



**Marine Corps Gazette**  
**Upcoming 2023 Monthly Themes**

**May Edition**  
 Themes: Training, Education and Talent Management  
 Author drafts due: NLT 21 February 2023

**June Edition**  
 Themes: Acquisitions/Allies & Partners/ The Air-Ground Team  
 Author drafts due: NLT 20 March 2023

**July Edition**  
 Author drafts due: NLT 17 April 2023

# Actually Competing

Refocusing the Marine Corps toward integrated campaigning

by Maj Eric Prentice

**W**ith the publication of the 2018 *National Defense Strategy* and subsequent *Commandant's Planning Guidance*, the Marine Corps followed the Joint Force down the perilous path of hyper-focusing on high-intensity and peer-level conflict. Meanwhile, historical cases from the beginning of the Atomic Era through the current examples of “lawfare” used by the People’s Republic of China display the ability of U.S. adversaries and competitors to deftly circumvent U.S. national and military advantages.<sup>1</sup> Since the Marine Corps spends the preponderance of time outside of high-intensity conflict, prudence directs investiture of focus, resources, and innovative models on integrated campaigning.<sup>2</sup> New operational concepts focused first on integrated campaigning can be complementary to ongoing force design efforts, persistently enabling competition mechanisms among increasingly unstable global environments while concurrently posturing the Marine Corps for conventional warfighting. Historical cases of imperial militaries—specifically those of *Pax Romana* Rome and pre-World War I Great Britain—reveal useful models of balanced operations and focus across their respective competition continuums. These cases offer the Marine Corps a thought model for balancing its focus across this spectrum, centering around persistent, multi-functional, and regionally aligned overseas forces to support Joint Force-integrated campaigning more effectively.

Regardless of the scenario or outcome, the recent history of the U.S. military displays a dogged focus on high-intensity conflict and the use of overwhelming technological superiority as the primary means to conduct war-

**>Maj Prentice is an Infantry Officer and wrote this article as a student in Marine Corps Command and Staff College, Academic Year 2020–2021. He currently serves as the Task Force 51/5 Future Plans Officer.**

fighting. Following World War II, this focus started with nuclear warfare and the concepts of employment focused on the use of nuclear weapons to defeat and deter adversaries.<sup>3</sup> In the Vietnam War, U.S. forces’ continual focus on conventional battle against the Viet Cong and North Vietnamese Army is perhaps the best illustration of this.<sup>4</sup> Similarly, the recent wars in Afghanistan and Iraq also displayed the U.S. military’s over-reliance on technology while concurrently exposing its weaknesses both in low-intensity conflict and in working with interagency partners to combine the instruments of national power.<sup>5</sup> Having now largely extricated itself from the agonies of these Middle East conflicts, the U.S. military—and no Service currently more so than the Marine Corps—is in the midst of an intensified effort to modernize conventional and technological capabilities to counter a revisionist China.<sup>6</sup>

However, this historic focus overlooks the fact that in most cases since World War II, adversaries chose to avoid U.S. military strengths in conventional warfare. The Soviet Union never escalated to full-scale war and instead engaged through proxies, the North Vietnamese and Viet Cong typically avoided conventional warfare outside of examples like Khe Sahn and the Tet Offensive, and violent extremist organizations and other hybrid threats continue to expand their zones of operations and support from state and non-state sponsored enterprises. Additionally, today’s primary competitors use “lawfare” and similar tactics to avoid kinetic confront-

ation with the U.S. military.<sup>7</sup> Even the Gulf War, which highlighted U.S. technological prowess, arguably serves as a poor justification for high-intensity focus given the strategic follies of the Iraqi leadership and subsequent lessons learned by U.S. adversaries and competitors.<sup>8</sup> Essentially, the Marine Corps is spending the preponderance of its time and effort on preparing for the most dangerous scenario, not the one that is happening in front of its eyes—the one that continually destabilizes the partners, allies, and regions it depends on in its emerging warfighting concepts.

Assessments of the future operating environment cast doubt on the current Marine Corps’ operational effectiveness given its focus and distribution. Global instability is intensifying via increased interstate, intrastate, and internationalized intrastate conflicts, as well as natural disasters and myriad refugee and internally displaced person crises.<sup>9</sup> Instability throughout critical regions has the potential to not only indirectly affect U.S. national interests, given the proximity to critical global lines of communication, but also have direct effects on international partners and allies.<sup>10</sup> As these regions continue to suffer from multiple forms of instability, they are likely to continue to metastasize into threats that have global effects. Indeed, Benjamin Franklin’s famous quote holds true today as much as it did in 1735, “An ounce of prevention is worth a pound of cure.”<sup>11</sup> Unfortunately, the U.S. response is normally post-crisis and even its military pre-crisis efforts—hampered in part by the posture of limited

and large overseas bases—are typically limited to non-persistent activities. Though many of the issues forecasted for the future operating environment do not lend themselves directly to traditional military disciplines, there is nonetheless a requirement—and thus an opportunity—for Joint Force units that are most able to integrate with the other instruments of national power. However, the current focus on high-end conflict combined with large and consolidated overseas basing makes the Marine Corps less viable when considering it for use as an instrument in integrated campaigning.

The imperial militaries of *Pax Romana* Rome and pre-World War I Britain provide a thought model for force composition and employment to enhance Marine Corps opportunities in integrated campaigning. Throughout their respective imperial eras, both militaries often transitioned between conventional campaigns and stability operations, especially following the expansion of the empires and the rise of respective competitors, adversaries, and destabilizing activities. Specific to the Romans, civilian leadership employed their legions throughout the empire not only in traditional military campaigns but also as policing forces and in other functional areas to maintain stability—notably engineering and logistics.<sup>12</sup> Noting the ineffectiveness and expense of maintaining large units when not in conflict, legions were distributed in small units to fulfill primarily policing and engineering roles, supporting imperial administrative efforts via persistent presence throughout the empire. Indeed, Rome’s ability to effectively employ and maintain their legions across the continuum—especially in the case of multi-functional and dispersed small units—all while maintaining conventional warfighting capabilities was a key point to their long-term success.

Regarding lessons from Britain’s experience, the island nation often relied upon the respective region’s local manpower to bolster its globally arrayed colonial army, typically hiring or partnering with militias, mercenaries, and local military units led by British officers.<sup>13</sup> These British forces operated region-

ally, sometimes fighting in bordering and distant countries, and supported both stability and colonial expansion. The key to the British system was the acceptance of its global limitations and the collaboration—at times through coercion or force—with regional members to create stable environments through supportive military postures. For their respective eras, the Roman and British imperial militaries overcame the limitations of the available logistical technol-

a country in Southeast Asia under an SFA or persistent security cooperation mission. Rotational units would conduct reliefs in place while remaining positioned in the forward-deployed location, ensuring persistence instead of the current touch-and-go of military exercises and partnerships. This persistent deployment model is equally practical for a MEU where subordinate units can be earmarked to directly support the MEU while simultaneously

---

***The primary benefit of an integrated campaigning-focused model comes from regionally aligned, persistent partnerships, which better support the Joint Force ...***

---

ogy and force-size disparity relative to their empire to maintain stability in complex environments. While not a proposal for the Marine Corps to conduct imperial policing itself, these imperial militaries show mental models for employment and force composition that balanced focus between conventional conflict and the integrated campaigning of their era.

The primary benefit of an integrated campaigning-focused model comes from regionally aligned, persistent partnerships, which better support the Joint Force in providing the other instruments of national power capabilities to achieve national objectives. Applying the above analysis to the 21st-century Marine Corps offers a distributed force employment concept that is persistent like the Roman legions and regionally aligned like the British colonial army. Using and increasing methods like security force assistance (SFA) units would deploy directly to designated locations, conducting rotations from there.<sup>14</sup> A specific example would be to start with a planned rotational unit such as one earmarked for the Unit Deployment Program or subordinate units of a Marine Littoral Regiment. Rather than having them operate from Hawaii, Okinawa, or newly developing U.S. bases, instead deploy directly to

deploying to landbased support sites working with partner nations in key areas of Africa, Europe, or the Middle East. If these units are multi-functional—composed of infantry, engineers, logistics, intelligence, or Joint Force/interagency augments to increase authorities—the partnership focus can be on more than traditional warfighting, ultimately leading to a more useful and effective mechanism for integrated campaigning in operations below armed conflict.

While simultaneously not attempting to brush aside the political complexities of access during competition, a focus on integrated campaigning is not to argue that the Marine Corps should become an imperial policing force aligned purely to stability operations, or that it no longer needs peer-conflict capabilities. First, in terms of host-nation access, an integrated campaigning-focused model requires just as much preparatory work in competition as conflict-focused models. Observed in the emerging warfighting concepts’ seeming reluctance to discuss and offer solutions to access issues, a previous *Marine Corps Gazette* article rightly argued that the Service must “offer EABO [expeditionary advanced base operations] host nations something tangible ... to get something out of it in material,

prestige, information, or security that counteracts the targeting that will inevitably follow the force presence.”<sup>15</sup> This is no simple task and no singular answer works for all host nations. However, even though detailed analysis is beyond the scope of this article, an integrated campaigning-focused Service can better provide persistent, tailored military units—vice an entire Marine Littoral Regiment, MEU, or Littoral Combat Team—to meet the mutual desires of both nations.

Secondly, using the British and Roman examples as a thought model should not be equated to the rote application of their method or unending commitments and force deployments to every corner of the globe experiencing conflict or instability. As stated by Professor Paul Poast in a recent article, “imperial policing was ... neither cheap, nor effective, nor sustainable.”<sup>16</sup> In applying the model to the 21st-century Marine Corps, being effective requires

planners and practitioners to determine priorities and definitive goals for integrated campaigning, avoiding unending operations with aimless goals.

Lastly, there remains a requirement for the Marine Corps to be prepared for conventional, peer-level conflicts in line with its naval character. Seen in Britain’s difficult transition to World War I, an imperial, small-wars focus exacted heavy costs upon reaching total war.<sup>17</sup> The United States’ most significant potential threats, China and Russia, possess peer-warfighting capability, thus requiring the Marine Corps to be prepared to counter that threat. However, the Marine Corps can cover two requirements with an integrated campaigning-focused employment model. The increased distribution of multi-purpose units supporting integrated campaigning also supports joint warfighting concepts like Expeditionary Advanced Base Operations and Stand-In Forces, where multi-purpose

units require distribution to increase lethality and force protection while simultaneously aiding the reconnaissance/counter-reconnaissance fight. Additionally, by increasing mutually supporting relationships with international partners, host-nation militaries provide increased military capability and expand the network of the combined force, similar to local militias supplementing the strength of the colonial British Army. This effect, however, is compounded exponentially in the 21st century as it is not just an increase in the Imperial Era’s traditional manpower and firepower but also an increase in the reconnaissance-strike network and operational access. Ultimately, this shift in Marine Corps focus better supports integrated campaigning while not detracting from peer-conflict lethality.

The Marine Corps’ relentless focus on high-intensity and peer-level conflict limits its ability to provide forces capable of effectively supporting and

Officer Professional Military Education  
Distance Education Program

# BLENDED SEMINAR PROGRAM

**RESIDENT & ONLINE**  
<https://www.usmcu.edu/CDET/officer-blended/>

integrating with the other instruments of national power to achieve national objectives throughout competition. Given the current operating environment's proliferating regional and global instability—something also seen in the Roman and British empires—analysis of Roman and British military history shows the viability of balancing focus between peer-level conflict and integrated campaigning. Using a different concept of employment focused on providing multi-functional and increasingly distributed forces to support integrated campaigning, the Marine Corps can better serve the Joint Force in supporting the achievement of national objectives.

Notes

1. Jonathan G. Odom, "Understanding China's Legal Gamesmanship in the Rules-Based Global Order," in *China's Global Influence: Perspectives and Recommendations*, ed. Scott D. McDonald and Michael C. Burgoyne (Honolulu: Daniel K. Inouye Asia-Pacific Center for Security Studies, 2019); and Department of Defense, *Joint Concept for Integrated Campaigning*, (Washington, DC: March 2018).

2. Integrated campaigning is defined in the *Joint Concept for Integrated Campaigning* as "Joint Force and interorganizational partner efforts to enable the achievement and maintenance of policy aims by integrating military activities and aligning non-military activities of sufficient scope, scale, simultaneity, and duration across multiple domains" (*Joint Concept for Integrated Campaigning*). See also, Public Intelligence, "A Century of War and Gray Zone Challenges," *Public Intelligence*, n.d., <https://q.publicintelligence.net/wp-content/uploads/2016/05/gray-zones.png>.

3. Melvyn P. Leffler, "The Emergence of an American Grand Strategy, 1945–1952" in *The Cambridge History of the Cold War, Volume I: Origins*, ed. Melvyn P. Leffler and Odd Arne Westad (Cambridge University Press, 2012); and Stephen L. McFarland, "The Air Force in the Cold War: Birth of a New Defense Paradigm," *Air & Space Power Journal* 10, No.3 (1996).

4. Gregory Daddis, "Bewildering Battlefields," in *Westmoreland's War: Reassessing American Strategy in Vietnam* (New York: Oxford University Press, 2014).

5. Anthony H. Cordesman, "America's Failed Strategy in the Middle East: Losing Iraq and the Gulf War," *Center for Strategic & International Studies*, January 2, 2020, <https://www.csis.org/analysis/americas-failed-strategy-middle-east-losing-iraq-and-gulf>; Jason Dempsey, "Coming to Terms with America's Undeniable Failure in Afghanistan," *War on the Rocks*, February 11, 2019, <https://warontherocks.com/2019/02/coming-to-terms-with-americas-undeniable-failure-in-afghanistan>; and Max Boot, "The Paradox of Military Technology: On American Power and Vulnerability," *The New Atlantis*, Fall 2006, <https://www.thenewatlantis.com/publications/the-paradox-of-military-technology>.

6. Gen David H. Berger, *38th Commandant's Planning Guidance*, (Washington, DC: July 2019); and Gen David H. Berger, *Force Design 2030*, (Washington, DC: March 2020).

7. Nathan Freier, et al, *Outplayed: Regaining Strategic Initiative in the Gray Zone*, (Carlisle: Strategic Studies Institute, Army War College, 2016).

8. Jeffrey Record, *Hollow Victory: A Contrary View of the Gulf War*, (Washington, DC: Brassey's, Inc., 1993).

9. Uppsala Conflict Data Program, *Armed Conflict by Type 1946–2019, Uppsala Conflict Date Program*, n.d., [https://ucdp.uu.se/downloads/charts/graphs/png\\_20/armedconf\\_by\\_type.png](https://ucdp.uu.se/downloads/charts/graphs/png_20/armedconf_by_type.png); and Idean Salehyan and Kristian Skrede Gleditsch, "Refugees and the Spread of Civil War," *International Organization* 60, No. 2 (n.d.).

10. Department of Defense, *Joint Operating Environment 2035*, (Washington, DC: July 2016).

11. U.S. History, "Ben Franklin," *U.S. History*, n.d., <https://www.ushistory.org/franklin/philadelphia/fire.htm>.

12. Christopher J. Fuhrmann, "'Military Stations Throughout All Provinces': Detached-Service Soldier-Police," in *Policing the Roman Empire: Soldiers, Administration, and Public Order* (New York: Oxford University Press, 2012); and Serafina Cuomo, "A Roman Engineer's Tales," *The Journal of Roman Studies* 101, (2011).

13. Due to fear of absolutist power, isolationist tendencies, and desire to limit the burden on the national coffers, the national leadership historically kept the British Army small in size, especially on the home island. This led to the extensive use of mercenaries and local forces to supplement numbers throughout the empire. Correlli Barnett, *Britain and He*

*Army 1509–1970: A Military, Political, and Social Survey*, (New York: William Morrow & Company, 1970); Paul Kennedy, "Britain as Hegemon," in *The Rise and Fall of the Great Powers*, (New York: Random House, 1987); and Vijaya Kumar Tiwary and Vijay Kumar Tiwary, "The Recruitment of the Gurkhas in the British Army, Their Role in British Empire," *Proceedings of the Indian History Congress*, (2009–2010).

14. Falling alongside the security cooperation family of activities, *Department of Defense Instruction 5000.68* defines *security force assistance* activities as those that "assist host countries to defend against internal and transnational threats to stability. However, the DOD may also conduct SFA to assist host countries to defend effectively against external threats; contribute to coalition operations; or organize, train, equip, and advise another country's security forces or supporting institutions." There is no timeline or deployment rotation set to conduct SFA, but the Army committed to the SFA mission with five regionally aligned SFA Brigades in the active component.

15. George J. David, "Making it Work," *Marine Corps Gazette* 104, No. 10 (2020).

16. In the essay, Professor Poast is specifically referencing the interwar years of the British Empire and their efforts in maintaining their global empire. Paul Poast, "Imperial Policing Redux: The Folly of Staying the Course in Afghanistan," *Modern Warfare Institute*, April 8, 2021, <https://mwi.usma.edu/imperial-policing-redux-the-folly-of-staying-the-course-in-afghanistan>.

17. Britain's pre-eminence among European and global powers—due in large part to an industrial revolution fuelled economy—enabled its use of a small, colonial army. While the army did operate effectively on its limited budget, the disregard the nation placed on continental war put it on the opposite end of the spectrum of the current U.S. military. Correlli Barnett, "Radical Reform 1902–14," in *Britain and Her Army 1509–1970: A Military, Political, and Social Survey* (New York: William Morrow & Company, 1970) and; Paul Kennedy, "Britain as Hegemon?" in *The Rise and Fall of the Great Powers* (New York: Random House, 1987).



# Reconnaissance Over Fires

Prioritizing ISR-T

by Capt Walker Mills & Maj Jacob Clayton

**“It is time to recall that the most difficult problem in naval warfare is finding the adversary.”<sup>1</sup>**

The CMC has charted a new direction for the Corps: lighter, faster, and more expeditionary. He recently released his report on the ongoing Force Design efforts and explained his thinking in *Military Review* and *Proceedings*. The changes will leave the Marine Corps with less infantry, no tanks, and see it exchanging its howitzers for missiles and rockets.<sup>2</sup> The purpose of all of these changes is to better design an “inside force” that can operate in a dispersed and expeditionary manner from island outposts in the Pacific and deny or exercise control over maritime terrain. Many inside and outside the Corps have argued that landbased, anti-ship missiles will be the key to future Marine Corps relevance.<sup>3</sup> To conduct sea denial, Marines will need weapons that can have lethal effects in the maritime domain—whether they are anti-ship cruise missiles, mobile sea mines, loitering munitions, or something else. What that means for Marines is that they need to be able to strike ships from *terra firma*. This is the direction the Corps needs to go; however, the Marine Corps cannot allow itself to be completely seduced by the vision of land-based missiles streaking out to sea seek-

>Capt Mills is an Infantry Officer currently in training to be an Unmanned Aircraft Systems Officer. He previously served on exchange to the Colombian naval academy La Escuela Naval de Cadetes “Almirante Padilla” in Cartagena, Colombia, and with 2/1 Mar as a Rifle and Weapons Platoon Commander. He is also a non-resident fellow at the Brute Krulak Center for Innovation and Future War.

>>Mr. Clayton is the Chief Operations Officer at Laconic working directly at the apex of Sovereign Nations, State-Owned Enterprises, Non-Government Organizations, and Multinational Corporations to jointly solve a newly emerging class of complex strategic problems lying at the intersection of the ecology, economy, and security domains. He is a Lieutenant Colonel in the Marine Corps Reserves as an Infantry Officer at the Marine Innovation Unit.

ing targets. Precision strikes are only as good as the intelligence, reconnaissance, surveillance, and targeting (ISR-T) that identifies and tracks targets to close the targeting cycle. Marines should prioritize ISR-T over fires to make the most

of their Expeditionary Advanced Base Operations concept and best support the Joint Force.

## Not Enough Missiles

In a potential Pacific conflict, the



**The Marine Corps should prioritize targeting forward as a critical contribution to the Joint Force. (Photo by Sgt Audrey Rampton.)**

Marine Corps will at best only have enough firepower to be a supporting effort. The other Services all have a greater capacity to deliver anti-ship fires. Each of the Navy's *Arleigh Burke*-class destroyers has nearly 100 vertical-launch cells capable of carrying various types of missiles. The *Ticonderoga*-class cruisers can carry even more, and the pending fielding of the Naval Strike Missile and other potential new anti-ship weapons will only increase this anti-surface firepower. Each Air Force B-1 "Lancer" bomber can carry 24 of the new Long-Range, Anti-Ship Missile. Meaning that a flight of four aircraft could carry nearly a hundred, heavy, ship-killing missiles.

Together the active-duty Army and Army National Guard field almost twenty HIMARS-equipped battalions and has hundreds of multiple-launch rocket systems in other battalions that can also fire guided missiles. The Army is also leading the way in developing and fielding the next generation of long-range precision fires. The Marine Corps currently has one HIMARS-equipped battalion in the active force and another in the reserves. CMC Berger has called for this to be increased roughly three-fold, but that would still leave the Marine Corps with about one-sixth of the missile-artillery capability that the Army can field only counting HIMARS systems.<sup>4</sup> This makes it clear that the Marine Corps' contribution of anti-ship missiles to a joint sea-denial or sea-control campaign, while valuable, is small relative to existing and planned capabilities resident in the other Services.

The missile math makes it clear that the Marine Corps' contribution of anti-ship missiles to a joint sea-denial or sea-control campaign, while valuable, is small relative to existing and planned capabilities resident in the other services. But rather than a chip on the proverbial shoulder, this is an opportunity. The Marines aboard expeditionary bases in a contested littoral can provide invaluable ISR-T and be the key link in the targeting process that enables long-range fires from platforms at sea and in the air to strike enemy targets. Navalist Wayne Hughes reminds us that: "In modern

naval combat, effective scouting is the key to effective weapon delivery."<sup>5</sup> By providing human sensors that conduct ISR-T inside the adversary's weapons engagement zone, the Marine Corps can be the critical integrator for the Joint Force in the littorals and help the other Services deliver their weapons effectively and decisively.

### Why ISR-T?

If the Marine Corps can use its forward position in the battle space as an inside force to improve the joint targeting, it can improve the effectiveness of all of the weapons the Joint Force can bring to bear in a maritime campaign. Wayne Hughes reminds us in *Fleet Tactics and Coastal Combat* that: "You can't hit what you can't find. You can't hit what you can't track."<sup>6</sup> Maritime ISR-T is a prerequisite for the employment of Marine over-the-horizon, anti-ship fires. This argument is for the prioritization of that ISR-T capability, including the risk-worth human sensor network inside the weapons engagement zone over the fires themselves.

ISR-T has often proved decisive in naval combat but does not always get the treatment that it deserves because it is more difficult to appreciate than combat. For example, the Coast Watchers, codenamed *Ferdinand*,<sup>7</sup> are little known today but were credited by both Gen Alexander Vandergrift and GEN Douglas MacArthur as critical to the victory at Guadalcanal.<sup>8</sup> ADM William "Bull" Halsey, commander of Allied forces in the South Pacific Area, was laconic in his praise of the Coast Watchers, saying only: "The coastwatchers [SIC] saved Guadalcanal, and Guadalcanal saved the South Pacific."<sup>9</sup> The Coast Watchers were an irregular network of Australians, New Zealanders, and indigenous Pacific Islanders who reported Japanese air and naval movement from vantage points behind enemy lines as well as supporting search and rescue efforts for Allied sailors and airmen. Together, the network had coverage of key straits and bases in the South Pacific and could provide Allied commanders with critical intelligence about Japanese strength, disposition, and movements.

### Future Marine Reconnaissance

In order to realize the potential of Expeditionary Advanced Base Operations, Marine mobile reconnaissance will need to change both in how it is equipped and how it is employed. Currently, light armored reconnaissance is equipped with variants of the light armored vehicle (LAV)—an eight-wheeled, amphibious reconnaissance vehicle. A study of possible replacement vehicles is already underway, but it is not clear that a replacement of the same type, or even a single replacement vehicle of any type would be suitable. Considering the vast array of light armored vehicles in the DOD that are standing by to be utilized in case of a landbased contingency, it might be more prudent to develop a complementary reconnaissance capability to add capacity for a maritime-based contingency. This prudence is of key concern due to the multi-billion-dollar choice between developing a redundant capability that is not in line with the *Commandant's Planning Guidance* that will be available for employment in a decade, or a unique capability that delivers value to the Joint Force—immediately. CMC Berger himself has expressed doubt about the future of the LAV or LAV-type reconnaissance platforms. Writing in his *Commandant's Planning Guidance*, he said he remained "unconvinced that additional wheeled, manned armored ground reconnaissance units are the best and only answer—especially in the Indo-Pacific region."<sup>10</sup>

Instead of replacing the LAV with a single landbased platform, the Marine Corps should think larger and develop a family of manned platforms supplemented with unmanned assets.<sup>11</sup> Critically, future Marine reconnaissance will need to be able to operate in the maritime domain. If Marines want to fight ships, or as the CMC has asserted—submarines, then the Marine Corps needs a reconnaissance community capable of operating in the maritime domain that can identify targets, maintain custody of them and pass them off to the Joint Force.<sup>12</sup> If the Marine Corps sees itself as a force capable of operating in the littorals it needs to have reconnaissance units capable of operating in the littorals—both





**ISR-T can be the decisive enabler that the Corps provides to a joint naval campaign.** (Photo by Cpl Austin Mealy.)

the landward and the seaward portions. It will simply not be good enough for Marine reconnaissance to be equipped with only groundbased platforms or equipped with systems that cannot pass targeting information to Navy or Air Force platforms. These reconnaissance units will also need to be equipped with unmanned vehicles—some operating in the sky and others on the surface or sub-surface. UAS, unmanned surface vehicles, and unmanned underwater vehicles are game changers for maritime domain awareness and allow smaller units to keep watch over greater zones of action with less risk to the force. If they are operating forward, they will also need to be sustained forward. It will take both innovative logistics concepts and innovative logistics platforms to support future reconnaissance.<sup>13</sup>

But most important is how future Marine reconnaissance will be employed. In his book on littoral warfare, Milan Vego argues that the key for a navy to successfully dispute control of a littoral or narrow sea was the “full integration of all available forces and assets and the closest cooperation among the services.”<sup>14</sup> Rather than operating out in front of mechanized and armored units or screening in a security area, future Marine reconnaissance should focus on providing all-domain targeting

to strike assets across the Joint Force and counter-reconnaissance and enable the integration that Vego believes is so critical to success in the littorals.

### Conclusion

CMC Berger has made clear his intent that the Marine Corps will better integrate with the Navy to support maritime campaigns for sea control and sea denial, and the Marine Corps is moving ahead in acquiring anti-ship weapons that it can deploy from forward positions inside the First Island Chain. While these are all steps in the right direction, the Marine Corps needs to also recognize that the most valuable capability it can provide to the Joint Force from a forward and austere expeditionary base is persistent, all-domain ISR-T. ISR-T provided by the Marines can be a decisive enabler for the rest of the Joint Force which has fires capacity that the Marine Corps does not, and still will not after the realization of new Force Design initiatives. The Marine Corps needs to make sure that as it redesigns itself for Expeditionary Advanced Base Operations it fields mobile reconnaissance units capable of conducting maritime ISR-T inside the weapons engagement zone that can support both Joint Force and Marine Corps fires.

### Notes

1. Roger W. Barnett, *Navy Strategic Culture: Why the Navy Thinks Differently* (Annapolis: Naval Institute Press, 2009).
2. Gen David H. Berger, *Force Design 2030*, (Washington, DC: March 2020).
3. Walker D. Mills, “Give Marines and Soldiers Better Antiship Fires,” *Proceedings* 145, No. 9 (2019).
4. *Force Design 2030*.
5. Wayne P. Hughes Jr., *Fleet Tactics and Coastal Combat*, second edition (Annapolis: Naval Institute Press, 2000).
6. *Ibid.*
7. The codename was in reference to the children’s story *The Story of Ferdinand* by Munro Leaf.
8. Eric A. Feldt, *The Coast Watchers* (Garden City: Nelson Doubleday Inc., 1979).
9. Petar Djokovic, “The Coast Watchers and Ferdinand the Bull,” *Semaphore*, Issue 4 (2014).
10. *Force Design 2030*.
11. Jacob Clayton and Michael Nakonieczny, “Rethinking Mobile Reconnaissance,” *Marine Corps Gazette* 104, No. 10 (2020).
12. David H. Berger, “Marines Will Help Fight Submarines,” *USNI Proceedings* 146, No. 11 (November 2020).
13. Walker Mills and Erik Limpaecher, “Sustainment Will Be Contested,” *USNI Proceeding* 146, No. 11 (2020).
14. Milan Vego, *Naval Strategy and Operations in Narrow Seas* (New York: Frank Cass Publishers, 2003).



# Space Marines?!

We had better hope so!

by Maj Julia Weber

It is the middle of summer 2008 in Quantico, VA; 262 brand new second lieutenants are seated in the Camp Barrett auditorium listening to Gen James Conway, CMC, talk to them about going off to war and leading Marines in combat. President Bush has authorized a troop surge, and all are destined for time in the sandbox. When the CMC is done speaking the floor is opened for questions. All questions/question askers were *supposed* to have been pre-vetted by staff platoon commanders, and those that were cleared were given the green light to ask their questions. No other questions were to be asked. The vetted questions covered topics from the “optimized” rifle squad composition to pending changes to the Marine Corps’ tattoo policy. However, before the final question was asked, one un-vetted lieutenant (who we will refer to as Smith) stood up and asked the CMC if there were plans to send Marines into combat in space. The CMC, at this point a practiced politician, managed to hide all but the faintest smirk as he politely stated that no—there were currently no plans to involve the Marine Corps in operations in space. Smith’s fellow lieutenants and company staff were somewhat less polite. He was well-roasted at the company’s dining-in where he was sent in circles around the dining room wearing a bubble “space helmet” (which doubled as a punch bowl) repeatedly hollering “Houston, we have a problem!” It was a joke then, and to be honest, it *is* still a little funny now, but the Marine Corps’ dependence on space-based capabilities is no laughing matter.

In December 2021, the current CMC, Gen David Berger, published *A Concept for Stand-in Forces*.<sup>1</sup> This document outlines how the Marine Corps will contribute to the *Joint Warfight-*

**>Maj Weber has previously served as both a UH-1 Huey Pilot and Financial Management Officer (Comptroller) in multiple assignments state-side and overseas, including in Afghanistan, Pakistan, and Guatemala. A recent graduate of the Naval Postgraduate School’s Master’s Program for Operations Analysis, she is currently serving as the I MEF G-2 Intel Systems Officer.**

*ing Concept* as the “eyes and ears of the fleet and joint force” in an era of great power competition. Specifically, the CMC highlights the “enduring tasks of conducting reconnaissance and counter-reconnaissance” and the Marine Corps’ role in helping to “complete naval and joint kill webs” from inside an adversary’s weapons engagement zone. Currently, the Marine Corps’ ability to securely conduct reconnaissance, counter-reconnaissance, and

The following *fictional* vignettes highlight how the availability of a Marine trained in space capabilities may be key to mission success.

## Reconnaissance

Sgt Dan Kirby, a Marine field radio operator, is setting up his unit’s tactical satellite communications terminal on an island just north of the Luzon Strait. Marines from his Marine Littoral Regiment (MLR) have been out aboard a

---

**Currently, the Marine Corps’ ability to securely conduct reconnaissance, counter-reconnaissance, and complete kill webs is wholly dependent on space-based assets.**

---

complete kill webs is wholly dependent on space-based assets. So, while we may not be sending Marines into combat in outer space anytime soon, we absolutely need Marines *assigned throughout the Marine Corps and Joint Force* who are educated on the rapidly changing capabilities and limitations of both U.S. and foreign space-based assets and the implications of those for the Marine Corps. These “Space Marines” must additionally have training on and access to the suite of tools that will allow them to integrate that knowledge into planning, operations, wargaming, concept development, and acquisitions.

small Philippine fishing vessel with a team of Philippine Marines passively collecting information on signals being emitted from a nearby fleet of Chinese fishing vessels. The Philippine Marines believe the Chinese fishing vessels are part of the Chinese Maritime Militia and are mining the strait in preparation for China’s invasion of Taiwan. This would prevent U.S. ships from approaching Taiwan from the southeast, delaying their arrival long enough to allow the People’s Liberation Army to take control of the southern end of Taiwan. The MLR does not have the computing resources necessary to lo-

cally decrypt the collected signal files to confirm or deny whether mines were deployed, so the files must be relayed back to Guam for processing.

Sgt Kirby is able to initially establish a secure connection with Guam via the Blackjack satellite network, the only network now generally available to the MLR as bandwidth on other U.S.-controlled satellite assets is generally reserved for Space Command, Air Force, and Navy units.<sup>2</sup> However, before Sgt Kirby's team is able to relay the collected signal files, the connection is lost. The signals intelligence processing team on Guam, expecting a file transfer but not knowing exactly when to expect it, simply assumes the MLR's comm team has run out of solar power again (the only source of power available to them when re-supply missions get delayed). They decide to wait for the MLR's comm team to re-establish contact, which they usually do once they have re-charged their power packs. Meanwhile, Sgt Kirby and his team, still with plenty of power, are scrambling to try to re-establish a communications link, knowing the potential value of the information they are trying to relay if indeed it is an indicator of a pending Chinese invasion.

What neither Sgt Kirby nor the team on Guam realizes is that Chinese hackers have exploited a software patch that was sent out to the Blackjack network several months ago and used it to take control of the satellites and disable certain portions of the network. Sgt Kirby has other means of communication available, but none that will avoid highlighting their position to the Chinese. Revealing their location would require them to immediately pack up and move to a new location to avoid being targeted if indeed an invasion is imminent. Unfortunately, the island they are camped out on is not that big, so even relocating on-island is not much help. A quick scan of the island by one of China's infrared imaging satellites could reveal their position. They would need a ride off-island, and the next re-supply mission that they could hitch a ride on without having to call for immediate support isn't for another eight hours. The supply deliveries are timed

to coincide with the arrival and departure of local fishing boats making their daily runs. If the MLR had a Space Marine on-staff during mission planning, he or she likely could have highlighted the potential for loss of the Blackjack network during planning and worked with the S-6 to ensure the MLR had periodic windows of time pre-arranged on other satellite networks as backup.

---

***Even though no Russian satellites were in range, they were able to hire commercial satellites to collect imagery and signals information from the munitions tests.***

---

#### **Counter-Reconnaissance**

CWO3 Alfred "Al" Masters, previously a fires specialist with a Marine Raider company, is now assigned to the headquarters unit of Marine Corps Special Operations Command (MARSOC). CWO3 Masters has been researching different man-portable loitering munitions. The MARSOC CG wants to outfit all MARSOC companies deploying to the European and Pacific theaters with loitering munitions as soon as possible and has directed CWO3 Masters to set up a test fire event for potential suppliers in conjunction with SOFWERX and the Defense Innovation Unit. The CG wants current company-level fires specialists to weigh in on which munition they prefer. CWO3 Masters, unable to schedule any range time at Camp Lejeune, which prioritized ranges for II MEF units because of low training readiness, has managed to reserve three separate days of range time at Fort Hunter Liggett in California.

SOFWERX and Defense Innovation Unit invited the top five potential suppliers to the first range day. Afterward, they assessed feedback from the participating Marine Raiders to narrow it down to three suppliers for the second range day, which occurred a few weeks later. This last range day is a demo of the selected system for the MARSOC CG. The demo includes incorporating the

loitering munitions into the execution of a practice raid on a small compound. When given the green light that the CG is in place, the Raiders storm the compound, using the loitering munitions to destroy both a previously unidentified enemy machinegun position and a communications satellite dish. What they do not realize is that there is a commercial satellite overhead capturing de-

tails of the raid and munitions test and sending it back to Russian intelligence officers.

The DOD acquisitions community, looking to highlight the successful partnership between SOFWERX, Defense Innovation Unit, and MARSOC, produced several press releases highlighting the involvement of Marine Raiders in the acquisitions process. Between the press releases and open-source collection on Marines on social media, Russian intelligence experts pieced together when the demos were taking place. Even though no Russian satellites were in range, they were able to hire commercial satellites to collect imagery and signals information from the munitions tests. From this, the Russians were able to determine not only the tactics employed but also the waveforms used to control the loitering munition. Had a Space Marine been involved in planning the munitions tests, he could have identified the potential for foreign collections on the test, checked when foreign satellites were going to be overhead, and helped schedule tests during times when both competitor nations and foreign commercial satellites were out of range.

#### **Closing the Kill Chain**

Capt Bernice Frankl, the battalion air officer for 2d Assault Amphibian Battalion, is aboard ship going over

the plan for the next day’s operation with several pilots and the operations officer from VMFA-312 via an encrypted phone call. The “Checkerboards” were not expecting to deploy, only just having transitioned to the F-35 after having flown F/A-18s for the last several decades. However, when Vladimir Putin decided he needed additional oceanfront property and sent a Russian militia to invade Estonia, VMFA-312 answered the call. The militia is not part of the regular army, allowing Putin to deny having control over them, but they are capable and have managed to take control of the city of Tallinn. 2d Assault Amphibian Battalion is aboard ship northwest of mainland Estonia. Tomorrow, with the Checkerboards providing close air support, the battalion plans to come ashore and start making their way towards Tallinn to re-take it from the militia.

Capt Frankl goes over the fire support coordination measures and laser codes one final time before signing off. Several of the Joint Terminal Attack Controllers (JTACs) she helped train will be in the first few waves to cross the channel in the morning and she wants to ensure they have the latest information. She had wanted to go first herself, but the battalion CO had insisted she wait for the last wave. That way, in case they need to initiate a branch plan, she will still have access to their digital planning tools and be able to push updated information out to the JTACs quickly.

Since Russia is not claiming direct association with the militia forces, the EUCOM commander and his staff determined it is unlikely that Russia will employ its air-defense weapons to protect the militia. Intentionally shooting a U.S. aircraft would likely cause more trouble than Putin is looking for at present. Still, F-35s are the only aircraft the EUCOM commander will allow within range. Intel suggests the landing will be uncontested as the militia appears to be wholly engaged around Tallinn setting up roadblocks and instituting curfews on the local population.

The next morning, as the first wave of ACVs are approaching the coast, several missiles come streaking toward

them. *So much for an uncontested landing*, thinks Sgt Bobby “Roo” Keeshan as he watches the missiles streak past. One clips the side of an ACV a few hundred meters back, but the second one misses. Sgt Keeshan, a JTAC in the second ACV that launched, immediately sends a call for fire to Check 12 and her wingman, who arrived on station just as his ACV was launching off the ship. Although Sgt Keeshan can see the slight hill from which the missiles originated, given the sea state, he cannot provide a steady laser designation from the ACV. So, he relays grid coordinates instead. Check 12, in a perfect approach, delivers two 500lb JDAMs. However, instead of impacting the hill, both land far south, and Sgt Keeshan checks his numbers as Check 12 sets up for another run.

***Each time the numbers are verified, yet each time the bombs fall short.***

This continues until both Check 12 and her wingman are out of ordnance. Each time the numbers are verified, yet each time the bombs fall short. Both the pilots and the JTAC are frustrated and confused, and by this time multiple ACVs have been hit and several sunk. Capt Frankl is just starting to piece together what is going on when the F-35s reach a low-fuel state and have to depart. What she has figured out, but neither her team nor the pilots realize yet, is that Russia has outfitted the militia with GPS spoofing capabilities and all U.S. assets, which rely on Global Positioning System (GPS) signals to determine location, are receiving fake signals. Had a Space Marine been part of the mission planning team, he would have identified this risk and helped 2d Assault Amphibian Battalion and VMFA-312 come up with a plan that included non-GPS-reliant ordnance in the mix, potentially saving lives.

**Does the Marine Corps Have Space Marines?**

Currently, the Marine Corps has two flavors of Space Marines: those holding an 8866 MOS and those with a 0540 MOS. Marines with an 8866 MOS, or Space Operations Officers, attended the Naval Postgraduate School and, after completing a two-year curriculum, earned a Masters of Science in Space Systems Engineering. As of November 2022, HQMC Manpower & Reserve Affairs’ Manpower Information Portal showed that there were twenty-seven 8866 AMOS-holders currently serving in the Marine Corps. Per the August 2022 Authorized Strength Report, the following Marine Corps units formally have positions for space operations officers on their staff:

Unit	Number of 8866 Billets
HQMC Combat Development & Integration	1
HQMC Information	2
HQMC Plans, Policy & Operations	1
Marine Corps Warfighting Lab	1
Marine Corps Information Operations Center	1
I Marine Expeditionary Force	1
II Marine Expeditionary Force	1
III Marine Expeditionary Force	1
Marine Expeditionary Units	7
<b>Total</b>	<b>16</b>

In addition to 8866s, the Marine Corps also has Space Operations Staff Officers who hold the 0540 MOS. These officers attended either the two-week Space 200 curriculum offered by the National Security Space Institute or the month-long Space Operations elective offered as part of resident Command and Staff College. As of November 2022, the Manpower Information Portal showed a total of two hundred and fifty-eight 0540 AMOS-holders serving on active duty throughout the Marine Corps and the August 2022 Authorized Strength Report shows that

the following Marine Corps units have 0540s as part of their staff.

Unit	Number of 0540 Billets
Training & Education Command	1
I Marine Expeditionary Force Information Group	1
II Marine Expeditionary Force Information Group	1
III Marine Expeditionary Force Information Group	1
Marine Expeditionary Units	7
<b>Total</b>	<b>11</b>

Ideally, each battalion and squadron would have at least one 0540 available, actively advising units on the implications of and teaching them how to incorporate space-based assets into planning and operations. Although 0540s are not as extensively trained as 8866s,

they are taught how to access and use the suite of space planning tools available to the Joint Force. The 8866 at each MEF also serves as a local subject-matter expert that 0540s can reach out to with questions. The MEFs however are not the only units that would benefit from having a Space Marine on staff. Marine Corps Systems Command, and the Deputy Commandants for Aviation, Programs, and Resources, and Installations & Logistics should also have Space Marines on hand to ensure space considerations are taken into account during Force Design, budgeting, acquisitions, and construction. The final report for MAGTF Warfighting Exercise 1-22 highlights the significant difficulty that Marine units are having simply understanding, much less carrying out, multi-domain operations. Ensuring units have access to a Space Marine who can advise and assist with planning is one way to help alleviate this significant capability gap.

