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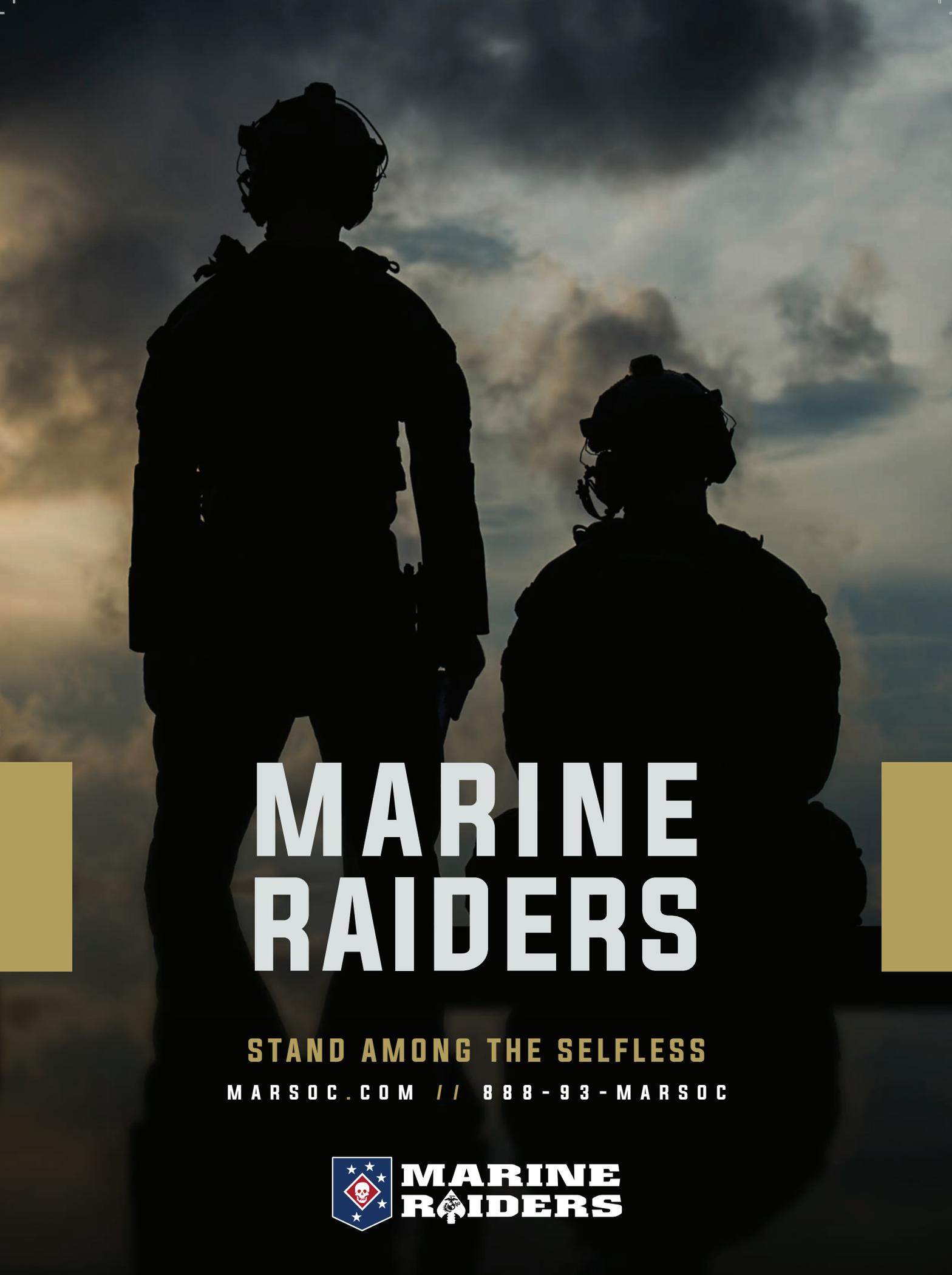
Special Edition

Force Design 2030: The Ongoing Debate

- **The Rational for Change: Modernization & Relevance**
- **The Counter Argument: Weakening the MAGTF**
- **Constructive Criticism: Maturing and Implementing Operating Concepts**



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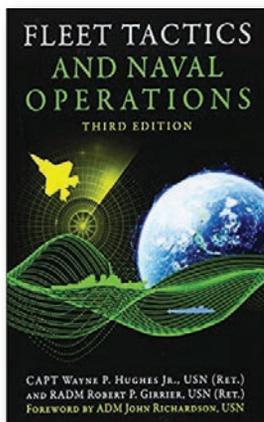


Cover

In 2021 the Marine Corps began experimentation with the Navy Marine Expeditionary Ship Interdiction System (NEMESIS) and its Naval Strike Missiles fired from an unmanned, modified Joint Light Tactical Vehicle. (Photo by Cpl Luke Cohen.)

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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

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DECEMBER 2022

Editorial: The Ongoing Debate

At the Marine Corps Association's Wounded Warrior Awards Dinner in Chicago on 29 July of this year, Gen James N. Mattis (Ret), the former Secretary of Defense, paraphrased a popular anecdote widely attributed to Albert Einstein: "If given one hour to save the world, I would spend 55 minutes defining the problem, and building consensus, and then I'd use the last five minutes to save the world."

Whether Einstein said words to this effect or not, the point is central to the ongoing discussion of change and modernization in the Marine Corps. If *EABO*, *Stand-in Forces*, and *Force Design 2030* are "the answer," then what is the question? What is the military problem to be solved? Does the solution being implemented solve the problem, and is there broad agreement and support for this course of action? That this discussion has often devolved into binary or "zero-sum" arguments following a "we're right, because they're wrong" narrative indicates that the necessary consensus is lacking. Moreover, the recent pace of change and the implementation of adjustments to force structure and major principal end-items have produced advocates from all sides who refuse to accept new information or to offer alternative solutions. In some cases, "winning the argument" has overshadowed what may be best for the Corps and questioning facts and logic has degenerated to questioning the character, intellect, and motives of individuals. This situation is corrosive to the intellectual honesty of the entire Marine community and has never had a place in our professional journal.

For our part, since 2018 the *Gazette* has presented divergent views about future force design and modernization which have been organized in this special edition of the magazine into the three categories featured on our cover. The goal is not to end this debate this month—quite the opposite. As we close out the year, the intent is to provide a summary of the highlights of this professional discourse as previously published in the *Gazette*, both in print and online, as "way-points" to launch the next phases of the discussion. Again, to quote Gen Mattis:

Every lesson of history says the Marine Corps is doing the right thing by not saying "we're just going to continue what we did in the past and expect that is going to work." I've learned every military since Alexander the Great that successfully modernized and transformed, did so on the basis of one thing: they specifically identified a military deficiency and set out to solve it. That lesson from history is now permeating every level of the Marine Corps, as it should, and we can see it in the *Gazette*. The vigorous debate going on now across the Corps is exactly what our nation needs and expects of today's Marines.

As we begin a new year, the *Gazette* is committed to providing a platform that sustains productive and civil discourse on future force design and every other issue of greatest importance to the Corps. Just as in the past, all Marines and friends of the Corps are encouraged to think critically and share their recommendations for overcoming the challenges facing Marines as the character of war continues to change.

The Association and the *Gazette* staff wish you all a happy holiday season, Merry Christmas and all the best in the coming year. Semper Fidelis.

Col Christopher Woodbridge (Ret)

MCA President and CEO, LtGen Charles G. Chiarotti, USMC(RET); *VP Foundation Operations*, Col Tim Mundy, USMC(RET); *VP Strategic Communications, Retail Operations & Editor, Leatherneck magazine*, Col Mary H. Reinwald, USMC(RET); *VP Professional Development, Publisher & Editor Marine Corps Gazette*, Col Christopher Woodbridge, USMC(RET); *VP Corporate Sponsorships, Events & Advertising*, Ms. LeeAnn Mitchell.

Not Yet Openly at War, But Still Mostly at Peace

Exploit the opportunity to become the 21st-century force that our Nation needs¹
 by LtCol Scott Cuomo, Capt Olivia Garard, Maj Jeff Cummings, & LtCol Noah Spataro

The Marine Corps’ current amphibious paradigm was born almost a century ago. At the time, bold leaders recognized a compelling need for change and exploited an opportunity to make our Service relevant to the needs of the Navy and our Nation.² Ever since, capability advancements have been integrated with new concepts and nested within our amphibious doctrine. From the Higgins boat—which enabled large-scale amphibious forcible entry operations—to close air support, air reconnaissance, radio communications, helicopter-borne assaults, and AAVs, all of these evolutionary changes helped to make the Navy-Marine Corps Team a significant value add for U.S. policymakers. The progression in the 1960s to incorporate Marine Amphibious Units and then to episodically rotating MEUs in the 1980s did the same.

Today, we believe our Service has another once-in-a-century opportunity to return to being the most relevant for the Navy and our Nation. Exploiting this opportunity, however, will first require our Service to accept that the current national security and defense strategies now describe a threat environment that limited capacity, episodic MEUs and reactionary, large-scale MEBs are unable to adequately address.³ These strategies grapple with a world where authoritarian regimes—including one whose economy might eclipse the size of our own within the next decade—increasingly challenge the rules-based international order that has benefitted our Nation for the past 70-plus years. (See Figure 1.) They also grapple with a situation where we are challenged by “an ever more lethal and disruptive battlefield, combined across

>Editor’s Note: This article is a synthesis of five articles originally published between 2017 and 2018 on the foreign policy and national security site *War on the Rocks*.

>LtCol Cuomo is an Infantry Officer and MAGTF Planner currently participating in the Commandant of the Marine Corps Strategist Program at Georgetown University.

>>Capt Garard is an Unmanned Aircraft Systems Officer assigned to the Ellis Group and currently serving with Task Force Southwest in Afghanistan.

>>>Maj Cummings is an Infantry Officer and currently serves on the faculty of the Expeditionary Warfare School, Marine Corps University.

>>>>LtCol Spataro is an Unmanned Aircraft Systems Officer currently serving as the Commanding Officer of VMU-1.

domains, and conducted at increasing speed and reach.”⁵

Our Service’s current force design remains inherently framed by a large-scale, two MEB amphibious joint forcible entry operation (JFEO) foundation. This framework must evolve concomitant to these new challenges and their “increasing speed and reach.”⁶

The current force design framework has not been updated to incorporate the threat’s compressed O-O-D-A loop where ubiquitous sensing is not militarily unique but commercially enabled leading to sense-to-decision loops (human or otherwise) occurring at machine speed.⁷ Nor does it account for the reality that the threat’s lethality

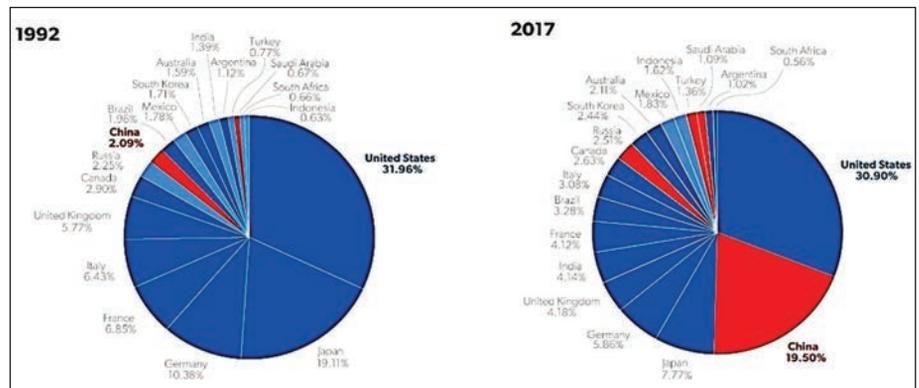


Figure 1. The charts illustrate a comparison of G-20 member country share of the “total G-20 gross domestic product” between 1992 and 2017. China’s impressive growth has heavily influenced the new U.S. national security and defense strategies.⁴

ranges are now measured in hundreds to thousands of miles.⁸ As such, our Corps' current approach to manning, equipping, and training largely disregards the threat our Navy must face to get us into a position of operational relevance. It also disregards what the Navy must do to provide sustenance and protection for the projecting force.⁹

With these facts in mind, this article's purpose is four-fold: (1) to further explain why our Service's current two MEB amphibious JFEO organizing construct is antiquated, (2) to present a new "big idea"¹⁰ for our Corps based on the *National Defense Strategy (NDS)* intent and its "global operating model" framework, (3) to help visualize the big idea moving from theory to practice, and (4) to provide eight recommendations to implement this new big idea opportunity on behalf of the American people.

A Valuable Amphibious Paradigm That No Longer Solves the Right Problem

When assessing future U.S. maritime capability requirements, a 2017 Center for a New American Security (CNAS) report stated, "The Marines need to find a new role for themselves, separate and distinct from joint forcible entry/amphibious operations or once again risk extinction."¹¹ Defense experts from the Center for Strategic and Budgetary Assessments (CSBA) previously reached a similar conclusion. In a report written for the Pentagon's Office of Net Assessment, titled "Strategy for a Post-Power Projection Era," they wrote:

Given projected resource constraints ... as well as the decreasing value of many instruments of traditional power projection, the United States should also divest of those legacy forces that are unlikely to be survivable or effective in robust A2/AD environments: large surface combatants that are intended to project power against land-targets from close-in ranges ... short-range tactical aircraft that depend on vulnerable forward bases ... high signature amphibious assault forces that deploy vulnerable landing craft and require large, secure beachheads; [and] heavy ground combat brigades that have immense logistical requirements.¹²

During his tenure in charge of the Pentagon, former Defense Secretary Robert M. Gates reinforced both reports' conclusions when sharing his skepticism of policymakers *ever* ordering Marines to conduct a large-scale storming of a beach again.¹³ That skepticism would likely only be attenuated by our principal competitor's ongoing intensive military modernization program and the resulting erosion of comparative advantage long enjoyed, if not assumed, by our policymakers.¹⁴

Crashing head-first into this surface, the 2016 *Marine Corps Operating Concept* (Washington, DC: HQMC) describes the Service's requirement to conduct "large-scale, forcible entry operations ... provided by up to two MEBs."¹⁵ A year later, writers assigned to the staffs of Combat Development and Integration Command and Marine Corps Intelligence Activity similarly explained their belief in the Service narrative position associated with fighting "in major operations to include two MEB JFEO."¹⁶ In 2018, our Service's posture statement to Congress stated, "38 L-Class Amphibious warships are required to meet a 2.0 MEB Joint Forcible Entry requirement."¹⁷ What may come as a surprise to some *Gazette* readers, this two MEB amphibious JFEO force design foundation, despite the occasional indications¹⁸ that our Service would embrace prioritizing disaggregated,¹⁹ dispersed,²⁰ or distributed²¹ operations, has remained the force development aim point for decades. As just one case in point, in 2006 Service leaders explained to Congress that "to support Joint Forcible Entry Operations, the Marine Corps shipbuilding requirement is two amphibious MEB Assault Echelons."²² In other words, regardless of what and how much has changed in the international security environment, the Marine Corps still holds steady to the belief that our force design must be married to multi-MEB amphibious JFEO. This framework is constraining the necessary conceptual and organizational adaptation required to honor the threats our Nation currently faces.

This is not a new problem for the Marine Corps. Let us rewind the clock 73 years. In July 1946, Gen Roy S. Gei-

ger, a Marine legend who commanded III Amphibious Corps a year earlier in the Battle for Okinawa, was the senior Marine present at an atomic weapons test at the Bikini Atoll in the western Marshall Islands. The test was named OPERATION CROSSROADS and the purpose was to determine the effects of a potential adversary's atomic weapons on warships.²³ More than 90 ships and other craft served as the targets during the test. After one of the atomic weapons exploded 520 feet above the objective area, five ships sank and 80 percent of those remaining received severe physical damage. Had the ships contained Marines and sailors embarked, observers concluded that radiation effects would have incapacitated the majority of them. After observing the test and contemplating a world with increasing numbers of such destructive weapons, Gen Geiger sent a letter to the Commandant. He stated, "future amphibious operations will be undertaken by much smaller expeditionary forces, which will be highly trained and lightly equipped, and transported by air or submarine."²⁴ Notably absent, is any mention, much less overwhelming budgetary prioritization, of any type of high-water speed, amphibious armored fighting vehicle.

Since Gen Geiger sent his letter 73 years ago, U.S. policymakers have only ordered a *single* large-scale amphibious forcible entry operation that even remotely fits a multi-MEB JFEO description. This mission occurred 69 years ago at Inchon in South Korea against North Korean Army troops.²⁵ The North Korean Army remains one of the potential adversaries used by our Corps to justify why American taxpayers should continue to invest in a two MEB amphibious JFEO capability. Yet, today its military has both anywhere from 20 to 60 nuclear weapons and long-range precision weapons that did not exist when Gen Geiger wrote his letter.²⁶ Moreover, Michael Beckley recently explained, "The geographic reality is that Chinese forces can occupy North Korea before U.S. reinforcements even mobilize for an attack." The myriad challenges mount, "China has at least 150,000 troops perched ... only sixty miles from North Korea's main nuclear

sites and two-thirds of its missile sites.”²⁷ The context in and technologies with which the only large-scale amphibious forcible entry operation took place are vastly different from any perceived operations that might take place today to the point that such context, like what is described by Beckley, negates its very political feasibility.

The overall global proliferation of long-range precision weapons, early warning surveillance systems that can track ship movements by the second, and especially nuclear weapons, are likely the primary reasons why Secretary Gates and the CNAS and CSBA scholars challenged our Service’s decades-old multi-MEB amphibious JFEO organizational design and associated investments. These facts are also likely why Congress, in the 2019 National Defense Authorization Act (NDAA), mandated that the Pentagon provide the American people with an assessment describing the “ability of power projection platforms to survive and effectively perform the highest priority operational missions described in the *National Defense Strategy*.”²⁸ Additionally, they are likely why the Senate-approved 2019 NDAA language required the Pentagon to both describe “the feasibility of the current plans and investments by the Navy and Marine Corps to operate and defend their sea bases in contested environments” and to determine “whether amphibious forced entry operations against advanced peer competitors should remain an enduring mission for the joint force considering the stressing operational nature and significant resource requirements.”²⁹

Clearly, Congressional pressure is mounting to explain why American taxpayers should continue spending more than \$43 billion annually on a Marine Corps. The pressure has reached a level such that, after reading the Senate’s recent NDAA challenge to our Service’s multi-MEB amphibious JFEO foundation, one long-time defense observer wrote an article, “Wither the Marines.”³⁰ Moreover, Congress’s overall confusion about our Corps’ future value has led to multiple members openly questioning what we do for the Nation.³¹ For example, Representative Mike Gallagher, a Marine intelligence officer and one of

our legislative branch’s most ardent Naval Service advocates, has recently written multiple articles repeatedly requesting “a new story about what the future fleet will do and how it will differ from today’s fleet.”³² He has also expressed in testimony his serious concerns about how our Corps’ operational concepts and budgetary priorities are “always on the wrong side of the cost curve at every step,” especially with respect to our primary competitors.³³

In short, our Corps’ two MEB amphibious JFEO mission focus and organizing construct, while at one time incredibly innovative and in demand by U.S. policymakers, has increasingly fewer friends given changes in the international security environment and our reluctance to evolve with the changing character of warfare. One of our Corps’ legends predicted this would be the case more than 70 years ago. It is time to reimagine ourselves— and our Corps now has the perfect opportunity to do so.