### Notes

1. Gen David H. Berger, *A Concept for Stand-in Forces*, (Washington, DC: December 2021).
2. Sandra Erwin, "DARPA Awards Lockheed Martin \$25 Million Contract Modification for Integration of Blackjack Satellites," *Space News*, September 7, 2021, <https://spacenews.com/darpa-awards-lockheed-martin-25-million-contract-modification-for-integration-of-blackjack-satellites>.

> *Author's Note: The views expressed in this article are solely those of the author and do not reflect the views of the Marine Corps, the Department of the Navy, or the DOD.*



## MAJGEN HAROLD W. CHASE PRIZE ESSAY CONTEST



The annual MajGen Harold W. Chase Prize Essay Contest invites articles that challenge conventional wisdom by proposing change to a current Marine Corps directive, policy, custom, or practice. To qualify, entries must propose and argue for a new and better way of "doing business" in the Marine Corps. Authors must have strength in their convictions and be prepared for criticism from those who would defend the status quo. That is why the prizes are called Boldness and Daring Awards

**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@mca-marines.org](mailto:gazette@mca-marines.org). A cover page should be included, identifying the manuscript as a Chase Prize Essay Contest entry and including the title of the essay and the author's name.

Repeat the title on the first page, but the author's name should not appear anywhere but on the cover page. Manuscripts are accepted, but please include a disk in Microsoft Word format with the manuscript. The *Gazette* Editorial Advisory Panel will judge the contest and notify all entrants as to the outcome shortly thereafter. Multiple entries are allowed; however, only one entry will receive an award.



E-mail entries to: [gazette@mca-marines.org](mailto:gazette@mca-marines.org)  
 Mail entries to: Marine Corps Gazette  
 Box 1775  
 Quantico, VA 22134

## BE BOLD AND DARING!

This content is sponsored by: **Observer**  
Media Group Inc.

**DEADLINE: 30 April**

# Force Protection for Stand-in Forces

Improving the EABO concept

by GySgt Alfredo E. Andrade

**O**n 3 March 2022, the Marine Corps re-designated the 3d Marine Regiment into the 3d Marine Littoral Regiment. The ceremony marked a historic step toward meeting the intent of the *38th Commandant's Planning Guidance* to realize the Expeditionary Advance Base Operations concept. *The Tentative Manual for Expeditionary Advanced Base Operations* is the Marine Corps' authoritative primer describing how Marines will compete in contested littoral environments. The document states that persistent stand-in forces will "conduct sea denial, support sea control and enable fleet sustainment."<sup>1</sup> It identifies important considerations in fires, intelligence, information, logistics, maneuver, and command and control to conduct this mission. All but one of the warfighting functions is thoroughly addressed within the *Tentative Manual*. Improvements can be made to the document's force protection considerations in low-intensity conflict to bring the concept closer to becoming a fully developed doctrine.

Force protection is defined as "the measures taken to preserve the force's potential so that it can be applied at the appropriate time and place."<sup>2</sup> Effective force protection requires a combination of military occupational specialties and is enabled by other warfighting functions. It is a function implemented by commanders and staff at every level that should be integrated into the planning process and considered across every domain. The *Tentative Manual* contains little guidance on force protection under "Other Planning Considerations," which recommends analyzing intelli-

gence on terrain, infrastructure, and enemy capabilities to inform a commander's force posture.<sup>3</sup> The manual lists dispersion and signature management as its most pressing concerns to facilitate force protection. These considerations are appropriate responses

to the modern theory of hybrid warfare, Mao was likely inspired by Sun Tzu when he wrote: "Making the armies able to take on opponents without being defeated is a matter of unorthodox and orthodox methods."<sup>5</sup> The overall intent behind employing these tactics

**>GySgt Andrade is an Explosive Ordnance Disposal Technician with two deployments as an Engineer Equipment Operator in support of Operation ENDURING FREEDOM. He is currently serving as the Company Gunnery Sergeant for 8th Engineer Support Battalion Explosive Ordnance Disposal Company.**

---

**The Tentative Manual for Expeditionary Advanced Base Operations is the ... authoritative primer describing how Marines will compete in contested littoral environments.**

---

to high-intensity conflict but do not adequately address the preservation of forces against irregular threats.

Chinese warfare contains examples of using irregular activities to cause an adversary to decide that occupying territory is too costly, resulting in the withdrawal of their forces from an objective. Mao Zedong's Peoples Liberation Army principles serve as a basis for People's War theories, a key theme among them being to "Combine mobile war, positional war and guerilla war."<sup>4</sup> This suggests that conventional units complement their capabilities with unconventional tactics to achieve cost imposition within enemy formations. Although this stratagem bears resem-

is to demoralize an adversary's military forces and delegitimize their credibility.

The 1974 Paracels Sea Battle between Chinese and South Vietnamese naval forces provides a historical precedent in the use of irregular activities to deceive and defeat a rival claimant in the South China Sea. This naval operation was carried out by a combination of Chinese irregular maritime militia and conventional naval forces that resulted in South Vietnam ceding control over the Parcels to China. The success of the operation resulted in irregular forces being used in the skirmish at Johnston South Reef with the Vietnamese in 1988 and the standoff with the Philippines at Scarborough Shoal in 2012.<sup>6</sup>



**A Marine Corps explosive ordnance disposal technician with 3d Littoral Logistics Battalion, 3d Marine Littoral Regiment, conducts exploitation on a simulated captured adversary unmanned underwater vehicle. (Photo by Cpl Patrick King.)**

Although these provocations underline the use of state-sanctioned fishing vessels in conjunction with conventional naval forces, China could conceivably use proxy forces to conduct irregular activities.<sup>7</sup> Opponents do not need to be victorious in potential high-intensity conflict but must deny the United States a clear victory in competition. The use of irregular and proxy forces will enable adversaries to achieve cost imposition comparable to the challenges faced in the streets and deserts of Iraq and Afghanistan.

The presence of U.S. naval forces within contested littoral environments will be interpreted as provocative by rivals who assert territorial claims. Before adversaries escalate to large-scale conventional war, they could first deploy irregular maritime threats such as placing sea mines.<sup>8</sup> Another probable enemy course of action is to proliferate

sensors to irregular forces to conduct intelligence preparation of the operating environment. This can be accomplished using unmanned aerial vehicles or unmanned underwater vehicles.<sup>9</sup> Should tensions escalate, these unmanned platforms could be weaponized to strike at critical vulnerabilities or deny freedom of movement. Organizing a force protection structure to manage risks and coordinate resources would aid in protecting forces conducting Expeditionary Advanced Base Operations.

Force protection focuses on preserving the potential of the Joint Force in four ways: active defensive measures, passive defense measures, technology to reduce fratricide, and emergency management.<sup>10</sup> Refinement to the *Tentative Manual* can be made to consolidate one or all these processes under a “Force Protection” chapter. These functions serve to “frustrate the enemy’s attempts to

locate and strike our troops, equipment, capabilities, and facilities.”<sup>11</sup> Specific examples applicable to Expeditionary Advanced Base Operations include but are not limited to air defense, mine countermeasures, operational security, and military deception. Some of these capabilities are captured under warfare and functional group commanders in Composite Warfare Doctrine.<sup>12</sup> At a minimum, a forward-deployed expeditionary advanced base would require a liaison for communicating force protection considerations to a Composite Warfare Commander’s operations directorate.

A force-in-readiness means preparing for the most probable threat of low-intensity conflict against the backdrop of great power competition.<sup>13</sup> Most military personnel associate force protection with levels or conditions that dictate physical security on installations. The Navy’s anti-terrorism force protection program guides naval forces with coherent security measures and pre-planned responses to hostile acts.<sup>14</sup> Physical security in an urban littoral environment will likely involve a combination of Marines and host-nation security forces. Theater Security Cooperation can enable force protection by partnering with allies to deter, detect, and defend against irregular threats. These operations will strengthen relationships and have the added benefit of creating favorable conditions for access to host nations.<sup>15</sup> Due to the wide dispersion of expeditionary advanced bases, threat analysis will dictate force posture across host nations within the operating environment.

Although often imagined to be exclusive to the Western Pacific, it is imperative to acknowledge that Expeditionary Advanced Base Operations are theater agnostic. These suggestions to refine the *Tentative Manual* seek to proactively identify and address irregular threats. If naval forces are simply reactive when these threats appear in theater, they will incur losses and lose the initiative. One such example is the suicide attack on the USS *Cole* in the port of Aden, Yemen, on 12 October 2000, which “demonstrated a seam in the fabric of efforts to protect our



**A Marine Corps explosive ordnance disposal response element with 3d Littoral Logistics Battalion, 3d Marine Littoral Regiment, employs a small robotic platform from their utility task vehicle to conduct reconnaissance of a suspected vehicle borne improvised explosive device.**  
(Photo by Cpl Patrick King.)

forces, namely in-transit forces.”<sup>16</sup> Although risk is inherent to all military operations, the protection of personnel and property will enable the persistence to retain a positional advantage in a theater.

As the Marine Corps invests in and divests itself of capabilities, it should retain the knowledge gained from decades of countering irregular threats in low-intensity conflict. This can be captured in the *Tentative Manual* under

**As the Marine Corps invests in and divests itself of capabilities, it should retain the knowledge gained from decades of countering irregular threats in low-intensity conflict.**

a “Force Protection” chapter so future generations are trained and educated on the relevance of force protection in low-intensity conflict. The insignia of the 3rd Marine Littoral Regiment proudly displays the M1905 bayonet in its center. This symbolizes the 3rd Marine Littoral Regiments’ mission to persist within the adversary’s weapon engagement zone and hold a blade to the enemy’s throat. As Marines operate within the littorals to execute Expeditionary Advanced Base Operations, ef-

fective force protection measures will help prevent them from getting stabbed in the back.

**Notes**

1. Headquarters Marine Corps, *Tentative Manual for Expeditionary Advanced Base Operations*, (Washington, DC: 2021).

2. Headquarters Marine Corps, *MCDP 1-0, Operations*, (Washington, DC: 2011).

3. *Tentative Manual for Expeditionary Advanced Base Operations*.

4. Headquarters Army, *ATP 7-100.3, Chinese Tactics*, (Washington, DC: 2021).

5. Sun Tzu, *The Art of War*, (Allendale Online Publishing, 2000), [https://sites.ualberta.ca/~enoch/Readings/The\\_Art\\_Of\\_War.pdf](https://sites.ualberta.ca/~enoch/Readings/The_Art_Of_War.pdf).

6. Toshi Yoshihara, “The 1974 Paracels Sea Battle: A Campaign Appraisal,” *Naval War College Review* 69, No. 2 (2016).

7. Ross Babbage, *Stealing a March: Chinese Hybrid Warfare in the Indo-Pacific: Issues and Options for Allied Defense Planners*, (Washington, DC: Center for Strategic and Budgetary Assessments, 2019).

8. Walker Mills, “Marines and Mercenaries: Beware the Irregular Threat in the Littoral,” *CIMSEC*, August 27, 2020, <https://cimsec.org/marines-and-mercenaries-beware-the-irregular-threat-in-the-littoral>.

9. Joseph Trevithick, “Indonesian Fisherman Caught What Appears to be a Chinese Underwater Drone,” *The Drive*, December 30, 2020, <https://www.thedrive.com/the-war-zone/38475/indonesian-fisherman-caught-what-appears-to-be-a-chinese-underwater-drone>.

10. Department of Defense, *JP 3-0 Joint Operations*, (Washington, DC: 2017).

11. Headquarters Marine Corps, *MCDP 1-2, Campaigning*, (Washington, DC: 1997).

12. Department of the Navy, *NWP 3-56, Composite Warfare Doctrine*, (Washington, DC: 2010).

13. John Vrolyk, “Insurgency, Not War, Is China’s Most Likely Course of Action,” *War on the Rocks*, September 13, 2019, <https://www.thedrive.com/the-war-zone/38475/indonesian-fisherman-caught-what-appears-to-be-a-chinese-underwater-drone>.

14. Department of the Navy, *NWP 3-07.2, Rev. A Navy Doctrine For Antiterrorism/Force Protection*, (Washington, DC: 2018).

15. Brian Kerg and Michael Murray, “How Marine Security Cooperation Can Translate to Sea Control,” *War on the Rocks*, September 13, 2019, <https://warontherocks.com/2019/09/how-marine-security-cooperation-can-translate-into-sea-control>.

16. U.S. Senate, *USS Cole Commission Report*, (Washington, DC: 2001).





# Such Other Duties as the President May Direct

Modernization and evolution

by Capt Michael Hanson

The publication of *Force Design 2030* was a game changer for the Marine Corps. In it, Gen David Berger, the CMC, argues that the Marine Corps is currently not organized or equipped to face the threat posed by a near-peer adversary. The adversary he has in mind is the People's Republic of China, and the current threat environment demands that the Corps change in size, structure, and equipment employed to meet this threat. The CMC makes it crystal clear: the Marine Corps must and will evolve. *Force Design 2030* is his ten-year plan for how the Marine Corps will do this to prepare for the next great power conflict. The document goes into detail as to how the Corps will meet these ends.

**>Capt Hanson is an Infantry Officer and Weapons Company Commander with 3/4 Mar. He is currently deployed to Camp Schwab, Okinawa, on his 6th deployment. Previously, he has deployed to Iraq in support of Operation IRAQI FREEDOM, aboard the USS Bonhomme Richard with the 13th MEU, Okinawa in support of the unit deployment program, and Romania in support of the Black Sea Rotational Force, among other places.**

To adapt, the Marines will have to divest completely in certain equipment sets, such as tanks and bridging assets, significantly decrease its amount of other equipment, such as towed howitzers and some manned aircraft, and drastically increase its numbers of other equipment, such as HIMARs and UAS. Conducting Expeditionary Advanced Base Operations to deter an encroaching Chinese navy, the Marines will position HIMARs in key maritime

terrain and use drones and other sensors to locate targets for the waiting missile batteries to engage. Additionally, though he acknowledged that the structure of the infantry battalion will have to evolve to facilitate these types of operations, the CMC left out the details of those changes, for now at least. Though this sweeping change in the structure of the Marine Corps is largely intended to deter the Chinese from embarking on a war with the United States in the Western Pacific region, there is no doubt that should hostilities arise the Marine Corps will be ready to act.

The prospect of this revolutionary directive has a lot of Marines asking a lot of questions and has ignited fierce debates within the ranks. By radically restructuring the makeup of the Marine Corps to confront China as Stand-In Forces through a campaign of Expeditionary Advanced Base Operations, how is the Marine Corps prepared to conduct the diverse range of other missions that it may be tasked with?

Gen Berger answered the question head-on when explaining his guidance to the framers of the new force laydown:

The last step was a piece of guidance from me that the Marine Corps is this nation's crisis response force by law, by role, and by function. So whatever we build for the structure, the design for the future of the structure of the



**Artillerymen from 2/14 Mar load rockets into a HIMARS during training. (Photo by Cpl Aaron James B. Vinculado.)**

Marine Corps, it must be capable of responding to any crisis, anywhere in the world, without any notice. That was the first step in framing the problem in our vernacular.<sup>1</sup>

He went on to explain that:

Today, we are built for a large-scale amphibious forcible entry. We're built for sustained land operations—in other words, the force ashore. We are heavy. We are built for force protection to protect our force. It was the force that we evolved over the past 15 years to match up for what we had to do in the Middle East.<sup>2</sup>

And that, “To do what we need to do in the future, we have to become lighter. We absolutely have to become more naval and operate as a single maritime force.”<sup>3</sup>

Forcible entry is defined as, “Seizing and holding of a military lodgment in the face of armed opposition or forcing access into a denied area to allow movement and maneuver to accomplish the mission.”<sup>4</sup> The ability to conduct operations of this type has been the classic mission of the Marine Corps in the modern era with the most famous example being the island-hopping campaign of World War II. Though images of Marines disembarking landing craft and storming hostile beaches have been an enduring memory for most of the American public, Marines have conducted these operations few times since World War II. The brilliant amphibious turning movement at Inchon during the Korean War is perhaps the epitome of large-scale amphibious forcible entry, but the Marine Corps has conducted nothing like that since. Furthermore, it seems unlikely that a modern forcible-entry operation will resemble those of World War II or the Korean War for the foreseeable future. Gen Berger acknowledged as much in his initial planning guidance:

I do not believe joint forcible entry operations (JFEO) are irrelevant or an operational anachronism; however, we must acknowledge that different approaches are required given the proliferation of anti-access/area denial (A2AD) threat capabilities in mutually contested spaces. Visions of a massed naval armada nine nautical

miles off-shore in the South China Sea preparing to launch the landing force in swarms of ACVs, LCUs, and LCACs are impractical and unreasonable. We must accept the realities created by the proliferation of precision long-range fires, mines, and other smart weapons, and seek innovative ways to overcome those threat capabilities.<sup>5</sup>

Despite this, the CMC did state that he does not believe that operations of this type are anachronistic. They still have utility, depending on the capabilities of the enemy that Marines would seize a lodgment against. Some examples of this include when Marines went ashore in a lightly contested environment in Grenada during Operation URGENT FURY in 1983 and when Marines landed unopposed in Somalia in 1992 during Operation RESTORE HOPE. Again, because the enemy forces in those two instances did not possess sophisticated anti-access/area denial-

Perhaps the most important amphibious assault since Inchon is the most famous one that did not occur. During Operation DESERT STORM in 1991, 5th MEB conducted an amphibious demonstration that “helped to tie up around 40,000 Iraqis in useless defensive positions along the beaches, awaiting a surface amphibious assault that never came.”<sup>6</sup> Though the embarked Marines did not land, their contribution resulted in a disproportionate effect on the larger ground campaign. This example clearly demonstrates that the ability to conduct amphibious forcible entry forces an enemy to prepare for it, even if it never comes, and this can be a game-changer in the future as it was in this instance.

Likewise, the greatest value that comes with a force prepared to conduct forcible entry is deterrence. Every Marine is fully aware that when there is an emergency somewhere in the world, among the first things the President is

---

***Every Marine is fully aware that when there is an emergency somewhere in the world, among the first things the President is briefed on is the location of the nearest MEU ...***

---

capabilities, amphibious ships were able to operate close enough to the coastline to launch landing forces via surface connectors. Though perhaps the best example of an amphibious forcible entry in recent Marine Corps history did not feature landing craft churning through the surf and Marines charging ashore. When the Marines of Task Force 58 established a foothold in landlocked Afghanistan in 2001, they did it entirely from the air. This operation would become the longest air assault in history, and the Marines achieved forcible entry from the sea without storming a beach. Regardless of the differences in each case, it is possible that Marines may go ashore in similar conditions to any of these in a future overseas contingency and should be prepared to. Once again, the main factor is the enemy.

briefed on is the location of the nearest MEU and how long until it will arrive on the scene. An amphibious ready group off a hostile coast and ready to strike in an instant weighs heavily on the minds of enemy decision makers, and can potentially change their internal calculus. This sort of change of heart resulting in peace through strength has undoubtedly occurred countless times in modern history, though we will never know how many.

Though the Marine Corps has stood ready to conduct amphibious forcible entry for decades, this is a mission that Marines have rarely been called on to perform since Inchon. Rather, crisis response and power projection have taken the fore in Marine Corps operations at this time. Crisis response is defined as, “operations conducted to alleviate or

mitigate the impact of an incident or situation involving a threat to a nation, its territories, citizens, military forces, possessions, or vital interests that developed rapidly and created a condition of such diplomatic, economic, political, or military importance that commitment of military forces and resources is warranted to achieve national objectives.”<sup>7</sup> Likewise, the definition of power projection is “the ability of a nation to apply all or some of its elements of national power—political, economic, informational, or military—to rapidly and effectively deploy and sustain forces in and from multiple dispersed locations to respond to crises, to contribute to deterrence, and to enhance regional stability.”<sup>8</sup>

Countless examples of missions of each category exist across the range of military operations. From humanitarian assistance/disaster relief operations, embassy reinforcement, and non-combatant evacuation operations, to tactical recovery of aircraft/personnel, and peace enforcement operations, Marines have been called on to perform all of these operations on multiple occasions in multiple countries just since the end of the Cold War. The examples are legion, and too many to list here, but having been called upon frequently to conduct such a wide spectrum of operations caused the Marine Corps to naturally evolve into a general-purpose force capable of any and all of these. However, as the world threat environment evolves, the Marine Corps must evolve with it.

In his initial planning guidance, Gen Berger reaffirmed,

The Marine Corps has been and remains the Nation’s premier naval expeditionary force-in-readiness. While we stand by to perform “such other duties as the President may direct,” foreign humanitarian assistance, disaster relief, and noncombatant evacuations do not define us—they are not our identity. Rather, they are the day-to-day consequence of being the force-in-readiness. As the force-in-readiness, we are not an across-the-ROMO force; but rather, a force that ensures the prevention of major conflict and deters the escalation of conflict within the ROMO.<sup>9</sup>

Marines will still train for these likely operations because history has shown that Marines will be called on to conduct these types of operations. Marines should also assume that they will be dispatched to confront Islamic extremist groups like the Islamic State, al Qaeda, al Shabaab, Boko Haram, and the Taliban, as these remain a significant cause of instability across wide swaths of the world. Likewise, strikes, raids, Military Operations in Urban Terrain, and Foreign Internal Defense cannot be ruled out and Marines must continue to train for these types of operations.

The Marine Corps will undoubtedly train for likely and foreseeable conflicts, such as those against China, Russia, Iran, and North Korea. The physical environments of these diverse potential battlefields range from desert to mountain, “from the snow of far-off Northern lands” to “sunny tropic scenes” and thus Marines will continue to train in “every clime and place.”

However, Marines must not forget about the unknown. Even recent history is replete with unforeseen events that shocked the world and required a response. The 1982 Argentine invasion of the British Falkland Islands, Saddam Hussein’s invasion of Kuwait in 1990, and the terrorist attacks of 11 September 2001 all instigated sizable military responses. Nobody knows where the next war will be fought, but one thing is certain, Marines will fight there.

This is precisely why the Commandant concluded *Force Design 2030* with the statement:

While the Future Force we are developing is different in terms of structure and capabilities, it is consistent with our historical roots as Fleet Marine Forces and directly supports our Title 10 responsibility to seize and defend advanced naval bases, and perform all such duties as directed by the President. It is also important to note that methods and concepts such as Expeditionary Advanced Base Operations are not the sum total of our contribution to the joint force. We will continue to serve as the nation’s premier crisis response force around the globe, and contribute to the deterrence and warfighting needs of all combatant commands.

It is a time of major structural change in the Marine Corps. However, one thing that will never change is that Marines will be ready to “perform such other duties as the President may direct.”<sup>10</sup>

---

#### Notes

1. Gen David H. Berger and Ryan Evans, “A Chat with the Commandant: Gen David H. Berger on the Marine Corps’ New Direction,” *War on the Rocks*, April 6, 2020, <https://warontherocks.com/2020/04/a-chat-with-the-commandant-gen-david-h-berger-on-the-marine-corps-new-direction>.
2. Ibid.
3. Ibid.
4. Office of the Joint Chiefs of Staff, *Joint Publication 3-18, Joint Forcible Entry Operations*, (Washington, DC: July 2021).
5. Gen David H. Berger, *38th Commandant’s Planning Guidance*, (Washington, DC: July 2019).
6. LtCol H. Thomas Hayden, “Amphibious Operations in the Gulf War: 1990–91,” *Marine Corps Gazette*, January 2006, <https://web.archive.org/web/20060106120916/http://www.mca-marines.org/gazette/2005/05hayden.html>.
7. Headquarters Marine Corps, *Marine Corps Operating Concepts, Third Edition*, (Washington, DC: June 2010).
8. Ibid.
9. *38th Commandant’s Planning Guidance*.
10. U.S. Congress, *Title 10, U.S. Code*, (Washington, DC: 1956).



# Proving Grounds

The Marine Corps maximizing deployments to develop and improve tactics, techniques, and procedures in support of the Stand-in Force

by Maj Chris A. "Rocket" Huff

The Assistant Commandant of the Marine Corps, Gen Eric M. Smith, released an article titled, "Stand-in Forces: Adapt or Perish" in the Naval Institute's *Proceedings* journal in April 2022 addressing and acknowledging some recent criticisms of the Marine Corps' *Force Design 2030*.<sup>1</sup> Gen Smith shrewdly opens and closes the article by simply writing, "Change is hard." His article specifically discusses the changes in the Marine Corps occurring with *Force Design 2030* to facilitate the Stand-In Force. The Stand-In Force will be primarily supported by the new Marine Littoral Regiments. He also explains and augments with clarifying information about other changes being implemented across the Marine Corps in conjunction with *Force Design 2030*. Gen Smith describes the Stand-In Force as, "units that are task-

**>Maj Huff recently returned from Africa and is the Executive Officer for Marine Medium Tiltrotor Squadron 161. He has deployed as an Infantry Officer to CENTCOM, an AH-1Z Pilot to INDO-PACOM, an MV-22 Pilot to AFRICOM, and will be deploying with the 15th MEU.**

organized, trained, and equipped to disrupt an adversary's plans at every point on the competition continuum. They are strategically placed where they can collect targeting data, strike to close choke points, or herd adversaries into areas where U.S. naval and joint forces can bring more weapons to bear."<sup>2</sup>

Gen Smith was clear in stating that, for now, the Marine Corps is not changing every unit into a Stand-In Force and believes it is important that the Marine Corps provide options to the combatant commander to address a wide range of threats by providing a wide range of capabilities. RADM J.C. Wylie, in his cornerstone book, *Military Strategy: A*

*General Theory of Power Control*, states:

The third basic assumption for war planning is that we cannot predict with certainty the pattern of the war for which we prepare ourselves. We cannot with reasonable certainty, forecast the time, the place, the scope, the intensity, the course, and the general tenor of a war. I think no man ever has. A strategy for an entire war is not predictable. This is particularly true with respect to the situation today, when we find ourselves faced by a potential enemy whose capabilities are not completely ascertainable and whose intentions are, in great measure, inscrutable.<sup>3</sup>

J.C. Wylie's words apply today and assist us in understanding why it is important that the Marine Corps maintains capabilities to conduct a multitude of different mission sets.

The Center for Naval Analysis recently provided the Marine Corps recommendations for future force structure in their unclassified report titled, "Aligning Marine Corps Aviation Force Structure with National Strategy."<sup>4</sup> The Center for Naval Analysis recommends the Marine Corps organize the force around crisis response and Stand-In Force roles. The Center for Naval Analysis' recommendation aligns with combatant commanders' demand for Marines to fulfill crisis response assignments globally but also recognizes the Marine Corps' adaptation to the pacing threat. The Marine Corps recognizes that it remains the crisis-response force-in-readiness and looks to the MEU as



**The Marine Corps conducting Expeditionary Advanced Base Operations in the Arctic with an Air Force refueling tanker. (Photo provided by author.)**

the branch's primary crisis-response force. Outside of the MEU, the institution of the Marine Corps is resistant to support additional crisis-response tasking. The Marine Corps views assigning units to crisis-response missions permanently or for indefinite periods as conflicting with the Services' focus on the *2018 National Defense Strategy*, *Interim National Security Strategic Guidance*, and the more recent *National Security Strategic Guidance*, *National Defense Strategy*, and the Marine Corps' own *Force Design 2030*. In support of the *National Defense Strategy* and *Interim National Security Strategic Guidance*, "The Annual Threat Assessment of the U.S. Intelligence Community for 2022," released before the Russian invasion of Ukraine, continues to emphasize, "President Xi Jinping's vision of making China the pre-eminent power in East Asia and a major power on the world stage."<sup>5</sup> National security strategies of multiple presidential administrations describe China as the pacing threat, and although the Marine Corps is posturing and changing to focus on the pacing threat, requests for Marines to support crisis-response missions around the globe continue to be sourced and are not going away. It is important to highlight that the Marine Corps is the only defense branch cutting manpower and slashing legacy systems to make room for modernization efforts, an idea that has been discussed in Congress and the DOD for decades. To continue driving efficiency and leading, the Marine Corps should seek to maximize resources by using every deployment as an opportunity to practice the tactics, techniques, and procedures (TTP) that would be used to execute Expeditionary Advanced Base Operations and Stand-In Force operations. Practicing these TTPs while deployed in support of enduring crisis-response roles can be a creative method of procuring additional funding while also improving proficiency in the concepts that will be implemented in the INDO-PACIFIC against the pacing threat. Supporting the Joint Force commander provides opportunities to exercise these techniques in a joint environment. The TTPs supporting a Stand-In



**Stand-In Forces are not isolated to a single geographic location. The concept of the Stand-In Force can be and should be used around the world against a wide array of threats. (Photo provided by author.)**

Force or Expeditionary Advanced Base Operations are not unique to a single geographic location. One such example is a recent deployment of a reinforced MV-22 squadron in the AFRICOM Area of Operation (AO).

Gen Smith states in his recent *Proceedings* article,

The Marine Corps' expeditionary capability and forward posture make us uniquely suited for stand-in-force operations. Our organic mobility, always in high demand, is a key enabler of this concept. L-class amphibious warships, light amphibious warships, KC-130J tankers, MV-22B Ospreys, and CH-53K King Stallion helicopters, all organic to the Navy-Marine Corps team, support the mobility that makes stand-in forces possible.<sup>6</sup>

The global force posture provides opportunities for concepts to be practiced whether in the INDO-PACIFIC or elsewhere around the globe. Recently, the AFRICOM Commander requested, and was given, a Marine Corps MV-22 squadron to support the Personnel Recovery Task Force also known as the Warfighter Recovery Network under the tactical control of the Combined Joint Task Force-Horn of Africa out of Camp Lemonnier, Djibouti. The Marine Corps was tasked with provid-

ing crisis response capabilities to the AFRICOM Area of Operation (AO) by sending an MV-22 squadron augmented by two KC-130J detachments, a Marine Aviation Logistics Squadron detachment, and a Marine Air Control Group detachment. In addition to the crisis-response mission, this reinforced MV-22 squadron is also tasked with several other classified missions. The AFRICOM AO provides a proving ground for many of the concepts that are being discussed with Expeditionary Advanced Base Operations, the Stand-In Force, and other concepts in *Force Design 2030*.

Marines do not have to be in the Pacific to practice new concepts that would be employed in the Pacific. RADM J.C. Wylie wrote in *Military Strategy: A General Theory of Power Control*, "'terrain' as a word does not have deep meaning to the non-soldier, but to the soldier, it is everything. It is the fixed field within which he operates. It is the limitation within which he must function. It is the opponent that he must always face no matter who may be his enemy. It is the fact of terrain that establishes the field within which the soldiers' professional intellect must generate its plans."<sup>7</sup> In the AFRICOM AO, the term "tyranny of distance" is

used often. Africa is larger than the combined land mass of the United States, China, India, and Europe. In many parts of the continent, one aircraft refueling location may be well over a thousand miles from another aircraft refueling location. Much like operating in host nations in the Pacific, diplomatic clearances for overflight, landing, and operating in many of the countries in Africa are frequently difficult to receive and could take months of negotiation by the Department of State. The terrain in Africa, from an aviation perspective, is not terribly different than the terrain in which the Marine Corps would be expected to operate while in the Pacific. While not open ocean, the distances from one operating area to the other in Africa impose some of the same friction and some of the same distances that would be planned and executed in the Pacific. For example, operations from ship to shorebased sites around the African continent provide opportunities to improve expeditionary seabased operations. Setting up refueling sites in expeditionary environments around the African continent provides opportunities for practicing the establishment of forward arming and refueling points or expeditionary airfields. Over-the-horizon and redundant communications are critical due to the tyranny of distance; aerial refueling is required, and vertical lift provides robust mission support as well as access in and out of expeditionary locations—all concepts and skills that will be necessary for the Pacific.

When we accept the premise that we cannot forecast the pattern of war, nor its time nor its place nor its characteristics, then we arrive at the conclusion that the primary requisite in peacetime war planning is not a single rigid plan for war. Our first requirement, rather, is for a spectrum of war plan concepts, for the broadest possible conceptual span of strategies for war, a spectrum that will embrace in both time and character any war situation that might conceivably arise.<sup>8</sup>

According to J.C. Wylie, a full complement of plans and strategies is necessary to meet present and future challenges:

The requirement is for a full bag of strategic concepts that will always provide, before and during war, not only a strategy assumed for the future or existing at any given moment, but a most comprehensive reserve of strategies ready for use whenever the situation changes or when a war fails to proceed in accordance with the plan in use.<sup>9</sup>

---

***The CMC ... is shaping the Marine Corps to provide capabilities that ... complicate a peer threat's maneuver ...***

---

For the Marine Corps, developing the Stand-In Force using the changes outlined in *Force Design 2030* is providing an additional capability that is assessed to address the pacing threat or what the Marine Corps would provide in combating the pacing threat in the Pacific. Gen Berger stated in a recent *Washington Post* interview,

The approach is to distribute Naval and Marine Corps Forces widely, to be able to operate from ship or from shore for the purpose of controlling key parts, just like you would on land, where there might be a road intersection that you want to control. Well at sea, in the maritime environment, there is the equivalent of road intersections that the U.S. needs to hold open, needs to make sure are open and free.<sup>10</sup>

The CMC, just as J.C. Wylie described, is shaping the Marine Corps to provide capabilities that, if needed, can be used to complicate a peer threat's maneuver and enable the tactical advantage of the Joint Force. Marines will need the practice and repetition of implementing tactics, techniques, and procedures that enable Stand-In Forces, particularly while deployed and working in the joint environment. Marines need to take advantage of every opportunity to practice the concepts of Stand-In Forces conducting reconnaissance, communications, and targeting whether they find themselves in the INDO-PACIFIC or operating across the Continent of Africa. Deployments such as ones to the AFRICOM AO are opportunities for those needed repetitions.



***The Ever Given, one of the world's largest cargo vessels, stuck in the Suez Canal in March 2021. Small, seemingly insignificant events, can have devastating consequences and Stand-In Forces located around the globe can rapidly assist, deter, deny, or destroy. (Photo provided by author.)***

I have read many writings by Bing West since joining the Marine Corps. I remember reading about combat outposts of Vietnam in his book, *The Village*, while I was training at the Marine Corps Infantry Officer Course only to find myself a few months later operating in the Upper Sangin Valley in Afghanistan. In a *New York Times* article in 2011, Mr. West discussed his book, *Grit, Strategy, and the Way Out of Afghanistan* and criticized the U.S. strategy in Afghanistan: “The question isn’t what the Marines or Army do, the question is, why are they doing it, and what’s the end state ... my objection is, they’ve stayed to become the government.” Mr. West’s analysis of Afghanistan was perceptive, and ten years later, after watching the withdrawal of U.S. troops and the end of the war in Afghanistan, we would all be remiss not to listen to Mr. West and consider his criticism of new developments in the Marine Corps today. In response to an article titled, “A Response to Mr. Christopher Corrow, Headquarters Marine Corps” in the *National Review*, Mr. West discusses the recent changes in the Marine Corps saying, “*Force Design 2030* is designed to land very small groups of Marines armed with a few anti-ship missiles on uninhabited islands. All the islands in the Taiwan Strait, East China Sea, Strait of Hormuz, and the Black, Baltic, and Mediterranean Sea are heavily inhabited. Before war breaks out, the United States needs permission from the host nation to install weapons and troops. The host nation, about to become a belligerent, will demand a heck of a lot larger force than a few Marines with a few missiles.”<sup>11</sup> The premise of this comment suggests Marines and the Department of State are not already cooperating with host nations and insinuates that the nations would be gun-shy to work with the United States for fear of becoming a belligerent. It assumes that the only thing the Stand-in Force provides is a small unit with an anti-ship missile. Gen Smith comments on this narrow scope of the understanding of Stand-In Forces in his recent *Proceedings* article, “Stand-in forces are not just roving bands of vulnerable Marines, placed on small

islands and left to their own devices in the hope that an enemy ship might one day blunder within range. Yes, there are areas in this concept that need improvement, but these difficulties are solvable.”<sup>12</sup> Gen Smith is highlighting why the Marine Corps needs to practice. Bing West continues his critique in *National Review*, “Second, the invasion of Ukraine has again demonstrated that aggressors strike when and where they choose. Because our nation does not pick the time and place, our forces

identifying gaps in those capabilities. The requirements created by the tyranny of distance found in Africa are much like what would be experienced in the INDO-PACIFIC and the Marine Corps is gaining advantages by practicing TTPs in the AFRICOM AO. The MV-22 squadron in the AFRICOM AO is flying aviation logistics support and combat-assault-transport missions while conducting aerial refueling to cover the distance between locations. The Marine Corps does not have an

---

***The battlefields that will require anti-ship missiles will not be permissive and are considerably more vast than battlefields that will not need them.***

---

must be prepared to fight anywhere. However, Marines today are much less capable as our global ‘Force in Readiness,’ because the resources devoted to the South China Sea scenario are not transferable elsewhere.”<sup>13</sup> In contrast to Mr. West’s conclusion, Marines are executing many of the same tactics that support Stand-In Force operations with units in Africa, across vast distances, and as a distributed force. The resources that will be used in the Pacific are directly transferable to other areas of the world and can be practiced in other areas of the world. Mr. West continues in his critique saying, “The stand-in force, if it makes it ashore, is still out in the ocean. It is unlikely to acquire data not already reported by submarines, seal units, intelligence intercepts, and hundreds of satellites.”<sup>14</sup> Much like in Africa, the size of the Pacific complicates information collection. To say all the information will already be available without a Stand-In Force because units and assets already exist in the Pacific is presumptuous at best. Operating and planning for similar problem sets in Africa, the Marine Corps is gaining tactical proficiency with small units that are learning to be comfortable operating widely distributed. Redundant communications methods are improving by tactical operators being forced to use over-the-horizon capabilities and

organic GCE in AFRICOM working with the MV-22 squadron. Not having a GCE does not mean that TTPs needed for Stand-In Forces are not being practiced; however, the repetitions gained by practicing the TTPs needed to support the Stand-In Force is unique to the aviation squadron and supporting detachments without the GCE. Africa, a fairly permissive AO, allows units to practice such concepts frequently. The Marine Corps needs to practice in order to be effective in the higher threat environment of the contested littorals of the INDO-PACIFIC.

The battlefields that will require anti-ship missiles will not be permissive and are considerably more vast than battlefields that will not need them. When the Marine Corps needs them, the Marines will really need them. As J.C. Wylie says about maritime theory, “The establishment of control by the sea means, in its ideal form, complete knowledge and complete control of everything that moves by sea.”<sup>15</sup> To achieve such a feat, and maybe we cannot, the United States will need a vast presence of distributed forces capable of contributing to the collection and dissemination of information and methods of destroying targets required for sea control. J.C. Wylie states, “It should be noted that the extension of (sea) control onto the land in this case

is hinged upon the destructive power of the missile, which is a highly specialized but by no means an unusual method of exercising control.”<sup>16</sup> An oversimplified description of small teams going ashore with medium-range anti-ship missiles is not a fair assessment of what distributed Stand-In Forces will provide or the proficiency and actions that are required to master the destructive power of the missile while operating as a distributed force. Peter D. Haynes wrote about the 23rd Chief of Naval Operations, ADM Carlisle A.H. Trost’s theories in his book, *Toward a New Maritime Strategy*. Haynes writes,

Trost agreed with replacing the military’s immense overseas structure with a forward presence approach, which consisted of deployed forces and smaller, more mobile, and more-flexible permanent forces. Trost noted the difficulties in obtaining overflight rights (diplomatic clearance) and decreasing access to dwindling numbers of U.S. bases overseas elevated the significance of U.S. Naval forces since they could demonstrate, in his words, “military power without raising politically sensitive issues of territorial sovereignty.”<sup>17</sup>

This issue is a constant in Africa and provides justification for Trost’s assessment. Haynes continued to write,

Trost pointed out that despite the end of the Cold War, the proliferation of advanced weaponry posed an increasing threat to the fleet. (Trost) noted that 41 third-world nations possessed over 250 attack submarines, a total of 100 of which had anti-ship cruise missiles, and that many had landbased anti-ship capabilities as well. Many of these nations were anti-western and sat astride maritime transit routes and key choke points. ‘Survival ... requires advanced electronics and weapon systems,’ he noted, ‘and does not allow the luxury of ‘low mix’ platforms.’<sup>18</sup>

As examples of the proliferation of advanced weaponry, he referred to the British experience during the Falkland Islands War in 1982, when the Royal Navy lost 2 ships to the advanced Exocet anti-ship missile, and the attack on the USS *Stark* in May 1987 in the Persian Gulf by an Iraqi jet that launched



**In 1979, First Sea Lord and Chief of Naval Staff ADM Terence Lewin had given a lecture in which he pointed out that airborne early warning aircraft would be vital in any future war. However, this was with the expectation these would be landbased aircraft, because the only Royal Navy ship capable of carrying AEW aircraft (HMS Ark Royal had already been decommissioned). He went on to state that Sea Harriers would be supplemental to landbased fighter aircraft and that the Sea Wolf missile system would need to intercept incoming enemy missiles.” (Failure in the Falklands. Steven Iaconon, U.S. Naval Institute. April 2022). (Photo provided by author.)**

2 Exocets, killing 37 crew members and nearly sinking the ship.

We are all taking a good hard look at the actions that Russia is taking against Ukraine. Should the United States be asked to intervene in Ukraine, along-

---

**... Marines need to practice the concepts of the Stand-In Force ...**

---

side our joint and coalition partners, the Marine Corps is ready, day or night, under all weather conditions, during expeditionary, joint, or combined operations. However, the Marine Corps is listening to J.C. Wylie’s warning from 1957 that, “we need not remain always within the prevalent opinion of the moment.”<sup>19</sup> The Marine Corps is not wrong to focus on the pacing threat. President Biden’s *Interim National Security Strategy Guidance* states,

We will sustain readiness and ensure that the U.S. Armed Forces remain

the best trained and equipped force in the world. In the face of strategic challenges from an increasingly assertive China and destabilizing Russia, we will assess the appropriate structure, capabilities, and sizing of the force, and working with the Congress, shift our emphasis from unneeded legacy platforms and weapons systems to free up resources for investments in the cutting edge technologies and capabilities that will determine our military and national security advantage in the future.<sup>20</sup>

To continue maximizing opportunities and resources, Marines need to practice the concepts of the Stand-In Force, conducting reconnaissance, improving communications, targeting, mastering long-range and expeditionary advanced basing wherever Marines find themselves whether in the INDO-PACIFIC, on detachments for training, conducting MEF level exercises, or operating across the continent of Africa.



## Notes

1. Eric M. Smith, "Stand-in Forces: Adapt or Perish," *Proceedings*, April 2022, <https://www.usni.org/magazines/proceedings/2022/april/stand-forces-adapt-or-perish#:~:text=Small%2C%20mobile%2C%20and%20lethal%2C,adversary's%20plans%20at%20every%20point.&text=%22Adapt%20or%20perish%2C%20now%20as,%2C%20is%20nature's%20inexorable%20imperative.%22>.

2. Ibid.

3. J.C. Wylie, *Military Strategy: A General Theory of Power Control* (New Brunswick: Rutgers University Press, 1967).

4. Charles Nickerson et al., "Aligning Marine Corps Aviation Force Structure with National Strategy," *Center for Naval Analysis*, March 2022, <https://www.cna.org>.

5. Office of the Director of National Intelligence, *The Annual Threat Assessment for the U.S. Intelligence Community for 2022*, (Washington, DC: February 2022).

6. "Stand-in Forces."

7. *Military Strategy*.

8. Ibid.

9. David H. Berger, "The Path Forward," *Washington Post*, March 16, 2022, <https://www.washingtonpost.com/washington-post-live/2022/03/16/path-forward-gen-david-h-berger>.

10. Bing West, "A Response to Mr. Christopher Corrow, Headquarters Marine Corps," *National Review*, March 19, 2022, <https://www.nationalreview.com/corner/a-response-to-mr-christopher-corrow-headquarters-marine-corps>.

11. "Stand-in Forces."

12. "A Response to Mr. Christopher Corrow, Headquarters Marine Corps."

13. Ibid.

14. Ibid.

15. *Military Strategy*.

16. Ibid.

17. Peter D. Haynes, *Toward a New Maritime Strategy* (Annapolis: Naval Institute Press, 2015).

18. Ibid.

19. *Military Strategy*.

20. Joseph R. Biden, *Interim National Security Strategic Guidance*, (Washington, DC: March 2021).



Join a Marine's journey across the Pacific during World War II in our new virtual experience with **five runs and challenges**. Go from Marine Corps boot camp to the challenges and eventual victories at Guadalcanal, Tarawa, Peleliu and Okinawa!

Learn more about our new series at:  
[mca-marines.org/mcaevents/category/foundation-events](https://mca-marines.org/mcaevents/category/foundation-events)

MARINE CORPS  
ASSOCIATION  
FOUNDATION

A Run through  
Marine Corps History  
**WWII PACIFIC  
CAMPAIGN**



# Training for the Future

The next step  
by Capt Walker Mills

In early 2018, Secretary of Defense James N. Mattis established the Close-Combat Lethality Task Force to make generational investments in America’s close-combat forces, that is the Army and Marine infantry, as well as reconnaissance and special forces units.<sup>1</sup> He assessed that close-combat forces, specifically the Army and Marine infantry, had been neglected in recent decades and that soldiers and Marines today train in ways that would be familiar to their grandfathers. Meanwhile, other areas of the military like aviation, communications, and other high-end capabilities benefited from massive investment and proliferation. This sentiment has been echoed by active-duty members of the force, with members noting that since 1945 eighty percent of America’s battle casualties have been sustained by close combat forces, with the highest percentage coming from Marine infantry.<sup>2</sup> At the human level, this means that the eighteen-year-old rifleman from Youngstown, OH, in 2023 is not much different from his counterparts who invaded Iraq in 2003 or in 1991. There have been marginal improvements to his personal equipment, but the way he is trained is largely unchanged. Of training evolutions in the desert of Twentynine Palms, CA, one Marine wrote, “the 1985 Marine would feel mostly right at home if asked to strap on his kit and fight the training scenario of 2017.”<sup>3</sup> I served with a battalion executive officer who believed that the platoons in our battalion were nearly identical to the ones he remembered leading well over a decade before. This needs to change. The Pentagon’s “Third Offset” is innovation, we need to make sure as a Service that we are investing in the training and education of our Marines and sailors in a way that promises

**>Capt Mills is an Infantry Officer currently in training to be an Unmanned Aircraft Systems Officer. He previously served on exchange to the Colombian naval academy La Escuela Naval de Cadetes “Almirante Padilla” in Cartagena, Colombia, and with 2/1 Mar as a Rifle and Weapons Platoon Commander. He is also a non-resident fellow at the Brute Krulak Center for Innovation and Future War.**



**Some of the training Marines undergo today would be easily recognized by their grandfathers. (Photo by Cpl Ronald Parker.)**

to provide continued overmatch for a generation.<sup>4</sup> To make a generational investment in our close-combat forces, we need to fundamentally change the way we structure and resource our training to a model supported from outside of small units.

Today, military units are responsible for training themselves as they have been across almost all of history. Company commanders train their lieutenants, lieutenants train their sergeants, and sergeants train their privates. The two exceptions in the Marine Corps are formal schools—like the Infantry Officer Course or Winter Mountain

Leader’s Course—and Service-level exercises run by outside agencies like Mountain Exercise, Integrated Training Exercise run by the Marine Corps Training and Operations Group in Twentynine Palms, or Marine Corps Combat Readiness Evaluations. There is no doubt that these formal schools and facilitated exercises are the gold standards for pre-deployment training and individual development. Be fitting as such, they are prioritized in the training scheduled and resourced appropriately by Headquarters Marine Corps but even they have become stale. But what about the rest of the

time? Integrated Training Exercise is only a 35-day exercise, a Marine Corps Combat Readiness Evaluation may last a week if that, and only a small portion of Marines can expect to attend a formal school during an eighteen-month pre-deployment workup. During this time, the units train themselves, generally with training facilitated by the next higher level within the battalion.

This internal training model is weak for several reasons. Battalions are not organized or optimized for training—the structure of the Marine infantry battalion, the rifle companies, and the platoons are designed for combat. If it were organized for training, it would be organized differently. The leadership within the battalion has also been primarily trained for combat, not trained for training. Any leaders who have received specific training on how to train small units are likely in the battalion by chance. Though many formal courses in the Marine Corps pay lip service to the idea of *train the trainer* and small-unit training, it is rarely a focus. In the three-month Infantry Officer Course, only the final portion focuses specifically on building a training plan and executing live-fire training as a trainer. This makes sense because the Marine Corps needs trained platoon commanders who can lead in future combat. However, the reality is that today few Marine platoons are deploying to combat zones, but every Marine platoon spends the bulk of its time training. The current approach necessarily forces Marine lieutenants to “learn on the job.” Obviously, this is not impossible since this is how Marine platoons have trained for generations, but it is not ideal.

This focus on training also prevents leaders from being trained themselves. Some critics of this argument might argue that “training others develops true mastery” or something along those lines. Certainly, training others develops the skills of the trainer, but it is not the same as being trained yourself. Developing concepts of operations and confirmation briefs for ranges while they develop important skills can in no way be construed as improving the tactical decision making of a lieutenant.

As an analogy, let us consider a professional football team. While not a rifle platoon, there are similarities—episodic periods of training followed by contests, a single-minded focus on success, a professional time commitment, and so on. But there are fewer similarities in the way that the two groups train. The football team has a professional staff of trainers who have a specific specialty—defensive line, receivers, or nutrition for example—and there is a clear difference between the players and the coaches. Most of the coaches were likely players in the past, but their current position is as a professional coach, and they earned their position for their skill in *coaching*, not their skill at *playing*. The quarterback is not the coach, and the coach was not necessarily an MVP—but he was selected for his ability to coach.

---

***In our institution, the quarterback is also the coach and the team manager.***

---

We do not have this dual-track system for players and coaches in the Marine Corps. In our institution, the quarterback is also the coach and the team manager. Because of this, the quarterback is only able to spend a fraction of his time on the field training because of the other hats he is forced to wear. What this means for Marines is that there is a damning lack of tactical repetitions among our leaders that increase as Marines become more senior. A shift to using a dedicated cadre for battalion training is in line with the Commandant’s call for “aligning the talents of individual Marines with the needs of the service.”<sup>5</sup> Virtual reality and computer-based learning environments may help increase the number of reps Marines can get in a tactical environment by increasing efficiency, but they do not fix the underlying problem.

In my own experience of an eighteen-month pre-deployment workup and the anecdotal experiences of my peers—but

supported by an analysis of the career path for infantry officers—a platoon commander might reasonably have ten opportunities to lead his platoon in a tactical scenario during the workup. His company commander might have perhaps five or six. This lack of tactical experience at the company level has been highlighted in other commentaries.<sup>6</sup> The battalion commander will probably have only two or three opportunities, one during the readiness evaluation which is the final pre-deployment certification, and one during the Integrated Training Exercise. Both of these are facilitated by external agencies to the battalion—either the regimental headquarters or the Marine Corps Training and Operations Group. Added together, this means that after nearly twenty years of service, a Marine officer may only have twenty or so repetitions of command in a tactical scenario between his time in the fleet forces and supporting establishment. This is roughly one opportunity per year. This reality is in stark contrast to former Secretary Mattis’s drive to have troops fight “twenty-five [or more] bloodless battles” before combat.<sup>7</sup> This also means that the leaders who are evaluating and facilitating key training events may have only experienced them once or twice before.

What should be done? The Marine Corps should invest in a dedicated training cadre of active-duty, reserve, and civilian personnel to support, facilitate, and evaluate training down to the platoon level. We need to recognize that significantly increasing the value of our training time and the time available to train will require agencies outside of the battalion organization to facilitate training. Elite special-operations units, as well as professional sports teams, use this model of external support for training. It will be more expensive, and it will limit some of the traditional control commanders are used to having over their Marines and sailors, but it could result in a dramatically better-trained force.

Imagine a lieutenant colonel that has just assumed command of his battalion. His first order of business is to sit down with the head of the battalion train-



**Marines require the most realistic training technology can provide and dedicated expertise to get the most out of it. (Photo by Cpl Patrick Crosley.)**

ing cadre, perhaps a retired lieutenant colonel himself or an active-duty officer who is purely focused on training. The cadre leader presents the battalion commander with three training plans for the workup—each slightly different to allow the commander to exercise some command prerogative. But the workup has already been planned and incorporates all of the lessons learned and after-action reports of the last ten years of workups. The cadre knows the resources available for training and the training areas, and is ready to support the training. The commander does not have to spend his days with the operations office planning training; instead, he can be executing training. His on-the-job training does not have to come at the cost of training days for his battalion. The battalion leadership can participate in the training and become trained themselves. The cadre can facilitate more company and battalion-level events, more force-on-force events, and incorporate more training enablers like role players, contractors, and pyrotechnics. Because of the cadre, there is more training and better training.

Another benefit of using outside support is the value that they can provide in evaluation. In battalion training, most of the evaluations are done internally, leaders evaluate the actions of their

subordinates during a training event if they are formally evaluated at all. The weakness here is that those leaders may only have executed the training event they are evaluating once or twice before. They are probably not experts, and this limits the value of their feedback. A professional cadre would have the experience of observing tens or hundreds of similar events in the past and can do a much better job of evaluation. Furthermore, these cadres can adhere to common standards across the Marine Corps and provide real insight to senior leaders about readiness. They could incorporate evaluation tools like film and collect and analyze larger amounts of data to compare across the force—things that are generally out of reach for an infantry battalion. An article in the *Marine Corps Gazette* highlighted the value of “game film” for training events, but tellingly, the unit needed the support of multiple members of a local college football team to make this possible.<sup>8</sup>

If we as a Marine Corps truly want to maintain the lethality overmatch of our close-combat units, we need to make significant investments in the way we train our infantry at the fundamental level. We cannot simply will ourselves to *train harder* or *train smarter*, only organizational design can achieve this

level of change. This is more important than new night-vision goggles or a 6.5mm rifle round. This is more significant than adding simulators or computer games into a training program or adding contractor support to a range. This proposal is for fundamental change in the way units train—a shift from primarily training themselves to being trained by others.

### Notes

1. Secretary of Defense, *Establishment of Close Combat Lethality Task Force*, (Washington, DC: March 2018).
2. Jeff Cummings, Scott Cuomo, and Bob Scales, “When Dauntless Isn’t Enough: The Moral Imperative for Fixing America’s Close Combat Units,” *War on the Rocks*, January 23, 2018, <https://warontherocks.com/2018/01/dauntless-isnt-enough-moral-strategic-imperative-fix-americas-close-combat-units>.
3. Ryan Pallas, “No More Self-Licking Ice Cream Cones: Marines Need to Train Against Realistic Adversaries,” *War on the Rocks*, January 12, 2018, <https://warontherocks.com/2018/01/no-self-licking-ice-cream-cones-marines-need-train-realistic-adversaries>.
4. Secretary of Defense, *The Defense Innovation Initiative*, (Washington, DC: November 2014).
5. Gen David Berger, *Talent Management 2030*, (Washington, DC: November 2021).
6. Gene A. Harb, “The War Academy: Evolving the Field Grade Warrior,” *Marine Corps Gazette* 103, No. 12 (2019).
7. Jen Judson, “25 Bloodless Battles: Synthetic Training Will Help Prepare for Current and Future Operations,” *Defense News*, September 5, 2018, <https://www.defensenews.com/smr/defense-news-conference/2018/09/05/25-bloodless-battles-synthetic-training-will-help-prepare-for-current-and-future-operations>.
8. J.P. Carter and McEnroe, “Film Don’t Lie: Video Analysis Applied to Training,” *Marine Corps Gazette* 103, No. 7 (2019).



# Don't Call it a Comeback

Refining the role of heavy lift within Expeditionary Advanced Base Operations

by Capt Whitley "Warhammer" Noel

Imagine fumbling through your house and endlessly searching for the keys to your car only to realize after some intense searching that the keys were in your hand all along. When the CMC announced the *Commandant's Planning Guidance* of 2019 and introduced the idea of Expeditionary Advanced Base Operations (EABO), the Marine Corps, within all functional areas, made varying efforts to define their role within this new environment.<sup>1</sup> The leaders challenged their young Marines and salty veterans to tackle this complex problem-set of operating within the weapons engagement zone of a peer competitor. We were called upon to engineer innovative ideas for operating within the littorals in support of the Navy's Distributed Maritime Operations concept whether that meant acquiring new technology, weapons, and equipment, or changing the construct of an individual unit. However, the keys to success were in our hands all along, specifically the assets already in our robust inventory being employed in innovative ways.

At the forefront of the charge within the assault support community as we look to the future in developing doctrine for EABO at the squadron level are the Marines and sailors of Marine Heavy Helicopter Squadron 464 (HMH-464) known as the "Condors." In anticipation of future operations in a heavily contested multi-spectral environment, the Condors look to revolutionize the way the CH-53 helicopter is employed in the future fight by executing an aggressive campaign as a Stand-In Force. During a deployment for training to Grayling, MI, in August 2021, HMH-464 strategized ways to bolster the EABO concept to support the MAGTF in the littoral fight by exploring the functionality of a mobile,

>Capt Noel is currently serving as the Marine Aviation Training Systems Site New River Operations Officer and CH-53 Flight Leadership Standardization Evaluator Program Coordinator aboard MCAS New River. She was formerly the Assistant Operations Officer at Marine Heavy Helicopter Squadron 464.



**HMH-464 aircrew scan the coastline during a coastal patrol mission to deter simulated enemy activity in the port region. (Photo by LCpl Christopher Hernandez.)**

scalable, expeditionary Tactical Air Command Center employed and staffed at the squadron level. While this does not replicate a TACC in the sense that we know it doctrinally, the Condors aimed to redefine the scalability and operational output of a TACC staffed by organic squadron personnel. Additionally, HMH-464 explored new ways to incorporate the Adaptive Network Wideband Waveform to facilitate in-flight data transmission between both aircraft and ground stations. This was the first step in a year-long effort to increase the command and control capabilities of a squadron commander and to refine the role of assault support within the EABO environment.

In December 2021, HMH-464 took it exponentially further and conducted an EABO-centric deployment for training to Florida in a tri-site construct meant to refine tactics, techniques, and procedures for operating in a distributed environment in line with the concept of operating as a Stand-In Force. A *Concept for Stand-in Forces* reveals that a Stand-In Force is meant to "deter the application of military power on the part of adversaries by establishing forces designed to persist forward alongside allies and partners within a contested area, providing the fleet, joint force, interagency, and allies and partners more options for countering an adversary's strategy."<sup>2</sup> The squadron was able to

generate mass in strategic simulated littoral locations without the vulnerability of concentration. Over the course of the training evolution, the squadron conducted simultaneous operations at three autonomous locations through-

tions within multiple domains. The training plan for the evolution included working with multiple DOD and Department of Homeland Security agencies, simulating the Stand-In Force concept of integrating with partner nations.

***In an island-hopping campaign, the CH-53 is able to pre-position at remote locations and refuel both aviation and ground assets, thereby supporting all war-fighting functions of the MAGTF.***

out Florida with additional flight operations taking place aboard Marine Corps Air Station New River. HMH-464 successfully maintained command and control of all three locations and operations in New River by employing over-the-horizon and beyond-line-of-site capabilities never before tested within the heavy lift fleet community, ultimately allowing the commander to project force in a simulated island-hopping campaign and work to sustain operations within the competition and cooperation phases of the competition continuum. The HMH-464 team integrated with personnel from Kranze Technology Solutions and the 2d Light Armored Reconnaissance Battalion to leverage the strengths of the Mobile User Objective System to explore the next step in beyond line of site communications resulting in the first-ever field employment of data transmission between four ground and eight airborne nodes, providing realtime mission updates to the squadron commander. This new capability enabled the squadron commander to make decisions with realtime feedback on the status of his flight operations.

Efforts to maximize the capabilities of a squadron also included an intricate and interwoven tactical scenario and squadron training plan developed internally to provide scenario injects to include frequency jamming, Operations in the Information Environment, coastal patrolling operations, long-line externals, and interagency operations designed to interrupt adversary opera-

In doing so, the Condors showcased the CH-53's ability to extend the range of additional aviation assets by conducting aviation-delivered ground refueling with both helicopters and fixed-wing aircraft from various partner Services. In an island-hopping campaign, the CH-53 is able to pre-position at remote locations and refuel both aviation and ground assets, thereby supporting all warfighting functions of the MAGTF. Additionally, the CH-53 is the only heavy-lift helicopter asset in the military's arsenal. When partner nation rotary-wing assets are conducting patrols within the littorals, they may be limited by the amount of fuel organically onboard their aircraft, which restricts their range and capabilities. The CH-53 can

preposition at a strategic landing zone to set up a forward arming and refueling point and provide aviation-delivered ground refueling operations to allow these assets to project their presence further from their home base, maximizing their capability without increasing their footprint. According to the *Tentative Manual for Expeditionary Advanced Base Operations*, these forward arming and refueling points are a critical piece to ensuring the success of littoral forces by improving sortie generation and extending the range of multiple type/model/series aircraft.<sup>3</sup>

During operations aboard MacDill Air Force Base in December 2021, the Condors conducted long-line externals, lifting 500-gallon drums without the use of the traditional helicopter support team. Using a certified load as outlined in the multi-service helicopter sling-load manual, the Marines of HMH-464 emplaced multiple 500-gallon drums, simulating prepositioning potable water and fuel at pre-determined locations in support of the GCE.<sup>4</sup> Honoring the threat, HMH-464 determined that alleviating the need for additional helicopter support team Marines on the ground, effectively reduced the requirement for a high-demand, low-density capability operating within the weapons engagement zone while still conducting critical resupply missions throughout the distributed area



***HMH-464 aircraft avionics personnel integrate with 8th Communications Squadron personnel to develop TTPs for employing a TACC at the squadron level. (Photo by LCpl Christopher Hernandez.)***

of operations. *MCDP 1* talks about critical terms like “tempo” and “speed.”<sup>5</sup> The Condor’s EABO deployment for training to Florida demonstrated the CH-53 community’s ability to increase the tempo and speed of all warfighting functions as well as our partner nations with the emplacement of fuel and potable water drums in strategic locations. The Marine Corps boasts a heritage of being able to operate in any clime and place. The heavy-lift community can enable operations with its unique ca-

deployment for training to operate independently without losing medical coverage by employing telemedicine. The HMH-464 Flight Surgeon emplaced two qualified corpsmen at alternate sites to oversee scenarios with an incapacitated corpsman. Officers and enlisted Marines were chosen at random to participate in two telemedicine evolutions simulating a Marine needing stitches or other basic care, thereby extending the reach of the flight surgeon when otherwise stifled by the tyranny of distance.

3. Headquarters Marine Corps, *Tentative Manual for Expeditionary Advanced Base Operations*, (Washington, DC: February 2021).

4. Headquarters Marine Corps, *Marine Corps Reference Publication 4-11.3E, Multiservice Helicopter Sling Load: Single-Point Load Rigging Procedures*, (Washington, DC: February 2009).

5. Headquarters Marine Corps, *MCDP-1 Warfighting*, (Washington, DC: June 1997).



---

**The overarching theme here is that there are still groundbreaking ways to operate within the Marine Corps using existing technology, tactics, and procedures across all domains.**

---

pabilities in climates we have not yet faced, such as the triple-canopy jungles of our neighbors in South America and Asia. The long-line external capability facilitates the delivery of fuel or potable water to locations where landing to drop off supplies may not be possible.

A distributed logistics footprint poses its own problem set in an era when the Marine Corps traditionally boasts the ability to do less with more. There is not a secret warehouse somewhere stocked with unlimited supplies or augment personnel to supplement that which is organic to a CH-53 squadron. Marines of HMH-464 rose to meet this challenge by cross-training Avionics Marines to supplement the lack of available Communications augments. Operations in an Expeditionary Advanced Base environment are inherently dependent upon heavy communications. To operate as a Stand-In Force, personnel from HMH-464 identified the need to expand internal capabilities by conducting pre-deployment cross-training on the requisite equipment to execute an expansive primary, alternate, contingency, and emergency communications plan. Under the same logistical challenge of a limited number of augment personnel, the medical team explored new ways to allow the tri-site

The overarching theme here is that there are still groundbreaking ways to operate within the Marine Corps using existing technology, tactics, and procedures across all domains. The answer is to employ that which is already organic to our Marine Corps, specifically as we manage logistical challenges within the EABO construct, the mighty CH-53 and the innovative ways to employ this very capable platform. Through a series of deployments for training, HMH-464 successfully refined the role of heavy lift within the assault support community, a process that serves as a building block on which the Condors will continue to build and strengthen the importance of the heavy lift community in the future fight while operating as a Stand-In Force. HMH-464 is boresight focused on what warfighting means for the next generation.

---

**Notes**

1. Gen David H. Berger, *38th Commandant’s Planning Guidance*, (Washington, DC: July 2019).

2. Gen David H. Berger, *A Concept for Stand-in Forces*, (Washington, DC: December 2021).

**TRANSITIONING OUT OF THE CORPS?**

Whether you need

- service records
- employment opportunities
- benefit information

MCA has the information you need!

Visit [mca-marines.org/resource/transitioning-marines](https://mca-marines.org/resource/transitioning-marines)

and find the resources you need to aid in your transition from service.

# The Lynchpin of Force Design

Why *Talent Management 2030* is the key to success

by Maj Ryan W. Pallas

***“The existing system is incapable of providing the more skilled and experienced force required to meet the 38th Commandant of the Marine Corps’ Planning Guidance and Force Design 2030.”<sup>1</sup>***

***—Col E. Reid, “The Courage to Change: Modernizing U.S. Marine Corps Human Capital Investment and Retention”***

***>Maj Pallas is a CH-53E Helicopter Pilot who has completed tours at MCAS Miramar, MAWTS-1, U.S. Marine Corps Forces, Pacific, MCAS Kaneohe Bay, and Headquarters Marine Corps, Manpower and Reserve Affairs. Maj Pallas is currently attending the Schar School of Policy and Government as part of the Commandant of the Marine Corps Strategist Program.***



**Oath of enlistment.**<sup>6</sup> (Photo by Sgt Sarah Ralph.)

**F**orce Design 2030 lays the framework “in preparing for the sweeping changes needed to meet the principal challenges facing the institution.”<sup>2</sup> Lawmakers identified required changes for the Marine Corps after the release of the 2018 *National Defense Strategy* captured by a defense reporter publishing, “SASC Seeks Sweeping ‘Roles & Missions’ Report: Wither The Marines?”<sup>3</sup> Lawmakers insist, “We don’t have time for incremental change,” and without the correct personnel executing “the most aggressive [force design] of any service—except perhaps

the Chinese military,” the Service prematurely jeopardizes future success by once again prioritizing weapon systems and platforms over a modern personnel system.<sup>4</sup> The CMC recognizes this shortfall and understands: “Without profound improvements made at speed, the deficiencies in the current system will result in the failure of broader service modernization efforts.”<sup>5</sup>

This article seeks to describe the future human resource system and provide recommended solutions to

increase the Marine Corps’ ability to compete with the private sector and other Services. First, I will define the problem that faces the military in terms of recruiting. Next, I will describe what the Service is currently doing to attack the problem. Lastly I provide a list of recommended improvements, derived from my experiences as an assignments officer and student studying the all-volunteer force, to bolster current efforts by the Service to recruit and retain the talent needed for the future.



## The Problem

The U.S. Military faces a recruiting problem. The testimony to the Senate Armed Services Subcommittee on Personnel illustrates a decreasing population of eligible and interested men and women to recruit for military service.<sup>7</sup> Gilbert Cisneros, the Under Secretary of Defense for Personnel and Readiness, stated:

The size and quality of the youth market has changed very little in ten years. Only 23% of today's youth are eligible for military service without a waiver, and only 2% are eligible, high-quality, and likely to serve. Youth propensity has declined over the last several years, from 13% in 2018 to 9% in 2021. This decline represents approximately 1 million fewer youth propensed for military service.<sup>8</sup>

The population that recruiters can engage in is decreasing. Smaller recruiting populations without the requisite personnel systems are problematic for three reasons. First, the competition for talent between the private sector and the military is growing with the economy providing two jobs for every person in America.<sup>9</sup> Private sector investments in new human resource technologies are only increasing.<sup>10</sup> Unfortunately, the Federal Government is lacking, according to the Government Accountability Office study, which reveals, "One sector that could clearly do with more investment in HR tech is the U.S. Federal Government."<sup>11</sup>

Second, the Space Force is increasing the demand for highly technical skillsets by competing "for talent with the high-paying space industry."<sup>12</sup> Internally to the Services, there is a competition for high-performing technical experts with the CMC identifying,

In this current era of heightened global competition, the Marine Corps requires a vehicle for rapidly recruiting mature, seasoned experts. We can no longer afford the cost in time—measured in years, and sometimes decades—to train and educate all our technical leaders, particularly given the extraordinary pace of technological change.<sup>13</sup>

Lastly, a smaller pool of eligible and interested men and women could ulti-

mately impact Marine Corps operating concepts as discussed by the 38th Commandant in his November 2022 *Proceedings* article. Gen Berger states, "if analysis indicates that manned aircraft are necessary in large numbers, then the joint force should pursue fresh approaches, aggressively and creatively shifting personnel and resources to meet pilot recruiting and retention goals."<sup>14</sup>

The current recruiting problem should now be apparent. Not only are the Services recruiting from a smaller pool of eligible and interesting candidates, but the Services are in an internal competition for technical skills based on the "extraordinary pace of technological change" to keep pace with China, as directed by the 2022 *National Defense Strategy* if left unchanged could impact future operating concepts such as *Force Design 2030*.<sup>15</sup>

The problem is a combination of factors, but one aspect is economics; as the supply of interested and eligible personnel decreases and demand in both the private and military sectors increases, the result is the price per individual increases. This is not lost on lawmakers identified by the recent *FY23 National Defense Authorization Act* Markup which,

[s]upports a military basic pay raise by 4.6%. It also requires the Department of Defense to study the basic pay tables and basic allowance for housing ... in an effort to modernize and incentivize service member compensation ... and facilitate the recruitment and retention of the most talented military in the world.<sup>16</sup>

The Marine Corps requires a cradle-to-grave personnel system, or as the CMC identified, "a vehicle for rapidly recruiting mature, seasoned experts" that does not currently exist.<sup>17</sup>

The current system is unable to compete with the private sector or other military Services with the Army noticeably outpacing the Marine Corps.<sup>18</sup> Marine Corps systems are unable to leverage data when recruiting lacking predictive analytics for a more precise initial skillset and talent matching. This lack of capability will continue unless prioritized and funded. Unfortunately,

prioritizing weapons systems and platforms at the expense of personnel systems is not new to the Marine Corps. In November 1949, LtCol Godbold wrote:

We have spent tremendous amounts of time and money on the development of machines and methods of waging war. ... At the same time, we have placed less and less reliance on the individual marine. There has been a tendency to overlook the fact that regardless of the efficiency of our weapons and equipment, individual marines must still operate these weapons and equipment.<sup>19</sup>

If the Service continues to prioritize weapon systems and advanced platforms at the expense of personnel technologies it will prematurely dismiss, at a minimum, the Force Design efforts of the 37th and 38th CMC.

Not only is recruiting an issue but also retention. A 2020 *RAND* study on retention states, "The authors find that end strength and retention increased in each service *except* for the Marine Corps."<sup>20</sup> Maintaining the use of monetary incentives to navigate the proximate personnel challenge of the day without addressing the underlying problem of outdated personnel systems and policies is not only financially unsupportable in the long-term, but will prove the timeless words of Alfred Thayer Mahan, "Historically, good men with poor ships are better than poor men with good ships."<sup>21</sup> The Service's ability to recruit and retain the required personnel must rely on more than human effort alone as the recruiting environment and private sector become increasingly competitive leveraging technology in the human capital arena.

## Current Efforts

The Service is not blind to the current issues. The Marine Corps established the Talent Management Strategy Group nested within Manpower and Reserve Affairs that reports directly to the Assistant CMC.<sup>22</sup> The Assistant CMC is the Talent Management Officer for the Marine Corps, overseeing "issues impacting our ability to invest in, retain, and leverage a diversely skilled and talented force."<sup>23</sup> The working group has four lines of effort:

1. Implementation of new models for recruiting talent.
2. Establishment of an assignments process consistent with our warfighting philosophy.
3. Introduction of new initiatives to increase career flexibility.
4. Adoption of modern digital tools, processes, and analytics, consistent with industry standards.

The Service, since the release of *Talent Management 2030*, has updated parental leave, selective retention bonuses, proactive re-enlistments, remove-by-request or opt-out options, and education

opportunities leveraging non-monetary incentives. Although positive progress has been made, the adoption of modern tools, on which all other Force Design efforts hinge, is listed last in the lines of effort above. Intentional or otherwise, the Service must prioritize the adoption of modern tools first to achieve the remaining lines of effort.

**The Required Tools**

The new personnel system must do three things. First, it must gather data across the entirety of a career starting when an individual joins the Ser-

vice. Second, it must allow access and transfer of that data between Marine Corps organizations, from the tactical level to HQMC, enabling data-driven Service-wide solutions. Third, it must be available to the individual Marine for instantaneous comparative analysis for self-improvement, assessment, and long-term planning.

Five phases of a career:

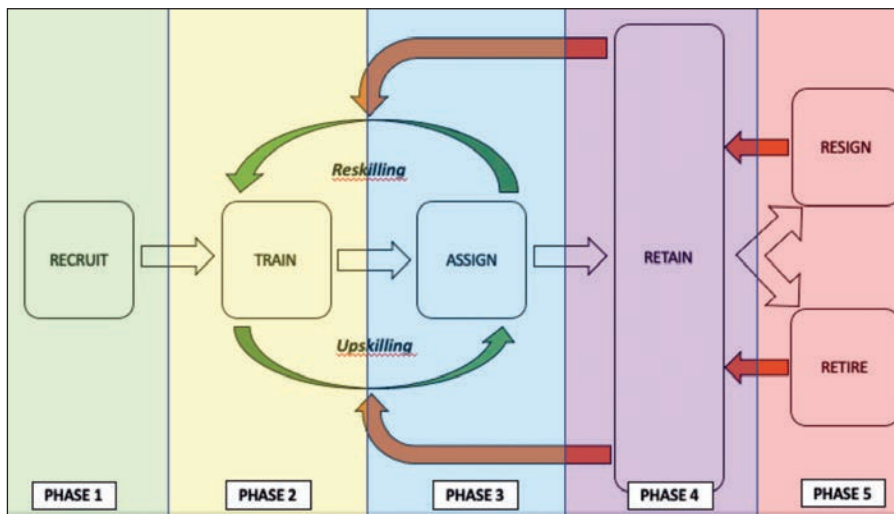
1. Recruit
2. Train
3. Assign
4. Retain
5. Resign/Retire

The new personnel system seeks to keep service members in Stages 2 (train), 3 (assign), and 4 (retain) without opting for Stage 5 (resign/retire). Should the service member opt for Stage 5, the system should then determine the cost/benefit of retaining that Marine or allowing them to separate. Through predictive analytics, the system can assess where an individual is throughout their career, the skills acquired through formal training or self-schooling, and how to assign those skills to satisfy an existing or emerging service requirement. As *Force Design 2030* looks to capitalize on the experience and knowledge of a more matured enlisted force, this seems a prudent step in ensuring the Service does not prematurely divest of human capital due to legacy personnel policies or systems.

If the system determines it is cost beneficial to retain a Marine, the Service can choose to reskill or upskill that individual. Reskill is “looking for people with adjacent skills that are close to new skills the company requires.”<sup>25</sup> Upskilling “teaches employees new, advanced skills to close talent gaps.”<sup>26</sup> To initially hire an individual requires a salary and a 33 percent replacement cost. If a company keeps an existing employee within the organization through reskilling, the total costs amount to \$10,000 or less per employee.<sup>27</sup> A by-product of this new system is lessening the financial impacts to parallel Force Design efforts by allowing reskilling/upskilling to a greater degree. Maximizing the use of internal personnel seeks to lower personnel costs over the aggregate of a career: “94 percent of employees say that they would



Sergeant Major of the Marine Corps at the Talent Management Summit. (Photo by Cpl Eric Huynh.)<sup>24</sup>



The five phases of a career. (Illustration created by author.)

stay at a company longer if it simply invested in helping them learn,” which reskilling and upskilling now allows the Marine Corps to provide to a greater degree.<sup>28</sup> The Service, through developed technology, is now in a position “[t]o be successful in competition and conflict in the 21st century” through a personnel system able to compete with the private sector and other Services.<sup>29</sup>

Lastly, a new personnel system allows data to “drive decision making” and shifts personnel decisions from reactive to proactive.<sup>30</sup> With recent events such as the great resignation with over 4.4 million people leaving their jobs, companies are now relying on human resource technology to a greater degree to attract and retain talent.<sup>31</sup> A new system allows data to inform the entire organization when it comes to personnel decisions with portals collecting data from the individual Marine, unit commanders, and HQMC in a single source location. Unfortunately, the current system collects data in over 70 disparate databases preventing the detailed analysis of valuable data to drive personnel decisions.<sup>32</sup>

The data, once collected and consolidated, also enables the individual Marine to make career decisions from realtime analytics. The outward-facing portal for service members can quickly provide a “class rank” or performance comparison across the Service. A Marine can now determine where they need to improve individually through comparative assessments using the data provided by the performance evaluation system and other key performance indicators.

### Social Media

The Services depend significantly on advertising. Historical data shows that increased advertising yields increased recruiting results.<sup>33</sup> However, commercial-free streaming services impede historic advertisement mediums such as television and radio. In addition, a *Pew* study reveals slightly over half of households have cable or satellite, a decrease of 20 percent since 2015.<sup>34</sup> This loss of a commercial medium creates a serious challenge with smaller and less eager recruiting

populations. A separate *Pew* study reveals men and women ages 18–29 use social media more than any other age demographic.<sup>35</sup> A Center for Naval Analyses study shows while social media recruitment “may take longer to materialize,” the resulting enlistment may last longer.<sup>36</sup> As a former recruiting station commanding officer stated, “The men and women who will make up our future ranks are digital natives.” The *Pew* study shows the men and women largely responsible for policy and institutional change are largely divorced from the digital realm.

LtGen Bellon, Commander of Marine Forces Reserve and South, has noticed the importance of social media. LtGen Bellon’s recent event at Marine Barracks Washington, invited some of the Service’s most prominent social media users stating:

I invited several of these social media leaders to our Evening Parade and met with them earlier in the day to personally congratulate them on their victories in the digital realm, to encourage their continued efforts, and to learn from them. Our Corps truly does evolve to stay relevant because our Marines continue to find ways to lead, hone their warfighting craft, and better others along the way.<sup>37</sup>

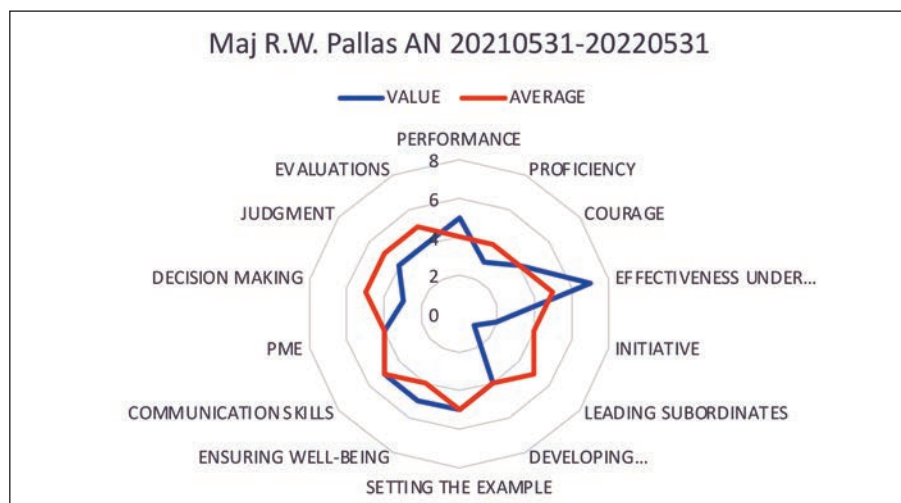
If the Service is serious about recruiting, senior leaders must demonstrate the behavior required to engage the next generation in the space they operate in. Social media can no longer be an after-

thought but the starting point when looking to recruit the next generation of men and women.

### Assignments Process Consistent with Our Warfighting Philosophy

Family models have changed since the establishment of the all-volunteer force in 1973. In a *Pew* study, only 25 percent of families were dual-income in 1960, whereas 60 percent were dual-income in 2012.<sup>38</sup> Financial security is grossly impeded by the historic military career path. Studies show “that spouses who relocate tend to take a cut in pay and benefits, and many find it difficult to find new employment.”<sup>39</sup> Forty-three percent of service members said spouse employment was an issue in the largest annual study of military families impacting economic security.<sup>40</sup> In a *Pew* study, “Two-thirds of lower-income adults (65%) say they worry almost daily about paying their bills, compared with about one-third of middle-income Americans (35%) and a small share of upper-income Americans (14%).”<sup>41</sup> The Services must consider the growing cost of living and how that impacts a Marine and his family in economic distress. When looking at pay tables for the DOD, a majority of service members fall within one of those categories listed above.

A recommended solution is to increase the average three-year assignment to five years. Assuming a twenty-year career, the new assignment length re-



**Annual fitness report (Blue) compared to individual career average (Orange). Example of outward-facing data. (Graph created by the author.)**

quires a family to relocate three times after the initial assignment. This suggested tour length enables children to finish high school in one location, increases equity in home ownership, and enables extended periods of spouse employment minimizing the impacts on dual-income households. The recent FY23 NDAA markup indicates many of these areas are being studied to include housing challenges and the ability for basic pay to be responsive to current economic conditions.<sup>42</sup>

Extended tours provide greater unit cohesion and continuity as the CMC looks to “[m]aturing the force” to “increase the readiness of our warfighting units and stability across our MEFs.”<sup>43</sup> This concept is not new and reflects the thoughts of MajGen Weller who said six decades ago, “The second fundamental requirement of the highest degree of readiness in combat efficiency is personnel stability.”<sup>44</sup>

The five-year tour would be the new standard. This does not mean a service member must stay for the entire tour. With a new personnel system to include an outward-facing portal for service members and monitors to interact in, the option exists to allow a service member to “opt-in” to move if desired. This seeks to streamline the current administratively intensive process of routing a request to shorten or extend tour lengths. This is another mechanism to allow greater flexibility when addressing career timing concerns.

The new personnel system will also display tactical unit data and allow for the collection of command inputs starting at the lieutenant-colonel level. A central repository for unit input can facilitate details lost across the echelons of command during assignments. First, the new system seeks to allow the commander access to see available personnel in their unit and accurately balance risk.

A challenge in most if not all personnel discussions was explaining the difference between the table of organization and the staffing-goal model. This distinction allows commanders to accurately measure risk. The table of organization, which is the common planning tool used by units, is the war-

time strength. The table of organization is something the units should not expect or plan for. The staffing goal is the more accurate planning factor, and the one HQMC uses when it comes to personnel assignments. The staffing goal results from the billets purchased by the Service balanced against rank and occupational specialty health levels. This also considers unit staffing precedence for all commands as delineated in *Marine Corps Order 5320.12*. Unfortunately, staffing goal information is only available at higher echelons of command

and the military is maintained. The military and private sector can capitalize on best practices including risk management, acquisitions, leadership, and technology. This should not sound foreign, as the military and private sectors have shared and developed technology throughout history to benefit one another. It is now time to share talent to maintain capability.

The talent-sharing career model looks to maximize service investments by retaining talented and qualified service members. Any increase in career

---

***The table of organization is something the units should not expect or plan for. The staffing goal is the more accurate planning factor ...***

---

thus preventing a common picture to be gained by the unit commander that allows “consonance with the requirements of the larger situation” as stated by *MCDP 1*.<sup>45</sup>

### **Introduction of New Initiatives to Increase Career Flexibility**

The following are recommendations to increase retention and compete with the private sector. The first recommendation seeks to retain talent by allowing the military and private sectors to both win through “talent sharing.”

Talent sharing allows service members to keep a revolving door quickly transferring between the military and private sector for like professions. In this case, I am addressing aviation, cyber, and STEM personnel. Active-duty service members without obligated service would be able to transfer seamlessly to the reserves and vice versa. Instead of fighting to keep technical professionals, allow them to work for civilian companies and return. Pilots can go to the airlines, begin their seniority clock, and then continue to fly in the reserves. At a certain point, they can return to active duty if they desire.

Individual proficiency continues to grow and a mutually beneficial relationship between the private sector

longevity increases the return on investment to the Service vice a complete divestiture. For example, creating a qualified pilot costs approximately five to ten million dollars.<sup>46</sup> There are countless other occupations, to include enlisted service members, where the Service benefits from keeping them in uniform instead of the current binary approach, which presents the service member with a stay-or-leave decision.