A New Marine Corps Big Idea to More Effectively Enable the NDS

Fortunately, the *NDS* provides the structure through which our Corps can creatively destroy and reimagine itself to become an essential component of the

“For whosoever commands the sea commands the trade; whosoever commands the trade of the world commands the riches of the world, and consequently the world itself.”

—Sir Walter Raleigh

joint force for many decades to come.³⁴ Its global operating model is built on four layers—contact, blunt, surge, and homeland—and highlights the necessity of continuous global coverage in key strategic locations.³⁵ The *NDS* describes

forces in the contact layer as those “designed to help us compete more effectively below the level of armed conflict.” Those in the blunt layer are to “delay, degrade, or deny adversary aggression.” Surge layer forces are described as “war-winning” and able to “manage conflict escalation.” Finally, forces in the homeland layer are specifically focused on defending United States’ territory.³⁷

Our Corps’ senior leaders have explained that to operate effectively in the contact and blunt layers “Marine forces must be combat-credible and oriented on warfighting to provide credible deterrence.”³⁸ They have also explained that these forces “must re-posture in a manner consistent with being the Nation’s sentinels—preventing large-scale war and managing crises as an extension of the Naval force.”³⁹ We argue that fully embracing these words—and prioritizing first and foremost dominating the time domain through a persistent offensive defense-in-depth force design—are the foundation of what should be our Corps’ new big idea. This persistent engagement will afford our Corps the ability to leverage our maneuver warfare philosophy through the use of small, independent, comprehensively lethal units.⁴⁰ Properly employed, these units will be more than capable of deterring the potentiality of revisionist powers attempting to seize strategic terrain as part of a *fait accompli* strategy.

The *NDS* global operating model (See Figure 2 on following page.) is a significant departure from the previous joint operations construct in which operations were episodically employed and phased in spatially circumscribed and predetermined areas.⁴¹ In the past, phases ended along prescribed timelines. It was contingent. The underlying assumption was that forces were able to step outside of the construct itself, to remove themselves from the portion of the world where violent political action transpired. But as Robert Kaplan observes in *The Revenge of Geography*, “The core drama of our own age ... is the steady filling up of space, making for a truly closed geography where states and militaries have increasingly less room to hide.”⁴² This is one reason why the new model is global in contrast with yes-

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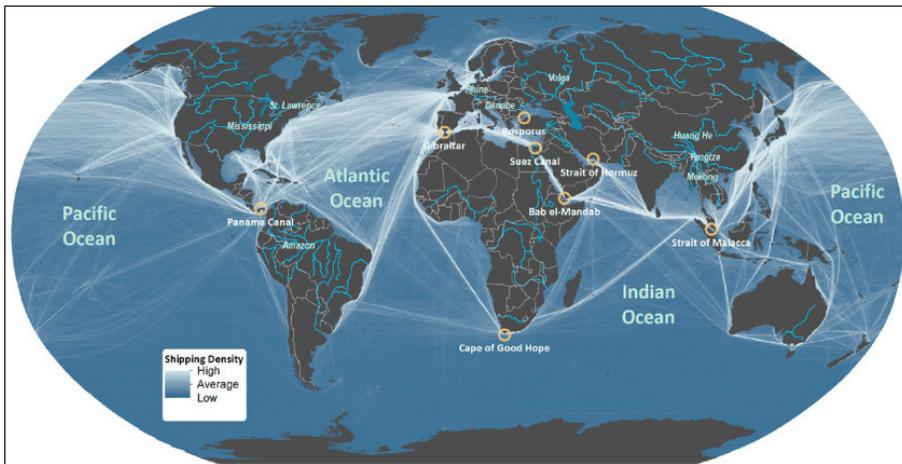


Figure 2. Maritime traffic flows throughout the world, particularly in and out of the United States, help explain the Global Operating Model logic.³⁶

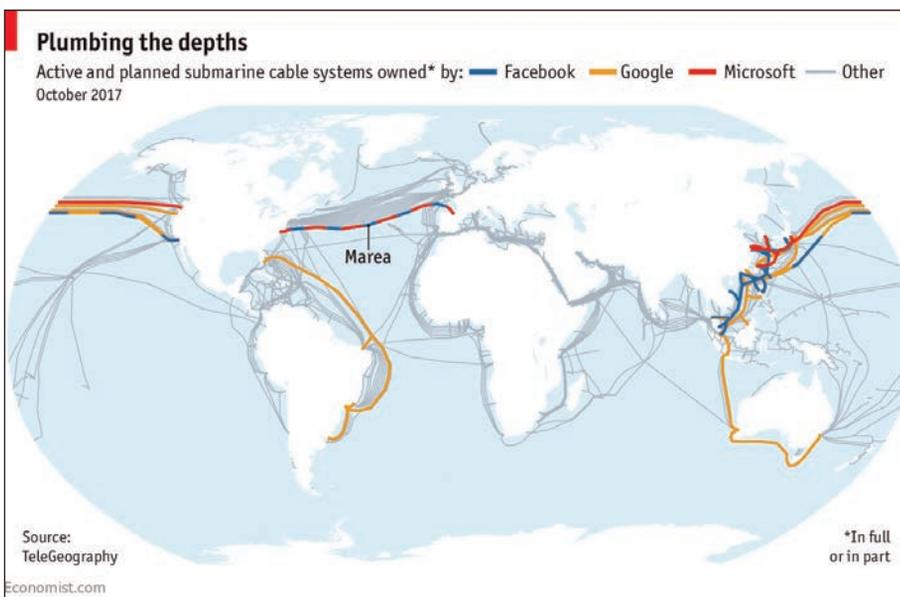


Figure 3. More than 99 percent of global digital communication traffic moves via undersea cables, including those owned by U.S. companies such as Facebook, Google, and Microsoft.⁴⁴

terday’s theater operating model. (See Figure 3.)

But there are other reasons. As the *National Cyber Strategy* elucidates, “Economic security is inherently tied to our national security.”⁴³ Americans cannot afford for the Pentagon to segment a battlespace when U.S. global trade with foreign countries totaled \$5.2 trillion in 2017 and relies on worldwide instantaneous connectivity via a limited number of strategic maritime chokepoints.⁴⁴ Nor can Americans afford for the Pentagon to try to completely cordon off the homeland as immune from the same persistent

competition and potential conflict indicated by the model’s layers. We exist in a world with global interconnection, persistent surveillance, and ubiquitous signals that challenge the freedom to maneuver to which the U.S. military has become accustomed.⁴⁶ Consider, for example, that commercial satellite companies such as *Planet Labs* capture “every square foot of the globe, sending 1.4 million images ... to Earth for processing, generating unprecedented perspective, awareness, and insight about the world below” every day.⁴⁷ Consider, as well, that such sensing and connectivity technologies have enabled

ordinary citizens to reveal in real-time both the highly classified Osama Bin Laden raid and the most recent U.S. presidential visit to Iraq.⁴⁸

When military planners were able to circumscribe “over there” from the continental United States, the Marine Corps was afforded a temporal freedom for mobilization. The time and effort required to deploy forces, including the dozens—if not hundreds—of ships needed for multi-MEB-sized amphibious JFEO, were uncontested *until* the forces were in the area of operations. This is no longer an acceptable nor a realistic planning assumption, as RAND’s most recent U.S.-China military scorecard makes abundantly clear.⁵⁰ This is why we believe our Commandant has emphasized the future challenging nature of “needing to fight to get to the fight,” if Marines are not already where they need to be when the fight begins.⁵¹ (See Figure 4 on following page.)

This is also why we believe the foundation of our Corps’ new big idea should anchor on dominating the time domain⁵² by employing highly maneuverable, forward-partnered amphibious close combat units⁵³ that operate persistently throughout the contact layer’s key maritime terrain⁵⁴ with a Clausewitzian attack-defense⁵⁵ mindset.⁵⁶ These units’ Marines should maximize the emerging technological spectrum, including but not limited to remotely piloted, artificial intelligence-enabled scalable autonomous, and loitering munitions systems.⁵⁷ They should also be seamlessly integrated with the Navy as part of a department-wide combined littoral warfare strike force effort, similar in many ways to Wayne Hughes’ *Minutemen*⁵⁸ squadron concept and what Milan Vego recommended in his seminal article on the world’s littoral regions.⁵⁹ In this case, these persistently forward-partnered littoral strike forces would actively deny key terrain while leveraging relatively inexpensive amphibious fast attack combatants,⁶⁰ some of which would be equipped individually with fifteen to twenty Marine-sized close combat units capable of collecting on, striking, and maneuvering against adversaries at unprecedented ranges both at sea and ashore.⁶¹ The other amphibious fast

attack combatants would be equipped with long-range anti-ship missiles to target adversary ships.⁶²

We envision this new littoral strike contact layer capability to be supported by a variety of blunt layer forces. These forces can be anywhere from mere minutes, to hours, to potentially a few days or weeks away. The mere minutes away blunt layer capabilities would include theater- or global-range joint force cyber and all-weather sea-based and ground-launched conventional missile fire support. The latter of these two capabilities, enabled by the anticipated U.S. withdrawal from the Intermediate-Range Nuclear Forces (INF) Treaty (particularly the conventional missile aspect), Congress's 2018 NDAA mandate for the Pentagon to "establish a program of record to develop a conventional road-mobile ground-launched cruise missile system with a range of between 500 to 5,500 kilometers," and the distributed amphibious close combat units' sensing and communications skills, would create a daunting situation for potential adversaries.⁶³ If they attempted to use overt military force to overrun one of the contact layer units to challenge a U.S. mutual defense treaty or to threaten any other vital U.S. security interests, they would quickly find "the width of the killing zone" that they have to maneuver through "would be measured, not in hundreds or thousands of yards, but in hundreds or thousands of miles."⁶⁴

The hours away capabilities would incorporate a variety of sea- and air-delivered strike capabilities, if not already located in potential firing positions at the start of the crisis. The few days or weeks away capabilities would include L-class ship-based, Navy-Marine Corps units that would have increased potential to execute missions such as long-range raids, TRAP, and embassy reinforcement due to the Service implementing key changes such as the Close Combat Lethality Task Force guidance,⁶⁵ fielding Block IV upgrades for the F-35B,⁶⁶ and fully embracing manned-unmanned teaming.⁶⁷ (See Figure 5.) Importantly, the amphibious close combat units would decrease the total capacity need for L-class ships while increasing their survivability. Reducing from the cur-

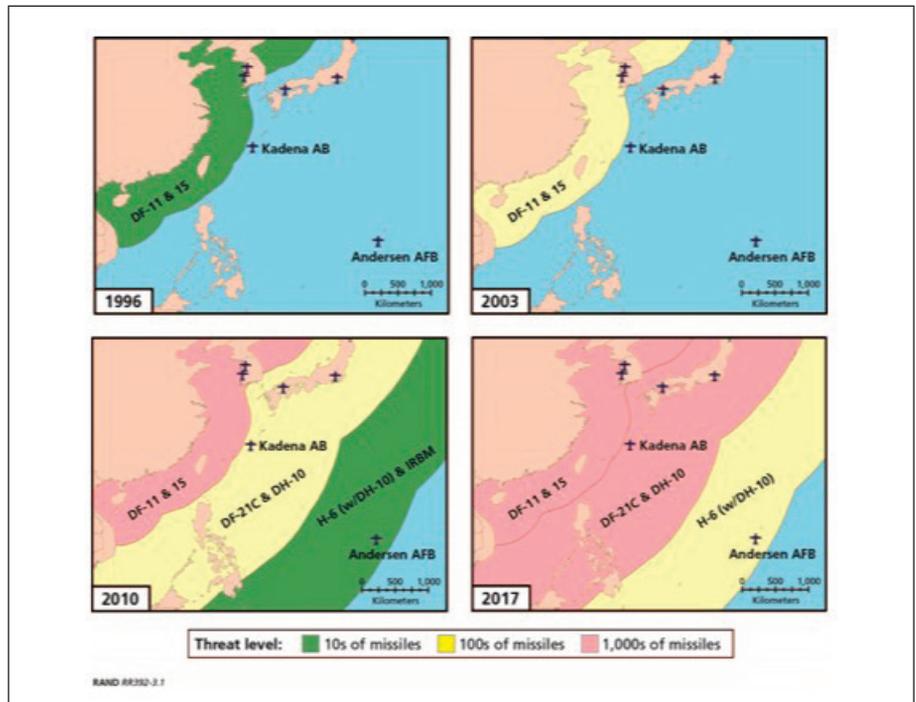


Figure 4. Chinese missile capabilities developments in the Western Pacific between 1996 and 2017.⁴⁹

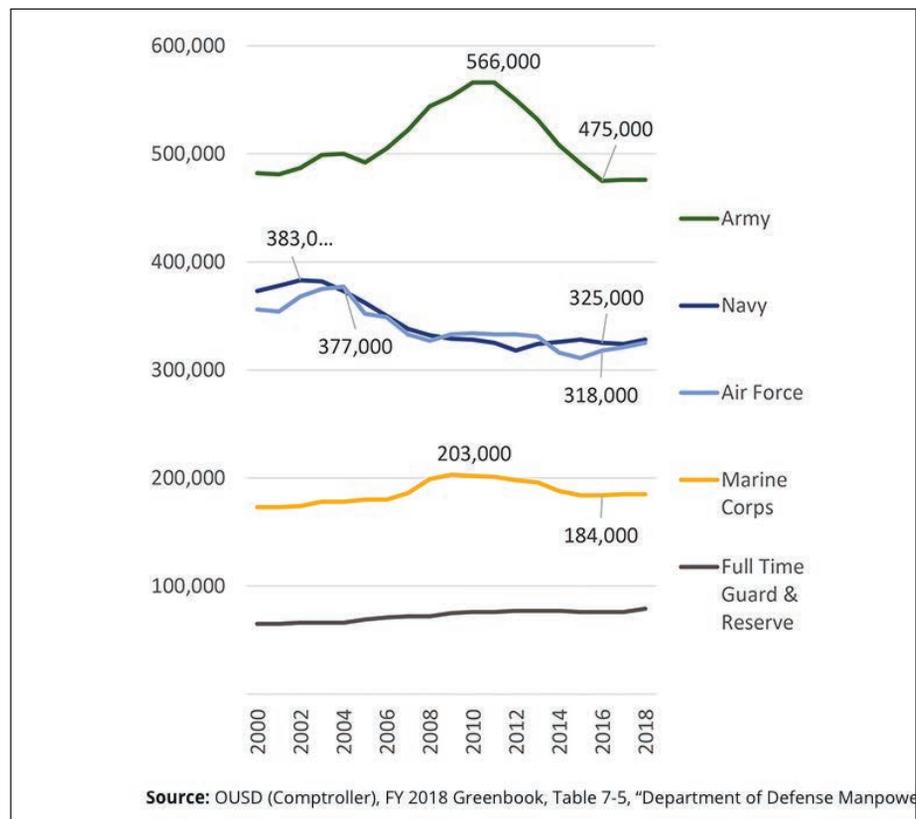


Figure 5. While Marine Corps end strength has increased since 2001, the Navy's has decreased by ~60,000 sailors.⁶⁸

rent goal of 38 to 25 L-class ships makes available “blue-green” force structure, procurement dollars, and sustainment resources to field the more than 100 amphibious fast attack combatants required for the close combat units that would anchor the contact layer force. What’s more, this change, like a fractal, enables the Naval force to exponentially increase persistent and cost-imposing power projection.

Of course, these contact layer forces, as well as those that might be called in from the blunt layer to support them, would be backed by America’s superior nuclear arsenal, diplomatic acumen, and economic strength. They are but one element, albeit an essential one, in a multi-layered, multi-dimensional approach to compel our adversaries to our will in the service of our national interests. Overall, this new big idea focused on dominating the time domain and leveraging a persistent, forward-partnered offensive defense-in-depth mindset would allow the joint force to turn current revanchist powers’ A2/AD [anti-access/area denial] advantages upside down and inside out. The big idea would also categorically deny a swift military victory to any irredentist action against our joint force, U.S. treaty ally, or strategic partner.

Moving the Big Idea from Theory to Practice

To see how this new persistent amphibious capability would fit into the NDS’s global operating model, let us imagine a world in which the Marine Corps embraces its implementation in at least five strategic locations: the South China Sea, the Strait of Malacca, the Bab-el Mandeb Strait, the Barents Sea, and the Bering Strait.

The South China Sea is simultaneously a place where more than \$1.2 trillion of the U.S. economy flows annually and one of the top potential great power conflict flashpoints in the world.⁶⁹ It is also a region where the U.S. Indo-Pacific Commander has testified China now controls “in all scenarios short of war with the United States.”⁷⁰ Recalling Thucydides, Frank Hoffman described Beijing exploiting its position in the region in similar manner to a modern day Melian Dialogue with Chinese charac-

“It follows then as certain as that night succeeds the day, that without a decisive naval force we can do nothing definitive, and with it, everything honorable and glorious.”

—General George Washington

teristics: “The mighty do what they can and the small suffer what they must.”⁷¹ Recently, a Chinese warship sailed within 45 yards of a U.S. Navy destroyer as it was executing a freedom of navigation exercise in the area.⁷² A few days prior to that incident, U.S. Air Force B-52 bombers conducted a show of force in

claims are ineffective because they are “inherently transitory.”⁷⁵ Consequently, they argue, these actions “do not have an appreciable impact on the behavior of local civilian mariners and aviators, who will once again be subject to Chinese harassment as soon as the Americans sail [or fly] away.”⁷⁶

The foundational problem with the current U.S. approach is the lack of an integrated strategy that appreciates the competition with China is, first and foremost, one over the rules-based order, especially in the global maritime commons. Implementing the new big idea will help fix this problem. Rapidly maneuverable Marine close combat units embarked with Naval forces on fast-attack combatants and serving under a joint force maritime component commander (JFMCC) would enable executing a generational littoral “counterinsurgency campaign” similar to the one for which Cronin and Stires called.⁷⁷ This capability would be “coupled with vigorous diplomacy”

This is also why we believe the foundation of our Corps’ new big idea should anchor on dominating the time domain⁵² by employing highly maneuverable, forward-partnered amphibious close combat units⁵³ that operate persistently throughout the contact layer’s key maritime terrain⁵⁴ with a Clausewitzian attack-defense⁵⁵ mindset.⁵⁶

this same region.⁷³ These actions were in response to China’s growing militarization of artificial islands in the strategic region and subsequent threats to U.S. and allied military and civilian vessels operating in it.⁷⁴ These exchanges are clear examples of “grey zone” or “below the threshold of conflict” contact layer activities. Despite all the attention these actions have gained, Patrick Cronin and Hunter Stires recently identified a critical problem with them: without persistence, U.S military activities that attempt to reinforce freedom of navigation or object to Chinese territorial

focused on achieving, as they describe, “an essential victory for U.S. and allied arms and the rules-based international order they defend.”⁷⁸ It is important to emphasize that what we are proposing can only work if these amphibious close combat units are persistently located and thoroughly integrated with the rest of the elements of national power and our allies and partners.