The new model depends heavily on the reserve component. The mission of the reserves is “augmenting and reinforcing the Active Component with trained units and *individual Marines* as a sustainable and ready operational reserve to *augment and reinforce active forces* for employment across the full spectrum of crisis and global engagement.”<sup>47</sup> The new model creates reserve billets in active-duty units to increase personnel levels and combat active-duty personnel shortages. A similar program exists known as the Individual Mobilization Augmentee.<sup>48</sup>

In talent sharing, service members can transition from active duty and directly affiliate with their former unit without having to relocate. The unit benefits from a fully trained individual while the Service has maintained ca-

pability and increased the return on investment from the training given to the individual. Instead of acquiring a service member and satisfying a reserve billet for a reserve unit, the Service must first align the reserve officer in the “talent sharing” model toward current active-duty shortfalls.

Another incentive, as overseas and geographically remote billets remain challenging to fill, is the use of brevet promotions. The FY19 NDAA granted the Army the ability to use brevet, or temporary promotions, that include increased rank and pay. The Army filled geographically challenging positions at Fort Irwin using this authority.<sup>49</sup> If the Marine Corps did not request the brevet promotion authority, this is a simple request to include in the upcoming NDAA remembering “incentives power the system.”<sup>50</sup>

The Marine Corps recently introduced the ability to opt-out of promotion consideration.<sup>51</sup> The Service can go one step further and remove merit re-order by creating a single zone for promotions for every grade. The inefficiencies in merit re-order are easy to illustrate. The Service establishes promotion zones over which the service member has zero control or influence. If a service member with superior performance over the entirety of their career is senior in zone, merit re-order does nothing to recognize their efforts or retain the Service’s top performers. In fact, that individual can lose ground in the promotion process by being ranked lower in the promotion order through the merit re-order process. The Service must create one zone and select the best and most fully qualified. Caitlyn Talmadge and Vipin Narang indicate militaries that “shape its officer corps” using nonmeritocratic criteria jeopardize “warfighting capability, leading not only to a loss, but quick

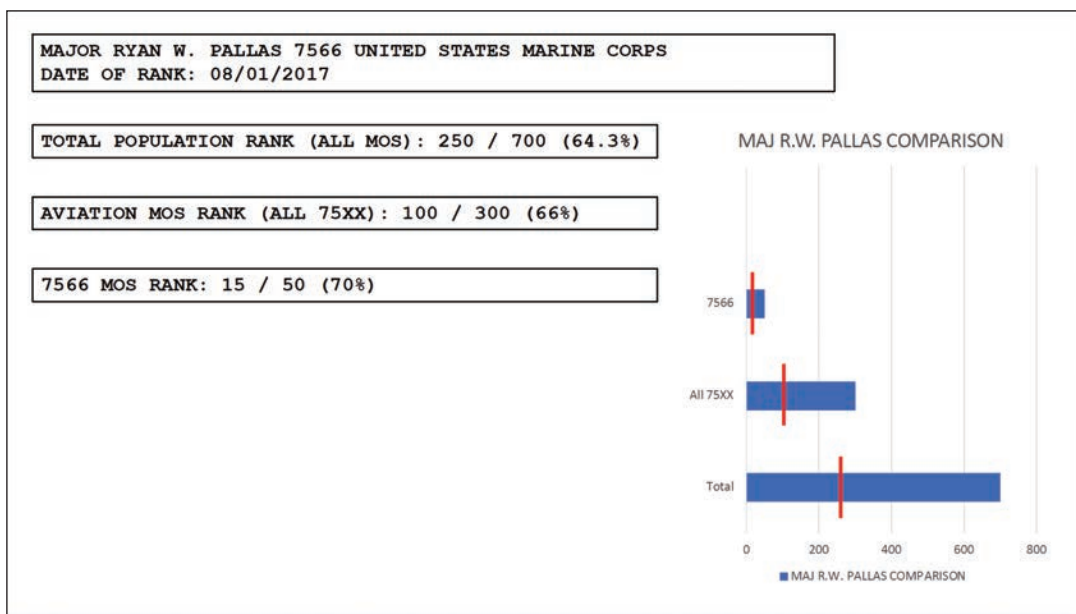
loss” in their study *Civil-military Pathologies and Defeat in War: Tests Using New Data*.<sup>52</sup> The Service must recognize that performance on the battlefield begins with merit in the board rooms through an update to promotion zones in *U.S. Code Title 10*.

The Marine Corps can further improve promotion and selection processes through technology. In the scientific method, there is a process known as replication. Different individuals or groups, if given the same data, should draw the same conclusions. Although the current board system is adequate, it defaults to the experiences of the individual board member rather than data comparison. Boards fail to consider the fluctuations in the average performance of the eligible population. A superior record one year may be slightly above average when compared to the eligible population the following year. A common phenomenon identified in statistics is that the average value, in this case referencing performance, of a sample population may be different across year groups.

A single individual gains intimate familiarity with a record during any board and that is the board member responsible for briefing that Marine. A typical time to prepare a record for a brief is two hours. The remaining board members have approximately

five to six minutes to become familiar with a service member’s record only when that individual is briefed to the board room. Even then, the idea that the Service can select the best and most fully qualified and replicate the same results given the same data, with two hours of preparatory work and a five-minute brief, is unrealistic. The Service can improve this process by implementing comparative abilities in board software to allow comparison across the entire eligible population, within a specific field (combat arms, combat service support, aviation), and within an occupational specialty. For example, the board can see Maj Pallas is 250 out of 700 total personnel screening, 100 out of 300 in aviation, and 15 out of 50 in the 7566 occupational specialties.

By improving the board process, the Marine Corps can accomplish three things. First and foremost, it will select the best and most fully qualified using the current performance evaluation system metrics. Second, it will mitigate biases in the board room that naturally occur in human systems, whether it be nepotism, indifference, or otherwise, and provide a level starting point for all board members derived from a multitude of backgrounds. Third, it will instill greater trust in service members that the process is merit-based.



Example boardroom depiction for comparison. (Graphic created by the author.)

When discussing promotions, the service must also investigate separate categories for promotions. *Title 10* indicates, “Under regulations prescribed by the Secretary of Defense, the Secretary of each military department shall establish competitive categories for promotion.”<sup>53</sup> Updating competitive categories is required to create a path for staff officers. The current process promotes a small percentage of officers to colonel that have not commanded at the rank of lieutenant colonel.

The idea of merit-based promotions and a staff track is not new. The 13th CMC, MajGen Lejeune, discussed the idea in 1928 when he hoped for “an officer corps balanced between proven troop leaders and staff specialists.”<sup>54</sup> Requiring a singular career path prematurely divorces the Service from the necessary talents and capabilities required to navigate complicated issues that arrive far from the battlefield. The Service needs officers who can succeed in the Pentagon and Capitol Hill. Successful staff work enables the service to navigate complicated processes including budgets, acquisitions, Force Design, and personnel issues that require articulating problems and solutions to elected officials. A staff officer track creates a successful link from the Marine Corps to the Congress it serves.

The Service can make two changes immediately improving orders issuance. The Service can issue orders twelve months before a service member relocating and include follow-on assignments when selected for resident professional military education. This does two things. First, it provides greater clarity to service members and families to allow planning for the upcoming move. The lag in the issuance of orders by the Marine Corps becomes apparent when working with dual-military families in other Services. An earlier timeline allows service members and families to address factors such as school selection, housing, and the challenging logistics and planning required during a move. Second, it allows the Service to clarify the units’ incoming personnel to increase long-term planning, effectiveness, and risk management.

A caveat to the Service, it needs to consider the impacts of the military’s new blended retirement system. The Service must consider the bureau of labor and statistics study that shows a declining population of men and women who spend twenty years with a single employer.<sup>55</sup> Without complete data to analyze, a natural assumption is service members will be more inclined to leave active duty because of the new system. The blended retirement system allows service members to depart before the twenty-year mark with money in their pockets. The new retirement system, bureau of labor statistics study, and a highly competitive private sector set conditions for a mass exodus in the near future.

### Conclusion

There are those who will be hesitant to implement such reforms and highlight, “The system works today.” They are correct, the system does work, but it is unable to provide the necessary personnel for *Force Design 2030*. For example, a recent podcast with Marines from 1/2 Mar, the unit responsible for the Infantry Battalion Experiment, provided senior non-commissioned and staff non-commissioned officers at the company level with an increase of internal unit capability.<sup>56</sup> Without removing the current anachronistic pyramid promotion template, the infantry battalion experiment will never achieve the lawmaker-directed change captured in *Force Design 2030*. The system will prematurely divest of the required human capital it needs to succeed against a defiant Russia and rising China.

The problem is the systems and policies of today have been improved through a process of deliberate incrementalism of patchwork that can no longer recruit or retain the required force of the future. “Without profound improvements made at speed, the deficiencies in the current system will result in the failure of broader service modernization efforts,” and require excessive resources, both budgetary and time, lawmakers have identified no longer exist.<sup>57</sup> The recommendations above are not to say the Marine Corps is doing poorly, only that the Marine Corps can

and must do better by prioritizing and investing in a new personnel system first and foremost.

---

### Notes

1. Eric Reid, “The Courage to Change: Modernizing U.S. Marine Corps Human Capital Investment and Retention,” *Brookings*, June 2021, <https://www.brookings.edu/research/the-courage-to-change-modernizing-u-s-marine-corps-human-capital-investment-and-retention>.
2. Gen David H. Berger, *Force Design 2030*, (Washington, DC: March 2020).
3. Sydney J. Freedberg Jr, “SASC Seeks Sweeping ‘Roles & Missions’ Report: Wither The Marines?” *Breaking Defense*, June 6, 2018, <https://breakingdefense.com/2018/06/sasc-seeks-sweeping-roles-missions-report-wither-the-marines>.
4. Congressman Mike Gallagher Congressman Seth Moulton, “Send in the Marines for a Modernization: Force Design 2030 Ensures They Will Still Be the First to Fight,” *The Wall Street Journal*, May 30, 2022, <https://www.wsj.com/articles/send-in-the-marines-for-a-modernization-congress-plan-2030-forces-strikes-capability-11653940925>.
5. Headquarters Marine Corps, *Talent Management 2030*, (Washington, DC: November 2021).
6. Sarah Ralph, “RS Orange County Future Marines Participate in an Oath of Enlistment at San Diego Loyals Game,” *DVIDS*, July 3, 2021, <https://www.dvidshub.net/image/6729823/rs-orange-county-future-marines-participate-oath-enlistment-san-diego-loyals-game>.
7. Subcommittee on Personnel, Senate Armed Services Committee, *To Receive Testimony on Military and Civilian Personnel Programs in the Department of Defense in Review of the Defense Authorization Request for Fiscal Year 2023 and the Future Years Defense Program*, (Washington, DC: April 2002), <https://www.armed-services.senate.gov/hearings/to-receive-testimony-on-military-and-civilian-personnel-programs-in-the-department-of-defense-in-review-of-the-defense-authorization-request-for-fiscal-year-2023-and-the-future-years-defense-program>.
8. Gilbert, Cisneros, Undersecretary of Defense for Personnel & Readiness, *Testimony, Regarding Fiscal Year 2023 Defense Personnel Posture Before the Senate Armed Services Subcommittee on Personnel*, (Washington, DC: April 2022), <https://www.armed-services.senate.gov/imo/>

media/doc/Combined%20Statement%20-%2004-27-2022%20-%20SASC%20(Pers)%20-%20Personnel%20Posture%20-%20USD%20(PR)%20+%20ASDs%20(3).pdf.

9. Jeff Cox, “Payrolls Rose 390,000 in May, Better than Expected as Companies Keep Hiring,” *CNBC*, June 3, 2022, <https://www.cnbc.com/2022/06/03/jobs-report-may-2022.html>.

10. Stuart Lachlan, “Private Sector Modern HR Tech Spend on the Rise, but Public Sector Locked in Antiquity,” *Diginomica*, June 11, 2014, <https://diginomica.com/private-sector-modern-hr-tech-spend-rise-public-sector-locked-antiquity>.

11. Ibid.

12. Patricia Murphy, Deputy Chief of Space Operations for Personnel, *Department of the Air Force Presentation to the Subcommittee on Personnel Committee on Armed Services United States Senate: Military Personnel Posture Hearing for FY23* (Washington, DC: April 2022), <https://www.armed-services.senate.gov/imo/media/doc/Statement%20of%20Ms.%20Patricia%20Mulcahy%20SASC-P%20Hearing%20>.

13. *Talent Management 2030*.

14. David Berger, *Recruiting Requires Bold Changes* (U.S. Naval Institute Proceedings. Vol 148/11/1437 November 2022) <https://www.usni.org/magazines/proceedings/2022/XXXarangXXXe/recruiting-requires-bold-changes>.

15. Department of Defense, *2022 National Defense Strategy Fact Sheet*, (Washington, DC: March 2022), <https://media.defense.gov/2022/Mar/28/2002964702/-1/-1/1/NDS-FACT-SHEET.PDF>.

16. Congressman Mike Gallagher, *Gallagher Opening Statement at FY23 NDAA Markup*, (Washington, DC: June 2022), <https://gallagher.house.gov/media/press-releases/XXXarangXXXer-opening-statement-fy23-ndaa-markup>.

17. *Talent Management 2030*.

18. Colin Demarest, “Five Questions for Army’s Robert Collins as He Moves to Pentagon Acquisitions Office,” *C4ISRNET*, June 21, 2022, <https://www.c4isrnet.com/battlefield-tech/it-networks/2022/06/21/five-questions-for-armys-robert-collins-as-he-moves-to-pentagon-acquisitions-office>.

19. Bryghte D. Godbold, “Origin of the New Personnel System,” *Marine Corps Gazette* 33, No. 11 (1949).

20. Avery Calkins and Beth J. Asch, *What Happened to Military Recruiting and Retention of Enlisted Personnel in 2020 During the COVID-19 Pandemic?* (Santa Monica: RAND Corporation, 2022).

21. Alfred T. Mahan, *The Influence of Sea Power Upon the French Revolution and Empire 1793–1812*, Vol I. (Boston: Little, Brown, and company, 1892).

22. Headquarters Marine Corps, *ALMARS 007/22, Talent Management Strategy Group*, (Washington, DC: March 2022).

23. Ibid.

24. Eric Huynh, “Talent Management 2030 Summit,” *DVIDS*, June 15, 2022. <https://www.dvidshub.net/image/7274349/talent-management-2030-summit>.

25. Talent Guard, “Reskilling and Upskilling: A Strategic Response to Changing Skill Demands,” *Talent Guard*, n.d., <https://www.talentguard.com/blog/reskilling-upskilling-strategic-response-changing-skill-demands>.

26. Ibid.

27. “Reskilling & Upskilling.”

28. Abigail J. Hess, “LinkedIn: 94% of Employees Say They Would Stay at a Company Longer for This Reason—and It’s Not a Raise,” *CNBC*, February 27, 2019, <https://www.cnbc.com/2019/02/27/94percent-of-employees-would-stay-at-a-company-for-this-one-reason.html>.

29. *Talent Management 2030*.

30. Ibid.

31. U.S. Bureau of Labor Statistics, “TED: The Economics Daily,” *U.S. Bureau of Labor Statistics*, November 22, 2021, <https://www.bls.gov/opub/ted/2021/quits-rate-6-6-percent-in-accommodation-and-food-services-in-september-2021.htm>; and *Private Sector Modern HR Tech Spend on the Rise, but Public Sector Locked in Antiquity*.

32. David Ottignon, *Statement of Lieutenant General David A. Ottignon, Deputy Commandant for Manpower & Reserve Affairs, United States Marine Corps, Before the Subcommittee on Personnel of the Senate Armed Services Committee Concerning Military & Civilian Personnel Overview*, (Washington, DC: April 2022), <https://www.armed-services.senate.gov/imo/media/doc/Statement%20of%20Lt%20Gen%20Ottignon.pdf>.

33. Bernard D Rostker, *I Want You! The Evolution of the All-Volunteer Force*, (Santa Monica: RAND Corporation, 2006).

34. Lee Raine, “Cable and Satellite TV use has Dropped Dramatically in the U.S. since 2015,” *Pew Research Center*, March 17, 2021, <https://www.pewresearch.org/fact-tank/2021/03/17/cable-and-satellite-tv-use-has-dropped-dramatically-in-the-u-s-since-2015>.

35. Pew Research Center, “Social Media Fact Sheet,” *Pew Research Center*, April 7, 2021, <https://www.pewresearch.org/internet/fact-sheet/social-media>.

36. Curtis Gilroy, Elizabeth Clelan, Josh Horvath, and Christopher Gonzales, “The All-Volunteer Force and the Need for Sustained Investment in Recruiting,” *Center for Naval Analyses*, April 2020, <https://www.cna.org/reports/2020/05/DRM-2019-U-022349-1Rev.pdf>.

37. Information was gathered by the author using *LinkedIn*. *LinkedIn* Profile of Lt-Gen David Bellon: [https://www.linkedin.com/posts/lieutenant-general-dave-bellon-4839368\\_leadership-digital-people-activity-6938985026306916352-PxCb?utm\\_source=linkedin\\_share&utm\\_medium=ios\\_app](https://www.linkedin.com/posts/lieutenant-general-dave-bellon-4839368_leadership-digital-people-activity-6938985026306916352-PxCb?utm_source=linkedin_share&utm_medium=ios_app).

38. Pew Research Center, “The Rise in Dual Income Households,” *Pew Research Center*, June 18, 2015, [https://www.pewresearch.org/ft\\_dual-income-households-1960-2012-2/](https://www.pewresearch.org/ft_dual-income-households-1960-2012-2/).

39. Julie B. Davis, “Moving Violations: When Relocation Demands One Partner Follow, the Road Can Be Bumpy,” *Los Angeles Times*, May 17, 1995, <https://www.latimes.com/archives/la-xpm-1995-05-17-ls-2633-story.html>.

40. Department of Applied Research at Blue Star Families in collaboration with the D’Aniello Institute for Veterans and Military Families, Syracuse University, “2021 Military Family Lifestyle Survey Comprehensive Report. 2021,” *Blue Star Families*, n.d., [https://blue-starfam.org/wp-content/uploads/2022/03/BSF\\_MFLS\\_Results2021\\_ComprehensiveReport\\_03\\_14.pdf](https://blue-starfam.org/wp-content/uploads/2022/03/BSF_MFLS_Results2021_ComprehensiveReport_03_14.pdf).

41. Pew Research Center, “Most Americans Say the Current Economy is Helping the Rich Hurting the Poor and Middle Class,” *Pew Research Center*, December 11, 2019, <https://www.pewresearch.org/social-trends/2019/12/11/most-americans-say-the-current-economy-is-helping-the-rich-hurting-the-poor-and-middle-class>.

42. House Armed Service Committee, "Full Committee Markup: National Defense Authorization Act for Fiscal Year 2023," *House Armed Service Committee*, June 22, 2022, <https://armedservices.house.gov/2022/6/full-committee-markup-national-defense-authorization-act-for-fiscal-year-2023>.

43. *Talent Management 2030*.

44. Donald M. Weller, "Personnel Policies and You," *Marine Corps Gazette* 44, No. 6 (1960).

45. Headquarters Marine Corps, *MCDP 1, Warfighting*, (Washington, DC: 1997).

46. Michael Mattock, Beth Asch, James Hosek, and Michael Bonito, *The Relative Cost-Effectiveness of Retaining Versus Accessing Air Force Pilots* (Santa Monica: RAND Corporation, 2019).

47. Headquarters Marine Corps "The Official Mission of Marine Corps Forces Reserve," *Marine Forces Reserve*, n.d., <https://www.marforres.marines.mil/About/Mission-Statement>. (Author italicized words for emphasis).

48. Headquarters Marine Corps, *Individual Mobilization Augmentee Program*, (Washington, DC: n.d.).

49. Janell Ford, "Three NTC Officers Apart of Army's Return of Brevet Promotions," *DVIDS*, December 4, 2020, <https://www.dvidshub.net/news/393873/three-ntc-officers-apart-armys-return-brevet-promotions>.

50. *Talent Management 2030*.

51. Headquarters Marine Corps, *MARADMIN 011/22, Opt Out of Consideration for Promotion*, (Washington, DC: January 2022).

52. Vipin Narang and Caitlyn Talmadge, "Civil-military Pathologies and Defeat in War: Tests Using New Data," *Journal of Conflict Resolution*, 2017, [http://www.caitlintalmadge.com/uploads/8/5/4/1/85419560/XXXarang\\_talmadge.pdf](http://www.caitlintalmadge.com/uploads/8/5/4/1/85419560/XXXarang_talmadge.pdf).

53. Legal Information Institute, Cornell Law School, "10 U.S. Code 621, Competitive Categories for Promotion," *Cornell Law School*,

n.d., <https://www.law.cornell.edu/uscode/text/10/621>.

54. David J. Ulbrich, *Preparing for Victory: Thomas Holcomb and the Making of the Modern Marine Corps, 1936-1943* (Annapolis: Naval Institute Press, 2011).

55. Ibid.

56. Controversy & Clarity, #3 *Devon Sanderfield, Nathaniel Baker, and Michael Carreiro*. (Spotify September 2022), <https://open.spotify.com/episode/4i49YtjUGdBgYtgKYxw4L?si=j7CgXurzQvyv-zZgsO8G3g>.

57. *Talent Management 2030*.



## SUPPORTING MARINES AROUND THE WORLD

Take the guesswork out of ordering your uniform.

With alterations, medal and ribbon mounting, uniform accessories and packages, and free uniform measurements, **The Marine Shop** is here for you, whether you're in Okinawa or Quantico, Kaneohe Bay or Albany, or anywhere the Corps may send you.



SHOP TODAY AT: [WWW.MARINESHOP.NET](http://WWW.MARINESHOP.NET)



# Implications of “Hide and Seek” for a 21st-Century Stand-In Force

A digestible assessment of the reconnaissance and counter-reconnaissance concept

by 1stLt David “Drew” Robinson

**“A likely vision of warfare centers on the recon/counter-recon contest.”**

**—Gen David H. Berger,  
38th CMC**

Presently, the Marine Corps is performing a Service-wide pivot spearheaded by the 38th CMC, Gen David H. Berger. As the engagements in the Middle East come to an end, today’s Joint Force finds itself positioned in the center of a very different contest than the one it has been fighting for the last twenty years. Gen Berger is restructuring the Marine Corps to confront the new reality of the modern battlespace—despite much criticism and resistance to change. However, the notion that the Marine Corps can and must adjust to dynamic threats is not novel—it is engrained in the Service’s very fabric. Two enduring principles of the Marine Corps are “an expeditionary naval force” comprised of Marines who are “agile and adaptable,”<sup>1</sup> a message that Gen Berger continuously reinforces in publications such as the *Commandant’s Planning Guidance*, *Force Design 2030*, and *A Concept for Stand-in Forces*, among others. These references provide high-level guidance on how to better posture the Marine

**>1stLt Robinson is an Unmanned Aircraft Systems Officer who deployed to EUCOM with Commander Task Force 61/2 in support of U.S. Sixth Fleet objectives and Recon/Counter-Recon experimentation.**

Corps toward modern threats, drawing particular attention to the concept of reconnaissance and counter-reconnaissance (RXR). Gathering from the foundation laid by these doctrinal pillars and others, this article will define reconnaissance and counter-reconnaissance in digestible terms and highlight its premier relevance to the identity of the Marine Corps through the next decade and beyond.

While the concept of RXR is as old as conflict itself, it has evolved through new methods in the 21st century’s accelerated technological environment. Nevertheless, it is helpful to begin with the definitions of these terms in the con-

text of one of the most foundational pieces of doctrine in the Service, *MCDP 1-0, Marine Corps Operations*. Per 1-0, “Reconnaissance operations use visual observation or other detection methods to obtain information about the activities and resources of an enemy or adversary.”<sup>2</sup> In a modern maritime context, detection methods are employed across all five dimensions of the maritime domain: sea, land, air, cyberspace, and the electromagnetic spectrum.<sup>3</sup> Sensors and platforms often used in reconnaissance may gather images or video, collect or emit electromagnetic radiation, monitor or manipulate web traffic, and so forth. When perceived as credible, both

**“The Marine Corps, within the Department of the Navy ... shall be organized, trained, and equipped to provide fleet marine forces of combined arms, together with supporting air components, for service with the fleet in the seizure or defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign.”**

**—Title 10, United States Code—Armed Forces**



Marines assigned to TF 61/2 conduct casualty evacuation and snag-and-tow rehearsals. (Photo by Sgt Dylan Chagnon.)

active and passive reconnaissance efforts in these domains generate a formidable caution against adversaries who know they are being watched, a concept referred to as “deterrence by detection.”<sup>4</sup>

As the Joint Force continues to develop and commit more resources to the reconnaissance effort, one must understand that adversaries are aggressively doing the same. Peer reconnaissance capabilities have outpaced estimates, closing the advantage gap that the United States has enjoyed for many decades.<sup>5</sup> Counter-reconnaissance, as defined by *MCDP 1-0*, “consists of all active and passive measures taken to prevent hostile observation of a force or area.”<sup>6</sup> Examples of active measures below the threshold of violence may include jamming and cyberattacks, while passive measures may comprise concealment, deception, and emissions control/signature management. As the modern battlespace expands beyond the traditional boundaries of air, land, and sea into space and cyberspace, winning the counter-reconnaissance battle will rely on a deeper understanding of how to employ these measures in innovative ways.

Another useful way of thinking about RXR is in terms of *scouting* and *screening*. Cited by Gen Berger in his article “Preparing for the Future,” CAPT

---

**The implications of a force highly proficient in RXR are profound ...**

---

Wayne P. Hughes describes scouting as “reconnaissance, surveillance, code-breaking, and all other ways to obtain

and report combat information to commanders and their forces.”<sup>7</sup> With this data, commanders can better anticipate, plan for, and effectively counter an opponent’s moves—an advantage that the United States has unilaterally exploited in recent conflicts against less-capable adversaries. Hughes defines screening, on the other hand, as “all measures used to frustrate the enemy’s scouting effort ... include[ing] the possibility of attacking a threatening enemy.”<sup>8</sup> This notion of uncertainty inflicted upon the enemy highlights an important characteristic of RXR as, ideally, a sub-kinetic means of influencing the battlespace, firmly based on deterrence but backed up by the maintenance of a credible threat posture.

The implications of a force highly proficient in RXR are profound, a sentiment that is continuously echoed from the balconies of the Marine Corps. In his *Commandant’s Planning Guidance*, Gen Berger asserts, “A likely vision of warfare centers on the recon/counter-recon contest.”<sup>9</sup> Since its release, the *Commandant’s Planning Guidance* has been a catalyst by which many major force publications continue to tug on the common thread that is the RXR concept. One of the most detailed outlines contextualizing RXR in the modern threat environment is



The USS Georgia training with Marines from TF-61/2 conducting launch and recovery training. (Photo by Sgt Dylan Chagnon.)



**MajGen Francis Donovan arrives in Naples, Italy, to command the newly-formed Naval Amphibious Force, TF-61/2. (Photo by CWO Izzel Sanchez.)**

*A Concept for Stand-in Forces*, in which Gen Berger posits that “Stand-in forces’ enduring function is to help the fleet and joint force win the reconnaissance and counter-reconnaissance battle ... by gaining and maintaining contact (establishing target custody and identifying

the identity of the Service. The Joint Force no longer enjoys the luxury of “seeing without being seen,” which has led to an overexpansion of footprints and signatures being left by friendly forces and an underestimation of how much these truly need to be reduced to

---

***The challenge for today’s leaders is how to balance both sides of the RXR coin: packing as much reconnaissance capability as feasible into the Stand-In Force ... while simultaneously frustrating rival collection methods ...***

---

the potential adversary’s sensors) below the threshold of violence.”<sup>10</sup> In short, *winning the recon/counter-recon contest will be defined by effectively hiding in parallel with skillfully seeking*. When the advantage cannot be maintained by skill alone, speed—iterating through the sense, make sense, and act model quicker than the adversary—will provide the edge in the RXR battle.<sup>11</sup>

The RXR concept will continue to dominate discussions at every level of the Marine Corps as a pillar of the Stand-In Force concept that is shaping

contend with peer and near-peer adversaries. The Joint Force—and Nation as a whole—requires the Marine Corps to adapt to these changing threats and better leverage its capabilities as a “small but lethal, low signature, mobile, relatively simple to maintain and sustain” force.<sup>12</sup> The challenge for today’s leaders is how to balance both sides of the RXR coin: packing as much reconnaissance capability as feasible into the Stand-In Force and outsourcing the rest to “bed down” assets while simultaneously frustrating rival collection methods and maintain-

ing a low enough profile to not foil the counter-reconnaissance mission.<sup>13</sup> If the Marine Corps can strike this balance and establish itself as a Stand-In Force capable of winning the RXR contest, the Joint Force will be closer to filling the gaps necessary to counter peer and near-peer adversaries in the modern operating environment.

---

**Notes**

1. Headquarters Marine Corps, *MCDP 1-0 (w/ change 1,2,3) Marine Corps Operations*, (Washington, DC: March 2019).
2. Ibid.
3. Gen David H. Berger, *A Concept for Stand-in Forces*, (Washington, DC: December 2021).
4. Thomas Mahnken, “Deterrence by Detection,” (Center for Strategic and Budgetary Assessments, April 2020), as cited in Gen David H. Berger, “Preparing for the Future,” (Fort Leavenworth: University Press, May 2021).
5. Gen David H. Berger, “The Case for Change,” *Marine Corps Gazette* 104, No. 6 (2020).
- 6 *MCDP 1-0*.
7. Wayne P. Hughes, *Fleet Tactics and Naval Operations* (Annapolis: Naval Institute Press, 2018) as cited in Berger, “Preparing for the Future.”
8. Ibid.
9. Gen David H. Berger, *38th Commandant’s Planning Guidance*, (Washington, DC: July 2019).
10. *A Concept for Stand-in Forces*.
11. *38th Commandant’s Planning Guidance*.
12. *A Concept for Stand-in Forces*.
13. Ibid.



# F-35B and Its Multirole Abilities

Misunderstanding leads to inadequate results

by Maj Evan Slusser

Whether there is an “F” or an “A” in the front of the nomenclature for a Marine tactical fixed-wing asset, the reality is that each platform will undoubtedly be forced to provide a multirole capability to the operational commander. Unfortunately exacerbating this issue, lengthening acquisition cycles and skyrocketing costs bind pilots to platforms for lengths of time that outlast their relevancy, demand capabilities across a wide spectrum of military applications to fill procurement gaps, and ensure overwhelming readiness requirements in terms of both resources and personnel. The F-35 is destined to become the Marine Corps’ sole fixed-wing tactical aviation platform. As such, its longevity must be carefully designed and facilitated. Without fully understanding the implications and limitations of such a Force Design or aircraft just yet, the Marine Corps’ ground forces can expect overestimated results and underperforming air wings.

The genesis of multirole aircraft is one born of opportunity through technology and the trial and error of battlefield application. Though admittedly, it seems strange for one to think about the need for multirole aircraft when considering the ability of states to possess weapons that can “annihilate any part of the world from virtually any other.”<sup>1</sup> Likewise, strategic bombing was once on the verge of ruling the world—capable that is of serving indefinitely as a singular path toward political victory without the costly inclusion of ground forces in armed conflict.<sup>2</sup> With strategic bombing and nuclear weapons, one

*>Maj Slusser is an active-duty F-35 A/B/C Pilot currently assigned to Defense Contract Management Agency DCMA Lockheed Martin, Fort Worth. He currently serves as a Government Flight Representative, Aviation Safety Officer, Standardization Officer, and Training Officer conducting post-production flights of all three variants of the F-35 Lightning II and is an Adjunct Instructor for EWSDEP. Maj Slusser has previously served with Marine Fighter Attack Squadron-121, conducting multiple deployments throughout the Indo-Pacific with the 31st MEU. He has a master’s degree in International Security Studies from the University of Arizona and completed resident programs at Marine Corps University.*



**An F-35 Lightning II aircraft assigned to the 2nd MAW. The Corps 5th Generation Fighter is a stealth multirole strike aircraft that is capable of both air superiority and strike missions. (Photo by Airman Hiram Martinez.)**

merely needs to “put a few bombs on any target, and any kind of opposition would be eliminated.”<sup>3</sup> As time passed, however, the number of aircraft began to unexpectedly decline. Ingenuity and arms races gave rise to the “missile age,” satellites were put into orbit, and the usage of unmanned aerial vehicles and the

development of surface-to-air missiles brought about a reluctant shift in airpower application and theory.<sup>4</sup> Manned aircraft slowly became less important as missiles, unmanned aerial vehicles, surface-to-air missiles, and electronic countermeasures dominated the battlespace and challenged air superior-

ity. Political dictates and the insanity of mutually assured destruction further limited the ability of airpower to apply nuclear solutions to either strategic or tactical problems. With an air force's inability to use weapons that achieved, as Robert Oppenheimer noted, a "destroyer of worlds" status, they turned back toward conventional weaponry albeit with less variance among aviation platforms, a greater number of capabilities now reliant upon fewer airpower assets, and the notion of airpower being directly related to the successful military performance of associated ground forces.

Enter the multirole aircraft. The benefits of such platforms are widely accepted: (1) operational flexibility—and therefore tempo; (2) ease of logistical complexity and platform manufacturing/production; and (3) a limited reliance on outside entities for service requirements, support, and missions. For the Marine Corps specifically, the F/A-18 and AV-8B have played this role in the past and have performed adequately. Importantly, however, it must be noted that they served in joint campaigns that took advantage of assets providing force-enabling capabilities that allowed them to remain survivable and flexible in their employment. Now, the Marine Corps relies on the truly untested capabilities of the F-35 B and C variants in an Indo-Pacific environment where isolation is more realistic than Joint Force engagement at the tactical level. Further, the risks of this new Force Design give rise to well-known aircraft acquisition faults. The F-35 will be asked to perform a variety of missions including air superiority, close air support, offensive air support, defensive counter-air, and all-weather attack or intercepts. It is only logical, as previously understood by the Air Force, "that a single aircraft could not perform all of these missions as well as [several] different airplanes all designed to accomplish a single mission."<sup>5</sup> The inability to fund single-mission aircraft leads to our Services getting "a plane that could perform all of the missions marginally, but none of them really well."<sup>6</sup>

As the DOD's largest single-weapon system program, there is significant dependence on the performance of these



**In 2016, Marines with VMFA-121, 3d MAW, conducted the first ever hot load on the F-35B Lightning. (Photo by SSgt Artur Shvartsberg.)**

aircraft. Touted by Lockheed Martin as the most lethal, survivable, and connected fighter jet in the world, there is no shortage of claims by the producing company and contemporary observers alike which note the advanced *next generation* capabilities of the F-35 family. However, the truth behind the lofty rhetoric is an unacceptable collection

---

### **Information sharing is a legitimate use of the F-35 ...**

---

of false claims, design flaws, and a dogmatic approach to the Marine Corps' acceptance of the F-35 as a panacea to 21st-century threats—most of which stem from a fundamental misunderstanding of what makes a multirole aircraft effective.

The F-35 is claimed to serve as the "backbone of allied airpower ... playing a critical role in joint domain operations, the fighter brings unprecedented situational awareness, information sharing, and connectivity to the coalition."<sup>7</sup> These are misleading statements if not blatantly false. There is significant literature on the center of

gravity and the true backbone of allied airpower—much of which lays the burden on Air Force "critical enablers."<sup>8</sup> Critical enablers refers to air-to-air refueling (AAR) assets, airborne command-and-control platforms and networks, and intelligence, surveillance, targeting, acquisition, and reconnaissance assets. Perhaps the F-35 will grow into this role, but it does not currently serve as the backbone of Marine tactical aviation or allied airpower.

The limited number of current weapons that operational F-35s can utilize, combined with drastically improved adversary weapon systems, denies the F-35 the title of "most lethal." Most "survivable" is dependent on such a wide variety of factors that the claim should be taken with a grain of salt when used in support of the F-35's ability. Information sharing is a legitimate use of the F-35, but the *connectivity to the coalition* enabled through the F-35's software is quickly becoming a relic of past wars and our NATO defense strategies. This is in part due to the divergence of America's shifting strategic interests toward the Pacific compared to the strategic interests of our traditional coalitions and the limited numbers of F-35s our partner nations can afford to purchase and employ—without being further integrated into the Air Force's

Advanced Battle Management System project, Marine tactical aviation will be limited to an inadequate datalink infrastructure only.<sup>9</sup> Alongside these deceptive claims, there are two reasons for a misunderstanding of multirole aircraft in general and with the F-35 in particular.

Particularly, because the F-35 capabilities are hidden behind a myriad of security barriers and need-to-know programmatic nuances, any information control and expectation management borders on impossible. Low observable technology and its implications are so novel to the Marine Corps forces at

and vague responses to questions due to unnecessary security limitations.

Generally, there is a misunderstanding among the Marine Corps' aviation personnel about what could make a successful multirole aircraft if forced to employ one—a difficult concept for an organization that prioritizes an air-to-ground mindset above all else. In a historical context, military aviation illustrates the potential value of a fighter-type aircraft that excels in many different mission sets—that is, the most successful multirole aircraft will be one designed for air-to-air combat and then modified for air-to-surface functions.<sup>10</sup>

---

***The cadre of pilots and those commanding the aircraft's future, currently hold in their hands the most pivotal moment of their careers to set the program on the correct course.***

---

large that the need-to-know does not come with a formal, or even an informal, education in stealth characteristics and theory. Pilots, planners, and commanders alike are more often than not left to their own devices when trying to dissect and understand thousands of pages of tactical manuals, which, in my personal experience, often ends in shoddy groupthink. The doctrine and tactics are numerous, constantly changing, and written by a multitude of people who cycle through the role on the same iterative three-year timeline as any other service member. Not to mention, their qualifications for writing such tactics are almost universally based on their proven ability to perform and recite those tactics while a student at Marine Aviation Weapons and Tactics Squadron One—hardly a critical evaluation of their capability to devise and develop the required understanding for a new generation of aircraft. There must be a genuine effort to reduce the barriers to F-35 information, attempt to reduce misunderstandings between actual capabilities and those proliferated by private companies, and limit the need to provide only surface-level

The characteristics of successful multirole fighters—maneuverability, acceleration, rate of climb, high top speed, cockpit visibility, large payload, high ceiling, balanced technology, and an internal cannon—mimic those of successful air superiority fighters.<sup>11</sup> There are no certainties in the world, nor is it wise to glean too much from history, but there is strong empirical analysis that suggests these criteria should be considered when required to design a multirole aircraft due to acquisitions constraints. The F-35 is not an air superiority fighter, it lacks proven multirole traits, and as such has become an inappropriate multirole fighter for the future of Marine Corps force development as it relies too heavily on sister-Service platforms and capabilities to increase its effectiveness in that role. Marine Corps doctrine relies on the assurances of air superiority and is assigning the task to an asset incapable of the mission against a peer adversary. It will not be able to sustain operations at the extended ranges required in the Pacific based on the need for critical enablers outside the Marine Corps' command hierarchy or pushed back

beyond the range of utility by advanced weaponry.

If the Marine Corps continues down this unproductive path of using inappropriate assets to fill gaps left by Force Design and basing the decisions on ideas already proven ill-advised, the Marine Corps will never develop the tactics or culture needed to address the most effective uses of the F-35 platforms. The cadre of pilots and those commanding the aircraft's future, currently hold in their hands the most pivotal moment of their careers to set the program on the correct course. It should not be lost to the status quo of legacy operations. The F-35B and C each have a role to play. Discovering that role will require Marines to question its inconsistencies.

---

Notes

1. John Olsen, *A History of Air Warfare* (Lincoln: Potomac Books Inc., 2010).
2. Ibid.
3. Ibid.
4. Ibid.
5. Grant Hammond, *The Mind of War: John Boyd and American Security* (New York: Smithsonian Institution Press, 2001).
6. Ibid.
7. For more information see: <https://www.lockheedmartin.com/en-us/products/f-35.html>.
8. Justin Bronk, *The Future of NATO Airpower: How are Future Capability Plans within the Alliance Diverging and How Can Interoperability Be Maintained?* (Philadelphia: Taylor & Francis, 2019).
9. Ibid.
10. Todd Aubyn, *A Historiographical Analysis on the Genesis of the Multi-role Fighter* (Maxwell Air Force Base: Air University, 2015).
11. Ibid.



2022 LtCol Earl “Pete” Ellis Essay Contest: First Place

# Pushing Lethality to the Edge

A smarter, deadlier MAGTF

by Capt W. Stone Holden

The threats facing today’s MAGTF have evolved significantly—even over just the last decade. Cyber capabilities, unmanned aerial vehicles (UAVs), and more have dispersed across a wide range of actors and become prominent factors in conflicts across the globe. Capabilities that were once the domain of advanced states can now be found in the arsenals of rising powers, transnational criminal organizations, and terrorist groups. These technological forms of warfare are cheaper to purchase, more user-friendly, and more portable than previous generations of military hardware. A 2021 Office of the Director of National Intelligence report assessed that these trends were likely to continue, creating new disruptions.<sup>1</sup> The spread of these capabilities has some stark implications for how the Marine Corps needs to organize, train, and equip for the next fight.

Understanding the aggregate effect of all these changes in technology and domains is essential. This is a difficult task, with many experts disagreeing (and plenty making book deals) and speculating about these impacts on warfare. It is probably most salient how these technologies are applied to modern conflicts and to project those effects into the future. Current and recent conflicts provide an exciting window into what a future U.S. engagement might look like with some of these changes.

Battlefield experiences in Azerbaijan, Ukraine, and Ethiopia all point toward

*>Capt Holden is a Marine Officer currently assigned to USSOUTHCOM where he has worked in security cooperation and collections management billets as well as managing a variety of projects implementing cutting-edge technological solutions to address the range of threats in the area of responsibility. He previously served in the INDOPACOM Area of Responsibility with 3d Mar and Combat Logistics Battalion 3, where he deployed in support of the PACOM Augmentation Team Philippines and aboard the USNS SACAGAWEA in support of Task Force KOA MOANA 17 to support a range of partner nation engagements across the Pacific.*

three clear lessons for the MAGTF of the future. First, advancements in technology have caused lethality to become more accessible and dispersed to lower echelons than previously feasible, which is pushing lethality to the tactical edge of formations. Secondly, the war in

to pull from in times of conflict offers a distinct advantage in an age of technologically-focused warfare. These three elements will allow the MAGTF of the future to retain a competitive advantage in the future operating environment.

## Technology Pushing Lethality to the Edge of the MAGTF

Technology has improved across a broad range of metrics over the last two decades, thus becoming more reliable, resilient, powerful, lethal, and compact. Furthermore, the cost of technologically advanced systems has greatly declined, allowing more capabilities at a fraction of the price they would have cost in years past. Major advances in unmanned aerial systems (UAS), loitering munitions (LMs), and mobility options mean that the MAGTF needs to invest in ways to push high-lethality weapon systems to lower echelons while guarding against the same effect in adversary forces.

UAS can significantly extend the range of enemy fires. This allows them to reach well behind the forward lines

---

**Understanding the aggregate effect of all these changes in technology and domains is essential.**

---

Ukraine has shown the value of joint integration at the lowest possible level, with members of each Service able to understand, access, and employ the capabilities of the other Services. Finally, having a deep reserve of technical capability is critical in a modern conflict. A technologically skilled base of citizens

of troops and strike at valuable targets for a relatively low cost in manpower and resources.<sup>2</sup> This is a powerful incentive to disperse capabilities to lower-level units, leaving them less vulnerable to attack by UAS. UAS and LMs are not just a concern during combat operations against a major state. The MAGTF prepares to deal with this technology across the spectrum of adversaries. The Ethiopian Civil War against rebels in the Tigray region provides an interesting example of technological proliferation in a developing country's warfighting

skills with them into the service.<sup>8</sup> The relative cost and ease of replacement for these systems make them attritable, easy to disperse to frontline units, and well suited to the tactical edge of combat. The adoption of these systems provided significant benefits to Ukrainian forces across a range of operations.

LMs are a specific type of UAS which have become increasingly popular on the battlefield. Early versions of these munitions have been around since the Vietnam War, originally designed to home in on the radiation emitted by

MAGTF. The UVision Hero series of LMs have been integrated onto LAV-25 platforms with the intent to provide intelligence, surveillance, and reconnaissance and a precision-strike capability from one package on these vehicles—a significant enhancement for lethality.<sup>13</sup> The Marines have also discussed intentions to test an air-launched version that could supplement traditional aircraft munitions, providing greater situational awareness for the crew while also providing fire support that could outlast the limited time on station for most aircraft in the Marine inventory.<sup>14</sup> Incorporation of these types of munitions could provide enhanced battlefield awareness, close air support, and precision-strike capabilities at a fraction of the cost of traditional air assets while also maintaining the ability to disperse risk and capability. The Marine Corps needs to continue work to procure and develop lightweight, high-lethality systems that can be dispersed widely to forces.

Increasing the mobility of small teams empowered by these technologies also has a major impact on lethality. Electric bikes and motorcycles can increase the mobility and stealth of reconnaissance and sniper teams operating close to, or forward of, the front line of troops while allowing them to carry bulkier weapon systems into position. Ukrainian forces have employed versions of electric motorcycles with front-line troops for exactly this purpose. Domestically produced models of these bikes boast top speeds of 55 mph, a range of over 90 miles on one five-hour charge, and the ability to carry up to 330lbs—all having a relatively light weight of under 200lbs.<sup>15</sup> These bikes have been used to provide greater mobility to anti-armor teams, carrying modern NLAW and Javelin anti-tank guided missiles into place, firing and displacing quickly.<sup>16</sup> The combination of speed, lightweight build, and near-silent performance allows small teams to move into position to identify a target or to act as a shooter themselves. While the United States has invested in concepts like this in the past, Ukraine provides a fascinating proving ground that once again shows the value of quiet,

---

***... small commercially produced UAVs have seen wide use at the tactical levels, serving in roles from reconnaissance to fire control to loitering munitions.***

---

capabilities.<sup>3</sup> The second most populous country in Africa, it is one of the poorest and with less than one percent of its GDP for military funding leaving them with an annual military budget of around one billion dollars.<sup>4</sup> Despite the constrained budget, Ethiopia's fight has featured the use of several types of drones: Chinese-made Wing Loong 2 armed UAV, Turkey's Bayraktar TB2 armed UAV, and Iran's Mujaher-6 have all made appearances in the battlespace.<sup>5</sup> As these technologies get cheaper and improve in quality, more adversaries will have access to drones across the spectrum of threats in future MAGTF engagements.

In Ukraine, small commercially produced UAVs have seen wide use at the tactical levels, serving in roles from reconnaissance to fire control to loitering munitions. Many of these UAS are commercially available and donated by outside groups. Drone enthusiast groups who ended up being part of the war effort produce some locally.<sup>6</sup> These UAS are relatively inexpensive. If they are lost, broken, or destroyed, it is not a major event with replacement models available to purchase for \$1000–\$2000.<sup>7</sup> Replacement parts can also be 3D printed by local groups of citizens or soldiers who brought those

anti-air defenses.<sup>9</sup> Advances in artificial intelligence have combined with the miniaturization of electronics to allow for munitions capable of much higher levels of autonomy.<sup>10</sup> The ability of these munitions to loiter overhead while searching for targets within a certain signature parameter before striking or returning to base to be refitted and launched again creates a useful blend of intelligence, surveillance, and reconnaissance assets and munitions. These characteristics made them incredibly effective in the Azerbaijani war against the Armenians in 2020 when LMs played a key role in destroying enemy air defenses and armored assets.<sup>11</sup> Furthermore, their lightweight design and relatively low cost (when compared to traditional air assets or missiles) provide an economic way to extend the umbrella of fires of a force with low cost in manpower and support. Turkey, Armenia, Iran, the United States, Israel, and China (among more than a dozen of others) have begun producing these munitions or incorporated them into their arsenals, which means that the MAGTF of the future will need to be prepared to handle them.<sup>12</sup>

The Marine Corps has done some experimentation with versions LMs and how they might be integrated into the



highly mobile systems that can move high-lethality capabilities around the battlefield.<sup>17</sup>

The systems that the Marine Corps chooses to invest in for the MAGTF will play a large role in helping it maintain an edge in warfighting capabilities, but simple cultural shifts will allow access to much greater firepower and support by leveraging the unique capabilities of the Services fighting alongside them.

### **Jointness: It's About Firepower**

Integration between Services is critical on a modern battlefield, where sensors are ubiquitous and the interconnectedness of fires systems offers a major advantage. This interconnected web of sensors and shooters, each maximizing the most appropriate asset for the given task of finding, communicating, and shooting a target has been called "Mosaic Warfare."<sup>18</sup> The advantages of this high-level interoperability between Services have been demonstrated by the Ukrainian forces. They have been able to successfully link a variety of sensors to non-traditional shooters, allowing them to achieve some impressive battlefield results. During the back-and-forth battle for Snake Island, the Ukrainian forces were able to use Turkish Bayraktar UAVs to spot and target Russian forces and equipment.<sup>19</sup> One impressive instance of this was in the sinking of the Russian flagship, *Moskva*, by a land-based, indigenously-produced Neptune anti-ship missile.<sup>20</sup> The ability to string multiple sensors and shooters, taking advantage of various capabilities of other Services is a powerful force multiplier that the MAGTF of the future must be able to employ.

U.S. forces are going through great pains to ensure the interoperability of equipment and personnel across platforms, capabilities, and Services. The technical side of this effort is the Joint All Domain Command and Control program, which seeks to find solutions that will allow multiple generations of current platforms to become interoperable while laying a common groundwork for future systems to share that interoperability.<sup>21</sup> The Joint Force offers a far greater variety of platforms and capabilities than those which are available

to the MAGTF. This is a good thing since it allows Marines to access greater firepower, mobility, and support capabilities than would otherwise be available to them. But you cannot expect Marines who have been raised to view other Services as rivals or "less than," led by officers whose time with the Joint Force can work against them for promotion, to fully grasp and maximize the full potential of the Joint Force.

There are cultural and materiel differences that are important to understand and navigate if you want to fully access the capabilities of a sister Service. Junior officers and staff NCOs need to be intimately familiar with the capabilities brought to bear by these forces to appropriately leverage them to accomplish the mission. What does

### **Upskill for the Kill**

A more technically demanding world demands technically competent personnel who can thrive by leveraging existing and emerging technologies. The United States as a whole is struggling to upskill the broader workforce, particularly in manufacturing jobs which have been replaced or moved out of the United States due to more competitive production locations overseas.<sup>23</sup> Beyond the current workforce, the workforce of the future needs a higher level of education and technical training to hold meaningful jobs than previous generations.<sup>24</sup> Trends in technologically advanced weaponry proliferating across the battlefield and allowing lethality to be pushed down to lower levels of the MAGTF requires a force that has

---

***A more technically demanding world demands technically competent personnel who can thrive by leveraging existing and emerging technologies.***

---

the Army element have that can help address my challenge, how do I get it, and who do I talk to? These questions are vital for junior leaders to have the answers to before the next conflict starts, but unfortunately, the system does not incentivize junior leaders who are in the position to glean that knowledge and bring it back to the force.

The current structure (anecdotally) penalizes Marines for not having Marine raters on their fitness reports, making a tour at a joint assignment potentially damaging to a career, as non-Marine reviewers are seen as less valuable than Marines and there is a strong sense of *what have you done for the Corps lately*.<sup>22</sup> Instead of penalizing young leaders for stepping into a situation that can potentially bring useful knowledge of joint capabilities back to the force, the Marine Corps should be encouraging rotations of junior officers and non-commissioned officers for that exact reason. To be truly effective across the domains of battle and enhance the firepower available to the MAGTF, jointness needs to be embraced.

the technical proficiency and mental capacity to embrace these changes.

The current changes to the Marine School of Infantry reflect that desire to upskill the MAGTF. Higher standards for intelligence, physical fitness, and longer training will all serve to lay a foundation for the skillsets that will be needed from their initial training.<sup>25</sup> Increased training in crew-served and anti-tank weapons will provide additional skills that have proven indispensable in the conflict in Ukraine, where ATGMs have played such a key role across the battlefield. Beyond training, educational opportunities need to be provided and encouraged by leadership. Although the U.S. military has a higher percentage of the population with a high school diploma than the civilian populace, rates of enlisted attainment of higher education fall at the undergraduate and graduate levels to well below the average in the broader civilian population.<sup>26</sup> This is a loss to the MAGTF of the future, which will desperately need both trained and educated service members serving in

officer and enlisted roles to be competitive.

There are a variety of ways to upskill the MAGTF of the future. Extending the length of primary training schools to provide a longer period to learn and retain a broadening range of skill sets that are required for basic job proficiency is one way. Requiring more regular follow-on training at career waypoints to reinforce earlier training, update knowledge based on current best practices, and allow for a mixing of experiences by professionals with different operational experiences would have a major positive impact. There are also programs that could be used to incentivize Marines to pursue technical training or educational opportunities on their own time and with a greater benefit to the force. These could look like a structured program to help Marines achieve an associate's degree or technical certification in a relevant skillset over the first two years of service through distance or night classes. It is a smart investment to make the changes that will maintain the qualitative edge that the MAGTF holds, upskilling the Marines of today and laying the groundwork for the Marines of tomorrow to be more skilled and educated for the next fight.

### Smarter, Faster, Deadlier: The MAGTF of the Future

The Marine Corps will have to adapt to the increased pace of warfare in the coming decades. Adversaries across the threat spectrum will have more information, technology, and lethality at their disposal than ever before. By studying the lessons provided by ongoing conflicts across the globe, it is easy to see the path that the MAGTF must take as they move toward the future. A concerted effort must be made to push lethal capabilities and the supporting mobility further toward the edge of the tactical formation. Capabilities previously held at the battalion or regiment level have a place much lower now. The Marine Corps needs to get comfortable, even greedy, with joint opportunities for integration. This is a vital link to assets and capabilities that do not come at the expense of the Marine Corps but could provide the vital element for a successful

operation. This needs to be encouraged and pushed to more junior personnel as an opportunity to learn and bring back value to the Corps. Finally, human capital is what has always made the Marine Corps the dominant fighting force that it is. Marines on Wake Island did not benefit from the best equipment as they lashed the Japanese forces. The Corps must continue that tradition, offering increased technical training and education to upskill the force while encouraging the next generation of Marines to come into the force more skilled and capable than ever.

#### Notes

1. Office of the Director of National Intelligence, "Global Trends 2040," *Director of National Intelligence*, 2021, [https://www.dni.gov/files/ODNI/documents/assessments/GlobalTrends\\_2040.pdf](https://www.dni.gov/files/ODNI/documents/assessments/GlobalTrends_2040.pdf).

2. Office of the Director of National Intelligence, "Annual Threat Assessment of the US Intelligence Community," *Director of National Intelligence*, February 2022, <https://www.dni.gov/files/ODNI/documents/assessments/ATA-2022-Unclassified-Report.pdf>.

3. Global Conflict Tracker, "War In Ethiopia," *Council on Foreign Relations*, October 20, 2022, <https://www.cfr.org/global-conflict-tracker/conflict/conflict-ethiopia>.

4. The World Bank, "Ethiopia Overview," *The World Bank*, October 06, 2022, <https://www.worldbank.org/en/country/ethiopia/overview>; and World Factbook, "Ethiopia: Military Expenditures," *Central Intelligence Agency*, n.d., <https://www.cia.gov/the-world-factbook/countries/ethiopia/#military-and-security>.

5. Alex Gatopoulos, "How Armed Drones May Have Helped Turn the Tide in Ethiopia's War," *Al Jazeera*, December 10, 2021, <https://www.aljazeera.com/features/2021/12/10/how-armed-drones-may-have-helped-turn-tide-in-ethiopia-conflict>; and Wim Zwijnenburg, "Is Ethiopia Flying Iranian-Made Armed Drones?" *Bellingcat*, August 17, 2021, <https://www.bellingcat.com/news/rest-of-world/2021/08/17/is-ethiopia-flying-iranian-made-armed-drones>.

6. Andrew Kramer, "From the Workshop to the War: Creative Use of Drones Lifts Ukraine," *The New York Times*, August 10, 2022, <https://www.nytimes.com/2022/08/10/world/europe/ukraine-drones.html>.

7. Information available at <https://store.dji.com>.

8. Amy Feldman, "Putting 3D Printers to Work in Ukraine's War Zone," *Forbes*, March 31, 2022, <https://www.forbes.com/sites/amyfeldman/2022/03/31/putting-3d-printers-to-work-in-ukraines-war-zone/?sh=70814225015f>.

9. Weapon Systems, "AGM-454 Shrike," *Weapons Systems*, n.d., <https://weaponsystems.net/system/1066-HH08%20-%20AGM-45%20Shrike>.

10. John F Antal, *Seven Seconds to Die: A Military Analysis of the Second Nagorno-Karabakh War and the Future of Warfighting* (Philadelphia: Oxford: Casemate, 2022).

11. Ibid.

12. Manu Pubby, "Indigenous Loitering Munition Successfully Hits Target at Pokhran," *The Economic Times*, September 22, 2022, <https://economictimes.indiatimes.com/news/defence/indigenous-loitering-munition-successfully-hits-target-at-pokhran/articleshow/94383125.cms?from=mdr>; Stew Magnuson, "Loitering Munitions Proliferate as Tech Changes Battlefield," *National Defense*, August 9, 2022, <https://www.nationaldefensemagazine.org/articles/2022/8/9/loitering-munitions-proliferate-as-tech-changes-battlefield>.

13. Dan Parsons, "Marines Handoff Loitering Munition Control Between Air, Sea, Land Platforms," *The Drive*, June 3, 2022, <https://www.thedrive.com/the-war-zone/marines-handoff-loitering-munition-control-between-air-sea-land-platforms>.

14. Ibid.

15. Howard Altman, "Commander in Ukraine Wants Quiet Electric Bikes for His Sniper Teams," *The Drive*, May 11, 2022, <https://www.thedrive.com/the-war-zone/commander-in-ukraine-wants-quiet-electric-bikes-for-his-sniper-teams>; and Rachel Pannett, "Ukrainian Fighters Take to Electric Bikes in the War Against Russia," *The Washington Post*, May 26, 2022, <https://www.washingtonpost.com/world/2022/05/26/ukraine-russia-war-electric-bikes-weapons>.

16. Matthew Gault, "Ukraine Is Using Quiet Electric Bikes to Haul Anti-Tank Weapons," *Vice News*, May 24, 2022, <https://www.vice.com/en/article/xgde8k/ukraine-is-using-quiet-electric-bikes-to-haul-anti-tank-weapons>.

17. David Leffler, "New Spec Ops Dirt Bikes Combine Stealth and Speed," *Task and Pur-*

pose, June 15, 2016, <https://taskandpurpose.com/tech-tactics/new-spec-ops-stealth-bikes-freakishly>.

18. DARPA, “DARPA Tiles Together a Vision of Mosaic Warfare,” *DARPA*, n.d., <https://www.darpa.mil/work-with-us/darpa-tiles-together-a-vision-of-mosaic-warfare#:~:text=The%20concept%20is%20called%20E2%80%9CMosaic,that%20its%20forces%20are%20overwhelmed>.

19. YUSUF ÇETINER, “Ukrainian TB2 Destroys Russian Mi-8 Helicopter On Snake Island in First Reported Aerial Kill,” *Overt Defense*, May 10, 2022, <https://www.overtdefense.com/2022/05/10/ukrainian-tb2-destroys-russian-mi-8-helicopter-on-snake-island-in-first-reported-aerial-kill/>; and Xavier Vavasour, “Watch Ukrainian TB2 Striking Two Russian Raptor Assault Boats,” *Naval News*, May 2022, <https://www.navalnews.com/naval-news/2022/05/watch-ukrainian-tb2-striking-two-russian-raptor-assault-boats>.

20. David Hambling, “Ukraine’s Bayraktar Drone Helped Sink Russian Flagship Mosk-

va,” April 14, 2022, *Forbes*, <https://www.forbes.com/sites/davidhambling/2022/04/14/ukraines-bayraktar-drones-helped-destroy-russian-flagship/?sh=3fe003753a7a>.

21. Congressional Research Service, “Joint All-Domain Command and Control (JADC2),” *In Focus*, January 2022, <https://crsreports.congress.gov/product/pdf/IF/IF11493/16>.

22. Paul W. Mayberry, et al, *Making the Grade: Integration of Joint Professional Military Education and Talent Management in Developing Joint Officers* (Santa Monica: RAND Corporation, 2021), [https://www.rand.org/pubs/research\\_reports/RRA473-1.html](https://www.rand.org/pubs/research_reports/RRA473-1.html).

23. Aspen Institute, “Upskill America,” *Aspen Institute*, n.d., <https://www.aspeninstitute.org/programs/upskill-america/about-upskill-america>.

24. Kausik Rajgopal and Steve Westly, “How Tech Companies Can Help Upskill the U.S. Workforce,” *The Harvard Business Review*, Feb 2018, <https://hbr.org/2018/02/how-tech-companies-can-help-upskill-the-u-s-workforce>.

25. Otto Kreisher, “Marine Infantry to Become More Commando-Like,” *Sea Power*, May 12, 2022, <https://seapowermagazine.org/marine-infantry-to-become-more-commando-like/#:~:text=Among%20the%20training%20changes%20underway,14%2DMarine%20element%20during%20training%2C>.

26. Kim Parker, Anthony Cilluffo and Renee Stepler, “6 Facts about the U.S. Military and Its Changing Demographics,” *Pew Research Center*, April 13, 2017, <https://www.pewresearch.org/fact-tank/2017/04/13/6-facts-about-the-u-s-military-and-its-changing-demographics>.



Sponsored by:



**SUPPORT  
TODAY'S  
MARINES**

**MARINE CORPS  
ASSOCIATION**  
EST 1913

Join the Marine Corps Association today and not only will you be supporting programs for Today's Marines, but you also receive *Leatherneck*—Magazine of the Marines.

Join today at:  
**WWW.MCA-MARINES.ORG**

2022 LtCol Earl “Pete” Ellis Essay Contest: Second Place

# Automation is a Marine’s Best Friend

Loitering munitions, drones and the effects of technology

by Col Seth Milstein

In June 2017, the 37th CMC told Congress the Marine Corps was “not organized, trained, and equipped” for war with a peer adversary. While principles of war remain timeless, warfare has radically changed due to microprocessors and miniaturization. New capabilities such as loitering munitions, semi-autonomous drones, and cyberspace operations have altered combat dramatically from 20th-century norms.<sup>1</sup> Battlefields are more transparent and more lethal. As armed forces and others worldwide wrestle with the implications of these weapons, the Marine Corps has pushed forward with experimentation to adapt to changing battlefield reality. Integrating these emerging capabilities into MAGTFs will better enable combined arms for future fights. Concurrently, MAGTFs need suitable means and resilience to operate under the microprocessor-automated gun. Contrary to some popular beliefs, the MAGTF as a concept is not dead, although it must evolve to assimilate these new weapons effectively, use them at a competitive tempo, and survive against determined enemies who are arming and training for the future.

## Today’s Battlefield

21st-century warfare is quick, precise, and deadly. Loitering munitions (LM) were a major contributor to Azerbaijani success in the 2020 Nagorno-Karabakh War.<sup>2</sup> While uncrewed aircraft systems (UAS) have seen combat

**>Col Milstein is assigned to U.S. Navy Expeditionary Combat Command. He is a MAGTF Officer with a background in tanks, intelligence, and psychological operations, a Middle East and North Africa FAO, and an inventor with several patents. He has deployed to Afghanistan, Iraq, East Timor, and various other places, served with 1(UK) Armoured Division and German Fleet Command, and commanded 6th ANGLICO.**

since 1849, the United States, Russia, and others have fielded increasingly autonomous drones.<sup>3</sup> These newer systems have served in United States, Russian, Armenian, and Azerbaijani operations.<sup>4</sup> Autonomous drones include uncrewed ground vehicles and uncrewed maritime vessels. Cyberspace operations became a concern in 1984 and have been present in gray-zone operations and any number of conflicts falling short of war.<sup>5</sup> Known uses of cyber during combat include Israel against Syria in 2007, Russia against Georgia in 2008, and in 2014 and 2022 by both sides of Russia-Ukraine, with other skirmishes possible. With all of these, the thrust is to use the speed of microprocessors to reduce human intervention in kill webs: to deliver effects faster than defenders can respond.

As technology progresses, the Marine Corps has not been idle. The Switchblade family of LM has been used since 2012. Current UAS inventory includes MQ-9 and the initial deployment of Drone40 small UAS (sUAS).<sup>6</sup> NMESIS mounts anti-ship missiles on uncrewed ground vehicles. U.S. Marine Corps Forces Cyberspace Command, established in 2010, is the Marine Corps component of U.S. Cyberspace Com-

mand.<sup>7</sup> While military cyberspace capabilities are classified, a casual study of known criminal hacking illustrates the ingenuity and destructiveness of digital weapons. To counter LM and UAS, the Marine Air Defense Integrated System is being fielded. Capabilities development continues, although the Marine Corps faces challenges with expeditionary operations against technologically astute adversaries.

The main Marine Corps issue, aside from the limitations of the platforms themselves, has been integration with overall MAGTF command and control (C2). LM are treated as one-off specialized munitions. Group 5 UAS are centralized. Cyberspace operations are highly classified and have elaborate processes to nominate and approve operations.<sup>8</sup> The full weight and advantage of these new capabilities cannot yet be employed by a MAGTF. Part of the solution is rethinking it within C2 architectures while the other part is designing systems for schemes of employment that maximize their potential. From a defensive perspective, MAGTF training does not yet take these new threats seriously.

## Cross-Cutting Principles

One consistent theme behind these

new capabilities is automation. Exploding capabilities in processing speed and miniaturization enable weapons better able to self-direct than before. The idea is not new. As with the AK-47 and the smartphone, capabilities once exclusive to governments are available to the masses.<sup>9</sup>

To prepare for a near future with more automated weapons, the Marine Corps' approach must:

- Field capabilities suitable for the lowest echelon possible. While exquisite capabilities are needed for specialists, automation's greatest value is reached by widespread use.
- Design systems to be commanded rather than deliberately operated. When Marines go "head down" for an extended time, the security burden on their unit goes up.
- Anticipate technological parity or disadvantage. Enemies, and not just peers, will bring bleeding edge innovation to the fight, unburdened by Byzantine procurement regimes. Resiliency is a critical capability, manifested in reduced signatures, minimized communication requirements, use of passive sensors, and flexibility of use.
- Reconsider doctrine to understand how automated capabilities integrate with and complement existing competencies.

### **The Sky is Falling: Loitering Munitions and Semi-Autonomous Drones**

While uncrewed vehicles have existed since the 19th century, micro-processors have taken the concept to a new level. Automation added autopilot functionality that reduced control inputs from flying a UAS to directing it. Natural evolution is less human involvement to execute missions, using artificial intelligence (AI) to minimize explicit control. While uncrewed ground vehicles generally require less energy than UAS, automation has proven more complicated due to terrain variation and obstacles. Drones carry a wide variety of payloads: weapons, sensors, communication equipment, countermeasures, or cargo. Good designs are modular with payloads based on mission requirements. Drones



**Marines can employ existing loitering munitions and semi-autonomous drones across a broad range of tactical tasks from reconnaissance, attack, and resupply. (Photo by LCpl Tyler Forti.)**

may be cheap, especially compared to crewed platforms, and are expendable. UAS may be launched by individuals, small teams, from vehicles or airfields, and many types may be recovered and reused. LM are attack UAS carrying warheads, combining the functionality of UAS with missiles. Some LM act completely autonomously without human interaction, particularly against air-defense systems and specialized emitters.

Semi-autonomous drones offer tremendous versatility. Drones that take orders have far more value than those requiring explicit control. One concept being pursued is "loyal wingman," drones that support crewed platforms with minimal human direction (also called Collaborative Combat Aircraft). Another concept is swarms: groups of drones working together, offering a flexible team of multiple platforms.<sup>10</sup> UAS swarms may be independent edge networks, where aggregate processing power allows the fusing of sensor data, automated decisions, and coordinated actions by participating UAS—all with little or no human involvement. AI allows initial evaluation and exploitation of sensor returns onboard drones, drastically reducing the data needed to be communicated.<sup>11</sup> Such swarms may be given tasks to accomplish in given operating areas, reporting criteria, and circumstances when human guidance is required.

Some mission profiles, such as reconnaissance or logistics, are natural fits for semi-autonomous drones: go somewhere, look around or drop something off, and come back. Complexity intrudes as automated decisions get harder or coordination is needed: look closer where or fire at whom? LM resemble self-deploying mines, with more than a few parallels between mine and LM employment.<sup>12</sup> Mines are best when observed and LM combine sensors and shooter and may be assisted by other collectors. Like mines (or improvised explosive devices), LM wait where enemy activity is expected. Unlike mines, LM are equally useful over land, littorals, or water. An issue with LM is target discrimination: is it engaging an enemy target? Closely associated is collateral damage—who near the target might be harmed?

Drones are already widespread, with countries recognizing the cost of ownership and operation is often significantly lower than traditional warplanes. Drones are cheap enough to be owned by commercial ventures, non-government organizations, and individuals. Newer power sources give drones greater range, carrying capacity, and loiter time. The proliferation of drones is growing, and with it, the number of sensors, if not weapons. Expeditionary operations must anticipate observation from drones while being unclear which drones belong to whom. Defending

against UAS and LM means defeating entire kill webs.<sup>13</sup> UAS need to be stored and launched from somewhere. While LM may be used independently, sophisticated operators will bring additional sensors for battlefield awareness and cueing. Sensors themselves have limitations and UAS may depend on communication links. More automation means UAS require less communication to work. Aside from attacking UAS themselves, whether before launch or in flight, or attacking their communication networks, defense hinges on defeating networked sensors and managing signatures.<sup>14</sup> Camouflage, concealment, deception, and dispersal are vital capabilities.<sup>15</sup> Little is as attractive for LM as immobile command tents, antenna farms, or concentrations of vehicles or supplies.

Drones attached at multiple echelons and across the MAGTF enhance fluidity in operations. Drone swarms may provide battlefield awareness, fire support, communication relay nodes, electronic warfare support, and tactical deception during offensive and defensive operations. Logistic drones may be critical enablers for distributed maritime operations. Using semi-autonomous drones and smart swarms in these roles reduces the number of human operators and burdens on communication links. Loyal wingmen add to available air support during operations. Tactics can include LM to deny areas to enemies for windows of time. UAS and LM excel in the deep fight and can be used to shape areas ahead of maneuver forces or aircraft. The engagement area becomes far more hazardous when covered by swarms of UAS and LM, providing sensor coverage and rapid attack options. A MAGTF might use transport aircraft to deploy LM some distance from targets or employ the “Turducken of Lethality” to flood an area with LM: aircraft carrying UAS carrying LM.<sup>16</sup>

The Marine Corps needs cheap, modular sUAS designed to be semi-autonomous and operate in swarms. A rotary-wing (or tilt-rotor) semi-autonomous family of logistics UAS will enable expeditionary operations generally and Stand-in Forces specifically, providing

answers to contested logistics questions.<sup>17</sup> Large numbers, allowing for attrition, of modular, general-purpose semi-autonomous armed UAS, capable of carrying LM and other munitions, enable UAS support to intermediate echelons, and provide loyal wingmen. Vehicle-portable LM, able to maneuver with GCEs, with hundreds of miles of range pushed to the lowest echelons possible will add long-range sensors and firepower to complement other capabilities. Such LM will give MAGTFs means to do anti-access/area-denial operations over land, littoral, or water.<sup>18</sup>

Automating UAS depends on sensors, signal processing, and AI. Swarms that share data will be better equipped to do pattern recognition based on multiple sensor returns. The introduction of collective AI will enable swarms to coordinate attacks to overwhelm defenses. Swarms will share data to better cue attacks. UAS finding a target may direct others to search based on enemy tactics and known disposition, which speeds up the detection of additional targets. Future employment

operations, and defense in particular, most Marines are hazards to themselves and their units. When leaders say, “every Marine is a collector,” the natural question is: for whom?<sup>19</sup> Increasing the defensive posture of the entire Marine Corps in cyberspace starting with the individual Marine is not difficult and offers immediate benefits.

Defensive cyberspace operations beyond individual countermeasures are critical. MAGTF C2 will be attacked. Automated systems make information assurance even more vital. Hijacked UAS and LM are bad, although misdirected fire support or logistics are no better. Supporting infrastructure, such as GPS, will draw enemy attention. Another defensive opportunity is counterdisinformation. A common practice is fake reporting to portray atrocities that never happened or exaggerate casualties, amongst other things, in a bid to win the battle of the narrative.<sup>20</sup> Communication Strategy and Operations may use media collected from numerous origins, including individual Marines, UAS sensors, and open sources,

---

***Drone swarms may provide battlefield awareness, fire support, communication relay nodes, electronic warfare support, and tactical deception ...***

---

may include cheap, semi-autonomous sUAS swarms and loyal wingmen as organic equipment for every squad and every vehicle. Such swarms will increase awareness and enhance security. Swarms may provide point defense by flying in a pseudorandom pattern to screen flanks under fire. This may defeat missiles and LM.

**Lethal 1s and 0s: Cyberspace Operations**

Cyberspace is a ubiquitous battlefield yet misunderstood by many. Every device with a microprocessor or connected to the electromagnetic spectrum or the internet is on this battlefield. The ugly reality is every Marine with a smartphone is engaged in information operations. When considering cyberspace

using digital forensics to reveal deep fakes. The aggregation of media and identification of fabrications is enabled by automated processes. Communication Strategy and Operations need such automation to outpace trolls.<sup>21</sup>

Offensive cyberspace operations (OCO) offer a significant opportunity to shape battlefields and influence audiences.<sup>22</sup> Although the damage mechanisms differ, OCO bears a strong resemblance to certain special operations.<sup>23</sup> Attacking an endpoint or network node is similar to attacking a fortification, whereas going after network links is akin to ambushes. The challenges of using OCO come from a pernicious combination of classification, lead time, and C2. Automated OCO, swarming botnets and AI-enabled malware, is



**An autonomous submarine being tested, the large displacement unmanned undersea vehicle, "Snakehead," provides a variety of capabilities including sensors in support of intelligence preparation of the operational environment. (Photo by Richard Allen.)**

openly discussed by cybercriminals and poses new cybersecurity risks.

Associated with cyberspace operations is partially disaggregating electronic warfare from signals intelligence. While there are beneficial ties that must be maintained, the two functions are not the same.<sup>24</sup> More jammers offer the opportunity to defeat enemy communication links, confuse enemy sensors, and provide terminal protection from precision fires; Marine Air Defense Integrated System is a start. Signals intelligence informs jammer use. Integrated C2 gets the most of both.<sup>25</sup> Cyberspace operations and jammers may be used against communications links and nodes with processors and storage, including those supporting LM and UAS operations.

### **Tying It All Together: C2**

Automated destructive systems pose new challenges for C2. Integrating existing capabilities with advantages conferred by new systems is important. At the same time, risks posed by automation and its limitations must be managed. Both concerns are solved by overall C2 architecture, system design in light of emerging assumptions, and command approach and tactical control measures. Structurally, the as-

simulation of new capabilities is simpler. UAS, LM, and cyber units are centralized at appropriate force providers and detached, task-organized, and given appropriate command relationships for operations.

Assuming enemies target entire friendly kill webs, C2 constructs must be designed for resiliency and degraded operation, ideally using a zero-trust model. Redundant reliable paths for information flows must be prepared. Independent operations with limited guidance, a maneuver warfare staple, are the crux of the autonomous value proposition. Signatures must be reduced, which raises questions about the minimum volumes of data needed to fight effectively. Can burst-transmitted messages replace continuous data streams? Are the latter saved for critical moments in an engagement? Is voice adequate or is video teleconferencing essential? Can short textual orders replace outsized PowerPoint decks? Automation will add heavily to managing resilient networks and updating digital defenses. AI may parse operations orders into programming.

Submarines offer ideas for autonomous UAS design. UAS need passive sensors, such as electro-optical, infrared, hyperspectral, and radio receivers,

with active sensors as backups or as payloads.<sup>26</sup> Sensor input flows to signal processing AI to understand returns, with analysis captured in burst-ready reports. Modern memory capacity prepositions relevant information, such as topographic data, aboard, making streaming data superfluous. Passive navigation avoids GPS dependency. Passive sensors and autonomous pattern recognition enable celestial navigation. Passive sensors plus topographic data equal terrain association. Russian Glonast and Chinese Baidu provide options. Communication between UAS in a swarm may be optical. Carbon fiber structures reduce radar signature. Command link security is essential. The result is a flexible UAS that emits little yet operates in an AI-enabled edge network, with payloads driven by METTT.

UAS are ideal for command by negotiation. Centralized command and decentralized control, as with most supporting arms C2, is fundamental: where will UAS be transiting and operating to execute which missions?<sup>27</sup> Monitoring the precise location of UAS, or friendly units generally, may become tactically impractical. UAS may be directed to areas to operate with as much discretion as their sensors, signal processing, and automation allow—guided by tactical control measures. UAS sensors may enable combined arms, with armed UAS and LM adding fires. Other MAGTF elements may be given guidance to deconflict with UAS, whether by geography or by time. Event-driven coordination makes sense as decision points are triggered by discovering specific signatures or engaging certain targets.<sup>28</sup> Target discrimination will remain a valid concern until AI proves itself superior to human decision makers. Collateral damage has no simple answer. AI can be programmed to defer to human decisions in ambiguous circumstances.<sup>29</sup>

Giving MAGTF commanders cyber support options, much like requesting fire support, overcomes many limitations on OCO. Marines need adequate awareness of the effects generated, protocols to request support, and relevant timelines. Having a package of pre-authorized cyber support options awaiting a *call for cyber* creates responsiveness to

the fluidity of operations. Cyber support may be automated to trigger upon meeting predetermined conditions.

Automation is fundamentally about tempo: sensing faster, deciding quicker, applying effects more rapidly than enemies can respond, and adapting as situations develop. Effective C2 shortens and hardens links in kill webs while

which qualities are needed in future systems is essential. Understanding limitations and how to degrade and defeat forces with the newest weapons will provide the resilience needed to accomplish critical missions.

The Marine Corps takes credit for three major innovations in 20th-century warfare: amphibious assault, close

tracking, and identifying potential targets; cueing potential targets to human operators; prioritizing selected targets; timing of when to fire; or providing terminal guidance to home in on selected targets, provided that human control is retained over the decision to select individual targets and specific target groups for engagement.

“Fire and forget” or lock-on-after-launch homing munitions that rely on TTPs to maximize the probability that the only targets within the seeker’s acquisition basket when the seeker activates are those individual targets or specific target groups that have been selected by a human operator.”

See: Office of the Secretary of Defense, *DoD 3000.09 Autonomy in Weapon Systems*, (Washington, DC: 2012).

**Automation is fundamentally about tempo: sensing faster, deciding quicker, applying effects more rapidly than enemies can respond, and adapting as situations develop.**

making them tougher to sense, using organization, implicit and explicit communication, and informed decisions, and shedding outdated, artificial brakes such as 72-hour air tasking order cycles. Integrating automated weapons uses technology to gather more information, evaluate it, and act upon it at the edge within mission parameters, making powerful Marine-machine teams ideally suited for maneuver warfare. The essence of reconnaissance and counter-reconnaissance is acquiring useful information while denying it to enemies. Such weapons make sensing and striking far beyond the horizon practical. Enemies get a vote, and they will bring innovation to defeat MAGTFs, which must be ready to survive a transparent, lethal, and automated reality. While slipping jabs is best, being ready to eat knuckle sandwiches is pragmatic while blocking with the face just hurts.

**Conclusion**

The modern battlefield boasts a variety of 21st-century capabilities: LM, semi-autonomous drones, and cyber. The common theme behind these capabilities is automation—using the speed of modern computing to increase battlefield tempo faster than humans can cope. These systems are being adopted globally and will influence combat operations. Just using new weapons is not enough.

Adapting organizations to make effective use of them and recognizing

air support, and vertical envelopment. While the Marine Corps did not invent the underlying concepts, it first made them tactically successful. Almost a quarter of the way into the 21st century, the Marine Corps can lead the way in using automation as a critical capability within MAGTF operations to enable future success while enduring enemy use of these new weapons. The Marine Corps is well-served by thinking beyond semi-autonomous to more autonomous because such systems are inevitable.

**Notes**

1. *Autonomous weapon system.* A weapon system that, once activated, can select and engage targets without further intervention by a human operator. This includes human-supervised autonomous weapon systems that are designed to allow human operators to override the operation of the weapon system but can select and engage targets without further human input after activation.

*Human-supervised autonomous weapon system.* An autonomous weapon system that is designed to provide human operators with the ability to intervene and terminate engagements, including in the event of a weapon system failure, before unacceptable levels of damage occur.

*Semi-autonomous weapon system.* A weapon system that, once activated, is intended to only engage individual targets or specific target groups that have been selected by a human operator. This includes:

Semi-autonomous weapon systems that employ autonomy for engagement-related functions including, but not limited to, acquiring,

2. John F. Antal, *7 Seconds to Die* (Philadelphia: Casemate, 2022).

3. “Unmanned aircraft: An aircraft that does not carry a human operator and is capable of flight with or without human remote control. Also called UA.” (JP 3-30) “Unmanned aircraft system: That system whose components include the necessary equipment, network, and personnel to control an unmanned aircraft. Also called UAS.” (JP 3-30).” See: Joint Staff, *JP 1-02 Department of Defense Dictionary of Military and Associated Terms*, (Washington, DC: 2016).

4. Atul Chandra, “Why China’s armed UAVs are a Global Export Success, and Its Fighter Jets, Not So Much” *Defence Procurement International*, November 5, 2021, <https://www.defenceprocurementinternational.com/features/air/china-has-disrupted-the-military-drone-market>.

5. Fred Kaplan, *Dark Territory* (New York: Simon & Schuster, 2016).

6. DOD categorizes UAS based on the table located on the next page. Headquarters Marine Corps, *MCRP 3-42.1A Multi-Service Tactics, Techniques, and Procedures for the Tactical Employment of Unmanned Aircraft Systems*, (Washington, DC: 2015).

7. Headquarters Marine Corps, *MCIP 3-40.02 Marine Corps Cyberspace Operations*, (Washington, DC: 2014).

8. Michael Schwille, Jonathan Welch, Scott Fisher, Thomas M. Whittaker, Christopher Paul, *Tactical Operations in the Information Environment* (Santa Monica, CA: RAND, 2021).

9. C.J. Chivers, *The Gun* (New York: Simon & Schuster, 2010).



Category	Size	Max Gross Takeoff Weight	Normal Operating Altitude	Speed
Group 1	Small	0-20 lbs	<1,200 ft AGL	<100 knots
Group 2	Medium	21-55 lbs	<3,500 ft AGL	<250 knots
Group 3	Large	<1,320 lbs	<18,000 ft MSL	<250 knots
Group 4	Larger	>1,320 lbs	<18,000 ft MSL	Any
Group 5	Largest	>1,320 lbs	>18,000 ft MSL	Any

10. Andrew Ilachinski, *AI, Robots, and Swarms* (Washington, DC: CNA, 2017).

11. Charles J. Simon, *Will Computers Revolt?* (Annapolis, MD: Future AI, 2018).

12. Department of the Navy, *NWP 3-15 Mine Warfare*, (Washington, DC: 1996).

13. Headquarters Marine Corps, *MCTP 3-02A MAGTF Network Engagement Activities*, (Washington, DC: 2022).

14. Headquarters Marine Corps, *MCIP 10-10Bi MAGTF Counter Guided-Rockets Artillery, Mortars, and Missiles (G-RAMM) Operations*, (Washington, DC: 2018).

15. Headquarters Marine Corps, *Marine Corps Concept for Signature Management (SIGMAN)*, (Washington, DC: 2017).

16. Caroline C. Baxter, *Twitter*, February 8, 2021, <https://twitter.com/carolinecbaxter/status/1358939478207959044>.

17. Headquarters Marine Corps, *MCRP-3-20.5 UAS Operations*, (Washington, DC: 2017).

18. Headquarters Marine Corps, *MCRP 3-20.2 Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare*, (Washington, DC: 2020).

19. NATO, *Camouflage for The Digital Domain*, (Riga, Latvia: NATO STRATCOM COE, 2020).

20. P.W. Singer and Emerson T. Brooking, *Like-war* (New York: Houghton Mifflin Harcourt, 2018).

21. Jessikka Aro, *Putin's Trolls* (New York: Ig Publishing, 2022).

22. Daniel P. Bagge, *Unmasking Maskirovka* (New York: NY: Defense Press, 2019).

23. William H. McRaven, *Spec Ops* (Novato, CA: Presidio, 1996).

24. Headquarters Marine Corps, *MCRP 2-10A.1, Signals Intelligence*, (Washington, DC: 2018).

25. Headquarters Marine Corps, *MCWP 3-40-5, Electronic Warfare*, (Washington, DC: 2002).

26. Headquarters Marine Corps, *MCTP 3-20G, Air Reconnaissance*, (Washington, DC: 2018).

27. Headquarters Marine Corps, *MCWP 3-31, MAGTF Fires*, (Washington, DC: 2018)

28. Headquarters Marine Corps, *MCRP 3-20F.4, Multi-Service Tactics, Techniques, and Procedures for Airspace Control*, (Washington, DC: 2019).