Let us now shift 1,250 nautical miles to the southwest to the Malacca Strait. This strait is described as the 21st-century “Fulda Gap.”⁷⁹ More than 15 million barrels of oil pass through the strait

each day, including around 82 percent of China's 9 million-barrel daily import requirement. (See Figure 6.)⁸⁰ Beyond oil, around 25 percent of total global trade by volume moves daily through the strait, along with more than 30 terabits per second of transoceanic data.⁸¹ Needless to say, the Strait of Malacca is strategic maritime terrain—to the extent that to control the Strait of Malacca is to control the South China Sea. Thus, Beijing's efforts to economically sway into its orbit countries located adjacent to the strait, such as Malaysia, should not be a surprise.⁸² Nor should China's efforts to develop closer relationships with the Royal Malaysian Navy, which currently includes providing littoral missions ships, a variety of weapons, and increased bi-lateral training exercises.⁸³ Beijing's aggressive push to establish a foothold adjacent to the Strait of Malacca is not isolated to Malaysia though. It is increasingly expanding across the countries of Southeast Asia, many of whom are members of the Association of Southeast Asian Nations (ASEAN).⁸⁴ Ominously, a recent poll of ASEAN member countries found two-thirds of the respondents believe U.S. engagement in Southeast Asia has declined and one-third have "little or no confidence in the United States as a strategic partner and regional security provider."⁸⁵

Now let us imagine a Marine Corps that embraces the proposed new big idea in a geo-strategic crisis where China sought to seize part of a treaty ally or partner's territory near the Strait of Malacca. This location possesses Reliable Acoustic Path arrays that provide intelligence on submarine movements⁸⁷ and undersea network nodes.⁸⁸ More than 220 undersea cable systems are responsible for over 99 percent of all transoceanic digital communication.⁸⁹ Of the 685 undersea cable network nodes—where the cables transition between land and sea—366 are located on islands, many of which are located in the Indo-Pacific region.⁹⁰ U.S.-based digital communications' companies, who make millions of dollars daily due to these cables, protest against China's intentions and encourage the White House to respond.⁹¹

From U.S., allied, and commercial surveillance capabilities, imagine in

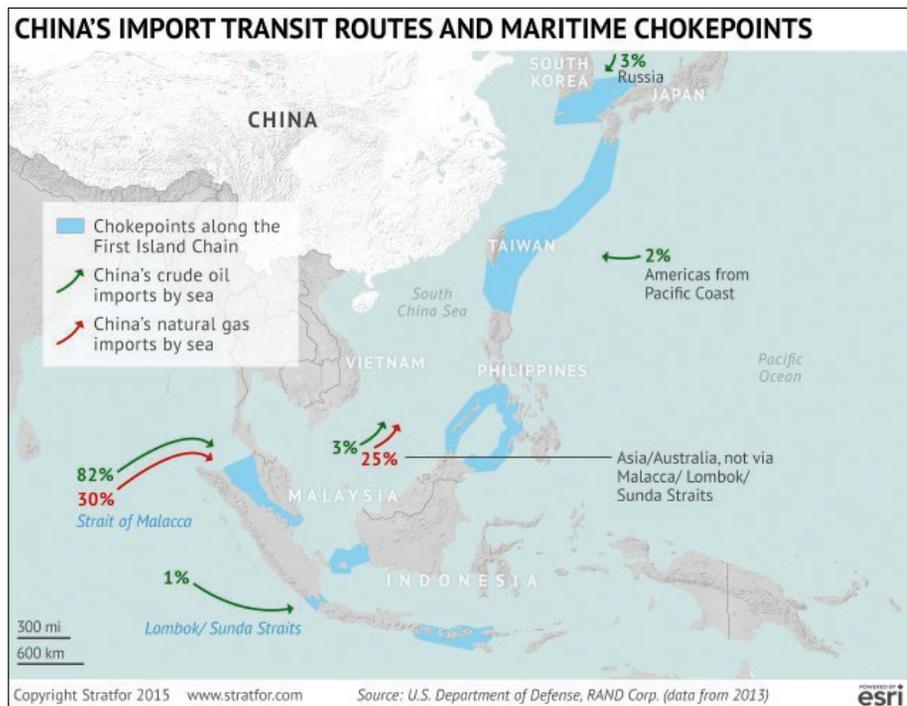


Figure 6. Key maritime terrain and how the Chinese economy is fueled by way of the sea.⁸⁶

this scenario the JFMCC responsible for the area receives information that many thousand Chinese assault troops, embarked on naval shipping, are sailing toward the location at approximately sixteen knots.⁹² This force is 300 miles from its expected objective. At this point, the JFMCC has around twenty hours to develop and implement a plan that helps U.S. policymakers blunt the attack.

A forward-partnered amphibious close combat company—composed of around 200 Marines trained to operate in more than 12 separate teams—is already on the ground operating with special operations and allied forces in the country where the attack is expected. This is not a disingenuous scenario inject but a fundamental aspect of this strategy and the Marine Corps' persistent engagement mindset. The JFMCC, in conjunction with the "country team," orders the Marines to move into positions to blunt the adversary assault. The Marines, with their partner forces who have trained to this scenario in previous exercises, move via organic all-terrain vehicles and local transportation to assume these positions three hours later. With more than 100 loitering munitions, located in dense vegetation, this close

combat company—in essence, a revolutionary airfield-less mini-MAGTF—is prepared to sense, swarm, and if necessary, neutralize adversary naval vessels at ranges out to multiple dozen miles.⁹³ Additionally, this unit has a limited number of platforms that range out to 500 miles while carrying up to 20-pound payloads.⁹⁴

Simultaneous with this mini-MAGTF's actions, the JFMCC orders three more close combat companies to insert into a larger offensive defense-in-depth. MV-22s fly one of these units in from an amphibious ship located 500 miles away and it arrives 3 hours later. A second close combat company inserts as part of a littoral strike force from a separate ship and is in position within a similar timeline. This company is prepared to blunt the adversary attack on land or from their fast attack combatants with long-range anti-ship missiles. And in coordination with our allies, the third close combat company launches via MV-22s from a new British naval base in another part of the contact layer and covers 1,200 miles to arrive 5 hours later.⁹⁵

The JFMCC, along with U.S. and allied policymakers, now has a force of more than 1,000 personnel on the

ground, armed with nearly 1,000 loitering munitions, as well as grenades, rifles, machine guns, rockets, mortars, and long-range anti-ship missiles. This force is supported by the MAGTF's growing medium-altitude long-endurance UAS capabilities and prepared to engage the adversary from every direction, at ranges as far out as 500 miles.⁹⁶ It also has the capability to instantly leverage theater- and global-range joint cyber and conventional missile fires. Moreover, because of the innovative efforts of young logistics Marines, this force can 3D print hundreds more loitering munitions from locations near their defensive positions.⁹⁷ Additionally, autonomous vehicles can deliver these weapons directly to the distributed close combat units.

At this point, the adversary has ten hours remaining on its movement across the ocean. American and allied policymakers communicate to leaders in Beijing that a force is in position and prepared to uphold international law and U.S. mutual defense treaty obligations. What do you think the Chinese leaders would do next? We are inclined to think these Chinese policymakers would re-evaluate the outcome of their decisions and call off the attack. Regardless, our Corps' new amphibious forward-partnered capability would have strategic effects for our Nation. If the Chinese troops continue their movement, our reimagined mini-MAGTFs can monitor and affect them in real-time. This includes bringing overwhelming swarming firepower to bear should the Chinese troops cross our ally's twelve-mile international territorial boundary, or well beforehand. Additionally, if any of the adversary troops ever gets ashore, the Marines can then close with and destroy them with rifles, grenades, and bayonets. This is precisely the type of persistent capability that we envision our Corps, based on the proposed new big idea, possessing for our Nation.

Switching from this strategic vignette, let us move 4,000 nautical miles west to the Bab-el Mandeb Strait and see more opportunities to leverage the new big idea in the contact layer. Nearly 10 percent of the global oil supply—4.7 million barrels per day—passes between the 18 miles separating Ras Menheli, Yemen

and Ras Siyyan, Djibouti.⁹⁸ Referred to as a "deadly geopolitical cocktail," the strait is subject to everything from Somali pirates to Houthi anti-ship missile attacks spilling over from Yemen's ongoing civil war.⁹⁹ Additionally, China's first overseas military base, for "international obligations," is located in Djibouti.¹⁰⁰ Unsurprisingly, China's "Belt and Road" initiative has significant infrastructure investment in Djibouti funded by predatory loans that indebt the country.¹⁰¹ China also recently secured a 99-year lease for a port in Sri Lanka, providing its growing maritime force access to a key location along the main shipping route between the Bab-el Mandeb Strait (as well as the Strait of Hormuz, another piece of key maritime terrain) and the Malacca Strait.¹⁰²

China's base in Djibouti is only eight miles away from American forces at Camp Lemonnier and, as the U.S. National Security Advisor recently highlighted, is already interfering with their activities by conducting laser interference against pilots operating in the region.¹⁰³ The same counterinsurgency

model recommended by Cronin and Stires applies here, as do the combined force littoral strike capabilities for which Hughes and Vego have called. By embracing the new big idea, Marines will be able to simultaneously help support the Navy and special operations forces, reassure strategic partners, and counter Beijing's attempts to increase its influence in the region.

Spinning the globe again, we travel north 4,000 nautical miles to Svalbard, Norway. (See Figure 7.) This was the site of a number of military operations during World War II, most importantly as key maritime terrain for Germany to maintain war weather stations.¹⁰⁵ Svalbard is 550 nautical miles north of Murmansk and adjacent to the Barents Sea, where Russia is constructing artificial islands.¹⁰⁶ Svalbard is also home to the Doomsday Vault for the world's seeds.¹⁰⁷ It has the northern-most set of undersea cables that are likely to be networked as the Arctic continues to melt.¹⁰⁸ This is not a region unfamiliar to our Corps. Recently, our Service increased its persistent presence in Norway conducting

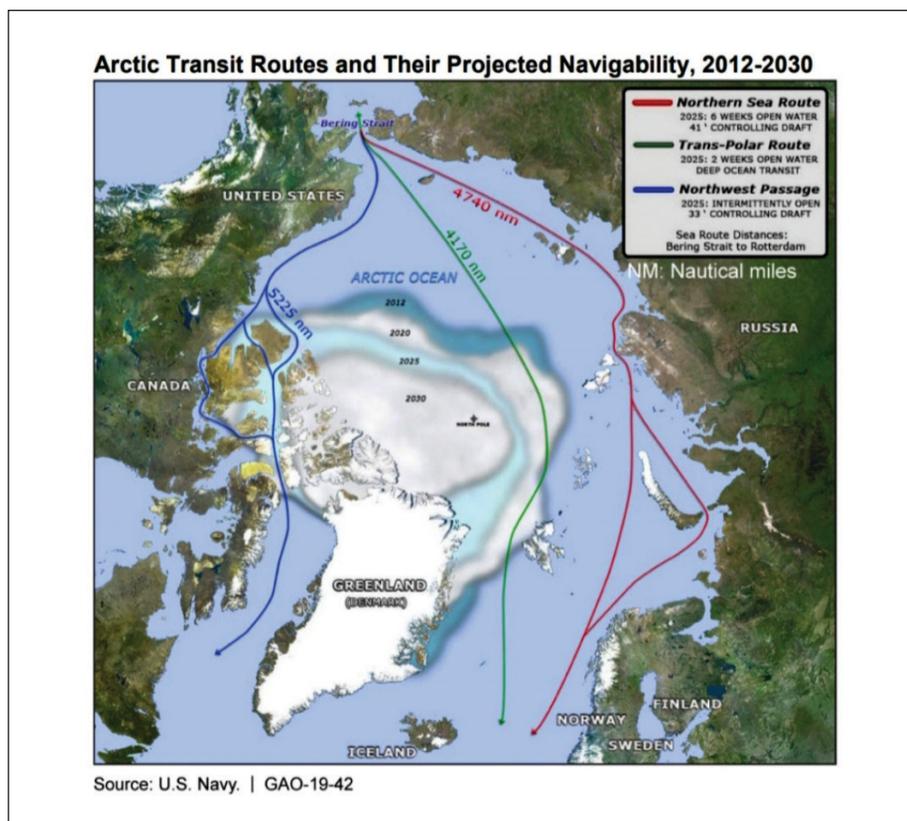


Figure 7. Arctic sea routes.¹⁰⁴

exercises while maintaining an established Marine Corps Pre-Positioning Program-Norway.¹⁰⁹

With the proposed new big idea, we suggest a modification to deter Russia and to increase cooperation with our allies. Currently, the Norwegian Coast Guard only has one vessel, yet it requires more to conduct all the operations required for Svalbard.¹¹⁰ This provides an excellent partner mission opportunity for an augmenting persistent littoral strike force. Moreover, last year Russia conducted an exercise simulating an invasion into Svalbard, which if carried out could invoke Article 5 of the North Atlantic Treaty.¹¹¹ Russian possession of Svalbard would enable their A2/AD capabilities, protect their nuclear submarines, and enable sea control into the Barents Sea complicating NATO efforts. We believe amphibious-based close combat forces, with both their organic lethal fires and instantaneous access to theater- and global-range joint cyber and conventional missile capabilities, would serve as a vital deterrent to help prevent such a scenario from ever happening in the first place.

Turning now toward the other entrance to the Arctic, 2,100 nautical miles over the North Pole, we find the Bering Strait. Unlike during the Cold War, when sea ice concentrations in the region prevented dependable transit routes for trade, cargo shipping along the Northern Sea Route in 2017 achieved a record high of 9.7 million tons.¹¹² This was a 35 percent increase from 2016, with experts forecasting much greater growth in the years ahead. U.S. Navy strategist, Rachael Gosnell, recently commented that the “Bering Strait will open for an extended period starting around 2020, the Northern Sea Route around 2025, and the Transpolar Route around 2030.”¹¹³ She also described how plentiful natural resources have already sparked great interest in the region. Russia is acting on these interests by conducting major infrastructure building efforts and large naval exercises.¹¹⁴ China has also employed its navy in the region.¹¹⁵ Unfortunately, despite this key maritime terrain being adjacent to Alaska, neither the U.S. Navy nor the Marine Corps have a visible, persistent presence in the

region. U.S. Senator Dan Sullivan, a Marine representing the state of Alaska, has increasingly expressed concerns about these deficiencies during Congressional testimony.¹¹⁶ This is yet one more opportunity for our Corps to implement the proposed new big idea. In this case, our new mini-MAGTF littoral strike force proposal would help support an already over-tasked U.S. Coast Guard element protect 10,000 kilometers of U.S. coastline, which is 50 percent of America’s coast.¹¹⁷ These forces could also partner with our Canadian allies who have similar challenges in the region.

These are just five pieces out of dozens of potential key maritime terrain locations. The selection of the South China Sea, Strait of Malacca, Bab-el Mandeb Strait, Barents Sea, and Bering Strait should not imply that this is where competition might become conflict, but to serve as talismans for potential crisis spots. This analysis could have equally described maneuver in and around the Strait of Hormuz, the Suez Canal, the Bosphorus Strait, the Panama Canal, and the East China Sea, among many others. While it is unwise to debate precisely where or when a conflict trigger will occur, it is increasingly imperative to have a credible force at this point *first* and this force must be connected to the full might of our Nation. Given the world’s increasingly closed geography, achiev-

ing this powerful, persistent presence requires fundamental change to how our Service thinks about its mission and relevance to the Navy and our Nation.

Top Eight Actions Required to Implement the New Big Idea

With the new strategic guidance and big idea vision in mind, what follows are the top eight actions that our Corps should embrace to maximize its future value for our Nation:

*Embrace expanding the competitive space.*¹¹⁸ Instead of the current episodic MEU and multi-MEB amphibious JFEO surge capability focus, philosophically commit to prioritizing contact and blunt layer missions that maximize our Nation’s ability to constantly compete with revisionist powers and violent extremist organizations.¹¹⁹ (See Figure 8.) This will enable forward persistence in ways that reassure allies and partners, while deterring and, if necessary, helping to defeat potential adversaries in short order. The current lack of persistent and distributed presence near key maritime terrain means our Service has much work to do to achieve this goal.

Double down on reinvigorating Maneuver Warfare. Our big idea not only proposes a way to leverage the changing character of war in our favor, but also the very structure of democracy, capitalizing on what David Blair has



Figure 8. The icons on the map indicate the approximate location of the capital ship within each CSG or ARG as of 31 December 2018. Even if the other four ARG ships are operating in a distributed manner near key maritime terrain, major shortfalls remain throughout the contact layer.¹²⁰

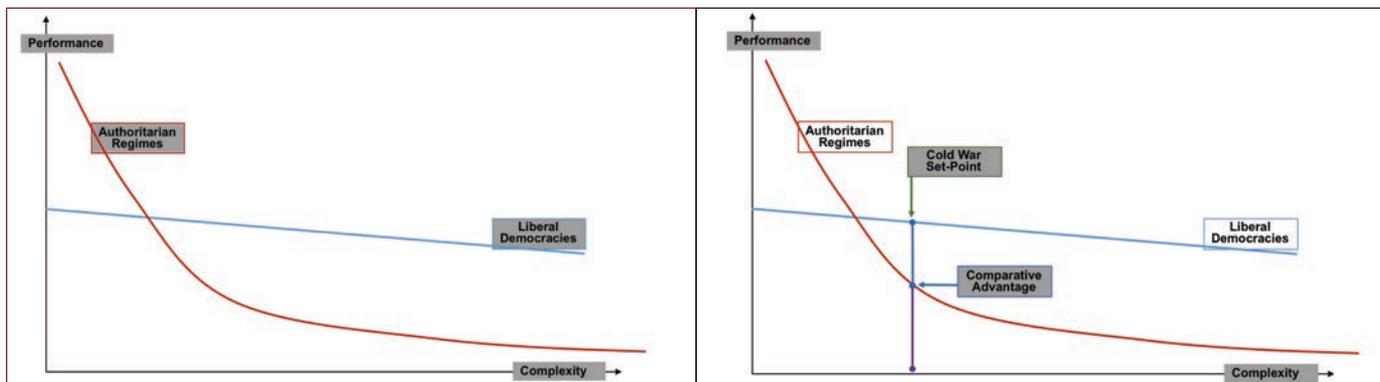


Figure 9. (Image by David Blair.)

called the *Chaos Imperative*.¹²¹ The *Chaos Imperative* is to liberal democracies as maneuver warfare is to the Marine Corps. It seeks to inject disorder into a system that requires order to perform. Just like *MCDP-1 Warfighting* the *Chaos Imperative* seeks to “create a turbulent and rapidly deteriorating situation with which the enemy cannot cope.”¹²² Calibrated chaos is one of our innate advantages in a great power competition with a centralized, repressive, and controlling authoritarian state such as China. It proposes a way to leverage the structure of our democratic system, like our warfighting philosophy, to outperform our enemy in deliberate chaos and complexity. In other words, calibrated chaos, as a principle, should be considered our best friend. The Marine Corps’ new big idea should strive to maximize the competitive advantages of this chaotic trade space. While the generals’ war might belong to the Chinese General Staff, a captains’ war, or even better, a sergeants’ war, belongs to us.