29. Robert J. Marks, *The Case for Killer Robots* (Seattle, WA: Discovery Institute, 2020).



Sponsored by:



## MARINE CORPS MUSTANG ASSOCIATION

### What is a Mustang?

A Mustang is an individual who graduated from either MCRD San Diego or MCRD Parris Island who, at some point in their career, becomes a Commissioned Officer or Warrant Officer in the Marine Corps, or one of the other recognized branches of the U.S. Armed Forces.

To learn more about the Mustang Association and to join, visit [www.MarineCorpsMustang.org](http://www.MarineCorpsMustang.org) or, call (703) 349-0873.

2022 LtCol Earl “Pete” Ellis Essay Contest: Honorable Mention

# More Than the Sum of Their Parts

Combined arms and loitering munitions

by Maj Carl Forsling, USMC (Ret)

**L**oitering munitions, often called “kamikaze drones,” have been one of the standout technologies of the war in Ukraine. The images of Ukrainian Switchblades and Phoenix Ghosts wreaking havoc on Russian convoys demonstrate the incredible utility of these systems.

These weapons give units as small as squads and fire teams the ability to observe and destroy targets several terrain features away—practically close air support (CAS) in a can. A few riflemen can now target groups of troops and even light armor well beyond the reach of their organic direct-fire weapons.

Seeing the success of these weapons contrasted against the high attrition of Russian fixed- and rotary-wing CAS aircraft in Ukraine, it might appear that CAS is on the road to obsolescence. Fuller analysis reveals that loitering munitions allow yet another dimension of combined arms, another horn to add to the enemy’s dilemma. By integrating their employment with traditional attack aircraft, both become more effective.

*Loitering munitions lend themselves to Force Design 2030.* They are a huge boon for small, distributed units, like those envisioned under *Force Design 2030*. The Marine Littoral Regiment does not need weapons platoons or companies to get a far more useful indirect fire capability than the 60s or 81s the Corps has relied on for decades.

Cheap, plentiful, and distributed precision fires are the dream of every commander. At the most basic level,

**>Maj Carl Forsling is a former CH-46E and MV-22B Pilot who now works in the aerospace industry.**

loitering munitions from handheld launchers or vehicles give a GCE a responsive intelligence, surveillance, reconnaissance, targeting, and strike capability that previously required ACE assets.

Unfortunately, it is also the dream of enemy commanders. There will likely be just as many loitering munitions hunting Marines as Marines’ loitering munitions hunting the enemy. With relatively small units conducting Expe-

well-established drill, the precise tactics, techniques, and procedures surrounding the role of loitering munitions in combined arms warfare are not yet defined.

Loitering munitions can provide a previously difficult combination of mass and precision. Typically, there is a trade-off between those two things. A small quantity of laser-guided bombs is one thing. An artillery or mortar barrage is something else. Now large quantities of precision munitions can be brought to bear at an exact time-on-target at the tactical level.

Loitering munitions will continue to proliferate and iterate, creating new tools and accompanying tactics. The

---

***The images of Ukrainian Switchblades and Phoenix Ghosts wreaking havoc on Russian convoys demonstrate the incredible utility of these systems.***

---

ditionary Advanced Base Operations, Marines cannot afford to engage in an automated version of attrition-based warfare.

*Loitering munitions change the instruments of warfare but not necessarily the tune.* In a typical historical example of combined arms, artillery fixes the enemy in place and suppressive fire prevents him from using his own weapons, enabling maneuver elements to close with and destroy. In contrast to this

upper bound of capability will likely be one or more loitering munitions delivered by a long-range ballistic or cruise missile. At the lower bound, loitering munitions will be at least as common and as easy to employ as 40mm grenades from M203s were in earlier times. With continued improvements in sensors, batteries, and additive manufacturing, one can envision insect-sized loitering munitions with explosives printed into their airframes swarming the battlefield.

In such an environment, attack aircraft may no longer be as necessary as they once were to deliver a single AP-KWS or Hellfire to destroy an enemy position out of reach of a squad's organic weapons. That squad can now pop a Switchblade out of a tube and accomplish the same task within minutes.

But applying that method to a larger enemy unit is another matter. The expenditure rate could be extraordinary and well beyond what infantry units

solution could be an adaptation of a platform like an MV-22 or a KC-130 that does not ordinarily provide CAS exploiting the standoff capability of loitering munitions to provide large quantities on call.

Those and similar ideas could relieve much of the need for GCEs to carry disproportionate stores of loitering munitions. But while airborne magazines or repurposed assault support platforms are good for deploying certain standoff munitions, they are unsuited

aircraft to attack targets with greater standoff without a precise location at launch.

This property allows a smaller number of aircraft to support a far broader area than previously possible. Already, air-launched loitering munitions are available with ranges of more than 100nm. In the armed reconnaissance role, deploying these weapons greatly extends the area covered. If the platform is a tiltrotor or other high-speed platform, it can even sprint forward to observe those areas of interest or further engage any enemy revealed.

Similarly, manned aircraft can use loitering munitions to extend their effective time on station on both the front and back ends. Again, the complimentary effects of loitering munitions and more traditional weapons are apparent. After an attack by a loitering munition, a manned aircraft can reattack targets revealed by their movements or by radiating.

During ingress and while it engages, manned aircraft can use multiple loitering munitions dispensed as air-launched effects to overwhelm the enemy's defenses with several potential threats. This forces him to prioritize which ones to engage with his defensive systems, thus supplementing more traditional decoys, chaff, and flares. Similarly, during egress, loitering munitions can remain behind to pick off survivors or prevent them from displacing. These and similar methods of employment serve to increase friction for the enemy, make him slower to maneuver, and more vulnerable to other fires.

*Aviation fires, both traditional and loitering, complement ground fires.* Loitering munitions have unique vulnerabilities and strengths that will affect how troops are employed in both the attack and defense. As successful as loitering munitions have been in Ukraine, they are vulnerable to countermeasures, both current and future. They are generally battery-powered, propeller-driven devices, and on an individual basis are easy to defeat. A loitering munition, or even many loitering munitions, launched without accompanying fires or maneuver will have little kinetic effect against a prepared adversary.

---

## ***The combined effects of loitering munitions and other airborne fires are greater than the sum of the two taken separately.***

---

can carry. Even with additional vehicle support, regular resupply of loitering munitions will be essential.

A landbased force with contiguous supply lines could conceivably keep a sufficient supply of such weapons flowing to the front. A naval expeditionary force cannot, at least without considerably more ground vehicles, and thus also more fuel supplies, more connectors, more amphibious lift, etc.

If that resupply is via air, the obvious question is: why not cut out the middleman? If air assets are delivering these munitions to the GCE to employ, then air assets, be they manned or unmanned, can in turn carry and employ those munitions themselves. This allows the infantry to carry more of the long-range munitions like the Naval Strike Missile that are their reason for being deployed in the first place. Aircraft create an opportunity to simultaneously mitigate that potential for a large additional resupply requirement while using loitering munitions to create new capabilities.

*Aircraft can carry far more and more capable loitering munitions than an infantry unit.* Several types of air vehicles will have a role. There could be unmanned platforms that act simply as autonomous or semi-autonomous airborne magazines of loitering munitions. Similarly, a near-term, low-cost

for close engagements with the enemy. Purpose-built attack aircraft give the ability to both stand off and stand in (in the tactical sense) as the situation demands.

*Attack aircraft increase the effectiveness of loitering munitions and vice versa.* The most flexible means of providing this in the near- to mid-term is via manned attack aircraft. Aviation fires offer combined arms effects without encumbering the supported unit.

The combined effects of loitering munitions and other airborne fires are greater than the sum of the two taken separately. Loitering munitions drive their targets to deploy and move under an umbrella of countermeasures. This makes targets more vulnerable to detection and engagement with other weapons, like SLAM, Spike-NLOS, JAGM, and even 20mm cannons. All these present different profiles and are more difficult targets for interception than relatively slow-moving loitering munitions.

Attack aircraft provide flexibility for the employment of loitering munitions in both space and time. This is especially true for VTOL and VSTOL aircraft, such as the UH-1Y, AH-1Z, and F-35B, that can be positioned close to the front lines. Loitering munitions give a distinct and new method of conducting offensive air support, allowing

Defenses against loitering munitions start with air defense artillery as well as surface-to-air and air-to-air missiles. These are uneconomical in that role, due to the sheer quantity of loitering munitions and the need to preserve expensive assets such as guided missiles. Meaningful protection needs additional layers.

One layer is electronic, using jammers to defeat either the command or operation of loitering munitions. The other is kinetic, active protection sys-

tems using either munitions or directed energy. The Corps must account for these from an offensive and defensive standpoint—as both a user and a target.

---

***By virtue of its combined arms experience, the Marine Corps has a unique opportunity to obtain synergy between ... loitering munitions and the tested structure of the MAGTF.***

---

tems using either munitions or directed energy. The Corps must account for these from an offensive and defensive standpoint—as both a user and a target.

Loitering munitions force their targets to take action to counter them. He may attempt to disperse and minimize his signature. This will be effective until the sheer number of munitions in an area makes hiding impossible. At that point, those troops will have to employ an active air defense.

The difficulty in defending against loitering munitions and air threats, in general, is that vehicles and sensors are necessary, creating new vulnerabilities. Those vehicles limit the terrain over which a force can move and are inherently vulnerable to acquisition and targeting in multiple spectrums. The sensors mean that the enemy can be targeted by anti-radiation weapons.

All this is to say that there is still a role for high-speed missiles and direct-fire weapons to exploit these potential vulnerabilities. The steps needed to defeat loitering munitions push the nature of combat back toward a combined arms construct. As an adversary defends against one weapon, he increases his vulnerability to another.

This could be a terrifying prospect for anyone except for Marines. By virtue

of the Corps' experience as a combined-arms force that combines ground and aviation assets, it is in a unique position to inflict this dilemma on the enemy while avoiding it for itself.

*Attack and utility aircraft have an important role in Expeditionary Advanced Base Operations.* One of the first actions taken in *Force Design 2030* was to reduce the flight line allocation of F-35s in VMAs and to reduce the number of HMLA squadrons. While the change may have been warranted in the context

of the Marine Corps as a whole, the aircraft in those units have value disproportionate to their numbers when exploiting the combined-arms effect of loitering munitions.

Loitering munitions do not replace attack aircraft. In fact, only forward-based attack aircraft can bring the necessary volume of those munitions to bear without encumbering the GCE. This facilitates the use of fire and maneuver vice a drone-based war of attrition. Ironically, while loitering munitions may reduce the total number of aircraft needed to support the GCE, only by creative use of expeditionary fixed- and rotary-wing attack aircraft will the Corps capitalize on the full potential of loitering munitions.

It is unlikely that aircraft carriers will remain inside the WEZ and have enough excess sorties to provide direct support of the Marine GCE, much less remain close enough to any troops in contact to provide sufficient time on station. This means that Marine Stand-In Forces need to establish sufficient expeditionary airfields to support several F-35B detachments on a rotating basis as well as enough F-35Bs to support what may be a high-attrition mission.

The F-35B serves as part of the first layer of defense against enemy aviation

assets deploying loitering munitions. Just as importantly, it provides reach and timely response with all types of aviation fires.

The UH-1Y and AH-1Z both provide similar fires capability but with the ability to stage for longer periods out of forward arming and refueling points. As larger expeditionary airfields supporting F-35Bs need to periodically displace and thus incur gaps in fixed-wing coverage, the Y and Z maintain a responsive forward presence. In addition, the utility logistics capability of the UH-1Y supplements the mobility and resupply of the stand-in force, which will always be at a premium.

Marine Stand-In Forces will need a high-speed, long-range tiltrotor or similar replacement of the Y/Z to fully exploit loitering munitions and provide the full implementation of this new combined arms methodology. Such an aircraft would enable wider dispersion of rotary-wing attack and utility aircraft and provide greater overlapping coverage with F-35Bs. This would maximize the amount of ordnance of all types available, effective on-station time, and mutual support and survivability of air assets.

By virtue of its combined arms experience, the Marine Corps has a unique opportunity to obtain synergy between the emerging technology of loitering munitions and the tested structure of the MAGTF. Even more than before, the MAGTF is more than the sum of its parts, and the emergence of loitering munitions makes this even more true, not less.



Sponsored by:



# Offensive Cyberspace Operations

Using artificial intelligence and kill chains to analyze the effects of MAGTF execution authority

by LtCol Arun Shankar

Offensive cyberspace operations (OCO) play a crucial role in every phase of modern warfare from competition to conflict to stability. Generally, geographic combatant commanders, U.S. Cyber Command (USCYBERCOM), or Service-level components hold the authority to use these weapons. Though there are methods for MAGTF commanders to request OCO support from these agencies, they can be arduous and time-consuming. In practice, this often leads to the assumed unavailability of this resource and suboptimal outcomes at the MAGTF level. This article proposes a simple mathematical model that uses artificial intelligence (AI) to analyze opportunities when a further delegation of this authority might prove fruitful. Implications of these findings to law and policy are also presented.

## Background

OCOs are an element of the warfighting function termed “fires.” Fires, most commonly known as bombs and rockets, are more accurately defined as lethal and nonlethal capabilities that produce a specific effect on a target.<sup>1</sup> Like psychological operations and electronic warfare, OCOs are nonlethal fires. They aim to disrupt or deny an enemy’s capability but generally do not inflict casualties directly. Examples of OCOs could include adversary data manipulation or network denial.<sup>2</sup>

Though fire support may come from different agencies and various echelons

**>LtCol Shankar is a CMC Fellow at the Hoover Institution, Stanford University. He has served a combined 28 months in Operation IRAQI FREEDOM and Operation ENDURING FREEDOM as a counter-IED Analyst, Assessments Analyst, and Communications Officer, and holds a PhD in Operations Analysis from George Mason University.**

of command, MAGTF battlespace owners typically hold the authority for executing the use of these assets. In fact, this authority is more common in the use of lethal fires than nonlethal fires. In some cases, this approval is delegated even further through the assignment of direct-support relationships. Within this model, a particular fires asset may be tasked to provide priority support

unintended consequences. Moreover, OCO resources are precious. Unlike the firing of ammunition, if the adversary discovers the computer code of an OCO, its chance of friendly reuse is unlikely.<sup>4</sup> For these reasons, conventional leaders in the cyber community argue that the authority to deploy cyber effects in the battlespace must be held at component and combatant command

---

***This article proposes a simple mathematical model that uses artificial intelligence (AI) to analyze opportunities when a further delegation of this authority might prove fruitful.***

---

to a given MAGTF mission, and the MAGTF commander would retain authority to use it with very few approval parameters. Three-dimensional warfighting domains (air, land, sea, space) are well-suited for this construct.

Contrarily, cyberspace is not bound by the standard Cartesian coordinate system.<sup>3</sup> Limits and boundaries can be challenging to estimate, increasing the risk of collateral damage and other

levels, much like the use of large-scale missiles and nuclear weapons.<sup>5</sup>

A similar premise was first adopted when electronic warfare capabilities became mainstream in the 1970s. The authority to use these non-kinetic fires was held at the highest levels of command.

However, over time, a delegation of authority was eventually given to ground commanders once a wider au-

dience understood risk and capabilities. Citing this precedent, one could argue the same for OCOs.

Boundaries and fires deconfliction can also be defined for OCO scenarios if the environment is constrained and well-understood. Contrarians persist that this is impossible and that cyberspace is so abstract and dimensionless that every OCO has the risk of undesired catastrophic effects.<sup>6</sup> However, even an amateur understanding of networks will reveal that this premise is likely exaggerated. Though it is acknowledged that the network structures often do not correspond with physical space, they do have a logical space defined by IP addresses. This logical space can be assigned to a MAGTF battlespace owner, much like airspace, sea lanes, and battlefields. Designated as a restricted operating zone, it could also constrain maneuver to reduce collateral damage.

In addition to logical boundaries, the *probability of success* should also influence the OCO launch authority. A failed OCO is a costly loss of time and resources because it is also a zero-day attack.<sup>7</sup> Such an attack is the first of its kind, where it exploits a publicly unknown network vulnerability. The code to develop an OCO can take years to script, so its usage should be judicious. Moreover, once an OCO launches, the enemy can likely deconstruct and harvest intelligence from it. Artificial intelligence models are developed specifically for such scenarios, and they can provide credible insight into the probability of an OCO's success.

Once these parameters and constraints are defined within the battlespace, the MAGTF commander could have the authority to navigate within it, using a direct support asset or an organic force. In either event, the decision to act would lie with the MAGTF commander, decentralizing decision making and improving tempo, both of which are vital tenets of conventional maneuver warfare.<sup>8</sup>

### Artificial Intelligence Model - Cyber Kill Chain

AI refers to a machine's ability to think and perform tasks like a hu-

man. Machine learning is a subset of AI that denotes a machine's predictive and pattern recognition ability.<sup>9</sup> AI is not spreadsheet automation or macro-scripting; instead, its algorithms follow an endless cycle of inputting data and

### The code to develop an OCO can take years to script ...

outputting predictions. The predictions are checked against new data, and the algorithm parameters improve accordingly (i.e., machine learning). Typical examples of AI include facial

os.<sup>12</sup> This kill chain encompasses the actions of reconnaissance, scanning, gaining access, maintaining access, and clearing tracks. Reconnaissance is the act of studying the target and gathering general information such as login information, passwords, IP addresses, and physical locations. Scanning includes using software tools to determine open ports and other vulnerabilities. An attacker gains access through these vulnerabilities and maintains access by escalating privileges and installing backdoors for future access. Once the purpose of the attack is complete, the attacker covers his tracks upon exit by deleting created objects and clearing logs. A successful attack is defined by sequential success at each of these steps of the kill chain.

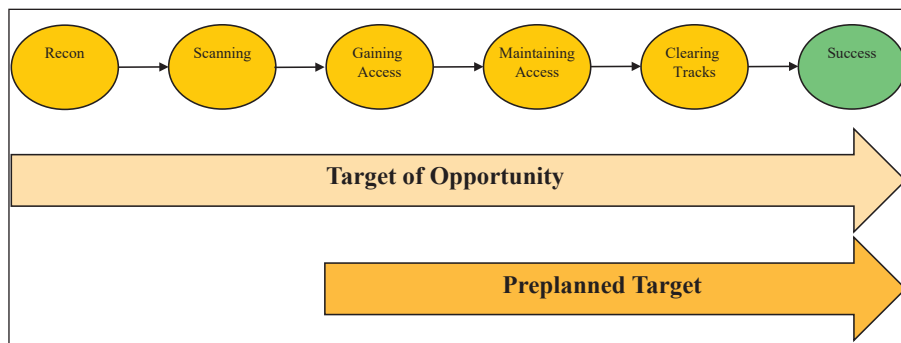


Figure 1. Cyber kill chain. (Figure provided by author.)

recognition software and grammar editing applications.

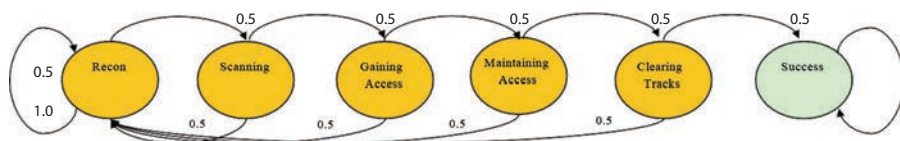
OCO can be framed by a cyber kill chain—a sequence of regular events for every cyber-attack operation.<sup>10</sup> Depending on the circumstances, they can be in series, parallel, or a combination of both. This decomposition of the cyber-attack process into a probabilistic network of events allows the decision maker to understand better the system's dynamics, rather than an oversimplified, binary scoring system that plagues most military decision support tools. This framework is modeled by assigning probabilities of success to each event, feeding an overall probability score for the success of the kill chain.<sup>11</sup> A commander's appetite for risk can determine a launch threshold for this probability.

Figure 1 portrays a simple kill chain that can be adapted for many scenari-

This five-phase OCO process can also be decomposed into a Markov Chain, a mathematical matrix of probabilities characterizing transitions between these phases.<sup>13</sup> In particular, the probability of residing in one phase only depends upon the previous state. A Markov Chain's elegant features allow us to estimate the probability of a successful OCO easily. As new data about OCOs is collected, these transition probabilities are updated, and final estimates are improved through machine learning. Hence, the Markov Chain is the backbone of the AI that powers this mathematical model and its conclusions.

Figure 2 overlays the five phases of the cyber kill chain into a Markov Chain and Markov Diagram. In this elementary model, the probability of successfully completing one phase

	Reconnaissance	Scanning	Gaining Access	Maintaining Access	Clearing Tracks	Success
Reconnaissance	0.5	0.5	0	0	0	0
Scanning	0.5	0	0.5	0	0	0
Gaining Access	0.5	0	0	0.5	0	0
Maintaining Access	0.5	0	0	0	0.5	0
Clearing Tracks	0.5	0	0	0	0	0.5
Success	0	0	0	0	0	1



**Figure 2. Markov Diagram and Markov Chain.** (Figure provided by author.)

and proceeding to the next phase is 50 percent. Conversely, the probability of failing the phase and returning to the first phase is also 50 percent. Moreover, if the fifth phase (clearing tracks) is completed successfully, there is a 100 percent chance of a successful mission.

The initial transition probabilities within the Markov Chain are derived from the exponential statistical distribution.<sup>14</sup> The exponential distribution is ideal for this circumstance because it is often used in reliability and failure analysis in some manufacturing settings. It requires just two inputs to produce an output probability. The first is the rate parameter, or the minimum time needed to complete the execution of a given phase under the current circumstances. The rate parameter is influenced by the type of cyber target—pre-planned or a target of opportunity.<sup>15</sup> Pre-planned targets should require less time to execute (low rate parameter) because reconnaissance and scanning have generally already occurred successfully (Figure 1). In contrast, targets of opportunity may require execution of all steps of the kill chain, with little prior planning, consequently requiring more time than a pre-planned target (high-rate parameter).

The second input is the maximum allowed time for each phase of the cyber kill chain, influenced by the tactical mission deadline. This total available time needs to be subdivided for each phase. Once the two inputs are deter-

mined for each phase of the process, the probabilities are computed and inputted into the Markov transition matrix. From here, the total probability of success for the mission is determined.

### Hypothetical Scenario

A MAGTF commander will execute a raid of a near-peer enemy stronghold in 36 hours. He knows his enemy primarily depends on a military cellular phone network to control his forces. He wants to attack the network with the end state of manipulating chat messages to cause chaos and confusion. His intelligence says the adversary is likely monitoring friendly satellite communications, so he does not wish to request OCO support from his higher headquarters. Moreover, since the start of this conventional war, national and Service-level cyber teams have been stretched thin, only providing support to decisive mis-

---

***A MAGTF commander will execute a raid of a near-peer enemy stronghold in 36 hours. He knows his enemy primarily depends on a military cellular phone network to control his forces.***

---

sions of national interest. Thankfully, a small OCO element is organic to his unit. He has been delegated authority to execute OCO missions if they meet

specific guidelines and their probability of success is greater than 75 percent.

Cyber missions can be characterized as routine (>24 hours), priority (12–24 hours), or urgent (0–12 hours). In this case, the mission is routine since the commander has 36 hours before execution. The target has also been pre-planned, so reconnaissance and scanning are already complete. Historical data reveals the average minimum time to failure is three hours when gaining access, six hours when maintaining access, and five hours when clearing tracks. The commander allows his OCO team a maximum of twelve hours in each of these sequential phases before he aborts the mission. Consequently, the calculations result in a probability of success of 77 percent. If the remaining guidelines for launch are met, the MAGTF commander should be allowed to execute without further approval.

### Discussion

The preceding AI model (hereafter “Markov Kill Chain”), powered by a Markov Chain, can easily be adapted to portray more complex scenarios. For instance, the five-phase cyber kill chain illustrated in Figure 2 can be converted to the well-known MITRE ATT&CK framework in Figure 3.<sup>16</sup> This kill chain has 14 phases and more than 100 sub-phases, but the Markov Chain foundation of the model remains the same. Subphases can be modeled separately, aggregating results into the greater Markov Kill “Web.” Additionally, phases

need not be sequential—the Markov Kill Chain is especially effective in analyzing parallel actions. Scalability is virtually endless.

Reconnaissance	Resource Development	Initial Access	Execution	Persistence	Privilege Escalation	Defense Evasion	Credential Access	Discovery	Lateral Movement	Collection	Command and Control	Exfiltration	Impact
Active Canaries	Acquire Infrastructure	Valid Accounts	Windows Management Instrumentation	Scheduled Task/Job	Valid Accounts	High Jaccation Flow	Modify Authentication Process	System Service Discovery	Remote Services	Data from Local System	Data Obfuscation	Defragment Over Other	Data Destruction
Carhaz Victim	Compromise Accounts	Replication Through Remote Media	Instrumentation					Network Sniffing	Software Deployment	Data from Removable Media	Failback Channels	Network Medium	Data Encrypted for Impact
Carhaz Victim Identity Information	Develop Capabilities	Trusted Relationship	Software Deployment					Application Window Discovery	Tools	Application Layer Protocol	Scheduled Transfer	Service Stop	Wiper System Recovery
Carhaz Victim Network Information	Obtain Capabilities	Supply Chain Compromise	Share Modules					Direct Volume Access	Application Through Removable Media	Local Capture	Priority	Data Transfer Size Limits	
Carhaz Victim Org Information	Share Capabilities	Share Public Keying Application	Use Location					Event Triggered Location	Screen Capture	Communication Through Removable Media	C2 Channel	Defragmentation	
Cloud for Information	Use by Compromise	Use Location	Exploitation for Client Execution					Boot to Local Adminstrator Execution	Screen Capture	Web Service	Network Over	Network Detail of Service	
Search Cloud Services	Command and Scripting Interpreter	System Services	System Services					Account Manipulation	Labelled Tool Transfer	Automated Collection	Access Tool Transfer	Defragmentation	Indicator Detail of Service
Search Open Web-based Databases	Powercat	Powercat	Powercat					Access Token Manipulation	Audio Capture	Data Involving	Web Service	System Shutdown/Reboot	
Search Open Web-based Databases	Powercat	Powercat	Powercat					Abuse Invalid Control Mechanism	Video Capture	Traffic Signaling	Automated Defragmentation	Account Access Removal	
Search Victim-Owned Websites	Powercat	Powercat	Powercat					Domain Policy Modification	Man in the Browser	Dynamic Execution	Protocol Hijacking	Data Manipulation	
								Unusual Credentials	Remote Service Session Hijacking	Non-Standard Port	Transfer Data to Cloud Account		

Figure 3. MITRE ATT&CK framework. (Figure provided by author.)

Moreover, the Markov Kill Chain is primarily driven by the rate parameters that influence the output probability from the exponential distribution. These input parameters are developed from historical data and updated as more data is collected, forming the machine learning backbone for artificial intelligence. A concerted data collec-

tion effort is essential for any artificial intelligence endeavor to produce reliable results; the Markov Kill Chain is no different. Therefore, this model's success also relies on military commands mining and storing this data in a readily accessible format.

networks. Suppose the enemy is using civilian infrastructure as part of his communications network. In that case, this may require a qualitative judgment by the commander on whether tactical execution of the OCO should be authorized. The target effect of the OCO should also be considered. Higher authorities should be consulted if the

and allows for cyberspace operations' covert, clandestine nature. Unlike the use of many physical weapons, the U.S. military will not advertise an OCO before it is executed for fear the attack will be thwarted and the precious code deemed useless. Therefore, because of this peculiarity of cyberspace, *Title 50* plays a role in this authorization.<sup>18</sup> Conveniently, the director of the National Security Agency, an intelligence agency, and the commander of US-CYBERCOM, a functional combatant command, are the same person, so the dual usage of *Title 10* and *Title 50* is supported by the command structure. Delegating OCO execution authority to the MAGTF level would require two modifications to this apparatus. First, the National Security Agency and the USCYBERCOM organizations must be commanded by different people and staffs.<sup>19</sup> Despite the overlap in *Title 50* characteristics, cyberspace operations should be planned and characterized as military operations in cyberspace, not as covert operations run by the intelligence community.<sup>20</sup> Intelligence operations are often risk-averse, overclassified, and laden with mounds of analysis. Its agencies are deliberate and methodical, built for long-term strategic outcomes rather than quick, tactical gains. Most of the U.S. intelligence community is manned

**Military cyberspace operations are primarily bounded by two specific elements of U.S. Code Title 10 and Title 50 ...**

OCO can cause widespread, unintended disarray that counters the desired friendly end state. Depending on the circumstances and available data, the Markov Kill Chain can be modified to consider all these conditions before producing a recommendation.

**Implications to Law and Policy**

Military cyberspace operations are primarily bounded by two specific elements of *U.S. Code Title 10* and *Title 50*, shown in Figure 4.<sup>17</sup> *Title 10* largely governs military operations in a general sense, including those in cyberspace. *Title 50* focuses on intelligence gathering



United States Code (USC)	Title	Key Focus	Principal Organization	Role in Cyberspace
Title 6	Domestic Security	Homeland security	Department of Homeland Security	Security of US cyberspace
Title 10	Armed Forces	National defense	Department of Defense	Man, train, and equip US forces for military operations in cyberspace
Title 18	Crimes and Criminal Procedure	Law enforcement	Department of Justice	Crime prevention, apprehension, and prosecution of criminals operating in cyberspace
Title 28	Judiciary and Judicial Procedure			
Title 32	National Guard	National defense and civil support training and operations, in the US	State Army National Guard, State Air National Guard	Domestic consequence management (if activated for federal service, the National Guard is integrated into the Title 10, USC), Armed Forces
Title 40	Public Buildings, Property, and Works	Chief Information Officer roles and responsibilities	All Federal departments and agencies	Establish and enforce standards for acquisition and security of information technologies
Title 44	Public Printing and Documents	Defines basic agency responsibilities and authorities for information security policy	All Federal departments and agencies	The foundation for what we now call cybersecurity activities, as outlined in Department of Defense Instruction, 8530.01, Cybersecurity Activities Support to DOD Information Network Operations.
Title 50	War and National Defense	A broad spectrum of military, foreign intelligence, and counterintelligence activities	Commands, Services, and agencies under the Department of Defense and intelligence community agencies aligned under the Office of the Director of National Intelligence	Secure US interests by conducting military and foreign intelligence operations in cyberspace

Figure 4. United States Code. (Figure provided by author.)

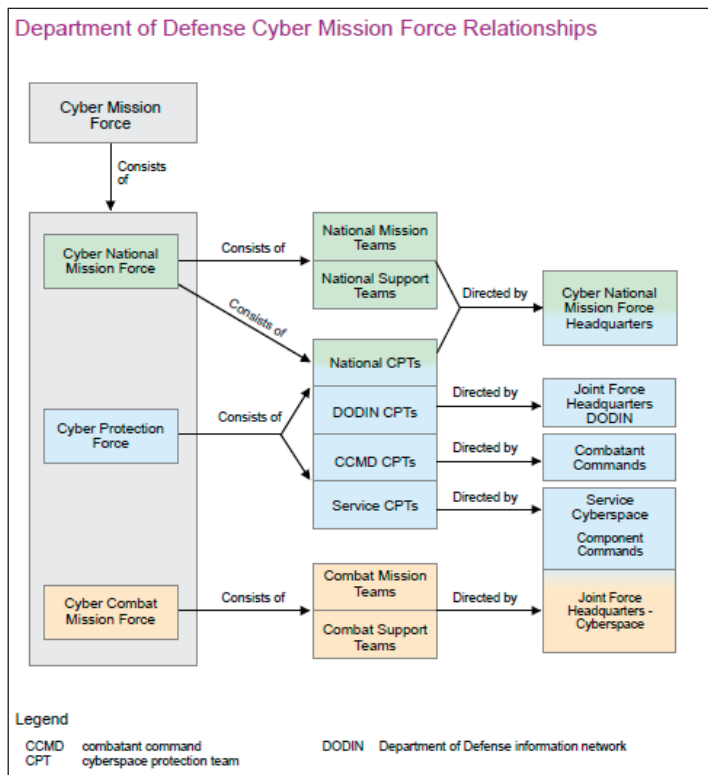


Figure 5. Command and Control relationships (present-day). (Figure provided by author.)

by civilians, not the military, and these cultural barriers are apparent to any service member outside of Washington, DC.

On the other hand, a combatant command is generally distributed and decentralized to support tactical military formations. The culture lends itself to accepting risk when it benefits tempo. Ground and air commanders are encouraged to take initiative and be bold. Therefore, OCO authority is more likely to be in the hands of MAGTF commanders in this latter command structure.

USCYBERCOM’s recent “Defend Forward” initiative is a step in the right direction.<sup>21</sup> The DOD’s former passive approach of waiting to be attacked before reacting is no more. Today, USCYBERCOM operators are actively hunting for adversaries before they reach our friendly resources. This long overdue, active defense strategy promotes tempo, but not at the tactical level. Nevertheless, GEN Nakasone and his leaders should be commended for taking this prudent step forward.

Second, the military’s cyber mission capability, or “Cyber Mission Force”, needs to be decentralized (Figure 5), with OCO capabilities at the MAGTF level. Doctrine should be revised to permit the dissolution of this empire into a practical, conventional warfare weapon.

**... the military’s cyber mission capability ... needs to be decentralized ...**

The counterargument of a cyberspace unity of command does not void the necessity of decentralized authority. A MAGTF commander cannot optimally maneuver in every warfighting domain without the authority to do so.

Granted, the benefit of this delegation of authority does not necessarily reveal itself during today’s low-intensity competition, but it absolutely will when

we face a great power in a conventional conflict.

**Conclusion**

OCO authority can be delegated to MAGTF commanders responsibly and effectively. Future warfare will require regular cyber warfare capabilities, and our tactical commanders need the authority to execute these fires when available. Artificial intelligence models exist to optimize this decision-making challenge. Moreover, our ancient cyberspace law and policy apparatus can easily be adapted to promote this new way of thinking.

This interdisciplinary research has both operational and methodological contributions. Operationally, the author portrays a way that a supervised AI algorithm can be used to promote the delegation of OCO authority to the MAGTF command level and highlights necessary changes in law and policy to attain that goal further.<sup>22</sup> Methodologically, the Markov Kill Chain can be adapted to any targeting process in military warfare.<sup>23</sup> Any kinetic or

non-kinetic fires methodology can be overlaid onto the Markov Kill Chain, and probabilities of success can be computed easily. No longer do these decisions need to be decided solely through qualitative measures. Today, we have the technology and resources to do better. Future efforts should be focused on the unclassified aggregation of historical OCO data.

Concurrently, data scientists should continue the development of more robust decision support tools that observe more inputs and produce better outputs.

---

***Any kinetic or non-kinetic fires methodology can be overlaid onto the Markov Kill Chain, and probabilities of success can be computed easily.***

---

Specifically, models that can digest enemy network architecture designs and produce collateral risk metrics can be instrumental. In the interim, serious research should illuminate the USCYBERCOM empire and why the bulk of its resources remain inside the Beltway, rather than with our warfighters.

**Notes**

1. Department of Defense, *JP 3-60, Joint Targeting*. (Washington, DC: 2013).
2. Blake Strom, Andy Applebaum, Douglas Miller, Kathryn Nickels, Adam Pennington, Cody Thomas, “MITRE ATT&CK: Design and Philosophy,” *MITRE*, March 31, 2020, <https://www.mitre.org/news-insights/publication/mitre-attck-design-and-philosophy>.
3. Department of Defense, *JP 3-12, Cyberspace Operations*, (Washington, DC: 2018).
4. R. Axelrod and R. Iliev, “Timing of Cyber Conflict,” *Proceedings of the National Academy of Sciences of the United States of America* 111, No. 4. (2014).
5. Peter Feaver and Kenneth Geers, *When the Urgency of Time and Circumstances Clearly Does Not Permit: Pre-delegation in Nuclear and Cyber Scenarios From Understanding Cyber Conflict: Fourteen Analogies*, (Washington, DC: Georgetown University Press, 2017).

6. Giorgio Bertoli and Lisa Marvel, “Cyberspace Operations Collateral Damage-Reality or Misconception?” *The Cyber Defense Review*, July 31, 2018, <https://cyberdefensereview.army.mil/CDR-Content/Articles/Article-View/Article/1588897/cyberspace-operations-collateral-damage-reality-or-misconception>.
7. Tommaso Zoppi, Andrea Ceccarelli, and Andrea Bondavalli, “Unsupervised Algorithms to Detect Zero-Day Attacks: Strategy and Application,” *IEEE Acces* 9, (2022).
8. Headquarters Marine Corps, *MCDP 6, Command and Control*, (Washington, DC: 1996).

9. S. Aziz and M. Dowling, “Machine Learning and AI for Risk Management,” in *Disrupting Finance* (New York: Springer International Publishing, 2019).

10. W. Zeng and Vasileios Germanos, “Modeling Hybrid Cyber Kill Chain,” *Research Gate*, June 2019, [https://www.researchgate.net/publication/335753886\\_Modeling\\_Hybrid\\_Cyber\\_Kill\\_Chain](https://www.researchgate.net/publication/335753886_Modeling_Hybrid_Cyber_Kill_Chain).

11. William J. Farrell III and Dean Wilkening, “Modeling Kill Chains Probabilistically,” *Military Operations Research* 25, No. 3 (2020).

12. Muhammed Mudassar Yamin et al., “Mapping Tools for Open Source Intelligence with Cyber Kill Chain for Adversarial Aware Security,” *Mathematics* 10, No. 12 (2022).

13. Kishor S. Trivedi and Andrea Bobbio, “Continuous-Time Markov Chain: Reliability Models,” in *Reliability and Availability Engineering* (Cambridge: Cambridge University Press, 2017).

14. Boualem Rabta, Bart van den Boom, and Vasco Molini, “A Continuous-time Markov Chain Approach for Modeling of Poverty Dynamics: Application to Mozambique,” *African Development Review* 28, No. 4, (2016).

15. *JP 3-60, Joint Targeting*,
16. “MITRE ATT&CK.”

17. *JP 3-12, Cyberspace Operations*,

18. Andru Wall, “Demystifying the Title 10-Title 50 Debate: Distinguishing Military Operations, Intelligence Activities & Covert Action,” *Presidents and Fellows of Harvard College*, 2011, <https://harvardnsj.org/wp-content/uploads/sites/13/2012/01/Vol-3-Wall.pdf>.

19. Frank Cilluffo and Joseph Clark, “Repurposing Cyber Command,” *Parameters* 43, No.4 (2013).

20. Benjamin Leitzel and Gregory Hillebrand, *Strategic Cyberspace Operations Guide*, (Carlisle: U.S. Army War College, 2022).

21. Jack Goldsmith and Alex Loomis, “‘Defend Forward’ and Sovereignty,” *Hoover Institution*, April 29, 2021, <https://www.hoover.org/research/defend-forward-and-sovereignty>.

22. M. Emre Celebi, *Supervised and Unsupervised Learning* (New York: Springer, 2020).

23. William Farrell III and Dean Wilkening, “Modeling Kill Chains Probabilistically,” *Military Operations Research* 25, No. 3 (2020).



Sponsored by:



# Talent Management

An underutilized solution stares us in the face

by Maj Eric Mattoon, USMCR

**R**oughly 75 percent of first-term active component (AC) Marines depart the Marine Corps entirely or join the Individual Ready Reserve every year to pursue other life goals.<sup>1</sup> AC Marines have alternatives to these two options. The Marine Corps can better retain its most talented Marines leaving the AC in the Marine Corps total force by improving education on Selected Reserve (SELRES) opportunities. Leaders' and career planners limited SELRES knowledge results in missed retention opportunities. However, talent management can improve by educating leaders on the SELRES and retaining top performers in the Selected Marine Corps Reserve (SMCR) or the Individual Mobilization Augmentee (IMA) program.

My lack of education about the SELRES led to countless post-Marine Corps plan discussions with AC Marines and missed retention opportuni-

**>Maj Mattoon is an Active Reserve Infantry Officer currently serving as the TECOM G-3 Reserve Policy Training OIC. He recently completed his Master of Military Studies paper titled "Elevating the Importance of the Individual Mobilization Augmentee Program to Reduce the Effects of Manpower Shortfalls and Improve Talent Management."**

ties. I encouraged Marines to reenlist, apply for jobs, or attend college. Rarely did I think about encouraging Marines to join an SMCR unit or become an IMA. It is more important than ever to ensure the Service retains talented and well-trained Marines in the total force during the current downsizing.

The Marine Corps' failure to educate AC Marines on total force service opportunities is a significant reason Marines are unaware of SELRES opportunities. The Marine Corps Reserves are often an afterthought for most AC Marines. Despite 36,800 Selected Reservists (SMCR, IMA, and Active Reserve Marines) accounting for 17

percent of the FY22 end strength, we do not think about leveraging them for talent retention in the total force.<sup>2</sup> The *Commandant's Planning Guidance* and first two *Force Design 2030* updates provided minimal guidance for the reserve component (RC) outside of identifying units to divest. In the eighteen-page *Talent Management 2030* guidance discussing retention of the Marine Corps' best, the document failed to mention the reserves once. If the Marine Corps strategic documents fail to account for the RC, it is no wonder why Marines would have a minimal understanding of SELRES opportunities. Marines will depart the AC for many reasons, but Marines approaching their end of active Service (EAS) can remain in the total force as a member of the SELRES. The AC's thinking on talent management needs to recognize the value of retaining EASing Marines in the total force through the SMCR or IMA program.

One option for Marines departing the AC is to join an SMCR unit. The obligation for a Marine affiliated with the SMCR is generally one weekend a month and two weeks a year. Marines affiliated with an SMCR unit are part of a unit that needs to meet and train together. Dispersed across the United States and Puerto Rico, SMCR units provide Marines an opportunity to pursue civilian careers while also remaining part of a Marine unit. As a member of the SELRES, joining an SMCR unit also provides medical and retirement benefits that incentivize some who



**F Co, 2/24 Mar at Exercise GUNSLINGER 22 board a U.S. Army CH-47 Chinook. This was a joint exercise with the Kansas Air National Guard designed to increase aircraft control and training. (Photo by Cpl Oscargavino Quintana.)**



**Marines with 2/14 Mar perform HIMARS training Exercise EMERALD WARRIOR 22.1. (Photo by Cpl Jonathan L. Gonzale.)**

choose to return to civilian life. Depending on a Marine’s future career, school, or distance to an SMCR unit location, the standard SMCR unit may not be viable and dissuade an individual from remaining affiliated with the Marine Corps.

The IMA program is another portion of the RC that augments and reinforces the AC in peace and facilitates a rapid expansion of manpower during an emerging crisis.<sup>3</sup> The IMA program “provides a source of pre-trained and qualified members of the SELRES to fill individual military billets, which augment AC units of the Marine Corps, DOD entities, and other departments or agencies of the U.S. Government possessing IMA structure on their T/O.”<sup>4</sup> The IMA program ensures the Marine Corps can rapidly expand AC units with the most talented personnel during an emerging crisis, mass mobilization, or with specialized or technical skills not required full-time.<sup>5</sup> During current times of reduced unit man-

power, the speed IMAs can activate would greatly assist AC units should the proverbial “flag go up.”

The IMA program can increase talent retention in the Marine Corps’ total force. The strict schedule of remaining affiliated with an SMCR unit does not work for many Marines moving onto different civilian careers or relocating to areas far away from an SMCR location with a vacant billet matching their rank and MOS. However, Marines who leave the Service for various reasons may be interested in joining an IMA program because of the enhanced drill flexibility afforded to individuals. The Marine Corps should better advertise the IMA program and use it to retain Marines in the SELRES who otherwise would have gone to the Individual Ready Reserve or exited the Marine Corps entirely if they had already completed their initial eight-year minimum service obligation. Commands also benefit from having talented and trained manpower. The Marine Corps can leverage the IMA

program to retain additional AC Marines reaching their EAS in the Marine Corps total force who otherwise would have departed the Service and thus take their experience with them.

The SMCR and IMA program can also retain influential prior-AC Marines in the total force with highly desirable skill sets or civilian careers. Prior-AC Marines who currently work on legislative staffs, technology/consulting companies, or have other specialized skills would provide value to the Marine Corps. These highly qualified individuals could introduce new ideas or develop new systems. Additionally, these individuals would continue to advocate for the Marine Corps when they return to civilian positions. The SMCR and IMA program could retain highly qualified individuals in the Marine Corps total force influential in politics, emerging technologies, government, or business.

The introduction to Reserve opportunities is occurring too late in a Marine’s post-Marine Corps decision-making cycle and needs to occur sooner. The Service could implement a policy, through DC M&RA with coordination from Marine Corps Recruiting Command, requiring all AC commands to begin educating Marines on SMCR and IMA opportunities one to two years prior to EAS. Unit career planners could also be incorporated into the solution as they already advise Marines on career opportunities. Professional Military Education courses could provide AC Marines instruction on the RC’s value, role, and opportunities throughout their careers. The introduction to the SMCR and IMA would provide a basic explanation of the SELRES, assist with reserve recruiting, and provide Marines time to consider and conduct further research on possible SELRES opportunities prior to finalizing post-EAS decisions.

Marines will leave the AC for many reasons, but they can remain in the total force as a member of the SELRES. The Service has invested an incredible amount of time and money into training these Marines and we need to improve how we retain them for who they are and what they will become. We need to adjust our thinking on talent



Marines with HMLA 773 Detachment A, 4th MAW, conduct maintenance on an AH-1Z Viper during Exercise GUNSLINGER 22. (Photo by Cpl Oscargavino Quintana.)

management to address the best method of retaining the Service’s most talented EASing Marines in the total force through the SMCR or IMA program.

**Notes**

1. Gen David H. Berger, *Talent Management 2030*, (Washington, DC: November 2021).
2. Department of the Navy, *Highlights of the Department of the Navy FY2023 Budget*, (Washington, DC: 2022).
3. Headquarters Marine Corps, *MCO 1001.62C, Individual Mobilization Augmentee (IMA) Program*, (Washington, DC: August 2021).
4. Headquarters Marine Corps, *MCO 5311.1E, Total Force Structure Process*, (Washington, DC: November 2015).
5. *MCO 1001.62C*.




**MARINE CORPS  
ASSOCIATION  
FOUNDATION**

**HELP ENSURE  
TODAY'S MARINES  
HAVE THE RESOURCES  
THEY NEED TO  
SUCCEED ON THE  
FIELD OF BATTLE AND  
ON THE HOME FRONT.**



**Donate today at [www.mca-marines.org/donate-to-mcaf](http://www.mca-marines.org/donate-to-mcaf)**

# Promote Ahead of Peers

The façade of meritocracy in the Marine Officer Corps and what can be done to fix it

by Mr. Michael Millican

“Promote ahead of peers,” “highly recommend for promotion,” and “promote at the first opportunity.” These phrases are common to Marine officers who regularly write and receive fitness reports (FITREPs). To an outside reader, and perhaps even a young second lieutenant at The Basic School (TBS), these phrases would appear to indicate a meritocratic organization functioning at its best where talented performers are identified, promoted in rank ahead of their peers, and put in the best possible position for success. Regrettably, the verbiage of FITREPs and the broader Marine Corps culture of competition among peers only gives the façade of meritocracy for a fundamentally flawed system. Simply put, the Marine Corps is not functioning as a meritocracy for the vast majority of its officer corps.

The fact that the Marine Corps manpower and promotion system is an anachronism is no secret to the Service or the current CMC who promulgated *Talent Management 2030* arguing the case for reform. This document rightly acknowledges that the current personnel management system “was designed in the industrial era and predates a host of cultural and technological developments that characterize today’s world.” However, unless the Marine Corps truly embraces the principles of competition and meritocracy among its officers, it will struggle in the CMC’s goal to “retain the right Marines for today’s era of renewed global competition.”<sup>1</sup>

The Marine Corps is not unique in its struggle to retain talented individuals. The economist and former Air Force officer Tim Kane argues in his 2012 book *Bleeding Talent* that while the U.S. military does an exceptional job of developing innovative and tal-

**>Mr. Millican is a former Air Defense Control Officer who served on active duty from 2018–2022.**

ented leaders, it does a poor job at retaining them. Using a data set of Army officers, Kane found that “93 percent answered that half or more of the best officers leave the military early rather than serving a full career.” Kane’s data also found that only seven percent of respondents agreed with the statement that the military “does a good job of retaining the best leaders.” Kane notes

periodically updated through various provisions of the annual National Defense Authorization Act, the standards codified by the Defense Officer Personnel Management Act place a primary emphasis on seniority and ensure that officers of a particular cohort will spend the majority of their careers as peers regardless of individual performance. Considering that promotion to first lieutenant is automatic for all eligible officers and promotion to captain is set at 95 percent, it is not until a Marine officer is in-zone for major that promotion becomes even remotely competitive with an 80 percent selection rate. While promotion to lieutenant colo-

---

***Simply put, the Marine Corps is not functioning as a meritocracy for the vast majority of its officer corps.***

---

that 90 percent of officers surveyed either agreed or strongly agreed with the claim that “the best officers would be more likely to stay if the military was more of a meritocracy.” Two-thirds of Kane’s respondents agreed that the military promotion system valued seniority over merit.<sup>2</sup> Considering the slow pace of change in the military and the inherent structural similarities between Army and Marine Corps promotions, a study conducted today of Marine Corps officers would likely yield similar results.

There are statutory limitations that impose mandatory time-in-grade and time-in-service requirements for military officer promotions. The Defense Officer Personnel Management Act became public law in 1980 and implemented consistent officer promotion standards across the DOD. Although

nel is slightly more competitive at 70 percent, it is only the board for colonel with a 50 percent selection rate where promotion becomes legitimately competitive for anyone above the bottom third. While a Marine officer’s FITREP might highlight a top performer as a “must for promotion,” getting promoted on schedule is pretty much a guarantee for the vast majority of Marine officers. Consider then a hypothetical career Marine officer eligible to be promoted to major who consistently performs in the top five–ten percent of their peer group. Despite demonstrated proficiency and almost a decade of FITREPs, the reality is that this officer will be promoted with their peers and not a moment earlier. Contrast this to the private sector, where the same high performer, with over ten years of documented performance, could reasonably

expect promotion and compensation to rise competitively. While the top-performing officers no doubt eventually get screened and selected for command and other high-profile billets, one cannot help but think about all the talented individuals who would have made excellent career Marine officers and left the Service for want of a more merit-based environment.

Of course, the statutory limitations imposed on promotion boards by federal law are not the fault of the Marine Corps. While it would be wise for Congress to re-evaluate the Defense Officer Personnel Management Act framework now over 40 years on from its enactment, there are other options available to the Marine Corps to increase meritocracy in the officer corps that would require zero changes to existing law and could be implemented in short order.

The first option available to the Marine Corps is to utilize below-zone promotions. The argument in favor of below-zone promotion is not new yet worth revisiting in light of *Talent Management 2030*. *U.S. Code Title 10 § 616* currently authorizes each selection board to select up to ten percent of all eligible officers from the below-zone for promotion. Yet despite this authority granted under statute, the Marine Corps remains averse to promoting highly qualified below-zone officers. In a 2014 policy paper on Marine Corps retention and promotion, retired LtCol Aaron Marx writes, “the Marine Corps does not use the BZ (below-zone) because of institutional inertia. The main cause is not that promotion boards discriminate; it is the fact that the Marine Corps has barely used the BZ throughout its history. Promoting from the BZ is rarely considered by members of promotion boards.”<sup>3</sup>

Regrettably, the Marine Corps continues to promote almost exclusively from the above-zone and in-zone categories. The data available from recent promotion boards makes this fact abundantly clear. From FY 2013 to FY 2023, only three active-duty line officers (0.019 percent) were selected for lieutenant colonel from below-zone out of 15,020 eligible officers.<sup>4</sup> On the major boards in that same time frame, only 6

of 21,088 (0.028 percent) eligible Marine officers were promoted from below-zone.<sup>5</sup> Despite the additional years of service, the figures are no different for colonels, with only four below-zone officers selected out of 7,148 (0.055 percent) eligible from FY 2013–FY 2023.<sup>6</sup> It can hardly be the case that this percentage accurately reflects the number of officers who were worthy of early promotion. With over ten years of evaluated performance, identifying the top five to ten percent of performers in each peer group should not be difficult. Rather, refusing to utilize this congressionally authorized ability to promote from below-zone is clearly a calculated decision by Marine Corps promotion boards to reward seniority over merit. The major argument in favor of seniority is that if officers are promoted from below-zone they will lack the necessary experience for higher-level command. Yet, in a December 2020 article “The Case For Below-Zone Promotions,” Maj Brian J. Hensarling found that “by instituting below-zone promotions only to the ranks of lieutenant colonel and colonel, however, a Marine officer could lose a maximum of two years of experience between promotions from O-5 to O-7.”<sup>7</sup> Is gaining one to two years of additional experience for average performers worth the tradeoff of limiting early promotion for the most talented officers? While the FY 2018 National Defense Authorization Act authorized the Armed Services to institute a reordering of the lineal numbers of top-performing officers, officially known as Merit-Based Promotion List Reorder, this too falls short of the true merit-based promotion to which the Marine Corps should aspire. Maj Hensarling described the Marine Corps’ implementation of this program on the FY 2021 colonel through major promotion boards as “an encouraging initial step” but one that “is ultimately inadequate.” He found that the efficacy of Merit-Based Promotion List Reorder depended largely on an officer’s existing lineal number and that even in the best-case scenario it would still result in only minor changes to the date of rank with officers in the top half of the cohort promoting at most only two to three months ahead of schedule.<sup>8</sup> Given

the CMC’s guidance in *Talent Management 2030*, Marine Corps promotion boards should seek to promote from the below-zone to the maximum extent possible.

The Marine Corps must also reform its officer MOS assignment process to better reward merit and performance. Marine officers are competitors by nature. To even apply for an opportunity to attend Officer Candidates School or the U.S. Naval Academy, individuals must undergo a competitive application process. Once a prospective officer reports to their initial training source, the evaluation only intensifies. At Officer Candidates School, candidates undergo a rigorous training regimen. They are screened and evaluated for the “leadership, moral, mental, and physical qualities required for commissioning as a Marine Corps officer.”<sup>9</sup> Midshipmen aspiring to commission as Marines must also undergo a similar screening process during their time at the U.S. Naval Academy. Regardless of the commissioning source, by the time new Marine Corps second lieutenants report to TBS, they have all earned their place. For the next six months at TBS, the new Marine officers undergo yet more evaluation in all areas expected of a company-grade officer and provisional rifle platoon commander. Upon completing the Basic Officer Course, the new lieutenants receive an overall GPA, which determines their lineal standing in their respective company of approximately 300 fellow officers. Yet despite undergoing the most robust and thorough entry-level officer pipeline in the DOD with hundreds of hours of evaluated training, when it comes time to assign a MOS and determine the entire trajectory of a Marine officer’s career, merit and performance play virtually no factor.

Instead of assigning a MOS based primarily on lineal standing as determined by student performance, the Marine Corps, since 1977, has instead elected to ensure a “quality distribution” across all occupations. TBS accomplishes this by dividing each graduating company class into “thirds” with MOS allocations divided evenly among the three tiers of officers.<sup>10</sup> What this

means, in reality, is that while an officer who finishes near the top of the bottom third of his class will likely get their top MOS choice, an officer who graduates toward the bottom half of the upper third is relegated to a choice much further down his or her preference sheet. While other factors are considered in MOS assignment, such as demographics, prior experience, and student preferences, the *Marine Officer MOS Assignment Handbook* makes clear that when it comes to determining a Marine officer's future career, quality distribution takes the highest priority while student preference takes the lowest.<sup>11</sup> What is the value in evaluating newly commissioned officers for months of training at taxpayer expense only to assign careers based on quality spread? Furthermore, instead of giving student officers every incentive to perform to the best of their ability, the current system rewards officers who either game the game or perform below the level of their peers. Are these the values the Marine Corps wishes to instill in its newly commissioned officers? This system, by design, punishes merit and is antithetical to the competitive spirit embodied in the Marine Corps.

Not only is the current system a complete contradiction of the meritocratic values of the Marine Corps, but it potentially hurts the retention of top-quality officers whose only fault was outperforming their peers at TBS. Instead of ensuring a quality spread across occupational fields at the company-grade level, the Marine Corps should focus on ensuring that the top performers from TBS are put in the best possible position for career satisfaction and advancement to higher ranks. Returning to a pure merit-based MOS assignment policy where a MOS is awarded primarily based on lineal standing achieves this aim, makes the Marine Corps a more lethal organization, and returns the organization to the meritocratic values it desires in its officer corps.

A 2006 study on Marine Corps retention found that “officers who graduated in the top third of their class at The Basic School are more likely to be retained.”<sup>12</sup> Furthermore, a 2021 study

of 9,216 Marine officers who graduated TBS between 2010 and 2020 found a “statistically significant relationship between MOS preference received and performance.”<sup>13</sup> The fact that these statistical relationships exist makes complete logical sense considering both the competitive nature of Marine officers and basic human nature that links job performance with career satisfaction. The focus of Marine Corps planners then should be to match the best students with their top preferences rather than ensure a “quality distribution.”

Critics of this meritocratic approach would argue that this would result in an unhealthy distribution of top-tier TBS students electing to serve in combat arms. This should not be a source of concern. Considering the curriculum at TBS primarily trains and evaluates students in their ability to serve as a provisional rifle platoon commander, if we accept the premise that top performers would naturally gravitate to com-

tion, and a career in the Marine Corps.

Of course, even under a truly meritocratic MOS assignment process, a fair amount of self-sorting across occupational fields will naturally occur among the student officers in a typical TBS class. If an officer in the top-third or middle-third aspires for a combat support MOS, a truly meritocratic system will make it more likely that the officer will get their top choice. Similarly, no longer would a bottom-tier student officer be forced into a primary MOS they may not desire at the expense of a top-tier or middle-tier officer. A new merit-based MOS assignment system is truly the best for all involved. It would foster healthy competition and challenge all student officers to perform at their best. Like below-zone promotions, the current system of MOS assignment is not mandated by law and requires no congressional authorization to change. The Marine Corps should do so immediately.

---

**... quality distribution takes the highest priority while student preference takes the lowest ...**

---

bat arms, this should not be a surprise. Furthermore, under a true merit-based assignment system, the overall lethality of the Corps would be increased by allowing top-performing officers to self-select a career path that could potentially lead to higher-level command. Considering that nearly every top-level Marine Corps operational command is held almost exclusively by infantry officers or aviators, artificially shrinking the talent pool of top-performing line officers at the company-grade level makes little sense. Additionally, electing for a truly merit-based approach would enable these same officers to enjoy greater career satisfaction and instill in the newest lieutenants the belief that hard work will be recognized and rewarded. The goal, then, should not be the ensure a “quality spread” at the company grade level but rather to ensure the top performers are put in the best possible position for career satisfaction, reten-

The Marine Corps is an organization that rightfully prides itself on being the best in the DOD. It should also demand the best of its officers. Unfortunately, given the current state of Marine officer promotions and MOS assignment, this is not the case. Any reforms that result from *Talent Management 2030* that fail to address the principle of meritocracy will ultimately fall short of the goal to increase the retention of many of the Corps' talented officers. Organizations that fail to reward merit create a culture of mediocrity. The American people deserve better than that from their Marine Corps.

---

**Notes**

1. Gen David H. Berger, *Talent Management 2030*, (Washington, DC: 2021).
2. Tim Kane, *Bleeding Talent: How the US Military Mismanages Great Leader and Why*



*It's Time for a Revolution* (New York: Palgrave MacMillan, 2012).

3. Aaron Marx, "Rethinking Marine Corps Officer Promotion and Retention," *Brookings*, August 4, 2014, available at <https://www.brookings.edu/research/rethinking-marine-corps-officer-promotion-and-retention>.

4. Marine Corps Manpower and Reserve Affairs, "FY 2013–FY 2023 Lieutenant Colonel Promotion Board Statistics," (Quantico, VA: 2021).

5. Marine Corps Manpower and Reserve Affairs, "FY 2013–FY 2023 Major Promotion Board Statistics," (Quantico, VA: 2021).

6. Marine Corps Manpower and Reserve Affairs, "FY 2013–FY 2023 Colonel Promotion Board Statistics," (Quantico, VA: 2021).

7. Maj Brian J. Hensarling, "The Case for Below-Zone Promotions," *Marine Corps Gazette*, December 2020, <https://mca-marines.org/wp-content/uploads/44-The-Case-for-Below-Zone-Promotions.pdf>.

8. Ibid.

9. Officer Candidates School, Training Command, "The Mission of Officer Candidates School," *Officer Candidates School, Training Command*, n.d., <https://www.trngcmd.marines.mil/Northeast/Officer-Candidates-School>.

10. Col David R. Everly, *Marine Officer MOS Assignment Handbook*, (Quantico, VA: 2019).

11. Ibid.

12. Aline O. Quester, Anita U. Hattiangadi, and Robert W. Shuford. "Marine Corps Retention in the Post 9/11 Era: The Effects of Deployment Tempo on Marines With and Without Dependents," *CNA*, 2006, [https://www.cna.org/archive/CNA\\_Files/pdf/d13462.a1.pdf](https://www.cna.org/archive/CNA_Files/pdf/d13462.a1.pdf).

13. Maj John M. Bailey, "Marine Corps Military Occupational Specialty (MOS) Assignments: Career Impacts of Match Quality," (Naval Post Graduate School, 2021).



**RESOURCES FOR VETERAN MARINES**  
**BENEFITS, HEALTHCARE, EDUCATION, AND MORE**

[mca-marines.org/blog/resource/resources-for-veteran-marines](https://mca-marines.org/blog/resource/resources-for-veteran-marines)  
has the information you need for life after the Corps.

# Answering the Taiwan Question

What is the United States' strategic interest?

by Maj Andrew Krebs

The re-emergence of great power competition and Russia's invasion of Ukraine highlight the need for the United States to assess how powerful nation-states will act to achieve their strategic interests. Russia's invasion has given the world a moment of pause to consider whether the People's Republic of China (PRC) will finally attempt to forcibly reunify the island of Taiwan. The adage of "turning the map around" at the tactical level to evaluate an adversary's perspective of the situation is a useful exercise to view the strategic landscape from the Chinese Communist Party's (CCP) position vis-à-vis Taiwan. A proper planning process seeks to grapple with the nature of the problem first and then develops multiple courses of action to solve the problem and evaluates each course of action. The following assesses the nature of the strategic problem for the CCP and offers three strategies to reunify Taiwan so that the United States can better understand and be better prepared to respond to the PRC's actions.

CCP leaders consistently declare that reunifying Taiwan with the PRC under a "one-country, one-system" or "one-country, two-systems" political architecture is a core interest.<sup>1</sup> The Taiwan problem has haunted the PRC for nearly seventy years, and President Xi Jinping declared that the question on Taiwan cannot go on indefinitely.<sup>2</sup> The CCP also knows that China has risen onto the world stage and can challenge the United States and the international liberal world order in all elements of national power. Thus, as it relates to Taiwan, *the CCP's strategic problem is*

**>Maj Krebs is an Infantry Officer and serves as the CMC Fellow at the Fletcher School of Law and Diplomacy, Tufts University in Medford, MA. This article is adapted from papers he wrote for a class titled "Strategy and Grand Strategy."**

*to determine how the PRC reunifies Taiwan so as not to incur military, economic, or diplomatic repercussions that inhibit China's path to regional and eventually global hegemony.* The strategic problem is best understood by analyzing the relationships between key actors in the international system, the narratives said actors use to understand the current context, and the implications of the problem for the PRC.

Reunifying Taiwan revolves around three key actors in the international system—the PRC, Taiwan, and the United States. PRC–Taiwanese relations are under tension because each entity's political interests are diverging. The relationship between the PRC and Taiwan is different than the relationships between the PRC and Hong Kong or Macau in that the PRC is reunifying resistant ethnic Chinese absent a colonial power.<sup>3</sup> Taiwan's dominant political party, the Democratic Progressive Party (DPP), rejects the diplomatic basis of relations, *the 1992 Consensus*, while the PRC upholds it as a foundational agreement.<sup>4</sup> The election of the DPP demonstrates that Taiwan increasingly disapproves of reunifying with the PRC.<sup>5</sup> Taiwan thrives democratically and economically and views Beijing's desire to reunify as a move that will up-

set the status quo.<sup>6</sup> Alternatively, the rising domestic opinion in China pressures the CCP to solve the Taiwan question sooner rather than later.<sup>7</sup> Taiwan's status impedes national rejuvenation and presents to the world a successful alternative to the CCP regime analogous to West Germany on the borders of the Soviet Union.<sup>8</sup> Reunifying Taiwan and preventing its independence are vital interests for the CCP.

The relationship between the PRC and the United States regarding the status of Taiwan functions as a competition for economic, diplomatic, and security interests in the Pacific. The United States desires to maintain the rules-based international order that it dominates, while the PRC seeks to revise the rules-based order to achieve regional and eventually global hegemony. Each entity's approach is markedly different as the PRC views Taiwan's status as a domestic issue, while the United States views it as an international issue.<sup>9</sup> Rhetorically, the United States and the PRC increasingly converge toward confrontation as the PRC does not denounce forceful reunification, and the United States fervently rejects any attempt that is non-peaceful.<sup>10</sup> The PRC is nearly capable of forcibly reunifying but lacks combat experience. The United States can defend Taiwan but must weigh the costs against other interests, especially recent aggression in Eastern Europe. The *Three Communiques and Six Assurances* are the diplomatic precedents for the two powers regarding Taiwan. However, these documents invite disagreement more than harmony in precipitating a crisis over Taiwan as the United States views them as a mere

acknowledgment of dialogue with no legal or substantive bearing, while the PRC perceives them as solid assurances.

The relationship between the United States and Taiwan balances against the PRC as a growing regional power. The diverging political relationship between the PRC and Taiwan and the converging confrontational relationship between the United States and the PRC amplifies interactions between the United States and Taiwan. Domestic politics in both the United States and Taiwan increasingly favor alignment with each other. Additionally, Taiwan's semiconductor industry is an important resource for American national security.<sup>11</sup> Each entity desires to maintain the status quo and hedge against the PRC; however, each side has different expectations of suitable assistance in a crisis.<sup>12</sup> Historically, the two entered mutual defense pacts, but the Taiwan Relations Act defines the current relationship. This legislation requires the United States "help Taiwan defend itself" but does not require the United States to "defend Taiwan."<sup>13</sup> Strategic ambiguity is a core concept of America's relations with Taiwan to deter the PRC. However, it is unlikely that the United States' vital interests demand preventing a non-peaceful reunification or empowering Taiwan's independence.<sup>14</sup>

The PRC, the United States, and Taiwan each tell causal stories that frame the situation from their own unique perspective. For the PRC, the story is that *China cannot achieve national rejuvenation and recover from the Century of Humiliation until it has reunified with Taiwan.*<sup>15</sup> This tells a story of grievance and revival, where the Chinese people, led by the CCP, overcame the sins of foreign powers. It is a narrative of foreign powers accommodating Taiwan as a continuance of past grievances and makes reunification necessary for revival. Across the Straits is a different story, in that *Taiwan thrives because it does not have a subordinate political relationship with Beijing.* This tells a story of identity and independence, whereby ethnically similar Taiwan sees itself increasingly different from the PRC politically, economically, and

culturally. It is a narrative that frames Taiwan's separation from the PRC as key to its success. Across the Pacific, the American story is that *Taiwan is a successful democracy because it is not subject to "one-party, two-systems."* This is a story of principles and values that continues the Cold War narrative that well-served American interests and established the rules-based international liberal order. It frames Taiwan's political and economic success as rejecting communism and authoritarianism.

---

### ***An American military confrontation potentially escalates into a broader conflict between two nuclear powers that leads to an uncertain outcome for either side.***

---

The nature of the system of relations between the PRC, Taiwan, and the United States creates a paradox for the PRC. Foreign intervention caused China's Century of Humiliation and reunifying China's claimed historic territories brings national rejuvenation. However, peaceful reunification is unlikely and non-peaceful reunification invites backlash and balancing from foreign powers that ultimately threatens China's revival. The system increasingly limits the PRC's options to avoid this paradox and constrains the PRC's ability to persuade Taiwan to reunify. The United States desires the status quo and Taiwan's political interests trend toward separation. Taiwan's ruling political class holds a reactive devaluation bias toward the PRC, dismissing the two-system proposition as the "Hong Kong-ization" and "dwarf-ization" of Taiwan.<sup>16</sup> They developed more hard-line opinions after witnessing the PRC subjugate Hong Kong in early 2020.<sup>17</sup>

As the PRC considers compelling Taiwan's reunification, the most important variable is how the United States responds. The nature of the problem is that China does not suffer repercussions that inhibit its path to regional and global hegemony; an American military response inhibits that path,

but an economic response may not. An American military confrontation potentially escalates into a broader conflict between two nuclear powers that leads to an uncertain outcome for either side. The ambiguity shrouding an American military response favors the United States. The PRC must determine if the United States has the political will to defend against forceful annexation. Such a determination is subjective and is measured through rhetoric and responses to other crises. An anticipated American

military response constrains the PRC's ability to reunify the territory. In the absence of a military response, expect economic consequences levied by the United States and the other nations it musters.<sup>18</sup> However, globalization and systemic interactions between the PRC and the United States create highly interdependent economies that may make economic sanctions temporary or altogether ineffective. This aspect of the system may enable compelling Taiwan's reunification.

After analyzing the problem from the CCP perspective, it is time to offer possible strategies to achieve the CCP's strategic objectives as it relates to Taiwan. Plausibly, the CCP's objectives are to maintain political power and domestic control in the PRC and reunify Taiwan within a satisfactory political structure. The following describes and assesses three possible strategies that integrate the PRC's instruments of national power to achieve the CCP's objectives.

#### **Strategic Option 1: Compel Reunification**

*If the PRC quickly defeats Taiwan's defenses while deterring foreign intervention and enduring the economic impact, then the PRC will successfully reunify Taiwan*

without suffering prohibitive costs that inhibit eventual regional hegemony. Strategic Option 1 assumes that defending Taiwan with American forces is not a vital interest of the United States and primarily employs the PRC’s military, economic, and public diplomacy instruments of national power.

Compelling Taiwan’s reunification requires that the PRC defeat Taiwan’s military, sustain its domestic economy, and employ supporting diplomatic measures. The PRC’s military forces are capable of air, naval, and amphibious operations that defeat Taiwan’s defenses and compel the Democratic Progressive Party (DPP) government’s surrender. The PRC’s military’s anti-access/area-denial weapon systems can inflict prohibitive costs on foreign military forces that intervene, namely the United States. *The likelihood of economic sanctions from the international community in response to non-peaceful reunification requires the PRC to build domestic economic resilience.*<sup>19</sup> The CCP can leverage its state control of private enterprises to prioritize domestic consumption over the international export of manufactured goods. Additionally, securing the transit of oil and natural gas from Russia and using alternate financing through the Asian Infrastructure Bank will help weather economic repercussions. Further, the CCP can deter economic reprisals by threatening to selectively inhibit supply chains against target nations.

*Strategic Option 1 employs a comprehensive diplomatic campaign that supports compelling Taiwan’s reunification.* Invoking the clause of the 2005 Anti-Secession Law that allows non-peaceful means if the possibilities of peaceful reunification were “completely exhausted” provides the CCP with the legal justification for its actions.<sup>20</sup> Publicly declaring the willingness to employ anti-access/area-denial weapons adds credibility to a deterrent against foreign intervention during a military attack on Taiwan. After the PRC military secures Taiwan, the CCP can promote a narrative to domestic and international audiences that celebrates the reunification of ethnic Chinese peoples.

**Pros:**

- *Limiting America’s options:* If this strategy is executed during the ongoing conflict between Russia and Ukraine, the United States will be caught responding to two great power conflicts simultaneously—thereby stretching America’s resources and limiting its strategic options. The United States would likely be more hesitant to intervene militarily.
- *Economic deterrence:* International actors are unlikely to decouple their economies and employ economic sanctions in sufficient scope, scale, and duration due to their dependence on the PRC for manufacturing and management of the global supply chain.

**Cons:**

- *Uncertain military outcome:* Due to the PRC’s lack of combat experience, there is a moderate risk that the PRC’s military operation becomes prolonged. A longer conflict weakens China’s international standing and military credibility and lengthens the window of opportunity for great-power military conflict between the PRC and the United States.
- *Inviting a security dilemma:* Even a successful military operation will likely motivate Asian neighbor states to increase military spending and balance against a perceived threat from the PRC.

---

**The PRC’s military’s anti-access/area-denial weapon systems can inflict prohibitive costs ...**

---

**Strategic Option 2: Create Pro-PRC political voices in Taiwan**

*If the CCP influences Taiwan’s domestic politics, then the PRC can persuade Taiwan’s government to reunify with the mainland.* Strategic Option 2 assumes the CCP can sufficiently shape Taiwan’s public perceptions in favor of reunification and primarily employs the PRC’s informational, economic, and

cultural instruments of national power to achieve the strategic objectives.

Creating political support in Taiwan for reunification requires the CCP to build support amongst Taiwan’s domestic polity, exploit Taiwan and China’s economic interdependence for political gain, and transform a shared ethnic identity into a shared political identity. *Building a pro-PRC political base in Taiwan necessitates consistent messaging across a broad demographic in Taiwan.* The CCP can leverage mediums such as China Global Television Network and the Alibaba Group-owned South China Morning Post to inform perceptions amongst Taiwan’s older audiences.<sup>21</sup> Additionally, employing state-run global media service Xinhua and multitudes of Chinese social media influencers enable the CCP to message younger media consumers. Appealing to a shared identity, highlighting the failings of the Democratic Progressive Party, and emphasizing the benefits of reunification can shape domestic perceptions in favor of the CCP’s strategic objectives.

*Exploiting China and Taiwan’s economic interdependence requires negotiating preferential market access and foreign direct investment in exchange for PRC political support from Taiwanese firms.* Past Taiwanese governments’ attempts toward a policy of conditional economic engagement with the mainland have failed as the island’s mixed economy favors economic exchange with the PRC.<sup>22</sup> The CCP can leverage the strong economic and consequentially strong political influence of willing Taiwanese businesses to amplify support for reunification. *Last, Strategic Option 2 creates cultural opportunities to transform China and Taiwan’s shared ethnic identity into a shared political identity.* Following the regression of COVID-19, the CCP can reopen Confucius Institutes in Taiwan to promote the party’s ideology and subsidize Taiwanese students’ studies at mainland universities. Inviting Taiwanese athletes to train and compete with the PRC’s teams and increasing the flow of tourists across the Strait leverages soft power instruments that help the CCP achieve its strategic objectives.

**Pros:**

- *Self-determination:* This option exploits Taiwan’s status as a democracy to influence public opinion toward self-determination that is favorable to the PRC. It is relatively resilient to criticism and intervention from international actors.
- *Economic Power:* Strategy 2 emphasizes the PRC’s strong economic instrument of national power and the capabilities of state control over information and private enterprises.

**Cons:**

- *Time:* Strategic Option 2 requires reversing the current political trend and may take numerous election cycles to change the behavior of or replace the DPP from power and build sufficient support for reunification.
- *Mixed-messaging:* Traditionally, the PRC’s propaganda promoting “common destiny” and state sovereignty has not resonated with audiences

valuing human rights and individual freedoms.<sup>23</sup>

**Strategic Option 3: Accommodate autonomy in exchange for political recognition**

*If the CCP negotiates with Taiwan to retain limited autonomy in exchange for reunifying with the PRC, the PRC can satisfy its strategic objectives with manageable tradeoffs.* Strategic Option 3 assumes that the balance of power in the Pacific grows in favor of the PRC over the United States in the long term and integrates the PRC’s political, public diplomacy, and informational instruments of national power to achieve the strategic objectives.

Accommodating Taiwan’s limited autonomy requires the CCP to tolerate a high degree of democratic governance and civil society on the island and manage political discontent. The CCP can allow Taiwan to retain its democratic governance and economic system in

exchange for a clear agreement on the definition of the 1992 Consensus and agreement that Taiwan is politically subordinate to the PRC. *Refraining from instituting political reforms maintains the status quo for Taiwan but alleviates the domestic pressure on the CCP to reunify the island.* The CCP accepts terms favorable to Taiwan such as not stationing PLA troops on the island and exempting Taiwanese citizens from certain legal obligations such as the 2020 national security laws. In exchange, Taiwan identifies as a province of the PRC and defers to Beijing for foreign and defense policy.<sup>24</sup>

*Taiwan’s democratic system and civil society allow its citizens to express discontent; therefore, it is important to employ information tools that prevent political discontent in Taiwan from echoing in the mainland.* As opposed to Hong Kong, Taiwan is a non-contiguous territory, so the CCP primarily needs to prevent criticism over the internet and media

**KA-BARS**

- Warthog KA-BAR Folding Knife \$25.99
- KA-BAR Skeleton Knife \$16.99
- Serrated Ka-Bar Knife with Leather Sheath \$124.99
- Official Ka-Bar Knife with Leather Sheath \$124.99
- KA-BAR Display Box \$124.99
- Ka-Bar Walnut Plaque \$57.99

AUTHENTIC KA-BAR KNIVES AND DISPLAYS. SHOP TODAY AT:  **The MARINE Shop** WWW.MARINESHOP.NET  
SERVING MARINES AROUND THE WORLD

channels from reaching mainland audiences. State-run media services and government internet controls can insulate domestic audiences in the mainland PRC against CCP criticism emanating from Taiwan’s natural democratic processes. *Further, CCP messaging can reinforce achieving reunification to domestic audiences to cement its political control.*

**Pros:**

- *Less resource intensive:* Minimizes the potential for conflict in the region and is the most efficient option to achieve the strategic objectives in the near term.
- *Elevates China’s standing:* Option 3 demonstrates the CCP’s willingness for dialogue and good-faith negotiations with other nations in the region.

**Cons:**

- *Hong Kong:* It will be difficult for the CCP to persuade Taiwan’s political class and public opinion to accept limited autonomy due to Taiwan’s recent memory of the CCP’s crackdown on Hong Kong’s autonomy.<sup>25</sup>
- *Long-term management:* Accommodating Taiwan’s democratic governance and free media will inevitably lead to criticism of the CCP and will require constant maintenance to preserve party control on the mainland.

While all three strategic options maintain the CCP’s domestic political power and reunify Taiwan, Strategic Option 2: Create Pro-PRC political voices in Taiwan assumes the least amount of risk and employs the CCP’s two most powerful instruments—the economy and control of information. Option 2 also capitalizes on the opportunity to influence the 2024 Taiwanese presidential election in which the incumbent and staunch opponent of reunification, Tsai Ing-wen, is ineligible for a third term. The risk to the PRC’s economic, military, and international standing is negligible if Strategy 2 fails, but the benefit to the PRC’s domestic, political, and international standing is very high if this strategy succeeds. Strategic Option 1: Compel Reunification risks severe repercussions from the international community to solve a domestic issue. The CCP has consoli-

dated domestic political control while leaving the Taiwan issue unresolved for more than seventy years. Therefore, the Party stands to gain little at the risk of too much if it employs the first strategy. Option 3: Accommodation suffers from the CCP’s actions in Hong Kong in 2020 and therefore requires the CCP to yield significant negotiating power to Taiwan. Additionally, while this strategy can capitalize on the opportunity to negotiate with a new Taiwanese president in 2024, Option 3 potentially

---

***The CCP has consolidated domestic political control while leaving the Taiwan issue unresolved ...***

---

solves a near-term problem while creating a long-term problem—managing inevitable political discontent inherent in Taiwan’s democratic system.

How will the CCP answer the Taiwan Question? The United States and its allies and partners must be asking themselves the same thing. It is premature to assess whether Russia’s invasion of Ukraine encourages or disincentivizes the CCP to launch a similar operation against Taiwan. But military planners must be attentive to the fact that, like combined arms, potential adversaries will wield and integrate multiple instruments of national power to achieve their objectives. Further, a keen understanding of an adversary’s view of the strategic problem and options available to them leaves us better prepared to anticipate and respond.

**Notes**

1. Yana Zuo, “The U.S. Global Strategy and Its Taiwan Policy,” *China Review* 18, No. 3 (2018).
2. Robert Blackwill and Philip Zelikow, “The United States, China, and Taiwan: A Strategy to Prevent War,” (Council Special Report No. 90, Council on Foreign Relations, 2021).

3. Yihu Li, “The One Country, Two Systems Solution to Taiwan: Two Comparative Analyses,” *China International Strategy Review*, No. 2 (December 2020).

4. “The United States, China, and Taiwan.”
5. Martin Mitchell, “Taiwan and China: A geostrategic reassessment of U.S. policy,” *Comparative Strategy* 36, No.5 (2017).
6. “The United States, China, and Taiwan.”
7. Qingguo Jia, “Taiwan: Can a Perfect Storm be averted?” *China International Strategy Review*, No. 3 (2021).
8. “The United States, China, and Taiwan.”
9. “Taiwan”
10. “The United States, China, and Taiwan.”
11. Ibid.
12. Ibid.
13. Ibid.
14. Ibid.
15. “The One Country, Two Systems Solution to Taiwan.”
16. Ibid.
17. Ibid.
18. “Taiwan.”
19. Ibid.
20. Ibid.
21. Thomas Lynch and Phillip Saunders, “Contemporary Great Power Geostrategic Dynamics” in *Strategic Assessment 2020: Into a New Era of Great Power Competition*, ed. Thomas Lynch III (Washington, DC: NDU Press, 2020).
22. Miles Kahler and Scott Kastner, “Strategic Uses of Economic Interdependence: Engagement Policies on the Korean Peninsula and Across the Taiwan Strait,” *Journal of Peace Research* 43, No. 5 (2006).
23. “Contemporary Great Power Geostrategic Dynamics.”
24. “The United States, China, and Taiwan.”
25. Ibid.



# The Sino Myopia

Is the Corps too focused on the PRC?

by Col Philip G. Wasielewski, USMCR (Ret)

In April 1985, I published a *Gazette* article, “The Soviet Myopia,” arguing that the Marine Corps was too myopically or shortsightedly focused on fighting the Soviet threat and instead needed to better prepare to engage other, more probable opponents in the Third World.<sup>1</sup> Thirty-seven years later, the Marine Corps is making the same mistake regarding the People’s Republic of China (PRC). The current myopic focus on the PRC has been the driving factor in major force structure changes. Numerous distinguished former Marines have argued that these changes make the Marine Corps a less capable force.<sup>2</sup> This article agrees with their assessment and will focus on the driving reason for these changes—optimizing the force to counter the PRC—as well as why theories and national security policies regarding the PRC threat may not validate such wide-reaching changes, the difficulties of accurately predicting future wars,

**>Col Wasielewski served on active duty and as a reservist in a variety of Infantry, Reconnaissance, and International Affairs billets including as a Reserve Attaché and Foreign Area Officer. He mobilized for Iraq and Afghanistan. He is currently a Senior Fellow at the Foreign Policy Research Institute.**

a modern naval power while its ruling Communist Party has abandoned Marxist-Leninist ideology for Chinese nationalism as a source of legitimacy. This has caused some to theorize that nationalist impulses will motivate Beijing to attempt an armed reunification of Taiwan. Others theorize that the growing power of the PRC and the fear this causes the United States will eventually bring the two into conflict (i.e. the Thucydides Trap).

Theories do not always translate into reality. First, the primary motivation of the Communist Party, like all dictatorships, is to stay in power. The possibility of an unsuccessful war resulting in economic distress and then domestic political upheaval can be a strong brake

to war or in the second half of the 20th century when neither did the United States and the Soviet Union.

However, more than theories drive U.S. national security policy. PRC foreign and economic policies often clash with our own and its political system and a lack of respect for human rights is an anathema to our liberal democratic values. PRC military growth has unnerved its neighbors, many of whom are allies or partners of the United States. For these reasons, there has been a bipartisan shift in the U.S. Government’s view towards the PRC from hopes that it would become a responsible stakeholder in the international system to a recognition that it has become a revisionist power. This new viewpoint has been codified in the core national security documents of the past two administrations, specifically the 2017 *National Security Strategy (NSS)*, the 2018 *National Defense Strategy (NDS)*, the 2021 *Interim National Security Strategic Guidance*, the 2022 *NSS*, and the 2022 *NDS*.