Update our Service concepts in full partnership with the Navy. The ongoing “Littoral Operations in a Contested Environment” and “Expeditionary Advanced Base Operations” concept efforts are a start. These should be revised based on the *NDS* guidance, the forthcoming new *National Military Strategy*, in anticipation of the U.S. withdrawal from the INF Treaty (again, with a particular focus on the implications of lifting the conventional missile constraints), and with a clear prioritization on maximizing the ability to provide persistent, distributed, and lethal capacity throughout the contact layer’s key

maritime terrain.¹²³ They should also be signed by the Secretary of the Navy, our Commandant, and the Chief of Naval Operations. Our Nation cannot afford any conceptual daylight between the Naval Services going forward.

*Focus force design on supporting essential naval tasks as described in the Chief of Naval Operation’s recently published “A Design for Maintaining Maritime Superiority.”*¹²⁴ These tasks are near identical to those described by our 29th Commandant, Gen Alfred M. Gray and LtGen George J. Flynn in their 2015 “Naval Maneuver Warfare Linking Sea Control and Power Projection.”¹²⁵ Accordingly, let the multi-MEB amphibious JFEO organizing construct fade away into the history books. Focus, instead, on reinventing ourselves in conjunction with the Navy such that within the next 5 years the Naval force has more than 50 persistent, forward-deployed complementary sensing, screening, and transformatively lethal, mini-MAGTFs located in key maritime littoral regions. Redefine our Naval Service “readiness” metrics in this way as well.

Redesign the amphibious component of the 30-year Naval shipbuilding plan. As per Representative Gallagher’s repeated requests, work closely with the Navy and Congress to create a new plan that meets the *NDS* contact and blunt layer intent. Continuing to request only more billion-plus dollar amphibious ships, each operated by 400 to 1,000 Sailors, is unaffordable given current budget constraints. Nor does it address what is required for operational relevance given the *NDS* guidance. The new plan should incorporate a more valuable amphibious

shipping approach, which includes around 25 large “L” class ships (LHD/LHA/LPD) maintained at high readiness rates to operate in the blunt layer. And instead of replacing the current fleet of LSDs with the LPD Flight 2 ships at \$1.4 to \$1.6 billion each, request more than 100 relatively inexpensive amphibious fast attack combatants to enable simultaneous forward-partnered persistent operations throughout the contact layer’s key maritime terrain.¹²⁶

*Fully implement the Close Combat Lethality Task Force guidance.*¹²⁷ The evolution and modernization of MAGTF small units in accordance with this guidance combines seamlessly with our Commandant’s intent to reinvigorate maneuver warfare. As such, it also enables adapting our forward deployed and forward stationed force posture, especially for units in the Western Pacific. Congress has already been informed that these forces need to become more lethal, maneuverable, and survivable.¹²⁸ These units should become the central components of the new big idea and the contact layer foundation, including the ability of forces within it to quickly transition to blunting activities.

Double down on our Corps’ growing relationship with Special Operations Command. Our Service is currently learning myriad invaluable lessons while working in ad hoc manners alongside the special operations community in multiple combat zones. In accordance with the new *Marine Corps–Special Operations Command Concept for Integration, Interdependence, and Interoperability*, these lessons should be institutionalized.¹²⁹ They should also inform the new am-

phibious close combat units' capability development such that these forces can best reassure allies and partners located in the world's key littoral regions. This coordination reiterates to strategic competitors and violent extremist organizations alike that challenging the rules-based international order will not be tolerated and that any attempt to do so will be soundly defeated.

Prioritize all aspects of manned-unmanned teaming. The robotics and autonomous systems opportunities that now present themselves, largely derived from software defined commercial technologies, can enable the new amphibious close combat mini-MAGTFs with persistent sensing, communications, and fires.¹³⁰ Our Service should embrace the velocity of commercial advancements and what this means for affordable capability development through rapid prototyping and hypothesis validation while also adopting advanced manufacturing for iterative small batch production. Simultaneously, we should think deeply about how other MAGTF elements, both manned and unmanned, can support these Gen Geiger-envisioned smaller forces. As just one example, persistence, multi-thousand-mile range, and high reliability redefines on-station aviation support potential. A remotely piloted aircraft's time in the chocks now only requires minutes at a forward arming and refueling point in exchange for days of sensing, communications bridging, and effects thereby redefining sortie generation possibilities. This one capability allows reimagining what organic and scalable remoted services support is possible for these mini-MAGTFs. Scalability is provided by autonomous, line-of-sight, relayed, or even CONUS reachback leveraging networked capabilities across enterprises while gracefully degrading to essential services for the new close combat units. This, combined with the organic capabilities of the new amphibious close combat units, shifts the collective capability menu for tactical visionaries and strategists for the next century to iterate in numerous permutations and combinations.¹³¹

Turning Crisis into Opportunity

One of the world's greatest innova-

tors, Alexander Graham Bell, once said, "When one door closes, another door opens, but we so often look so long and so regretfully upon the closed door, that we do not see the ones which open for us."¹³² Perhaps this quote applies to our Corps, too long yearning for the multi-MEB amphibious JFEO closed door to re-open anew and for being too satisfied with limited capacity, episodically rotating MEUs. Or, perhaps, given what our policymakers have tasked us to do, our Corps has been justifiably too focused on fighting in predominately land campaigns over the past eighteen years to embrace a new amphibious paradigm. Regardless, our policymakers have now given us fundamentally different strategic guidance—and with this guidance comes an enormous opportunity for our Corps to reimagine itself through the open door that the Navy and our Nation need most. The eight recommended big idea actions provide the broad framework to help us exploit this opportunity.

By increasing our Service's ability to provide the Navy and U.S. policymakers with transformatively lethal amphibious close combat units, which are, simultaneously revolutionary mini-MAGTFs, we will ensure that the global operating model contact layer has the persistent, forward-partnered strategic forces required to meet the NDS's intent. Additionally, by providing similarly transformative contributions to the joint force blunt layer, we will ensure that Marines can help counter adversary aggression reinforcing anywhere in the world within a week or two, if not in days, hours, or even in a minute or less. Combined, these new Marine Corps contact and blunt layer contributions will provide U.S. policymakers the most precious of all capabilities—time.

>For footnote information, please visit <https://mca-marines.org/wp-content/uploads/Not-Yet-Openly-at-War-But-Still-Mostly-at-Peace.pdf>.



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 <https://www.MarineCorpsMustang.org/> or, call (703) 349-0873.

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Disrupting the current struggle for dominance

by Col Art Corbett, USMC(Ret)

The nature of war is constant, and war will forever remain a violent contest of human will. In contrast, the *character* of war is constantly changing and persistently subject to the human dynamics of tactical creativity, technical innovation, and conceptual insight. Consequently, institutions dedicated to deterring and waging war must be similarly dynamic and recognize the essential truth that *change is a medium of advantage in war*. The greater the change, the wider the aperture for generating new advantage. A warfighting organization that is not constantly adopting, adapting, or initiating new means and methods of warfare is standing still, and most assuredly will be passed by more ambitious, creative, or sinister forces.

Our strategic competitors recognize that dynamic force innovation is a critical part of continuous military competition, and they have demonstrated a coherence in force development between new tactical means and more ambitious strategic ends that has largely eluded the United States. China, for example, has invested heavily in long-range fire capabilities in pursuit of their publicly declared *counter-intervention* strategy. This strategy appears designed to negate the ability of U.S. forces to persist forward in the Pacific, thereby compromising the credibility and deterrent value of the force to achieve desired strategic ends. The United States and regional allies have been compelled to accede to the illegal but expanding Chinese infrastructure supporting aggressive territorial claims in the South China Sea. All make appropriate protest but, ultimately, confrontation is limited to gestures in consideration of the vulnerability of the current combined force posture and structure relative to Chinese anti-access/area denial (A2/

>Col Corbett is a retired Marine Infantry Officer with 31 years commissioned service who commanded at every rank and retired in 2009. He is a graduate of the Navy War College, Army War College, and the Marine Corps School of Advanced Warfighting. He currently serves as a concept developer at the Marine Corps Warfighting Lab where he develops future operating concepts for the Marine Corps and the Naval Service.

AD) capabilities. The most valuable U.S. military capabilities are now concentrated or dependent on highly vulnerable bases within the potential adversary's weapons engagement zone (WEZ) and face either destruction or withdrawal in the event of war. These conditions fail to offer credible force deterrent options or assure allies. Given the global proliferation of A2/AD capabilities, similar challenges exist in other theaters as well. The growing mismatch between U.S. strategic objectives and the tactical means required to ensure force credibility and effectiveness demand increasingly prudent, favorable, and affordable options.

... it is better to defeat an adversary's strategy ...

There are two readily apparent but divergent paths to resolve this dilemma. The first option, reflexive and familiar, is to double down on the long-evolved means and methods of war and request additional funding for traditional capabilities with improved performance and additional capacity. The basic presumption of this option being that fundamental assumptions need not change, and the joint force can off-set adversary weapons and sensor range and capacity with greater capabilities and capacities of our own. In essence, we attempt to

play "catch-up" and eventually regain the lead. The inherent danger with this option is that it risks giving the competitor a complementary cost imposing strategy.

The second option is more difficult, but holds much greater promise, as it presumes that fundamental assumptions regarding the character of war have changed, and that considering mathematic and geographic realities, it is better to defeat an adversary's strategy than defeat his many forces through attrition. However, this option is hard. It requires devising new methods of warfare, innovating new and different capabilities, initiating new forms of competitive advantage—all with a focus to restoring the strategic initiative.

One potential approach aligned to the second option is the development and employment of resilient "stand-in" forces equipped with disruptive new tactical capabilities that will persist and operate forward within a peer adversary's WEZ. Informed by the constraints of both physics and economics, stand-in forces could be advantaged by exploiting emerging technology to enhance mobility and lethality and employing new design and manufacturing techniques to enhance platform numbers while reducing size and cost. They need to be deliberately designed to obviate the utility of adversary investments in long-range precision fires and impose time and cost impediments to deter their hegemonic ambitions. These new, smaller and more risk worthy capabilities will generate a

new force structure that is relevant in both countering malign behavior and deterring general war. Stand-in forces will support recent strategic guidance for force innovation as well as current and emerging joint and naval operating concepts.

During day-to-day “*competition*,” stand-in forces will enable the U.S. and our partners to confront *fait accompli* gambits and malign behavior with proportionate, responsive, and credible military options to match adversary aggression with commensurate force and risk. During conflict, stand-in forces may be employed as one of several simultaneous operational efforts within a wider joint campaign to defeat the counter-intervention strategy of peer adversaries. These forces will take advantage of partner geography to conduct an integrated maritime defense of the straits that control access to close and confined seas. Stand-in forces will conduct engagements that contrast sharply with the more familiar

stand-off approach long preferred by technologically adept western forces. Stand-off engagements are designed to minimize “*risk to force*” by confronting enemy formations with greater accuracy, over further distance, for a longer period of time. For centuries, military innovators and practitioners have sought to generate and sustain disproportionate tactical advantage through stand-off engagements; iterating and employing increasingly lethal and precise weapons systems from ever greater distance against enemies who require close proximity to effectively engage in combat. Stand-in engagements deliberately contradict this long-evolved pattern.

From the longbow and Minnie ball to the bomber and today’s long-range precision weapons and their supporting precision navigation and timing architecture, much of the modern military technical revolution has centered on extending the range and precision of stand-off weapons. The U.S. joint force

has perfected this over generations with ever more exquisite and expensive weapons and systems. Some adversaries, like the Iraqis during Operation DESERT STORM, never successfully adapted to negate these advantages. Others, however, were able to learn from their losses. The Vietnamese, for example, focused on avoiding detection and giving battle on their own terms by “grabbing the Americans by their belts” to render stand-off weapons irrelevant.

A portion of future U.S. forces could follow the Vietnamese example by making a virtue of proximity, stealth, ambiguity, simultaneity, and quantity to close with and destroy enemy forces before they can bring their own advantages to bear. This requires arming our stand-in forces with relatively smaller, less expensive, hard to find, risk worthy platforms in all domains. This low signature force structure is the antithesis of the current high signature, expensive, exquisite, and vulnerable joint capability

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set. This resilient new force structure will likewise need to be supported by an equally low signature and difficult to target expeditionary sustainment system that can support forward deployed warriors and their weapons systems without advertising critical vulnerabilities and generating single points of failure. The combination of resilient, low signature, forward infrastructure supporting similarly low signature, but highly lethal and dense, arrays of minimally manned and autonomous capabilities builds the next Joint Force on new and more realistic assumptions concerning the character of future war. Equally important, it enables the United States to shape the character of future war into an innovative competitive space where we will still dominate.

While the United States still has an advantage in technological innovation, we need to acknowledge that we have lost our long-standing competitive advantage when it comes to building major warfighting platforms. Considering the broad difference in the numbers of shipyards and the annual production of ocean-going bottoms between China and the United States, why would we consider a war that requires the risk, expenditure, and replacement of ships to still be a competitive space for the United States? The large platform *industrial base* that provided the sinew to win the Second World War is now in the hands of our strategic competitors. What still remains a dynamic and competitive space for American ingenuity is the fast emerging *innovation base* that already uses computer assisted design, additive manufacturing, robotics, and many new manufacturing techniques to produce many smaller and more resilient platforms at significantly reduced cost. When equipped with autonomy packages, these resilient platforms offer the opportunity to create and field a significant number of lethal, affordable, and hard to detect and kill unmanned and minimally manned weapons platforms. Unmanned systems are low signature, risk worthy assets that could be boldly employed in overwhelming numbers against expensive, exquisite, large signature platforms to achieve disproportionate result at minimal cost. They enable

naval forces to shift investment away from expensive to produce and maintain ships and reinvest in the many payloads that will be necessary to win a war in the missile age. Autonomous and minimally manned surface, subsurface, and air platforms clearly meet the criteria of *disruptive technologies that establish a new competitive space* for America's emerging innovation base and may provide capabilities optimized for stand-in forces.

While the concept of stand-in engagement is as old as war itself, the establishment of 21st-century stand-in forces will be disruptive because it creates what John Boyd called a "fast transient maneuver," an "Irregular and rapid/abrupt shift from one maneuver event/state to another." By disrupting the evolved and anticipated pattern of force development and engagement we may generate highly exploitable asymmetries and provide new opportunities for cost effective advantage. *Adding* stand-in engagements to the tactical mix will cause the enemy to hazard expensive offensive platforms against a lethal and dense mix of inexpensive, risk worthy, defensive platforms, and payloads—imposing disproportionate cost and asymmetric risk to enemy forces designed to strike against large signature standoff ships and infrastructure.

Since the operational level of war is designed to link tactical action to strategic ends, it follows then that the proper ambition of a *future* operational concept is to describe how *new tactical capabilities*, used in *new ways*, will provide future decision makers *better strategic options*. A proper operational concept has many components and points of consideration, but it is essential that it describe how investment in new tactical means will enable better strategic consequences, preferably at reduced cost in blood and treasure. Credible operational concepts are dependent on credible forces that are sustainable in battle and sufficient in lethal capability and relative capacity.

An optimum strategy—particularly one versus a nuclear-armed adversary—will be *adequately coercive, but not vertically escalatory*. To avoid provoking vertical escalation, the military operations associated with such a strategy will exploit off-shore naval operations

to generate coercive conditions. Toward that end, stand-in forces may fully exploit the many advantages of the tactical defense, which is the far stronger form of contemporary naval battle.

The *strategic offensive* complemented by an *integrated maritime tactical defense* provides unique and relevant advantages. Stand-in forces may be *highly coercive* when employed to deny adversary access to commerce or counter fait accompli gambits yet, when employed from treaty partner terrain using largely defensive capabilities, they are *not vertically escalatory*.

Combat credibility and demonstrated resolve equates to deterrence effectiveness. Stand-in forces stand forward with partners. Stand-in forces can persistently and resolutely declare intention. These forces may be regionally aligned and assigned. They will not withdraw upon indications and warning and their platforms and payloads can be proliferated in large numbers at affordable cost. The comparative ease of hiding their signature and masking their disposition leads to uncertainty and compounds the variables when calculating correlation of force, perhaps the greatest deterrent when facing an adversary who regards war as a scientific endeavor with computable results.

The development of a stand-in forces offers the potential for innovative change to disrupt the current great power competition and *regain the strategic initiative*. They will do so by satisfying the operational requirement to *create credible combat forces* to persist and operate inside the adversary's WEZ with sufficient capability and capacity to restore deterrence and produce favorable strategic outcomes.

The pattern and reality of war in the missile age makes the concept of stand-in forces inevitable. First to the force development blackboard wins.





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2018 National Defense Strategy

What does it mean for the future of the Marine Corps?

by BGen J. Scott O'Meara

As the post-Cold War international order continues to weaken under the pressure presented by an increasingly competitive and multipolar world, the United States finds itself at a strategic, inflective point. Former Secretary of Defense James Mattis publicly released a new *National Defense Strategy (NDS)* in January 2018. Directed by Congress, the *NDS* replaced the former Quadrennial Defense Review. Unlike previous Quadrennial Defense Review reports, the 2018 *NDS* was published as a classified document with a releasable version distributed for public consumption. A threat-based strategy, the *NDS* frames the current and near-future strategic and operational environment, identifies the central problem, recognizes methods and means to address this central problem, provides risk mitigation guidance, and delivers direction to the Joint Staff, combatant commands, and Services relating to joint force readiness, modernization, and force management.

Defense strategy is the linkage between operational capabilities and political objectives. Aligning with the National Security Strategy, the *NDS* defines the central problem as erosion of the United States' "competitive military advantage" within key regions generated from the rise of China and the re-emergence of Russia. Return of great power competition—likely to evolve along a nonlinear, reciprocal projection—will continue to transform the strategic landscape.

The *NDS* articulates the central challenge as the altering of balance of power within key regions created by the rise of China over the past decade and the re-emergence of Russia under Vladimir Putin. Competitive actions of China and

>BGen O'Meara was the Assistant Deputy Commandant, Plans, Policies, and Operations, HQMC when he wrote this article.

Russia challenge the post-World War II international order, causing it to wane. Although not mirror image threats, both China and Russia are activity employing grand strategies designed to exploit opportunities along the continuum of cooperation, competition, and conflict. This "new great game" is broadly defined by Russia and China's desire to seek right-of-entry and influence, control of strategically important geographical areas, and access to critical resources. Operations conducted below the level of armed conflict, exploiting a blend

of competitive actions, challenge the American traditional view of war and peace, becoming the "new normal."