These documents all acknowledge the threat the PRC poses to U.S. national security. The 2017 *NSS* classified the PRC as a revisionist power, along with Russia, but also specified other sets of challenges including the rogue states of Iran and North Korea and transnational threat organizations. The 2017 *NSS* placed no greater emphasis on threats emanating from the PRC over other challenges. It did call for restoring the military’s ability to produce innovative capabilities but, in the same sentence, also stressed the need to “grow

---

***The primary conflict of interest between the United States and the PRC that could lead to war is Taiwan and that has been a matter of contention since the PRC’s founding in 1949.***

---

the dangers of getting such predictions wrong, and how the war in Ukraine might inform current debates regarding force structure.

The primary conflict of interest between the United States and the PRC that could lead to war is Taiwan and that has been a matter of contention since the PRC’s founding in 1949. Since then, the PRC has become the world’s second-largest economy and

on adventurist risks such as an invasion of Taiwan. Russia’s current dilemma in Ukraine and the cost Putin’s regime may pay for his war must certainly be reinforcing this concept in Beijing. Second, the Thucydides Trap argument of conflict between rising and status quo powers often omits the number of times in history this has not happened such as in the late 19th century when the United States and Britain did not go

the size of the force so that it is capable of operating at a sufficient scale and for ample duration to win across a range of scenarios.”<sup>3</sup> The 2018 *NDS* operationalized the guidance of the 2017 *NSS* for the DOD and has been described as the main impetus, along with the *Secretary of Defense’s Defense Planning Guidance*, for the 2019 *Commandant’s Planning Guidance* and *Force Design 2030*. The 2018 *NDS* called for the military to pivot its focus from terrorism to inter-state strategic competition and named Russia and China equally as revisionist powers. The *NDS* was multidimensional in its focus on threats by revisionist powers and rogue nations as well as transnational threats such as weapons of mass destruction (WMD) and terrorism. This multifocal vision of the *NDS* was clearly articulated in its section on prioritizing preparedness for war:

During normal day-to-day operations, the Joint Force will sustainably compete to: deter aggression in three key regions—the Indo-Pacific, Europe, and the Middle East; degrade terrorist and WMD threats; and defend U.S. interests from challenges below the level of armed conflict. In wartime, the fully mobilized Joint Force will be capable of: defeating aggression by a major power; deterring opportunistic aggression elsewhere; and disrupting imminent terrorist and WMD threats.<sup>4</sup>

The 2021 *Interim National Security Strategic Guidance* and the 2022 *NSS* are similar to the 2017 *NSS* in their enumeration of threats and challenges. The 2022 *NDS* does prioritize deterring the PRC, which is now called “our most consequential strategic competitor,” ahead of the Russian threat, but still requires the DOD “to remain capable of managing other persistent threats, including those from North Korea, Iran, and violent extremist organizations.” All provide specified or implied tasks for the Joint Force to be capable of operating in three vital geographic domains—the Pacific, Europe, and the Middle East—and to be prepared for a wide range of contingencies from conventional warfare against nation-states to irregular warfare against non-state actors.

This flexibility in national security and defense security guidance is prudent and recognizes the dangers of focusing too much on one specific threat because world events are unpredictable making it hazardous to predict who and where the United States will fight next. This has been a historic challenge for the U.S. military since its inception to correctly discern the place and type of the next war. Usually, we get it wrong. As former Secretary of Defense Robert Gates once wrote:

In the forty years since Vietnam, our record in predicting where we will be militarily engaged next, even six months out, is perfect: we have never gotten it right, not in Grenada, Haiti, Panama, Libya (twice), Iraq (twice), Afghanistan, the Balkans, or Somalia. When it comes to predicting future conflicts, what kind of fights they will be, and what will be needed, we need a lot more humility.<sup>5</sup>

The *Commandant’s Planning Guidance* also recognizes this risk on its first page, yet the changes *Force Design 2030* institute are inconsistent with that recognition of ambiguity and seem fixed on concentrating to fight the PRC to the detriment of other contingencies.

However, let us suppose that is the correct decision and, similar to War Plan Orange before World War II, we have properly predicted our enemy and the correct strategy to oppose him. Would that validate the vision behind *Force Design 2030*? It depends.

First, as stated before, the most likely source of conflict between the PRC and the United States is Taiwan. However, a PRC invasion of Taiwan does not guarantee war between our two nations. The United States has not had a defense treaty with Taiwan, the Republic of China (ROC), since 1980 and is not obligated to defend it. An American president could offer military aid to Taiwan yet refuse to commit U.S. military forces, which has been our policy for Russia’s 2014 and 2022 invasions of Ukraine. It is entirely possible that the U.S. military would play no role in a PRC-ROC war.

Second, if the United States did declare war against the PRC in response to an invasion of Taiwan, how would or could these new concepts and force

structures be utilized? The cockpit of a PRC-ROC war would be the Taiwan Strait where amphibious assault forces must transit to reach Taiwan. There are several small island groups within the Strait and Pratas Island (approximately 250 nautical miles [nm] to the south of the Strait’s center), which are ROC territory. Deployment of Marine Littoral Regiment (MLR) assets to ROC islands in the Taiwan Strait would fulfill the Stand-In Force (SIF) mission to reassure partners and deter adversaries. In the event of hostilities, these islands would also be the proper environment to win the reconnaissance battle and disrupt PRC attempts to gain the initiative. However, when could MLR forces be deployed? Despite the recent bipartisan political agreement on the PRC threat, neither political party advocates the deployment of U.S. forces to Taiwan before hostilities—if even then. In the event of a U.S. PRC war over Taiwan, the timely deployment of SIF forces to islands in the Taiwan Strait during high-intensity air and sea combat cannot be guaranteed. An MLR could deploy to Taiwan itself but under current plans will lack long-range anti-air and ballistic missile defense systems essential for defending the island.

The geography and politics of other options are problematic. Japan’s Yaeyama and Miyako islands lie approximately 125 nm and 200 nm respectively northeast of Taiwan. Surface fires from these Japanese islands could engage targets approaching Taipei from PRC ports near Wenzhou and Taizhou, but engagement distances would be over 200 nm. This is beyond the range of most ground-based anti-ship missiles currently in our inventory. The Strait of Luzon, through which the People’s Liberation Army Navy (PLAN) Southern Fleet must pass to attack or blockade Taiwan from the east, is narrow enough so that forces based on the Philippines’ Batanes or Babuyan islands could interdict PLAN movements with the 150-nm Naval Strike Missile. However, considering the volatility of Filipino domestic politics and foreign policy, and despite territorial conflicts with the PRC in the South China Sea, there is no guarantee that the Philippines would go



to war over Taiwan. The same applies to other South China Sea nations.

Possibly the best way before hostilities to fulfill the SIF concept and ensure that proper reconnaissance, surveillance, anti-air, and anti-ship assets to defend Taiwan are positioned to serve as a deterrent or repellant force may be not via MLR deployments but via foreign military sales, foreign military financing programs, or direct commercial sales to

required by some of the world's most advanced economies pass through it daily. However, war in the South China Sea would stop all shipping in those sea lanes and shut off the PRC's access to oil and raw materials. Without the oil shipments that arrive via these sea lanes, the PRC's economy cannot function, and it cannot make up for this loss via existing pipelines connecting it to Central Asia and Siberia. Politically and economi-

naval campaign that the PLAN does. Besides the PLAN, there is no other hostile naval power that the concepts underlying *Force Design 2030* need apply but there are plenty of other powers, state and non-state, that threaten U.S. security interests. Combat against them may be quite different from the combat the Marine Corps is preparing for against the PRC.

Initial impressions from the ongoing war in Ukraine have led some to say that the Corps' major Force Design changes are the correct approach and are being borne out in actual combat. Such analysis should be done cautiously for a war not yet completed and because of the tendency, caveated in a recent study on U.S. military learning from foreign conflicts, to interpret events to support already perceived ideas (i.e. confirmation bias).<sup>6</sup>

For example, heavy losses in Russian armor seem to validate the decision to remove all tanks from the Marine Corps' inventory. Yet, the Ukrainians want more tanks and are using their tanks effectively to counterattack. The first obituary for the tank was written after the 1973 October War. This proved premature. Hand-held, anti-tank weapons have decimated Russian armored vehicles, but several years ago the Marine Corps faced a similarly motivated enemy with plenty of hand-held, anti-tank weapons in an urban environment and did not suffer comparable losses. Part of the reason may be as much about tactics and leadership as materiel. The Russian-Ukraine war is being waged with newer anti-tank technologies including drones. But as we analyze the results of those new technologies and use them to justify long-term decisions, we may wish to remember that in the history of warfare for every advancement in armaments, there is a countervailing advancement to neutralize or deflect it just waiting in the wings.

This war is also highlighting other aspects of military art and science relevant to our Force Design debates. The Ukrainian military is asking for more cannon artillery pieces and using those they have to great effect. High artillery ammunition usage rates in high-inten-

---

### ***Politically and economically, the cost of settling any of these maritime boundary disputes by war is not worth the high costs and virtually nil gains.***

---

the ROC Marine Corps. Having ROC Marines fulfill the SIF mission for the defense of their own country would achieve U.S. national security goals vis-à-vis deterring the PRC at limited diplomatic costs thus making it more politically feasible to do.

Critics of the above analysis may reply that there are other PRC threats to U.S. interests in Asia than just a PRC-ROC war and, in contrast with Taiwan, the archipelago geography of Japan, the Philippines, Malaysia, and Indonesia better support the Expeditionary Advanced Base Operations (EABO) and SIF concepts, which are necessary, if not essential, to deal with the reality of anti-access/area-denial weapons. They may also argue that EABO and SIF concepts are not even PRC or theater specific.

These are valid points but how likely is the PRC to fight a war with the United States over any other objective than reunification with Taiwan and how well do the EABO, SIF, and *Force Design 2030* concepts apply to other scenarios, theaters, or threats?

There is only one territorial dispute between the PRC and Japan, the Senkaku islands, but it is hard to see it leading to war. There are several territorial disputes between the PRC and Brunei, Malaysia, the Philippines, and Vietnam in the South China Sea. The strategic importance of this sea is obvious since the raw materials, especially oil,

cally, the cost of settling any of these maritime boundary disputes by war is not worth the high costs and virtually nil gains. Therefore, while war in the South China Sea leading to U.S. military involvement is possible, anything is possible, it is unlikely because the PRC already has the most important thing it needs in the South China Sea—open sea lanes.

Other national security threats could require a naval campaign to secure U.S. interests. Two examples in littoral regions are the Straits of Hormuz and the Straits of Bab-el-Mandeb. Freedom of navigation through these straits is as important to U.S. security as freedom of navigation through the South China Sea. Of the parties who might wish to block these straits, Iran is not a major naval power and the Houthis do not even have a navy. Both are equipped with their own anti-access/area-denial weapons protected by large amounts of combat-experienced and dedicated infantry fighters. Would a naval campaign against them require the same approach and forces as envisioned in the EABO and SIF concepts for conflict against the PRC or would it require a balanced combined arms force? The same applies to conflict with Russia. The Russian navy is not on par with the combined naval forces of NATO and neither the Norwegian, Black, or Baltic Seas pose the level of threat to a

sity combat has been another lesson (re) learned. The high rate of expenditure of both precision and non-precision munitions indicates that while long-range rocket units have their value, their precise but costly ammunition is a limitation. Here logistical viability, as well as combat capability, raises its head in designing the force since expensive and slow-to-produce rockets are likely to run out ahead of shells for cannon artillery and while these two indirect fire assets complement each other—they cannot replace each other.

The recent Russian debacle on the Siverskiy Donets river also shows the dangers of attempting a river crossing with an inadequate bridging capability. The high attrition rates of jet and helicopter aviation should also caution against cutbacks in aviation strength. There are new lessons to be learned from the war in Ukraine but also possibly old lessons to be reconfirmed such as having infantry battalions large enough to sustain high casualties and still fight, sufficient cannon artillery dedicated to specified infantry battalions, and sufficient air assets to deal with combat and maintenance related attrition and still provide sorties to support the ground force.

War with the PRC is not inevitable. It is possible, but it is just one of many scenarios for the employment of U.S. military forces. The scale of change and focus on a PRC-centric littoral campaign is not commiserate with the possibility of actually using these forces in the manner we wish to or with the guidance provided regarding this threat against all others. Relevant national security directives call for all the Services to be prepared for this scenario but also to be prepared for a number of other contingencies. This prudence is because of the historical risk of preparing for just one type of war against a particular enemy to the exclusion of almost all others.

This does not mean that the concepts being discussed such as the EABO and SIF are not without merit. At its core, EABO updates the Marine Corps' place in the conduct of naval campaigns and SIF is an interesting concept that could be redesigned by creating a couple of

units similar to the World War II era Base Defense battalions and combining them with task-organized force multipliers and headquarters when needed. In criticizing some changes, we should also recognize positive aspects coming from the commandant's planning guidance especially the Logistics in a Contested Environment and Light Amphibious Warship concepts and the creation of a fourth active duty Marine Aerial Refueler Transport Squadron.

However, it has been the myopic focus on fighting the PRC, like our earlier myopia about the Soviet Union, which we never fought, that has led to force structure changes some believe imperil the Corps' ability to fulfill its statutory missions across a full spectrum of military requirements. The war in Ukraine has shown that Russia still threatens our national security interests as do North Korea, Iran, and other state and non-state actors. The war in Ukraine will provide many new lessons but probably reinforce some old ones, which seem to be at variance with recent Force Design changes. Dissent regarding these changes results not from disloyalty or "old thinking" but from a sincere desire of many Marines to make sure that we have examined the direction we are going before we go too far. For example, if the Navy had better examined the validity of the concepts underlying the Littoral Combat Ship program, we may have saved billions of valuable shipbuilding dollars on this unsuccessful venture. The same applies to examining the validity of a concept that focuses the Marine Corps on one particular foe over others. To update the final sentence from the author's article 37 years ago, "the world will continue to be a very explosive place for decades to come, and it will present military problems beyond just those that were once found on the Fulda Gap or today are found in the Taiwan Strait and South China Sea."

#### Notes

1. Philip G. Wasielewski, "The Soviet Myopia," *Marine Corps Gazette* 69, No. 4 (1985).

2. Paul Szoldra, "A Fundamental Transformation Is Taking Place within the Marine Corps. Is That a Good Thing?" *Task and Purpose*, April 19, 2022, <https://taskandpurpose.com/news/marine-corps-force-design-intro>; Anthony Zinni, "What is the Role of the Marine Corps in Today's Global Security Environment?" *Task and Purpose*, April 19, 2022, <https://taskandpurpose.com/opinion/zinni-marine-corps-role>; P.K. Van Riper, "The Marine Corps' Plan to Redesign the Force will Only End up Breaking It," *Task and Purpose*, April 20, 2022, <https://taskandpurpose.com/opinion/marine-corps-force-design-infantry>; Gregory Newbold, "The Marine Corps' New Talent Management Plan Forgets What Makes the service Unique," *Task and Purpose*, April 21, 2022, <https://taskandpurpose.com/opinion/marine-corps-talent-management-critique>; Terry Drake, "The Marine Corps' Reorganization Plan Will Cripple Its Aviation Capabilities," *Task and Purpose*, April 22, 2022, <https://taskandpurpose.com/opinion/force-design-2030-cripple-marine-aviation>; Jim Webb, "The Future of the Marine Corps," *The National Interest*, May 8, 2020, <https://nationalinterest.org/feature/future-us-marine-corps-152606>; and Charles Krulak, Jack Sheehan, and Anthony Zinni, "War is as Dirty Business. Will the Marine Corps Be Ready for the Next One?" *Washington Post*, April 23, 2022, <https://www.washingtonpost.com/opinions/2022/04/22/marines-restructuring-plan-scrutiny-generals>.

3. Office of the President, *National Security Strategy of the United States of America*, (Washington, DC: December 2017).

4. Department of Defense, *Summary of the 2018 National Defense Strategy of The United States of America*, (Washington, DC: 2018).

5. Robert Gates, *Duty: Memoirs of a Secretary at War* (New York: Vintage Books, 2014).

6. Brent L. Sterling, *Other People's Wars: The U.S. Military and the Challenge of Learning from Foreign Conflicts* (Washington, DC: Georgetown University Press, 2021).



# How You Can Help

- » Donate
- » Join a Giving Society
- » Attend a Foundation event
- » Plan a Legacy Gift

DONATE TO THE



**MARINE CORPS  
ASSOCIATION**  
EST 1913

TO SUPPORT

# TODAY'S MARINES

Learn more at  
[mca-marines.org/foundation](http://mca-marines.org/foundation)

Login

Join

Donate

# Gaining the Advantage

by Mr. Joseph Miranda & Dr. Christopher Cummins

**M**CDP 1-3 defines tactics as “the art and science of winning engagements and battles. It includes the use of firepower and maneuver, the integration of different arms and the immediate exploitation of success to defeat the enemy,”

One element of tactics is in “Gaining Advantage.” 20th century military pioneer B. H. Liddell Hart refers to the importance of disrupting an enemy’s ability to react by employing tactics such as deep armor penetration and then striking the decisive blow.

Gaining Advantage includes a wide range of factors: exploiting combined arms, maneuvering to gain a positional advantage (such as striking against an enemy’s lines of communications), seizing a critical position, exploiting such factors as surprise, terrain, environment and weather, and fixing the enemy with one force and outflanking him with another.

One example of gaining advantage is with GEN Douglas MacArthur’s September 1950 amphibious invasion at Inchon which landed U.S. X Corps (including one Marine Corps and one Army division) deep behind North Korean lines, unhinging the enemy drive on the critical South Korean port of Pusan. MacArthur, per the doctrinal description, gained an advantage over the adversary not by overpowering the North Koreans at Pusan and pushing them back. Rather, he conducted a joint combined arms operation, with an amphibious force attacking from the sea and with air support. Meantime, the North Korean attention had been fixed at reducing the United Nations Command (UNC) enclave around Pusan. There was an asymmetrical element here as the Communists could not

>>Mr. Miranda is a prolific board wargame designer. He is a former Army Officer and has been a featured speaker at numerous modeling and simulations conferences.

>>Dr. Cummins, PhD, MBA, is the publisher of Strategy & Tactics Press and CEO of Decision Games. He has led a team in publishing over 400 board wargames and 600 magazine issues over the past 32 years. He is a former Army psychologist and continues to practice part-time specializing in assessing, testing, and treating individuals with stress disorders.



*Roman fortifications at Alesia, barrier of stakes with walls and tower behind them.*

challenge the UN Command at sea.

The Inchon landings took advantage of the terrain: the Korean peninsula’s long coastal flanks open to UNC invasion. This maneuver unhinged the North Korean command by striking from an unexpected direction and was combined with the UNC ground drive coming up from the Pusan perimeter.

Another UNC asymmetrical advantage was in airpower. U.S. and allied air forces had complete control of the skies at this time and could apply massive combat power both in tactical support of the ground forces and operationally via an interdiction campaign, as well as supporting a U.S. para-drop. All this supported the rapid drive north which took the North Korean capital of Pyongyang and then reached the Yalu

River before running into Communist Chinese intervention forces.

Exploiting tactical advantages is, of course, not a modern phenomenon but goes back throughout the recorded history of warfare.

## Gaining the Advantage: Caesar at Alesia

Gaining an advantage is illustrated with examples from Decision Games’ **Alesia** (appearing in *Strategy & Tactics* #312). Alesia was the climactic action of Julius Caesar’s Gallic War. In 52 BC Caesar was besieging the hill fortress of Alesia where the great Gallic war chief Vercingetorix was making his stand. To keep the Gauls pinned down, the Romans constructed a double line of siege fortifications, one facing inwards

towards Alesia and the other outwards as a defense against an expected enemy relief force. The fortifications were a masterpiece of Roman military engineering, with palisades, towers, siege engines, ditches and lines of stakes to break up enemy attacks.

In September a Gallic army appeared outside the fortifications. Caesar and his legionaries were caught in what could have been a trap, as the relief force was vastly superior in strength to the Romans, attacking from the outside while Vercingetorix attempted to break out from Alesia itself. Caesar could have been trapped.

Yet the Romans held. Caesar rapidly shifted forces to threatened points in his lines and launched sharp counterattacks. Meantime, the Gauls could not coordinate their breakout and relief forces. In the end, Gallic morale collapsed and Caesar triumphed. Vercingetorix surrendered and with that, Gaul became a province of the

Roman Republic. Caesar provided a running account of the battle of Alesia in his *Commentaries*, claiming much of the credit but recognizing many of his subordinates in the victory.

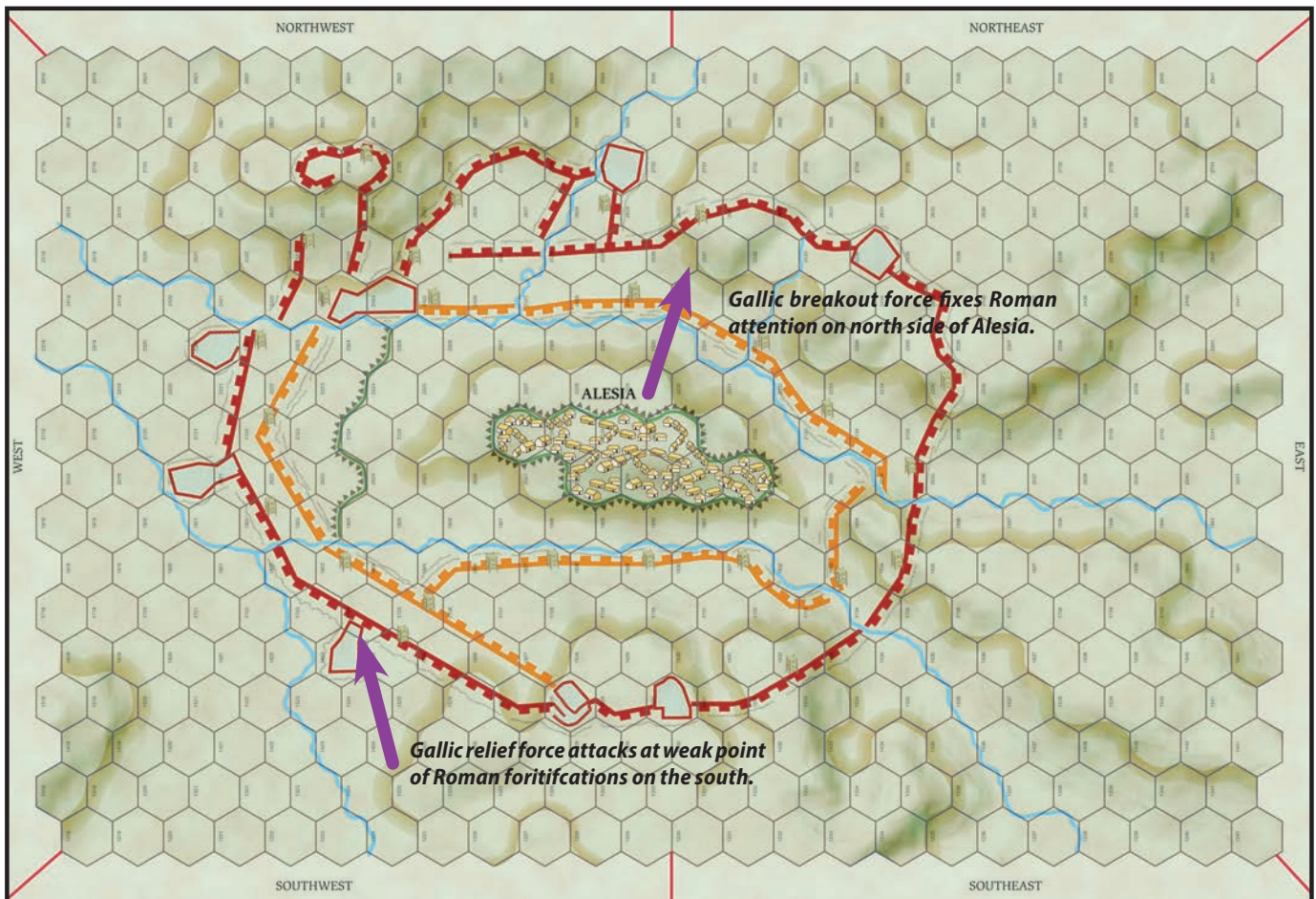
The **Alesia** game presents the situation and invites players to recreate the battle. As you can see from the game map, the Romans are in a difficult situation. The fortress of Alesia is in the center (with the green outline). The Roman siege lines are portrayed with crenelated lines (yellow facing inwards and red facing outwards) to represent the battlements. The two vertical red lines within the inner perimeter are ditches which the Romans had dug to impede breakout attempts by the Alesia garrison.

What makes the Roman situation difficult is that the Gallic relief force can march onto the map from any map edge, allowing for operational surprise. This would appear to give the Gauls something of a grand tactical advantage

as the Romans can be caught between two converging forces (see Map 1).

However, as actual play of the game (as well as the historical battle) demonstrates, the Romans gain the upper hand if they exploit their own advantages. One is superior command control.

The central game system in **Alesia** is with Command markers. These are counters which players pick randomly, activating various sub-commands of each side. Since the Romans generally have the advantage in leadership in the game, they can maneuver that much more effectively. This gets back to the Roman organized chain of command, centralized under Caesar himself and going through various legionary legates, tribune and centurions. The Gallic command structure was divided between Vercingetorix inside Alesia and the relief force outside the Roman perimeter. The result is that it is difficult for the Gauls to coordinate their assaults.



Another way for the Romans to gain tactical advantage is what amounts to interior lines insofar as their fortifications enhance movement. Caesar can shift his forces along the palisades to meet threats to the Roman defenses, while the Gauls are slogging across sometimes difficult terrain. Of course, this is a tenuous advantage since if the Gauls seize a part of the fortifications, movement is blocked and the Romans can be trapped between hostile forces.

Players can alter the terrain to create advantages. The Romans have Fort markers, representing major fortified areas of their siege lines. At the start of play, the player places them to create strongpoints and potentially channelize Gallic movement into fire traps (kill zones) since the Forts provide missile engine support. (The Fort units have an added advantage in enhancing game replay. By altering their deployment, the Romans can create different starting situations.)

The Gauls can create breaches to negate the defensive advantages of fortifications. So there is a military engineering aspect to game play.

Both players can take advantage of combined arms. Each side has infantry, cavalry and missile units. Infantry is good for holding the line and making assaults, cavalry for maneuver and making extended pursuits, and missile units for fire support. Getting these units to work together is a key to winning individual actions (see Map 2).

There are also some special tactics which players can exploit. These include cavalry *Charges* which can disrupt an enemy force if properly employed. The Romans can have their legionaries form *Orbis*, a circular defensive formation which minimizes the effects of being outflanked. These tactics let players gain local tactical advantages.

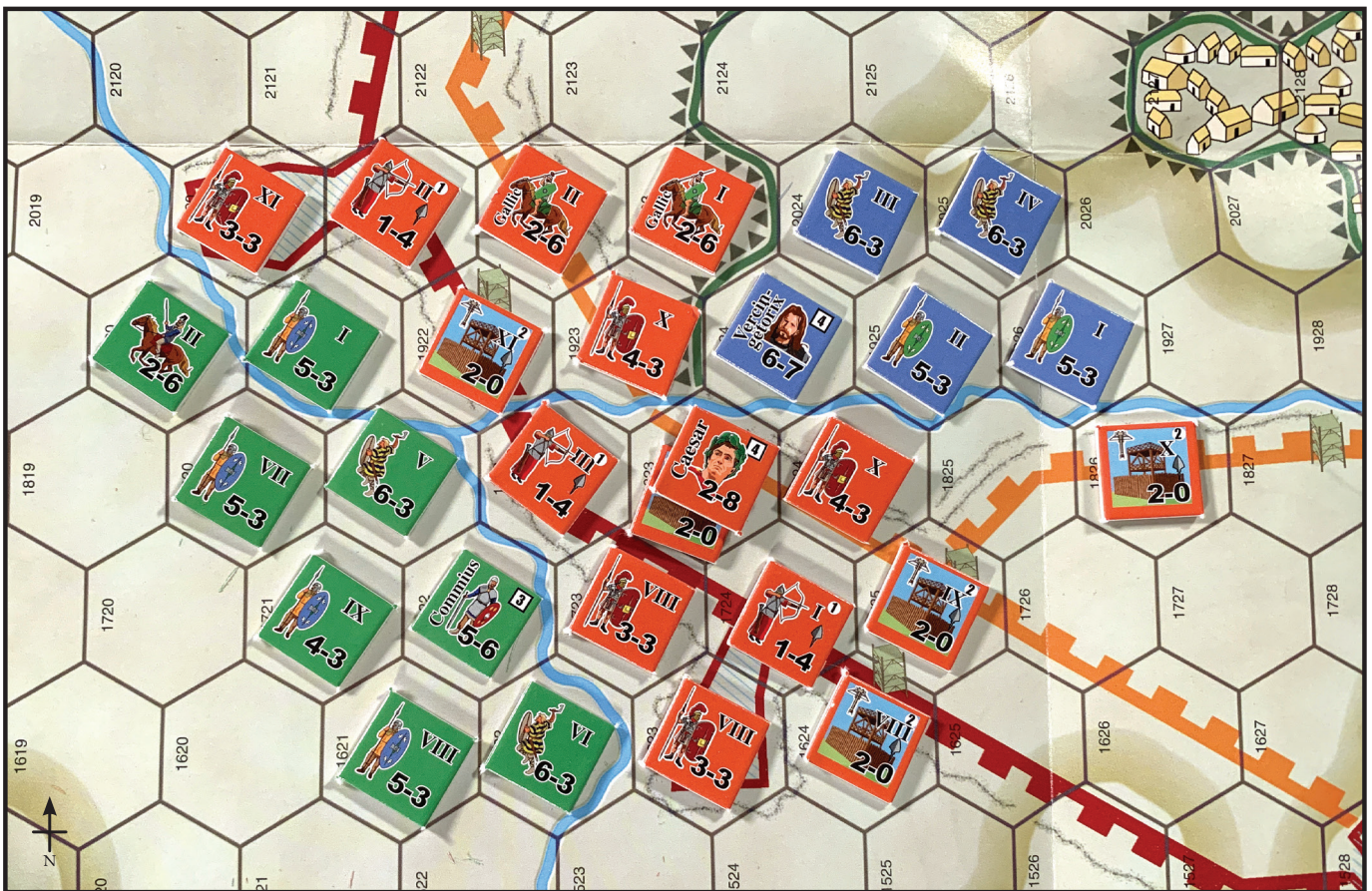
There's also the non-material angle. Random events will cause a morale check for one army or the other. The

Romans have an advantage here given their famed discipline, but a morale check can be a two-edged sword as it can cause the Gauls to rally with their well-known battle ferocity. Also, each player has a *Maximum Effect* marker which can be added to the Command pool once a game. When picked, this marker activates all friendly forces and provides a combat bonus when attacking. This opens the way for the player to initiate one big decisive action, whether for the Gauls breaking out or the Romans launching the decisive counterattack.

Finally, there is the leadership factor. Leaders provide focal points for subordinate unit activation as well as enhancing combats in which they participate—up front leadership really counts for much in **Alesia!** These are all ways to gain the tactical advantage, whether in 52 BC or on today's battlefields.



**Romans make a combined arms counterattack against the Gallic breakout force. Archers and missile engine in fort make a fire attack, to be followed up by legionaries and a cavalry flank attack.**



**YOU'VE READ IT. NOW PLAY IT.**



## **FAESULAE AD 405 & TRICAMERUM AD 533**

Fight The Fall: simulates the battles that occurred during the era AD 376 to 560, roughly the time from when the Goths crossed the Danube until the Byzantine reconquest of the west.

The game system emphasizes command control, leaders and unique tactics. Players pick command markers to generate actions, modeling the chaos of the battlefield. The objective is to gain victory in battle by destroying enemy units and morale. This game includes two scenarios, each showing a unique battle, with its own map, counters, and special rules:

Faesulae AD 405: Gothic chieftain Radagaisus vs. the Roman warlord Flavius Stilicho.

Tricamerum AD 533: Flavius Belisarius vs. Gelimer (King of the Vandals), mid-December AD 533, west of Carthage.

Components: 22x34 inch map & 176 counters

Players: 2

Map Scale: 1 hex = 100 yard

Unit Scale: 1 counter = 400–2,000 men



## **Strategy & Tactics Press**

**MAIL ORDER:**  
Decision Games  
ATTN: S&T Game Offer  
P.O. Box 21598  
Bakersfield CA 93390

**ORDER BY PHONE:**  
661-587-9633

**SPECIAL OFFER FOR MARINES\***  
<https://decisiongames.com/wpsite/mcaf/>

\$49.95 regular price  
\$29.95 for this issue

\*Offer expires 30 April 2023

# Developing the Naval Mind

reviewed by LtCol Daniel Goff (Ret)

**D**eveloping the Naval Mind by Benjamin Armstrong and John Freymann is an ambitious work that tries to be many things at once. It undeniably succeeds. Constructed in three distinct parts, *Developing the Naval Mind* is part PME facilitator, part naval history, and part publication advisor. Both Armstrong and Freymann are historians at the Naval Academy, and their main goal is to encourage naval officers to engage in professional dialog through “reading, reflection, and group study” to better prepare junior officers to cope with rapid social, technological, political, and military changes experienced today. This unique approach is exceptionally valuable in cultivating awareness of issues concerning both the Navy and Marine Corps and instilling education as an important aspect of military professionalism.

“Part I: The Seminar” is a systematic guide on how to organize, prepare, and conduct professional dialog through the selection and analysis of military-relevant intellectual material. Armstrong and Freymann make an important note in this section when they point out that an important aspect of an officer’s function in the military is to teach. This should resonate with Marines because Gen Lejeune called for Marine officers to cultivate a “teacher-scholar” relationship with their Marines. However, in the case of Armstrong and Freymann, they rightfully believe the teacher-scholar relationship should take place between officers as well. The culmination is this section is a call to write. To “read, think, speak, and write” are inherent duties, according to Armstrong and

**>LtCol Goff is a former CH-53E pilot and currently a course director for the Naval Community College.**

Freymann, that naval officers should systematically exercise in this era of social and military change.

The second part of *Developing the Naval Mind* is a survey of historical essays that remain relevant today. The selections of essays are from many of the great minds of the Naval Services. Such leaders and thinkers include Mahan, Sims, Krulak, and Mattis to name a few. These essays are concluded with relevant questions posed by Armstrong and Freymann, which help illustrate that certain aspects of

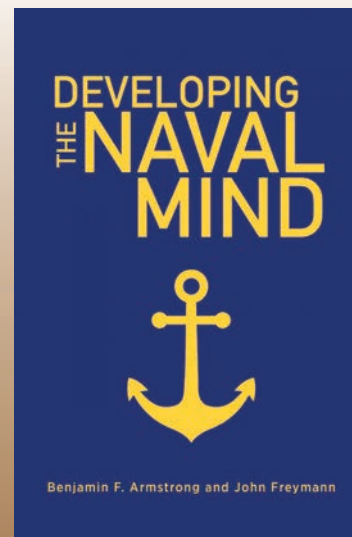
---

***This book and its message are ready-made for company-grade officers ...***

---

naval service are timeless and there exists a great body of knowledge available to be tapped to help guide naval leaders in the troubled waters of the present. To further their aim of getting more officers to contribute written dialog to the profession of arms, Armstrong and Freymann created an appendix that walks through the process, etiquette, and helpful recommendations regarding publishing.

So, who should read *Developing the Naval Mind*? This book and its



DEVELOPING THE NAVAL MIND. By Benjamin F. Armstrong and John Freymann. Annapolis: Naval Institute Press, 2021.

ISBN: 9781682476031, 248pp.

message are ready-made for company-grade officers who are looking for ways to better cultivate their professional thinking. However, *Developing the Naval Mind* would be a valuable tool for battalion and squadron commanders trying to educate their officers and SNCOs by thinking critically about their profession and understanding how the Marine Corps can better adapt and support the Navy and Joint Force in the future. Regardless of where you are in your Marine Corps career, *Developing the Naval Mind* is worth your time not only for the personal lessons it will undoubtedly impart upon you but also the Marines you serve with will benefit from the lessons you teach them for having read this unique work.





# The Bomber Mafia

reviewed by Col Kyle G. Phillips

Celebrated author Malcolm Gladwell introduces his latest book as the product of his boyhood obsession with the air war in World War II. Specifically, the romanticized stories of the bomber crews who ventured deep into enemy territory. *The Bomber Mafia* tells the story of first-generation combat pilots who saw the potential of strategic bombing to change the course of warfare.

As with any great writer, the book allows readers with different backgrounds to immerse themselves in the characters in order to validate or challenge their positions. At first look, *The Bomber Mafia* can be viewed as a story of two real-life generals, BG Haywood Hansell Jr. and then MG Curtis E. LeMay. The book starts with the relief of Hansell and the appointment of LeMay as his successor of the 21st Bomber Command on the Island of Guam. Hansell is portrayed as the idealist, whose pre-war intellectual work was thrust into the very real application of the Second World War. Hansell viewed strategic bombing through a “maneuverist” lens, allowing airpower to bypass strong points and attack critical war-making facilities that would quickly lead the adversary to succumb to the will of allied forces. Gladwell spends a great deal of time developing the supporting cast, to include Carl L. Norden, the Dutch inventor who created the “Norden bombsight” that would make the theory of precision strategic bombing a reality.

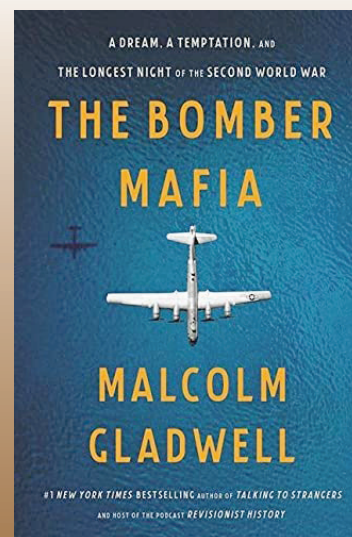
The combination of Hansell’s strategic doctrine of airpower with Norden’s technological innovation leads Gladwell to present the possibility of making warfare more humane, less destructive, and more limited than that experienced in World War I. Gladwell quickly moves the story of the Bomber Mafia through the “fog of war” that

**>Col Phillips is the Commanding Officer of Headquarters and Support Battalion, Marine Corps Installations East-Marine Corps Base Camp Lejeune. He has served as a Battalion Commander at the School of Infantry-East as well as the Staff Judge Advocate for 2d MarDiv.**

inevitably occurs. Both in the European theater and then in the Pacific, external and internal friction create conditions where “precision bombing” does not create the effects that the intellectual circles within members of the “Bomber Mafia” envisioned. Gen LeMay then takes center stage in the story where, scarred by the horrors of significant losses incurred in attempts to validate “precision bombing,” LeMay takes a different approach.

In stark contrast to the idealism of Hansell and Norden to use doctrine and technology to minimize the destructive powers of the military establishment, LeMay’s supporting cast takes the form of two Harvard chemists, Louis Fiester and E.B. Hershberg, who invent the jellied gasoline that we know as napalm. LeMay institutes nighttime low-level bombing. The new tactics combined with napalm resulted in the destruction of over 60 Japanese cities. LeMay justifies the new tactics as a means to end the war and save lives.

*The Bomber Mafia* resonates with students of military history on a variety of levels. Gladwell’s book serves as a redemption of Hansell and a repudiation of LeMay as the reader fast-forwards to the current discussions of Air Force generals and precision strategic air power that has become the norm in combat. However, an alternative approach to the real value of *The Bomber Mafia* lies in analyzing how innova-



THE BOMBER MAFIA: A Dream, A Temptation, and the Longest Night of the Second World War. By Malcolm Gladwell. New York: Little, Brown and Company, 2021. ISBN: 978-0316296618, 240 pp.

tion in warfare can lead to horrific results. Hansell and Norden pursued a more humane version of warfare. There are parallels that exist between the approach of the Bomber Mafia in air power and the emergence of cyber warfare. Cyber warfare similarly seeks to use non-kinetic power to deliver specific effects that force the enemy to succumb to the will of its adversary with minimal harm to the populace. Over the last few years, what has emerged is the proliferation of cyber warfare tools to both state and non-state actors that is felt almost solely by the civilian population. Gladwell writes that the firebombing of Tokyo in World War II resulted in more lost lives “in a six-hour period than at any time in the history of man.”

*The Bomber Mafia* provides insights into how to avoid innovations in military technology that inadvertently result in horrific destructive effects that all too easily are justified in armed conflict.



## Index to Advertisers

CDET.....	27
Chase Prize Essay Contest .....	2, 35
Henry Repeating Arms .....	5
Marine Corps Mustangs.....	79
MARSOC.....	CII
MCA .....	21, 24, 53, 73, 95, 112
MCAF.....	47, 91, 105
United States Marine Corps–National Campaign .....	CIV
Modern Day Marine.....	11
Navy Federal Credit Union.....	17
SMARTBooks .....	15
Strategy & Tactics Press.....	106–109
The MARINE Shop.....	62, 99
USAA.....	CIII



**CORPS VOICES**  
A Virtual Mentoring Podcast

**Featured Episodes**

Gen Alfred M. Gray Jr.  
Gen Alexander A. Vandegrift  
LtGen Lewis B. "Chesty" Puller

[www.mca-marines.org/mcu\\_history](http://www.mca-marines.org/mcu_history)

MARINE CORPS ASSOCIATION

## 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.mca-marines.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](mailto: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](mailto: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.



# Our mission is **serving military families.** And that means **hiring them, too.**

Founded by a group of Army officers in 1922, USAA lives by our legacy of serving those who serve — from the competitive products we deliver to the talented and diverse veterans and military spouses we hire.

That's why we're committed to offering veterans and military spouses a first look from our recruiters, and why we offer programs to help them successfully transition into civilian careers.

Discover career opportunities today at [usaajobs.com](https://usaajobs.com)



CELEBRATING 100 YEARS  
OF SERVICE



**MARINES**

BATTLE OF IWO JIMA ANNIVERSARY  
**78<sup>TH</sup>**



THE FEW | THE PROUD | THE MARINES

# REMEMBER. REFLECT. REIGNITE YOUR PURPOSE.

Seventy-eight years ago, six United States Marines raised the American flag over Mount Suribachi and showed the world what their oath meant. And as a Marine Veteran, you continue to remain always faithful to your community, country, and fellow Marines. Honor this battle, and every battle won, by experiencing the anniversary in a new way.

DEFINED BY WHAT YOU FIGHT FOR



SCAN THE CODE  
TO START