Secretary Mattis' concept of "expanding the competitive space" is a maneuverist approach to compete and win within the space this great power competition takes place. Temporally, expanding the competitive space incorporates activities across the continuum of competition, traversing all domains and elements of national power. This design is intended to generate increasing dilemmas to complicate the adversary's strategy, resulting in the United States setting the tempo and regaining the initiative. In short, this is the convergence of statecraft and warfighting.

To enable and assist with expanding the competitive space, the 2018 *NDS* elevates the importance on increasing



Force readiness will be one issue that needs to be addressed under the NDS. (Photo by LCpl Scott Jenkins.)

and deepening interoperability with allies and partners. Extending global reach with a strong network of allies and partners will provide access, capabilities, and capacity while increasing legitimacy.

The central logic of the *NDS* is that a more lethal, capable, and modernized joint force that is supported by a healthy network of allies and partners will enable the United States to establish a favorable balance of power: “Compete, deter, and win.” This modernized force, supported by a network of allies and partners, will provide a credible and conventional deterrence. In coordination with and support of other elements of national power, the joint force provides an escalation lever.

A sense of urgency for significant change runs through the language of the *NDS*. The intent is to prioritize and focus DOD on the question, “ready for what?” The “what” being high-end, contested domains warfighting against peer competitors. Shifting focus toward China and Russia while maintaining attention on rogue states Iran and North Korea, the *NDS* articulates a desired end-state, establishes prioritization, and sets a way forward.

To transition strategy into execution, the Secretary’s *Fiscal Year 20-24 Defense Planning Guidance* (DPG) provided specific programmatic guidance as well as detailed implementation direction to DOD enterprise. The Deputy Secretary of Defense assumed the role as the lead change agent for implementation. What does this mean for the Marine Corps? Programmatically, a shift to procuring next generation capabilities which can be employed and effectively operate as an inside force will be prioritized. Sustainment and divestment decisions concerning legacy capabilities will need to be made. Training, education, and the doctrine guiding how we deploy and fight will need to adapt. Posture and deployment cycle planning will very likely require adjustment.

Importantly, the *NDS* addresses the requirement to transform professional military education to produce future leaders skills and intuition required to meet rapidly emerging 21st-century challenges. Secondly, and linked to modernization, the *NDS* correctly identifies the

need to enable and enhance a culture of innovation within DOD so material and non-material solutions are generated and acquired at the speed of relevance.

Bridging the strategic to the operational, the *NDS* postulates a new way to dynamically deploy the joint force. From a global perspective, new ways are intended to optimally manage and integrate joint resources, operations, and forward posture. The 2018 *NDS* introduces two new operational concepts: Dynamic Force Employment and Global Operating Model (GOM). Presently, both concepts require further development and refinement by the Joint Staff. The GOM consists of four joint force employment layers: contact, blunt, surge,

The time to avoid cognitive bias is now.

and homeland. Integrating globally, the GOM is envisioned as a new design for posturing and employing combat power. Activities intended to expand the competitive space will be employed within the contact layer. As a global, forward deployed, naval expeditionary force, Marine Corps capabilities align well with intended operational and tactical actions envisioned within the contact, blunt, and surge layers. MEUs and Special Purpose MAGTFs complement the contact layer concept by providing flexible deterrence and response options while building situational awareness, conducting influence and shaping operations, and maturing relationships with allies and partners on a daily basis.

The 2018 *NDS* establishes the intent to inject prioritization and a sense of urgency within the DOD, shifting focus to rapidly closing joint force warfighting gaps. This will have programmatic, force development, and force management implications.

Implications

At this current inflection point, hard questions must be asked. National resources are finite, the United States’ fiscal burden is daunting, and prioritization is a must. Innovation at the speed of relevance is essential. Deep questions will need to be asked at the institutional level. Is the Corps ready for the high-end warfighting, regardless if it is against a peer competitor or proxy employing peer-competitor capabilities? Are the right capabilities, force design, and warfighting doctrine in place? As Marines, maneuver warfare is our warfighting philosophy—our mindset. However, do we know how we will deploy into and fight within a contested environment? The MOC states no. The time to avoid cognitive bias is now.

The intent for the remainder of this article is to generate intuitional-level reflection, spark critical thinking and debate, and accelerate innovation. Marine leaders should ask: Are we innovating? Are we thinking about future threats? Will we have the right leaders, doctrine, and material capabilities to overmatch opponents within all domains? In leveraging warfighting functions, along with training and education, force design, force structure, force posture, and innovation, the following section provides questions to initiate a broader discussion.

The Marine Corps is currently not organized, trained, and equipped to meet the demands of a future operating environment characterized by complex terrain, technology proliferation, information warfare, the need to shield and exploit signatures, and an increasing nonpermissive maritime domain.

—Marine Corps Operating Concepts (MOC)

Command and control (C2). Will the future C2 architecture possess network resilience to defend against peer cyber, jamming, and electronic warfare threats? Will the C2 network “plug and play” with higher joint and coalition networks? Will the Navy-Marine Corps network grids be integrated? Will bandwidth meet need? Will amphibious shipping C2 capabilities meet the demand requirements of multi-domain battle? How will signature control be managed? Are component headquarters designed and structured to support multi-domain operations?

Maneuver. Will the MAGTF deployment and employment strategy of the past meet the demands of today and the future? How will we deploy and fight the MAGTF within a contested domain environment? How will the MAGTF employ manned-unmanned teams to create situational understanding asymmetry to enable tactical engagement overmatch? Is naval integration on a track to enable seamless maneuver and warfighting at and from the sea?

Fires. Does Marine Corps Force 2025 optimize the MAGTF to fight effectively within the information domain? Are the current target development processes optimized to seamlessly converge effects, kinetic and non-kinetic, across all domains? Will future MAGTF long-range, precision fires enable the joint force to overmatch peer long-range, anti-access/aerial denial capabilities?

Intelligence. Will there be sufficient, persistent intelligence, surveillance, and reconnaissance capacity and capabilities? Will fused information be disseminated down through the battalion to the squad level to enable time critical targeting? Will indications and warnings distribution remain pace with hypervelocity weapons?

Logistics. How will the supporting logistics enterprise sustain a force operating inside integrated anti-access/aerial denial environments? Will the enterprise be able to support distributed operations over extended distances? Does current doctrine address combat refit and replacement? Will the medical enterprise capacity be robust enough to meet for high-end warfighting requirements?

Force protection. Has sufficient capability and capacity to defend against long-range, hypervelocity, and precision weapons been programmed? What new means of deception and decoying can be employed to complicate our adversary’s understanding and targeting solutions? Will programmed air, surface, and ground mobility platforms be survivable?

Information. What role will the MEF information group play within the larger interagency, joint, and coalition effort? What does it mean to maneuver within the electronic spectrum?

Training and education. Are training requirements and annual plans designed to meet high-end warfighting challenges? If yes, how often is training taking place? Are MEF/MEB headquarters operationally ready to deploy on short notice to command and control a MAGTF fighting against a peer? Is the education system focused on building future leaders with the knowledge required to meet future challenges while remaining warfighting subject-matter experts?

Force design, structure, and posture. Is the current MEF force structure optimized to enable rapid, effective, and efficient deployment of combat creditable MAGTFs? Relative to the Indo-Pacific-Asia region, is the MAGTF the ideal force design? What is the most optimal and sustainable Service end strength? Is the current Marine Corps global posture designed to address future threats?

Innovation. Is the Corps innovating as the speed of relevance? How will the likely convergence of artificial intelligence, autonomy, and robotics be leveraged?

Conclusion

The *NDS* shifts the DOD away from low-end stability operations and directs the DOD to identify cost effective ways and means to address challenges presented within regions where vital national interests are not at risk. Furthermore, it clearly shifts the Department to prepare for peer competition and conflict. This is a direct response to the rise of China and the re-emergence of Russia. However, a note of caution: since the beginning of the post-World War II era, the track

record for predicting where and with whom the next conflict will be fought is not a record to be proud of. History teaches that prudence is a virtue. History also teaches that the nature of and the motivation behind war remain unchanging. The current instability within the Middle East, Levant, and Africa will not soon change. Rogue nations Iran and North Korea will continue their disruptive activities. Simmering conflicts in Eastern Europe remain. Violent extremist and organized criminal threats will persist for the foreseeable future. Poor governance, demographic shifts, megacities, strained resources, and climate change will continue to impact regional stability. The likelihood of confronting proxy and surrogate forces of peer competitors remains high. The pace of technological advances will accelerate. Convergence of artificial intelligence, machine learning, autonomy, advanced manufacturing, nanotechnology, biotechnology, and many other technological advances may likely generate disruptive changes to the character of warfare. Ultimately, trends indicate continued instability, competition, and the likelihood of nation-state armed conflict. As the force-in-readiness, MAGTFs of today and tomorrow must possess capabilities that address primary threats while remaining flexible and adaptable to meet the unpredictable and the unknowns.

Notes

1. Secretary of Defense, *Summary of the 2018 National Defense Strategy of the United States of America* (Washington, DC: January 2018).

2. Commandant of the Marine Corps, *Marine Corps Operation Concept* (Washington, DC: September 2016).



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The Case for Change

Meeting the principal challenges facing the Corps

by Gen David H. Berger

The United States Marine Corps I lead in 2020 finds itself, like the rest of the U.S. defense establishment, at a crossroads. The passing of our Nation’s “unipolar moment” and the emergence of revisionist great power competitors in China and Russia, coinciding with a sea change in the character of warfare driven by social and technological change, demands that we move rapidly to adapt to the circumstances of a new era.

This article lays out the case, as I see it, for the sweeping changes the Marine Corps needs to make to meet the principal challenges facing the institution: effectively playing our role as the Nation’s naval expeditionary force-in-readiness while simultaneously modernizing the force to play its necessary roles in the operating environment described in the *National Defense Strategy* (NDS)—and doing both within the fiscal resources we are provided. Deep institutional change is inevitable when confronting modernization on this scale, and that type of change is hard. The urgency of change and the institutional reform and innovation necessary to achieve it has not diminished in the two years that have passed since the publication of the NDS. The ideas expressed below are not unique or original to me—forward thinkers across the defense establishment, academia, and industry have given voice to them for years. But the time to act is now.

Today’s Marine Corps

Today’s Marine Corps, despite many surface adaptations to the demands of the past two decades of counterinsurgency operations, is at its core optimized for amphibious forcible entry and sustained operations ashore. This essential design has endured since the 1950s, though it has changed in details of equipment and

“Much is written of courage in the fleet or in the field; but there is a courage of the closet that is no less praiseworthy and fully as rare, and that is the courage to do battle for a new or unpopular idea.”¹

—Alfred Thayer Mahan

doctrine in response to the secular trend, extending back to the dawn of modern warfare, toward greater range and lethality of weapons systems. My predecessors made significant advances in keeping pace with this trend in pursuit of capabilities they deemed essential to the Nation’s defense, based on the operating environment and the resources available at that time. Despite those advances, however, in light of the unrelenting increases in the reach, effectiveness, and lethality of modern weapons, the rise of revisionist powers with the technical acumen and economic heft to integrate those weapons and other technologies for direct or indirect confrontation with the United States, and the persistence of rogue regimes possessing enough of those attributes to threaten U.S. interests, I am convinced that the defining attributes of our current force are no longer what the Nation requires of the Marine Corps. The rest of this article will review the reasons why.

Threat Technology—Secular Trends and the Rise of the Precision Strike Regime

The secular trend toward the increasing range and lethal effect of military technology is a commonplace of the history of modern warfare. Accompanying the development of range and lethality at every stage, albeit sometimes unevenly, has been the advance of the ability to apply that lethality effectively to military ends through the necessary command, control, communications, computer, intelligence, surveillance, and

reconnaissance (C4ISR) organizations and technologies. These trends are of very long standing. Leaving aside the sweep of military history before 1945, the coming of the Atomic Age provided the clearest possible signal of their ultimate expression. The means to deliver lethality by very long-range unmanned means followed swiftly; Bernard Brodie noted in 1959, in strategic nuclear context, the advent of the “Missile Age.”

As technology continued to develop, the outlines in maritime warfare of what the influential defense analyst Andrew Krepinevich identified as the “Mature Precision Strike Regime” began to become evident at the tactical and operational levels of warfare. Although the advanced military establishments of the Cold War superpowers thankfully never met in open combat, indications of the evolution and proliferation of long-range precision strike and accompanying C4ISR technologies appeared as early as 1967 with the sinking of the INS *Eilat* by an Egyptian-operated, Soviet-manufactured SS-N-2 *Styx* anti-ship cruise missile (ASCM). Examples recur with regularity in the decades since, through the Tanker Wars and the South Atlantic War of the 1980s, to the crippling of the INS *Ab-Hanit* by a Hezbollah ASCM in 2006, and the attempted engagement of the USS *Mason* by similarly armed Yemeni rebels in 2016. Of critical note is the fact that these capabilities are now widely proliferated, to a limited degree of sophistication and integration, to regional powers and their non-state proxies, with the revisionist (and nuclear-armed)

great powers possessing capabilities that increasingly mirror our own. The world we live in today, much less tomorrow's, displays most of the attributes of a truly mature precision-strike regime.

Unsurprisingly, the trends driving the maritime precision-strike regime also define the state of the art in joint warfare more broadly. As many observers have noted, the United States awakened the world to this reality with its one-sided annihilation of Iraqi forces in Kuwait in 1991. The revisionist powers have taken some time to close the U.S. lead, but evidence that they have done so is clear in their fielded forces and in the steady drumbeat of real-world incidents drawn from the recent history of military action below the threshold of great power conflict. The revolutionary impact of early ATGMs in the 1973 Arab-Israeli war prefigures the trend in the same manner as the extensive employment of naval ASCMs in that same conflict. More recent conflicts including Israel's 2006 conflict with Hezbollah in Lebanon showcase the increasing range and lethality of modern precision-guided ground ordnance, while Russia's devastating employment of massed long-range artillery, directed and enabled by advanced C4ISR and electronic warfare capabilities, against Ukrainian forces in 2014 provide the most recent example of the proliferation on land of something approximating the maritime MPSR. Accompanying these indicators is the clear lesson from the United States' own experience in Iraq and Afghanistan of the vulnerability to even improvised explosive devices of the light armor systems (Stryker, AAVP7, LAV-25) that form so large an element of the current force design of our Nation's expeditionary land forces.

Corresponding trends are visible in the aviation component of joint warfare, with the steady advance and proliferation of ever more sophisticated aircraft, surface-to-air missiles, electronic warfare capabilities, and associated C4ISR technologies to integrate and control these capabilities. Real-world evidence of the "live" employment of these capabilities (outside of the horrific and regrettable incidence of their misemployment against defenseless civilian

airliners) is sparser than in the maritime and land domains. This is likely because the greater difficulty of integrating these advances still renders them largely the province of advanced state militaries, and because the United States still maintains a substantial qualitative lead in this domain. Nevertheless, two points bear emphasis. First, the state of the art in threat capabilities, especially sensors and both surface-to-air and air-to-air missiles, has already forced enormous and potentially prohibitively costly adaptation upon U.S. forces in response. The current emphasis upon low-observable stealth technology in aircraft design, for example, represents a large element of our technological response to the development and proliferation of the precision-strike regime in the air domain. Second, while advances in range, precision, and lethality drives high-end competition in the air domain, related technologies offer increasing risks and opportunities at much lower levels of conflict, potentially blurring the lines between air, maritime, and land domains and giving less sophisticated actors the ability to contest great-power air supremacy in previously unavailable ways. Real-world incidence of the employment of unmanned aerial systems and loitering munitions, from the crude efforts of the Islamic State and its non-state competitors in Iraq and Syria from 2014–2016, to the more sophisticated employment by Armenian separatists of an Israeli-manufactured HAROP loitering munition in 2016, to the swarming drone attack on the Saudi Aramco oil processing facilities that evaded air defenses, points to the expression of the secular trend at levels far below the realm of great power competition.

Why am I devoting space to a review of such well-established and documented trends? Because despite the available evidence and near-consensus in many defense circles as to the implications of these changes, we have been slow to adapt as a Service. Specific implications for our force design are addressed in greater detail below. In the meantime, I must consider the impact of a more recent (though far from historically unprecedented) development in warfare—the emergence of so-called

"gray-zone" strategies by an array of real and potential adversaries, most notably the two revisionist powers identified in the NDS.

Gray-Zone Strategies-Multi-domain Competition within the MPSR

With the advance and proliferation of the precision-strike regime, our adversaries have already proven they can deter us, to a degree, from employing our existing force design to counter their malign activities and defend the interests of our Nation, as well as those of our allies and partners. Recognizing that the United States must at a minimum, and to a degree that varies by threat and theater, employ greater caution in the employment of its existing military capabilities, these actors use the degree of deterrence thus achieved to advance their respective agendas by means of "gray zone," "hybrid warfare," proxy warfare, and related strategies.

There is little profit, for my purposes, in a debate over the intellectual merits of these various terms. The connecting file, from the perspective of force design, is the combination of deterrent effect with asymmetry of interest. Our adversaries, confronting the United States' long-standing lead in the technologies and capabilities of the precision-strike regime, have chosen to employ "salami slicing" strategies that confront us with the alternatives of waging or threatening war over comparatively minor stakes, or accepting *faits accomplis* in the form of local encroachments, annexations, or other violations of the rules of the established international order. Facing an adversary that has credibly fielded elements of a long-range reconnaissance strike complex, or possesses other capabilities (such as Iran's well-established capacity for irregular warfare, augmented by increasing capability for long-range precision strike), the United States is in greater or lesser degree deterred. If the objective the adversary seeks appears relatively insignificant, the U.S. incentive to overcome the deterrent effect is correspondingly reduced.

Recent history offers a number of examples, exhaustively analyzed in the national security literature of the past decade. China's "cabbage strategy" with

respect to the disputed features of the South and East China Seas is commonly described as the classic example of a gray-zone strategy, while Russia's destabilization of Ukraine and illegal annexation of Crimea epitomizes the so-far successful implementation of something more closely approximating "hybrid warfare." Meanwhile, Iran's pursuit of regional hegemony manifests as a more traditional program of political and religious subversion and proxy warfare in Iraq, Lebanon, Syria, and Yemen, all backed by an increasingly capable long-range reconnaissance-strike complex that displays, in local context, many of the attributes of the mature precision-strike regime.

These strategies are designed to avoid obvious counters by the United States and its allies and partners. The idea, again, is to present us with what Michael O'Hanlon describes as the "Senkaku Paradox": *faits accomplis* on matters of such relative insignificance, in areas at the margins of our current ability to project and logistically support significant forces, that we perceive a lethal response as simply "not worth it."

Imperative for Maritime Campaigning

The principal area where these trends play out today are in maritime theaters. Thus, it is no surprise that the NDS has directed our attention seaward, where the threats posed by both revisionist powers and rogue states are most significant.

Our "need to refocus on how we will fulfill our mandate to support the fleet" is clear enough in the *Planning Guidance I* issued in July 2019. Still, it is worth restating the arguments that underlay that contention in the context of the argument for significant change in our present force design. Of the four state adversaries specifically described in the NSS and NDS, two—the "revisionist power" of the People's Republic of China and the "rogue state" of Iran—present actual and potential threats that are either principally or partially of a maritime character. Russia, the other revisionist power, and North Korea, the second rogue state, present a variety of threats and challenges to the United States, but the majority of these manifest outside

the maritime domain. These adversaries are more accurately categorized principally as land powers.

It follows that, although the Naval Services will play certain roles as elements of Joint forces engaged in any principally land-oriented campaign that may take place involving Russia or North Korea, it is likely that these roles will be of a supporting nature, including (especially in the case of Russia) the provision of capabilities to support the deterrence or defeat of malign activities outside of areas in the "near abroad," close to the borders of their sovereign territory. The Marine Corps will contribute to such campaigns in accordance with relevant plans and orders, but will not use them as principal determinants of its force design or force structure.

The predominantly maritime threat posed by China globally, against which the Naval Services will need to operate in close concert to execute missions involving sea control and denial, long-range strike, and limited operations to provide assured access for elements of the Joint force, does represent the primary pacing threat against which our force design and force structure will be measured. Any fight against China, in particular, and for the present most critically the deterrence of any such fight, is an inherently joint endeavor to which the Marine Corps can contribute sensibly only as an integral part of the Naval force in the prosecution of a naval campaign. We will optimize our design for this threat, though as in the case of Russia, we will not consider exclusively the threat that China may pose in its immediate vicinity within the first island chain. Both China and the United States enjoy a range of options for confrontation and competition in a wider regional and global arena, though few of these involve credible scenarios featuring sustained land operations, and most of them are essentially founded upon the capabilities of the Naval Services.

Tomorrow's Marine Corps-Implications for Force Design

The preceding review of the imperatives for change explains why I concur with the 37th Commandant's assessment that "The Marine Corps is

not organized, trained, equipped, or postured to meet the demands of the rapidly evolving future operating environment." The imperatives of maritime competition, deterrence, and conflict in an era of warfare dominated by the emergence of a mature precision-strike regime demand change. The NDS offers clear guidance at the strategic level as to the general nature of the change required; at my level, as a Service chief, appear the institutional challenges and tradeoffs of recruiting, training, educating, and equipping Marines to give the combatant commanders the tools they need to execute the strategy.

So what are the specific changes required? I have recently released a force design report describing in detail my conclusions thus far, and I will not repeat the whole of that here. It is also important to remember that "answers" are elusive when the task is preparation for an unknowable future. I keep constantly in mind the words of the great British historian Michael Howard, who was "tempted," he once said, "to declare dogmatically that whatever doctrine the Armed Forces are working on now, they have got it wrong." Sympathetic to the challenge of preparing forces for a test that can only truly be administered in battle, Howard went on to allow that it is not too much to hope that we will not "get it too badly wrong," and that is most certainly my intention.

Clearer to me than the specifics of what we must do in future are a few things we need to stop doing now. As I noted above, the Marine Corps we have today is weighted too heavily toward amphibious forcible entry and sustained land operations. The fact that these design imperatives are not necessarily complementary does not help us—much of our present equipment, for example, is larger and heavier than we might wish it to be for amphibious operations of any kind. Its development was shaped, practically speaking, more by the demands of sustained operations ashore (from DESERT STORM forward) than of amphibious operations per se. If we take the three considerations outlined above—**rise of the precision strike regime, gray-zone strategies, and the imperative of maritime campaign-**

ing—and the NDS’s guidance regarding pacing for inter-state strategic competition as yardsticks by which to measure the adequacy of what we have today, the basic outlines of the necessary change become clear enough, at least at a fairly high level of abstraction.

First, a focus on a pacing threat that is both a maritime power and a nuclear power eliminates entirely the salience of large-scale forcible entry operations followed by sustained operations ashore. Such operations are problematic even in the case of the lesser rogue regime threats, as both of those identified in the NDS are also either nuclear or near-nuclear powers. As I noted in my Planning Guidance last year, this does not mean that forcible entry is no longer a capability the Nation might require at some level—merely that the requirement will be, for the foreseeable future, limited in scale, and focused specifically on the need to provide assured access for elements of the Naval or Joint force

rather than as a precursor to sustained Marine Corps operations ashore.

Second, even if there were a strong and credible requirement for large-scale forcible entry operations, such operations could not be carried out in the face of an adversary that has integrated the technologies and disciplines of the mature precision strike regime. As I noted in my Planning Guidance, the days of massed naval armadas nine miles offshore from some contested feature are long over. It has been traditional in the Marine Corps to note that “naysayers” have taken this position since the failure of the Gallipoli campaign in 1915, and to point to the U.S. Naval Services’ success in the interwar period in developing techniques of amphibious warfare that would prove the naysayers wrong. It is essential to note that the true lesson of this story is that the innovators of the 1930s created a complex of then-revolutionary ideas and technologies to solve the then-salient problem of the strongly opposed

amphibious assault. The force we have today, with the notable but operationally insufficient exception of rotary-wing vertical envelopment, is an incrementally-advanced, higher-tech version of that same 1930s solution. We now must recognize that time has flowed on. Our problems today, in terms of threat, geography, and technology (among other considerations) are not those of the 1930s. With respect to the effects of landbased precision fires, especially those launched from the homeland of a nuclear-armed great power, the naysayers of the 1930s are now simply the realists of the 2020s. Our job is to come up with doctrine and technology appropriate for the challenges of today (and tomorrow).

Finally, given the geopolitical realities of today and the nature of China’s society and strategic culture, it is highly likely that even if we did have an answer for the challenges of amphibious power projection in a mature precision strike regime, this capability would not be suf-

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ficient to deter or prevent our pacing threat from accomplishing its objectives in regions we judge important to our national security. The threat today accepts the (present) reality of U.S. conventional force superiority, and he has an answer for it in the form of the complex of aggressive behaviors “short of war” that we have come to characterize as gray-zone operations. Credible “lethality” is only a part of the answer to this challenge—the ability to compete directly, daily, and globally, by means acceptable to the American people and the rule of law, is the missing piece.

Conclusion

The changes to Marine Corps force design that I have directed thus far are largely commonsense responses to an acceptance of the implications of these three major considerations. Our force will be getting lighter, and somewhat smaller. Capabilities such as heavy tanks and heavy cannon artillery that are suitable principally for sustained land combat, or that are simply too heavy or logistically demanding to be projected ashore in the theaters and against the threats of primary concern today, are being cut back. So are capabilities such as attack helicopters that lack the range to be relevant against the pacing threat in the Pacific. Such heavy capabilities are found in abundance elsewhere in the joint force inventory, and I am confident that we can rely on them to be there to support Marines in any high-end ground combat scenario into which we may find ourselves drawn. Even Marine infantry battalions, the capability perhaps most central to my Service’s historical record and self-image, will become fewer and perhaps smaller, a move that is fully justifiable in a force that will no longer be sized for large-scale sustained ground combat. Changes in these key units will be informed by the recent experiences of highly distributable ground units operating within adversary weapons engagements zones, including those of our own special operations forces.

On the other hand, existing capabilities that promise to make us more competitive under the realities of the precision-strike regime will increase. Long-range rocket artillery and high-

endurance unmanned aerial vehicles, for example, are obvious contributors in this space and will be making their appearance in greater numbers enhancing the ability of future naval forces to win the reconnaissance versus counter-reconnaissance competition and “fire effectively first.”

These moves are, as I’ve noted, fairly obvious and well-supported by the wargaming, analysis, and experimentation we have done to date. I am confident that we have not gotten it “too badly wrong” in essaying these steps. What comes next is harder, though. We have concepts on the books with names like “Distributed Operations,” “Expeditionary Advanced Base Operations” and “Littoral Operations in a Contested Environment,” along with some emerging thoughts about long-term persistent operations in the NDS’s “contact layer” that we are discussing under the label of “Stand-in Forces.” Fully analyzing and testing these concepts, through integrated Naval wargaming and analysis but most importantly in real-world, live experimentation, is our next great challenge. Since the world is not waiting for us to complete our analysis, much of this work will necessarily be done by our operating forces out forward, in seamless integration and alignment with the Navy. Marines and sailors will have to uncover and develop solutions for the challenges of operating in the new modes our concepts suggest: in smaller units, on smaller ships, distributed over vast distances but linked by command and control systems and doctrines that allow such radically dispersed forces to achieve relevant, lethal effects in deterrence and in war. At least as challenging will be working out effective responses to the challenges of gray-zone operations and assuring our regional partners that we will be there to support them, come what may.

I say this next stage will be harder not merely because the practical work of accelerating ideas that have long languished at the conceptual stage into concrete, modern-world reality will be hard. The work will be harder politically because it cannot presume the suitability of any part of our existing force design or the sometimes multi-billion

dollar acquisition programs that have evolved to support that existing design. Programs such as the F-35 Joint Strike Fighter, the CH-53K heavy lift helicopter, and the entirety of today’s Ground Combat and Tactical Vehicle Strategy (encompassing systems from the M1A1 Abrams tank through the Amphibious Combat Vehicle and the Joint Light Tactical Vehicle), are based upon assumptions that do not in my view adequately account for all three major realities I have discussed above. These systems are what we have today, and it is eminently possible that many of them, at the system level and at the programmatic level, can evolve to meet the needs of the future. But the jury is still out on this. I am fully aware the redesign of the force may be perceived by some external audiences as an oversimplification in the face of an uncertain future—perhaps even an obsessive focus on China at the expense of other enduring requirements. Those who suggest this are mistaken. While our force will be purpose-built in accordance with the three major realities noted above, the resultant force will be more capable of competing against and, when necessary, defeating the forces of revisionist powers and rogue states within the context of a naval or joint campaign. It will also retain broad capabilities for forward deployment afloat in support of the range of crisis and contingency operations that have historically been the “bread and butter” of the Marine Corps in the intervals between major wars.

Our historical and legislatively-mandated role as the Nation’s force-in-readiness, “most ready when the Nation is least ready,” remains a central requirement in the design of our future force, and one which I will keep unflinchingly in mind as I oversee the next stage of wargaming, experimentation, and analysis that will work out many of the specific details.

Note

1. W.D. Puleston, *Mahan, The Life and Work of Alfred Thayer Mahan* (New Haven: Yale University Press, 1939).



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What's in a Name?

Implementing the *Commandant's Planning Guidance* requires more than just adopting its terminology

by LtCol John Berry, USMC (Ret)

By all accounts, the *Commandant's Planning Guidance* (CPG) has been exceptionally well-received. One defense journalist, Paul McLeary, observed, "Gen David H. Berger made clear he's setting a new course for the Corps, scrapping old capabilities without a trace of sentimentality." A former staff director of the Senate Armed Services Committee, Chris Brose, characterized the CPG as "one of the best defense documents I have read in a long time. The blood of sacred cows is all over this thing." A retired Navy officer and experienced naval strategist, Bryan McGrath, called it "the single most consequential piece of writing about American seapower since the combined effort of the 1980 maritime strategy. It is that big, and that important." Given our Service culture and the unique stature Commandants have within the Corps, McGrath also observed, "There are 180,000 Marines who will cite this thing chapter and verse as long as he is Commandant."¹

McGrath's observation has proven prophetic as Marines have enthusiastically embraced the direction set within the CPG. An unintended consequence of that enthusiasm, however, appears to be a propensity to embrace the Commandant's terms without fully grasping the ideas inherent in them. This is not an insurmountable problem, but is it one that needs to be understood and addressed if we are to move out effectively. As we proceed, we must keep in mind that the CPG content is *not* designed to merely improve the current force. Rather, it seeks to establish a new and disruptive competitive space, empower regional allies and partners, and regain the strategic initiative using new means and methods.

>LtCol Berry is a retired Infantry Officer currently serving as the Director of the Concepts Branch, Marine Corps Warfighting Laboratory.

This article will examine three terms—the first representing an operating concept, the second a new set of capabilities necessary to implement that concept, and the third an organization—to illustrate why we need to better understand the ideas inherent in the CPG's terminology in order to effectively implement it.

Expeditionary Advanced Base Operations

The *Expeditionary Advanced Base Operations* (EABO) concept pre-dates Gen Berger's tenure as Commandant, but he certainly influenced and supported its development while he was Commander, Marine Corps Forces Pacific/Commanding General, FMF Pacific, and then-Deputy Commandant for Combat Development and Integration. Often mischaracterized as a Marine Corps product, EABO is actually a shared naval concept formally endorsed by all three 4-star fleet commanders and co-signed by the Chief of Naval Operations and Commandant of the Marine Corps in mid-March 2019. It is one of two naval concepts—the other being *Littoral Operations in a Contested Environment*—endorsed within the CPG.

To grasp the essence of the EABO concept, we need to shed preconceived notions of what constitutes a "base." We are conditioned by our recent experiences to think of a base as something composed of large, fixed infrastructure that not only supports operations and forces but also provides physical se-

curity and some degree of comfort as well. This is true not only stateside but in recent combat operations overseas, wherein the United States was able to create forward operating bases that, in addition to providing airfields, maintenance facilities, billeting and messing, included such luxuries as gyms, Internet cafes, and designer coffee stands. In an era of pervasive sensors and long-range missiles, that conception of a forward base is irrational.

We need to get back to a fundamental understanding of what constitutes a base, and, toward that end, the current joint definition of the term is elegant in its simplicity. "A locality from which operations are projected or supported."

Expeditionary advanced bases are envisioned as operating areas large enough to allow forces—and those *essential* capabilities necessary to sustain them—to be dispersed among numerous hide sites and primary, alternate, and supplementary positions so that they can operate and persist inside a potential adversary's weapons engagement zone (WEZ). These forces, whether Navy, Marine Corps, or from our joint or combined partners, will carefully manage signatures while conducting localized movement and maneuver, thereby complicating an adversary's ability to find and target them while remaining positioned to achieve the desired operational effects. Where feasible, they will leverage host-nation government and commercial assets to perform select support functions.

Armed with that understanding of what constitutes the base, we are better able to grasp the EABO concept's call for employing mobile, low-signature, operationally relevant, and relatively easy to maintain and sustain expeditionary forces from a series of austere, temporary

locations ashore or inshore to conduct sea denial or support sea control.²

Sea denial involves preventing an adversary the use of the sea, while sea control is the condition in which friendly forces have freedom of action to use the sea for their own purposes. Sea denial within a given seaward area can be conducted by Marines operating from the adjacent landward portion of the littorals, assuming they have the requisite capabilities; however, sea control requires a fleet to exploit the sea for friendly purposes.

Thus, in particular situations Marines can be tasked to conduct sea denial unilaterally but the same is not true for sea control. Marines can, however, support the Navy's ability to establish sea control. World War II provides excellent examples of both. The Marine airfield on Guadalcanal provided the ability to operate aircraft that denied the adversary the use of surrounding seas, at least during daylight. Later in the war, the fleet commanders employed Marines to seize islands in the Central Pacific in order to provide bases to support the advance across the Pacific, thereby contributing to the Navy's ability to control the sea.

Understanding the importance of key maritime terrain is essential to understanding EABO, sea control, and sea denial. Key maritime terrain is any landward portion of the littoral that affords a force controlling it the ability to significantly influence events seaward. Again, World War II provides an excellent example. Gibraltar and Suez comprised key maritime terrain controlling access to and egress from the Mediterranean. Both locations remained in British hands throughout the war, thereby giving the Allies the ability to contain Axis forces in the Mediterranean.

The anticipated value of EABO is that they will provide fleet commanders the option of persistently posturing naval expeditionary forces forward on key maritime terrain as a complement to the seagoing elements of the fleet. These naval expeditionary forces can provide additional battlespace awareness, fires, and logistics capabilities to increase fleet capacity beyond the upper limit imposed by the number of platforms afloat.

When conducted prior to conflict, EABO will be designed to reassure our

friends while deterring aggression. In the event of conflict, EABO will be employed to contest *fait accompli* gambits, impose costs, deny adversary freedom of action, assist partner nations in defending sovereign territory, control key maritime terrain, and shape the operational environment in support of integrated sea control and maritime power projection operations. Ideally, EABO activities will be conducted during pre-conflict competition as a means of deterring regional aggression. In this regard, EABO are envisioned as a cooperative effort with like-minded nations.

Ideally, EABO activities will be conducted during pre-conflict competition as a means of deterring regional aggression. In this regard, EABO are envisioned as a cooperative effort with like-minded nations.

Although developed separately, the EABO concept is very consistent with the recently published *Joint Doctrine Note 1-19, Competition Continuum*, which posits that, rather than a world either at peace or at war, there is "a world of enduring competition conducted through a mixture of cooperation, competition below armed conflict, and armed conflict."³ This doctrine goes on to explain that military capabilities are applied in support of national security objectives, not just in conflict, but across the competition continuum.

Thus far, however, in our rush to embrace EABO, we have largely focused on the conflict portion of the competition continuum, thereby demonstrating a superficial understanding of the concept. Even within the focus on conflict, we have tended toward refining things we understand rather than exploring the unfamiliar. For example, a recent news item about an exercise purportedly exploring EABO included quotations from Marines about their ability to "quickly seize a limited objective" and to conduct "this type of raid."⁴

While seizing objectives or conducting raids *might* be conducted within the larger context of a joint campaign that is

maritime in character, *they are not central to EABO*. The focus on tactically offensive operations shortchanges the cooperation activities aimed at setting the conditions for operational access and strategic success. It also causes some to conclude that EABO are only conducted after the initiation of hostilities, despite the fact that attempting to insert forces onto key maritime terrain inside an adversary's WEZ becomes highly problematic once a war starts.

For that reason, pre-conflict cooperation with our regional partners, to include the discrete repositioning of

assets, is essential to enabling a more persistent forward posture, expanding capacity, and competing below armed conflict so that we can collectively deter aggression and achieve the more desirable goal of conflict prevention. Gen Berger recently emphasized the linkage between cooperation and deterrence, "Critical to serving as a credible deterrent is partnership. Therefore, our new naval capabilities must empower our partners and allies as much as ourselves."⁵

Effective deterrence rests upon the ability to impose fear of failure or fear of unacceptable cost on a potential adversary. The EABO concept espouses developing the ability to impose those fears by posturing survivable, combat-credible capabilities on key maritime terrain inside the adversary's WEZ. It also adds a degree of operational unpredictability to complicate adversary decision calculus. *These* are the aspects of EABO and the larger topic of distributed maritime operations that demand innovation.

Posturing combat-credible capabilities that can contribute to deterrence and, if necessary, provide a meaningful contribution to a maritime fight infers

the need to expand our tool kit—an inference confirmed by Gen Berger’s reference to “new naval capabilities” cited above—yet in some quarters we have deluded ourselves into thinking we can adequately conduct EABO with today’s capabilities.

While we will certainly continue to use or adapt the assets we have for some time—or consciously use them as surrogates for envisioned capabilities during live force experimentation—we need to expedite fielding potential alternatives or entirely new capabilities. The CPG explicitly states that our current capabilities are inadequate:

It is obvious from our concept development work that significant change is required in how we organize, train, and equip our Corps for the future. Innovation will be critical, but it is in the actual implementation of our innovative concepts that we will be judged. For the Marine Corps, meaningful innovation is not just having great thoughts and concepts rather, it is about translating great thoughts and concepts into action.⁶

Gen Berger subsequently elaborated on that theme,

We must develop distributed, low-signature, lethal, networked, persistent, and risk-worthy joint expeditionary capabilities that can persist and operate within the adversary’s weapons engagement zone.⁷

Stand-in Engagement Capabilities

The CPG identified the need to develop a concept for “stand-in forces” that are designed to “restore the strategic initiative to naval forces and empower our allies and partners to successfully confront regional hegemony that infringe on their territorial boundaries and interests.” It goes on to explain that stand-in forces must be designed to “confront aggressor naval forces with an array of low signature, affordable, and risk-worthy platforms and payloads” that will contribute to an integrated “maritime defense that is optimized to operate in close and confined seas in defiance of adversary long-range precision ‘stand-off capabilities.’”⁸

In other words, while potential adversaries seek to keep us out of key operating

areas and push us further away from our overseas partners by fielding stand-off engagement capabilities, we are going to counter that approach with stand-in engagement capabilities that allow us to accept risk and persist inside a competitor’s WEZ to confront malign behavior and, in the event of conflict, engage the enemy at close range. Our goal is to reverse the cost imposition by posturing numerous, low-cost capabilities that can generate disproportionate results.

As explained in the CPG,

Rather than heavily investing in expensive and exquisite capabilities that regional aggressors have optimized their forces to target, naval forces will persist forward with many smaller, low signature, affordable platforms that can economically host a dense array of lethal and nonlethal payloads [that] operate ashore, afloat, submerged, and aloft in close concert to overwhelm enemy platforms.⁹

Although a stand-in forces concept is yet to be formally published, various commands have already generated an assortment of briefs in which they have declared themselves to be stand-in forces. Their logic appears to be based entirely upon geographic location, inasmuch as they have units that frequently operate within a potential adversary’s WEZ. What they have overlooked is the need for the capabilities essential to being mobile, lethal, survivable, and sustainable within a contested littoral. Lacking these characteristics, in an actual conflict, forces operating inside the WEZ will be both ineffective and highly vulnerable. This assertion is reinforced by a recent unclassified report summarizing insights from force-on-force exercises, which declared that units will “struggle to survive inside weapons engagement zones.”¹⁰

The Commandant has acknowledged that we do not yet have the requisite stand-in engagement capabilities:

The Navy and Marine Corps together will need to fight for sea control from within contested spaces. Our war games highlight the real threat of long-range missiles; to succeed, we must possess the capability to persist within the arc of adversary fires. We must evolve into the nation’s ‘stand-in’ force.

As the foregoing extracts from the CPG and subsequent statements from the Commandant make clear, the EABO concept and the need for stand-in engagement capabilities are intertwined and fundamentally naval in character: “The Marine Corps will be trained and equipped as a naval expeditionary force-in-readiness and prepared to operate inside actively contested maritime spaces in support of fleet operations.”¹¹ The Marine Corps’ contribution to fleet operations will be provided by a reinvigorated FMF, but it is not at all clear the implications of that organizational title are widely understood.

Fleet Marine Force

Reinvigoration of the FMF appears to be the most enthusiastically embraced element of the CPG. Almost overnight, Marine references to the “operating forces” and “OPFOR” disappeared and have been replaced by “FMF” or “the fleet” in daily conversation, formal briefs, and official correspondence. Inasmuch as the Marine Corps—more than any other Service—cherishes its history, and the fact that the FMF was essential to preparing for and winning the Pacific War, this should not be surprising. Creation of the FMF was a watershed event. In their 1951 study *The U.S. Marines and Amphibious War: Its Theory, and Its Practice in the Pacific*, historians Jeter Isley and Philip Crowl declared:

The year 1933 marked the most crucial turning point in Marine Corps history ... the way was at last open for a continuous program of training and indoctrination in advance-base or expeditionary work with the fleet. Before any such scheme could be practically realized however, one preliminary step was essential—a sizeable body of marines would have to be permanently attached to the fleet for this purpose.¹²

Subsequent historical studies have elaborated on the motives for, and impact of, creating the FMF.¹³ These can be summarized as:

- It tied the Marine Corps to a unique role and specific set of naval missions associated with the Navy’s pacing threat.
- Recognizing that the fleet has historically been the Navy’s venue for innova-

tion, it provided the fleet commander an organization focused on developing the equipment, tactics, techniques, and procedures needed for those missions.

- It established a clear distinction between the Army and Marine Corps and provided a sound argument for preventing the latter from being absorbed by the former, in whole or in part, during an era of budgetary challenge.

- It sent a strong message to both Navy admirals and Marine generals (which included some opponents to the FMF) that the Commandant had committed the Marine Corps to a new focus.

Arguably, the same logic can be considered pertinent today.

So, what is the problem?

The FMF inherently connotes specific organizational and command relationships that today apply only to a relatively small portion of Marine Corps Operating Forces. The formal definition of FMF makes this apparent:

A balanced force of combined arms comprising land, air, and service elements of the United States Marine Corps, which is an integral part of a United States fleet and has the status of a type command.¹⁴

Today, the FMF is composed only of those forces actually embarked afloat or temporarily projected ashore from, and expected to re-embark aboard, the ships on which they deployed. These forces are under the operational control (OPCON) of the fleet commander. Both *Littoral Operations in a Contested Environment* and the EABO concepts envision expanding the number of forces under the fleet commander's OPCON to include Marines operating ashore—untethered to ships lingering offshore—on key maritime terrain to conduct sea denial or support sea control. The rationale is that modern sensors and weapons have eliminated the seam between operations on land and sea to the point where the fleet commander must have the abil-

ity to integrate forces operating from the landward portion of the littorals to friendly advantage. This is not a novel idea. The last time the United States fought a peer competitor in the maritime domain, World War II, the fleet commander had OPCON over Marines. In the immediate post-Cold War era, the maritime domain was uncontested, and we migrated to a support relationship as the norm. That era is waning and increasing threats into and within the maritime domain make a return to the unity of command inherent in OPCON a logical action.

In light of these developments, reinvigorating the FMF makes sense, but it will involve much more than just claiming the title and issuing new guidons. The CPG said as much, identifying measures such as assigning more Marine Corps forces to the fleet, putting Marine Corps experts in the fleet maritime operations centers, and also shifting emphasis in our training, education,

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and Supporting Establishment activities. These are ambitious measures that will take some time and much coordination to achieve. More significantly, the CPG explained,

Refining the component relationship, within the framework of Goldwater-Nichols, is a more complicated issue that must be explored in partnership with the Navy.¹⁵

Therein lies the rub. Since the Goldwater-Nichols Defense Reorganization Act of 1986, the Navy and Marine Corps have evolved different component command and major subordinate command structures that are not well aligned. For example, we currently have two major Marine component commanders, Marine Corps Forces Command and Marine Corps Forces Pacific, which are respectively dual hatted as CGs FMF Atlantic and FMF Pacific. These positions are holdovers from when the Navy had only two major operational commands, the Atlantic Fleet and the Pacific Fleet. Today, however, the Navy has three major 4-star commands: Fleet Forces Command, the Pacific Fleet, and Navy Forces Europe and Africa.

As the Commandant indicated, we cannot solve this unilaterally. Our organizational alignment must be studied and assessed in partnership with the Navy and within the boundaries of the 1986 legislation. It must be considered globally rather than solved regionally. There are many options to be considered: Should we create fully integrated naval components? Administratively separate but operationally integrated components? Separate but collocated? All Marine Corps forces OPCON to the fleet commanders or only a portion of them, and if the latter, what portion? There are many more questions but few answers yet.

So, What Is to Be Done?

The first step in solving a problem is recognizing it exists. Promoting that recognition was the primary purpose of this article. In simple terms, we need to collectively become conversant with what is—and is not—articulated in official concepts so we can do a better job in testing and implementing them.

With respect to EABO in particular, the three-page vignette included as an appendix at the end of the document has been identified by many readers as essential to fully grasping the “big ideas” of the concept; they recommend reading it before the main body of the text.

With respect to terminology, whether doctrinal or conceptual, it is always best to check the sources before putting pen to paper or icons to slides. We have a professional lexicon; let’s use it.

With respect to tougher issues, like the component relationship, we need to acknowledge that complex problems cannot be solved without a deep understanding of the issues involved and the facts bearing on the topic—to include an appreciation of competing ideas or organizational positions and the underlying reasons for them. The number one topic in the CPG is force design, and within that heading, the number one issue is naval integration.

Naval integration starts with every Marine officer or civilian employee in a position of responsibility involving naval matters figuring out who their Navy counterpart is and reaching out to establish a sound, professional working relationship. Our general officers have reached out to their flag officer counterparts and reportedly the common response from the admirals has been, “How can we help you help us?” We could not have asked for a better response. We need to build on that.

Notes

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Winning Sea Control

Transforming naval expeditionary forces

by Maj Brian Kerg, LtCol Nathan Dmochowski, & LT Joseph Hanacek, USN

Preventing *Fait Accompli*
The 2017 *National Security Strategy* (NSS) and 2018 *National Defense Strategy* (NDS) both describe strategic competition with revisionist powers as the central challenge facing the United States both now and in the future.¹ These potential adversaries, notably China and Russia, seek to reshape the international balance of power in their favor, further their own interests at the expense of those of the United States and its Mutual Defense Treaty (MDT) allies and partners, and act in ways that flout the rules-based international order. These ends are pursued through *fait accompli* strategies that quickly seize objectives and create anti-access/area denial situations that may prevent friendly governments from having the time or political will to strike back, as escalation may be deemed too costly.²

Historically, the United States deterred adversaries through a strategy of reactive punishment. However, the growing military and economic strength of potential adversaries, combined with *fait accompli* strategies, makes deterrence through punishment nonviable. Instead, deterrence by *denial* is emphasized by both the NSS and NDS as the preferred means of countering adversary *fait accompli* strategies. The United States, in cooperation with its allies and partners, must present adversaries with a credible deterrent that changes their decision making such that traditional, western military conflict is avoided outright. Adversaries must be made to believe that if they pursue aggression, they will be identified early and badly beaten, and will thus avoid aggression in the first place.

How the United States, its allies, and partners can feasibly employ a strategy of deterrence by denial is the central

>Maj Kerg is a Command and Control Officer and prior-enlisted Mortarman. He is currently serving as the Fleet Amphibious Communications Officer, U.S. Fleet Forces Command.

>>LtCol Dmochowski is an Infantry Officer. He is currently serving as the Branch Head, Ground Standards Branch, Training and Education Command.

>>>LT Hanacek is a Surface Warfare Officer. He is currently a student at the Department Head Course, Surface Warfare Officers School Command.

The views expressed here are those of the authors and do not represent the positions or opinions of the Marine Corps, the Navy, or the DOD.

question that must be answered by the DOD in general and the Department of the Navy (DON) in particular. One of the most influential members of Congress on national security, Marine Representative Mike Gallagher (R-Maine), recently made precisely this point in an article entitled, “State of (Deterrence by)

The United States, in cooperation with its allies and partners, must present adversaries with a credible deterrent that changes their decision making ...

Denial.” As Rep. Gallagher and others have made clear, the DOD and DON lack a framework upon which to ensure defense spending produces feasible denial capabilities. This is not for lack of trying, but the efforts across the Services have at times provided more confusion than clarity. With the release of several joint and naval concepts, inclusive of

expeditionary advanced base operations (EABO), joint access and maneuver in the global commons, littoral operations in a contested environment, and distributed maritime operations (DMO), planners across the naval Services are reaching different and sometimes conflicting conclusions about what is expected from Service, much less DOD leadership. Unclassified versions of these concepts remain too vague to be of use to policymakers, while classified versions are hidden from the public and cannot contribute to the public discourse. DON risks confusing both internal and external audiences with a dizzying array of new concepts and terms without an overarching, unclassified, and available vision by which to unify these supporting concepts.

The political will to fund a meaningful deterrence by denial capability is present. Congressional leaders, however, are calling on all stakeholders to prioritize this effort over local and parochial interests.³ But to reach the tipping point, DOD and DON must thoroughly and publicly articulate how they will provide deterrence through denial. They must describe to the public how and why they should appropriately fund the military toward credible deterrent capabilities. *Stand-in naval expeditionary forces con-*

ducting EABO, employed to complement DMO, will make this case to both Congress and the American people.

Naval and Combined: An Integrated Concept for EABO

EABO is inherently naval and combined in nature. While some planners to date have focused exclusively on the Marine Corps when developing EABO, it must holistically integrate Navy, Marine Corps, Coast Guard, MDT-allied, and partner forces to enable a persistent stand-in force.

Naval forces and sea control. Naval forces enable sea control and sea denial by establishing and operating from expeditionary advanced bases (EABs) at sea and ashore, using a variety of platforms deployed in littoral regions including from pre-existing, yet transformed—in accordance with the *Commandant’s Planning Guidance*, (Washington, DC: August 2019)—forward deployed bases such as those that the naval force has in places like Japan. If not permanent already, once established in their designated operating areas, naval forces deploy and operate sensor, shooter, command and control, sustainment, deception, and other capabilities required to persist forward as stand-in forces.⁴

These naval forces extend sea control from EABs. They exploit expertise and systems from the sea-surface, sub-surface, air, space, and cyber domains that are employed by and sustained from EABs. Importantly, current Navy Expeditionary Combatant Command capabilities are uniquely primed to support this concept, providing options for site preparation and mobility that will increase EAB-hosted forces’ responsiveness, displacement, reconstitution, and survivability.⁵ Unmanned and manned craft extend sea control and provide transportation and connector support, supporting ship-to-shore, shore-to-ship, and shore-to-shore movements.

Allies and Partners: Persistent access and sea control from the contact layer. MDT-allies and partner forces are the premier enabling feature of EABO. American allies and partners live, operate, and thrive inside the weapons and sensors engagement zone of U.S. adversaries every single day. The global

operating model describes these forces as operating in the contact layer, and here we differentiate between a “persistent” contact layer and a “reinforcing” contact layer.

Forces in the persistent contact layer remain forward deployed with MDT-allies and partners as part of regularly scheduled operations and theater security cooperation (TSC). Reinforcing contact layer forces are those expeditionary and special purpose units placed in the contact layer through dynamic force employment. Partnering EAB-hosting and hosted forces with America’s allies and partners, whether through recurring deployments of EAB forces in the persistent contact layer or through dynamically re-tasked expeditionary forces in the reinforcing contact layer, allows them to seamlessly integrate and support sea control and denial missions. Allies and partners offer persistent access to the contact layer, from which naval stand-in forces can operate from EABs and provide sea control and denial.

Allies’ and partners’ ability to conduct EABO can also be improved in multiple ways. First, naval forces should be trained and educated to conduct EABO alongside allies and partners in schools located at Quantico, VA, and Newport, RI. Further, EABO capacity can improve through increasing interoperability of equipment and skill-

sets, refined through more training and collaboration with coalition commanders. Finally, forces deployed to conduct TSC must be trained, equipped, and employed as a stand-in force that simultaneously builds capacity for sea control and denial among combined forces. In this way, EABO empowers MDT-allies and partners.

EABO and Stand-in Forces

The EABO concept is applied within the dual-posture context of stand-in forces and stand-off forces. The following proposed definitions for each build on the joint access and maneuver in the global commons’ definitions of inside and outside forces. This will better illustrate the role of stand-in *naval* forces.

Stand-in forces persist forward inside the range of adversary weapons and sensors to deter malign behavior and respond to conflict. Adversaries are compelled to consider the capabilities of stand-in forces when planning, providing friendly forces with the advantages of a deterrence by denial strategy. Stand-in forces assure allies and partners provide access for the joint force and other U.S. government agencies while simultaneously enabling efforts from other U.S. government agencies by demonstrating resolve through presence and responsiveness.



Future expeditionary forces would be naval and combined. (Photo by Cpl Israel Chincio.)

Stand-off forces are designed to minimize risk by engaging with long-range fires outside the range of most, though not all, enemy weapons and sensors. Stand-off forces consist of conventional forces and systems that permit massing of force and historically win battles during full-spectrum combat operations. However, they are postured outside an adversary's weapons and sensors engagement zone until threats have been minimized and they can close in mass.

EABO enables the *stand-in naval forces* that provide sea control and denial, changes adversary decision making to favor U.S. interests, deters aggression, and prevents conflict. During full-spectrum combat operations, EABO-enabled stand-in naval forces allow joint and naval commanders to exploit opportunities to leverage stand-off forces and win battles at sea and ashore.⁶

Providing sea denial and sea control. Sea denial and sea control is provided by these stand-in naval forces from EABs through several lines of effort and operation. First, the deployment of sensors and shooters provides credible force or the threat of force to adversaries, deterring them through denial. Second, the employment of intelligence, surveillance, and reconnaissance systems provides situational awareness to joint, maritime, and fleet commanders.⁷ Third, these forces persist forward and maximize survivability through signature management, use of key maritime terrain, passive defense, and treaty, ally, and partner integration. Finally, and perhaps most critically, they maintain the vital human-level connections required to sustain and strengthen any alliance or partner relationship.⁸

EABO Support to DMO, Naval, and Joint Forces

DMO employs naval forces in a dispersed fashion across the maritime theater to deter adversary forces from concentrating and projecting power. Friendly naval forces avoid the risks associated with concentration while providing an asymmetric advantage to fleet commanders and MDT-allies and partners, in turn creating dilemmas for adversary decision makers.⁹ Finding these increasingly distributed forces also

imposes significant costs on adversaries as they will need to invest in increasingly more command, control, communications, computers, intelligence, surveillance, and reconnaissance capabilities to locate them.

EABO complements and facilitates DMO in its pursuit of these ends. DMO requires persistent forward presence of friendly sea control and sea denial capabilities as a precondition for application. While DMO provides advantages in its own right, it can only provide commanders with an asymmetrical advantage while dispersed if effects are massed. This calls for operation of EABs inside the weapons and sensor zone, ensuring DMO can be more vigorously applied by allowing stand-in forces to provide mutual support and create integrated maritime defense-in-depth.

Key to this depth is the offensive, including sensing, capabilities provided by EABO forces and the credible application of deterrence by denial. This in turn provides naval commanders a means by which to feasibly support entry of stand-off forces, allowing for decisive naval campaigns that overcome and mitigate adversary A2/AD, and ultimately provide a means of entry of the joint force into theater.

Mission, Tasks, and Organization

Currently, EABO-capable forces remain conceptual and lack the assigned mission and tasks required to shape force design, training requirements, employment, and experimentation. What follows is a tentative description of those very elements.

Mission. Enable sea control and sea denial from expeditionary advanced bases in support of joint, maritime, and naval commanders in order to permit freedom of maneuver for naval forces.

Tasks. Conduct security cooperation with host-nation forces to perform all EABO tasks. Deploy inside the weapon and sensor zone from which to operate EABs. Persist forward indefinitely as a stand-in force; maintain persistent situational awareness inside the weapons and sensor zone and provide this awareness to fleet, maritime, and joint commanders. Locate, target, and destroy adversary maritime forces inside the weapons and

sensor zone with long-range fires ashore and with naval expeditionary capabilities at sea. Establish EABs to host and employ capabilities required to support fleet, maritime, and joint commanders. Deny adversaries the ability mass forces to coerce or attack allies and partners located near key maritime terrain. Protect vital U.S. economic interests passing above, on, and below key maritime terrain. Finally, expand EABs as required to support follow-on operations and tasks.

Task organization. EABO forces should be task organized according to the requirements of the mission. Elements may field and employ anti-ship cruise missiles; swarms of sea-surface, sub-surface, and aerial unmanned systems; and long-range precision ground fires as needed to support fleet, maritime, and joint commanders. EABO task organization should be fluid, agile, and tailorable.

Composition

Options for the composition of EABO-capable forces are model agnostic; they should be composed in a way that best provides sea control and sea denial, enabling freedom of maneuver. Any expeditionary unit, through dynamic force employment, can be tasked to conduct EABO and serve as a stand-in force. At the same time, current force models and capabilities can be re-purposed toward this end. Composition can also be tailored toward employment in both the persistent contact layer and reinforcing contact layer. Composition options might include:

Persistently deployed TSC teams. TSC teams will be re-tasked to provide initial EABO capabilities alongside MDT-allies and partners. Alternatively, TSC teams will be dynamically re-tasked to other sites to provide operationally relevant capabilities to an EAB.¹⁰

Designated companies and batteries within selected infantry and artillery battalions. Such units would be appropriately equipped and trained in EABO training and requirements standards. Ideally, high proficiency and a full load-out would be available to all Marine forces, but as EABO development continues across the Service, selected batteries and

companies may be the focus of effort—akin to selecting an individual infantry company within a battalion landing team to serve as its boat company.¹¹

Newly organized maritime commando battalions and squadrons. Such units would fully integrate Marine and Navy Expeditionary Combatant Command capabilities. As required, detachments could be deployed on an *ad-hoc* basis, or the battalion could be deployed cohesively.¹² Initial fielding could be modeled off of the recently fielded experimental battalion model, prioritizing units conducting Unit Deployment Programs (UDP) to the INDO-PACOM area of responsibility.¹³ Instead of deploying UDPs to execute legacy mission essential tasks and training and requirements standards in a deployed environment, units selected for this EABO deployment program would provide sea control and denial, and offer another means for deterring adversaries in a region while refining EABO tactics, techniques, and procedures (TTP).

Rotational forces and Special Purpose MAGTF. These forces would be EABO-capable and deployed to regions where persistent sea control and denial are required. Just as a MEU is always forward deployed and providing combatant commanders with the full spectrum of MEU capabilities, so too could EABO-capable rotational forces be persistently deployed and providing sea control and denial where it is most required. This would place an unyielding check on adversary aggression within the persistent contact layer, enabling deterrence over the long-term.

Si Vis Pacem, Habere Maris

Adversaries of the United States and its MDT-allies and partners employ and are refining *fait accompli* strategies to reshape the global balance of power to suit their ends. In response, the NSS and NDS call for the United States to pursue strategies of deterrence by denial, rather than rely on the increasingly obsolete strategy of deterrence by reactive punishment.

In the collective rush to conceptualize meaningful deterrent strategies, the DOD and DON have released a litany of strategic documents and force de-

sign concepts. However, they have not coherently expressed to Congress and the American people how deterrence by denial will be brought to fruition; Service leaders have been unable to tell Congress and taxpayers why they should appropriate funds to support the development of specific deterrence by denial capabilities.

This vision for the development of EABO does just that. Naval stand-in forces can be integrated and employed to provide sea control and sea denial. EABO enables the stand-in naval forces that provide sea control and denial, changes adversary decision making to favor U.S. interests, deters aggression, and prevents conflict. The United States and its MDT-allies and partners will no longer secure peace by preparing for war. Using these ideas as a framework for force design, we will secure peace by controlling the sea: *Si Vis Pacem, Habere Maris*.

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An EABO After-Action Report

What we may expect

by LtCol Gary C. Lehmann, USMC (Ret)

The following is a narrative version of fictional personal journal excerpts from a ground-based, anti-ship missile commander who completed an expeditionary advanced base operations (EABO) assignment sometime in the future while somewhere in the Indo-Pacific Command (INDO-PACOM) area of responsibility (AOR). Some editing was done to comply with security requirements and for readability purposes. The purpose of this narrative account is not to present *the way* EABO *will* or *should* be conducted, but rather *a way* EABO *may* be conducted. Also, this narrative is not the product of one person's imagination, but rather a compilation of thoughts and ideas gathered over time from a collection of active duty and retired Marines, government civilians and contractors, industry representatives, and academics who are intimately familiar with EABO. The hope is that this narrative will contribute to the ongoing open discussions about EABO and help facilitate the transformation of the Commandant's vision for force design into an operational reality.

After-Action Report

I received orders to deploy [my firing battery] to EAB Zeus as part of a persistent ground-based naval force in an active integrated maritime defense-in-depth in order to deny adversary access to the adjacent strait and to report on adversary maritime activities in the littoral areas surrounding the strait. I was told prior to deployment that EAB Zeus was established in virtually ideal circumstances with respect to mission, terrain, diplomatic relations (e.g., access agreements, etc.), host-nation support,

>LtCol Lehmann is a retired Infantry Officer currently serving as a contractor in support of the Marine and Naval Concepts Section of the Marine Corps Warfighting Laboratory.

and host-nation civil and military capabilities. These circumstances resulted in Zeus being more robust and capable than the other EABs in the AOR that did not have the same "perfect storm" of circumstances during our deployment.

As the two sea planes/flying boats transporting [us] approached EAB Zeus, the EAB headquarters (HQ) provided an updated landing/rendezvous point and time to the sea plane/flying boat flight leader in keeping with the EAB's rotating incoming sea plane schedule. When the sea planes/flying boats eventually landed and came to a halt, we real-

... our assigned sector contained four pre-surveyed positions ...

ized we were nestled in a lagoon. Within minutes, a couple of contracted small barges pulled alongside the sea planes/flying boats to shuttle us ashore. Exoskeleton-clad personnel quickly offloaded our gear and equipment into awaiting vehicles that moved everything to our designated marshaling area.

Once our gear and equipment were properly staged, [our leadership team] was greeted by the EAB's assigned "guide detachment" commander, SSgt Jones,

and his host-nation security force leader, Patrol Sergeant Miguel. They escorted us to the nearby "processing station," where we met the EAB Zeus commander, Navy CAPT Butkus (from the Navy Expeditionary Combat Command), and where pre-coordinated administrative and logistical details were negotiated with the host-nation and local authorities before being eventually presented to [our unit]. Afterward, a combination of local and tactical vehicles took us to our initial assigned sector. From the Fleet/Joint Force Maritime Component Commander FragO (fragmentary order) I received on the secure tablet I signed for from the EAB communications shop, I learned our assigned sector contained four pre-surveyed positions and another six un-surveyed positions.

Once we arrived at our initial assigned sector, SSgt Jones' detachment unloaded the prepositioned equipment, and we performed operational checks before we officially signed for all the gear. Meanwhile, Patrol Sergeant Miguel and his troops established their initial security posts throughout our assigned sector. Once we had established positive communications with the EAB HQ and were comfortable with our security, communications, and support arrangements, SSgt Jones' detachment departed, and we began mission planning in accordance with the naval commander's FragO.

We requested, and the EAB provided, a squad of Marines to set up and run hydrogen forward arming and refueling points (FARPs) to inflate a half-dozen stratospheric HALO (high altitude, low observable) balloons and begin continuous UAV (unmanned aerial vehicle) launch and refueling operations. The

balloons provided networked communications, navigation, and reconnaissance over and adjacent to our assigned sector for five days, just in case satellite coverage was lost. With rapid refueling of Group 1, 2, and 3 UAS with hydrogen gas, we had our own organic concentric rings of surface reconnaissance, queuing, and targeting support.

Our Marines and Sailors quickly preferred the hydrogen tactical vehicles' easier-to-operate-and-maintain engines compared to the diesel and gasoline vehicles they were used to. (They complained more weren't available!) The hydrogen powertrains allowed the troops to stay much more aware of their surroundings while operating the vehicles by eliminating the noise of engine idling. The hydrogen powertrains also quadrupled the time between refueling evolutions and eliminated the exhaust plumes that made it so easy to spot the old diesel-fueled vehicles, so our unit did not draw any unwanted attention (including from the many fishing boats constantly offshore).

As we persisted indefinitely forward in support of our mission(s), we were amazed at how the EAB effectively solved the vast majority of our personal and small unit battery and power requirements. The troops quickly adapted to the routine of every few hours squeezing a tube of aluminum paste and pouring

some cistern water into their personal microreactor, which powered their entire kits, including the power-hungry visual augmentation system. Whenever we ran low on energy, a resupply UAV air-dropped a crate of more aluminum paste tubes to keep us powered.

I learned that a sergeant assigned to the EAB, with ties to the local community, convinced a local boy and his buddies to scavenge soda and beer cans from around the island for money. The boys tossed those cans in the hopper of the EAB's aluminum reactor to keep it quietly powering the EAB's electronic equipment and the expeditionary water purifying system. Whenever our pre-positioned unit and individual water purifying systems needed augmentation, it was morale boosting to know the EAB was always ready with fresh water. Unlike previous deployments, none of our troops suffered stomach problems from drinking contaminated water.

When one of our Marines broke his leg, the EAB's pre-coordinated medical services enabled that Marine to recuperate at the EAB HQ manning radio watch—and we got a replacement Marine from the EAB to man our internal radio watch. The EAB maintained robust external communications links, and the EAB coordinated our host-nation security forces that kept us from hav-

ing to directly interface with the locals, who were also selling us food. When our tactical vehicles required major maintenance, the EAB provided the contact teams, who used downloaded vehicle-specific “YouTube-like” videos on their secure tablets to help them make repairs quickly, and the EAB provided replacement vehicles when needed. The EAB also 3D printed a lot of the replacement parts needed for a lot of our equipment and weapons. Our admin and logistics vehicles were frequently Ford F-150s that had a local maintenance contract coordinated by the small EAB contracting section.

The EAB constantly collected its “own force signature” and monitored our unit's signature. A week after we arrived, we learned our EMS [electromagnetic spectrum] signature had compromised the mobile shower unit and that we needed better light discipline. The EAB also emphasized deception activities. A week before last month's EAB exercise, the EAB deception officer coordinated use of “dummy” EMS simulators in support of our rotational firing points plan, and informed [our leadership team] of the other supporting deception efforts. We learned our exercise live fires diverted adversary attention away from the simultaneous clandestine unmanned underwater vehicle (UUV) activities at the old commercial port on the other side of the island.

When we fired until “Winchester” at last month's week-long, adversary-focused, scenario-driven, live fire EAB “sink-exercise” (where two decommissioned allied/partner vessels were sunk), I was surprised how fast the EAB commander mobilized all forward assets to get us re-supplied (we were the main effort). I later learned that the rapid resupply was only possible thanks to the disposable, ultra-long-endurance UUVs deployed autonomously all the way from Guam and Hawaii. [Our leadership team] knew the EAB was similarly supporting two other firing batteries, three Navy USV [unmanned surface vehicle] flotillas, several Navy barges to refuel and refit UUV squadrons, and two Marine Corps UAV squadrons. When the sea plane/flying boat delivered replacement parts and personnel,



Pre-coordinated medical services ensured rapid evacuation and care for our injured Marine.
(Photo by LCpl Alison Dostie.)

the EAB did the receiving and sorting and made sure people, parts, and mail all got physically delivered to all operating units. After one of our troops got in trouble with local law enforcement, we learned the EAB maintained a small, but busy, brig—in accordance with the Status of Forces Agreement signed upon the approval for establishment of the EAB a few months before our deployment.

According to national intelligence sources and open-source social media reports and postings, our six months of EAB Zeus operations, with its mix of overt and covert activities, had definitely captured the attention and imagination of the entire region. At a minimum, EAB Zeus, with all its hosted capabilities, had certainly surprised the regional adversaries and had been very well-received by our regional allies and partners. In combination with concurrent and on-going diplomatic and economic efforts, this whole-of-government approach to the

region seems to have led to a cut-back on the regional adversaries' all-too-frequent malign activities and a corresponding toning down of the belligerent rhetoric among the region's nations.

Some key insights from our EABO experience include but are not limited to:

- Our ground-based anti-ship fires were a perfect example of an EAB hosting stand-off capabilities (extending ships' stand-off forces' ship killing ranges) and demonstrated the operational effectiveness of the symbiotic/complementary relationship of stand-in engagements (e.g., unmanned/minimally-manned platforms, short-range torpedoes, missile boats, etc.) and stand-off engagements.
- The EAB was like the naval commander's unsinkable ship with tailorable operationally-relevant capabilities (e.g., anti-ship missiles; intelligence, surveillance, reconnaissance, and targeting; limited aviation support

[mostly UASs]; unmanned platforms "mother ship"; surface and sub-surface magazine and maintenance enhancements; etc.) supported by an organic, internal, and protected posture/infrastructure.

- Our unit's constant moving, displacing, and low signature (physical, technical, administrative) made us hard to find, which equaled being hard to target, which increased our survivability, and meant extra work and greater uncertainty in the adversaries' decision-making calculus.
- EABs are not equal nor identical—each one faces its own unique and dynamic challenges attempting to optimize efficiency without compromising resiliency.



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Force Design

It's about winning

by LtCol J. Noel Williams, USMC (Ret)

“Success in battle depends on many things, some of which we will not fully control. However, the state of preparedness of our Marines (physical, psychological, and operational) is in our hands.”¹

—Gen Alfred M. Gray

“In time of peace, the Fleet Marine Force would continue to be a laboratory of ideas on amphibious tactics, technique and material.”²

—Gen Alexander A. Vandegrift

Overview.

“If you cannot describe your vision to someone in five minutes and get their interest, you have more work to do in this phase of a transformation process.”³

—John P. Kotter

>LtCol Williams is a Fellow at Systems Planning and Analysis and provides strategy and policy support to Program Analysis and Evaluation, Programs and Resources, HQMC.

What defines the Marine Corps? Commonly-summoned images are of the individual Marine in immaculate Dress Blues or, alternatively, a grunt in grungy utilities with the sweat of exertion bleeding through. Collectively and institutionally, it is perhaps film clips of Tarawa, Iwo Jima, or Okinawa; the chill of Chosin; the jungles, hills, and vails of Vietnam; or the insalubrious sands of Iraq. But

there is a trait more fundamental than that portrayed by any of these mental images: winning in combat. Marines win on the battlefield, and America loves a winner. Marines have always won the battles they fought. It is winning that makes the Marine Corps what it is to the American public today. The U.S. Army has a higher bar—to win wars; however, in our niche, fighting and winning battles, the Marine Corps excels like no other.

The Marine Corps' current *Force Design 2030* project is focused first and foremost on maintaining the winning streak and ensuring we win our future fights. It is about evolving the Corps to ensure it will continue its winning tradition despite a changing world presenting very substantial new threats.

The *Force Design 2030* objective, in simplest terms, is a better trained and equipped distributed operations capable ground combat force, an ACE with a balanced mix of manned and unmanned systems, and a logistics element capable of sustaining distributed ground and aviation elements. This collective force can do all the missions the current force is designed to perform—and do them better. Adding some specialized capabilities for long-range precision strike to address fixed and mobile targets, a family of loitering munitions, unmanned air, ground, and surface platforms, and a range of electronic warfare and cyber warfare capabilities will not only enable us to perform current missions better but allow us to perform new missions we are not currently designed to perform.

In short, *Force Design 2030* will make us better, both at what we currently do and in several additive missions required by the fleet and the joint force. These missions entail operating effectively against adversaries that are our technological peers. In the context of our priority theater of concern, the Pacific, China can seriously challenge access to our fleet as it is currently configured, so we must assist the Navy in gaining and maintaining theater access. Analogous threats pertain in other theaters as well, including the Indian Ocean, the Middle East, and Europe.

If a town's fire department was unable to get to the fire because a bridge was out, should it sit at the station while Main Street burns, or should it find another way to the fire? The Marine Corps cannot sit back self-satisfied when our fire trucks (amphibs) cannot get to fight. We need to find another way.

Missions

The *2018 National Defense Strategy* and subsequent related guidance has

“The maintenance, equipping, and training of its expeditionary force so that it will be in instant readiness to support the Fleet in time of war I deem to be ... the most important Marine Corps duty in time of peace.”⁴

—Gen John A. Lejeune

directed the Marine Corps to go back to its more traditional role of littoral operations with a focus on the Pacific. For much of the past one hundred years, the Pacific has been the priority of effort for the Corps, with two-thirds of its FMF permanently stationed in the region. This includes during the past twenty years of wars in the Middle East.

The *National Defense Strategy* and the subsequent *Force Design 2030* have not introduced a new role and missions era, nor have they altered our historical advance base and expeditionary combined arms missions. For example, the advance base mission of early last century was a tactically defensive mission for Marines and was intended to enable offensive operations by capturing key terrain, ensuring logistics support to the fleet, and defending airbases for power projection during World War II. Today’s advanced base mission adds an offensive strike capability to these expeditionary forces. Advanced base operations within a mature precision strike complex means our shore-based forces, cued by a combination of our distributed operations capable Marines and remotely piloted aircraft and other sensors in advance of them, can project long-range fires that formerly could only be done by ships or air forces. Long-range precision strike capabilities add new tools to our toolbox that are in demand by joint force commanders and Congressional leaders. Ad-

ditionally, unlike the Washington Naval Treaty era (pre-World War II), we have the ability to develop new infrastructure integrated with powerful treaty allies.

Thus, the *Expeditionary Advanced Base Operations* concept represents a traditional mission implemented with new technologies that ensures Marines remain first to fight. This new capability bolsters conventional deterrence by establishing persistent striking power forward.

Expeditionary advanced base (EAB) operations are also critical to winning the competition below the level of conflict by providing critical intelligence, surveillance, and reconnaissance (ISR) for maritime domain awareness and assured C2 to the fleet and joint force. This is a critical mission that is often overshadowed by those judging force design by just looking at charts of program divestments and investments. EAB operations and the associated naval campaign are not about fighting an inevitable war with China, Russia, or Iran. Instead, the concept is about deterring such conflicts while also providing additional ways for the United States to compete globally.

For example, EAB operations can provide ISR and assured communications not just to the Navy but also to the Coast Guard as it supports allied and partner fisheries protection and maritime law enforcement. A second example would be distributed operations capable elements aboard new light amphibious warships in conjunction with unmanned systems operating from EAB’s providing video evidence of Chinese aggression against friendly shipping and destruction of the marine habitat. In several of the world’s key maritime regions, our competitors have overplayed their hand, and providing pictures to prove bad behavior will be an important component of winning the competition for a free and open economic order that respects sovereignty over a lawless authoritarian model. In many ways, this is no different than the “every Marine a collector” spirit that the Corps embraced over the last two decades.

As Senators Jim Inhofe and Jack Reed, the Chairman and Ranking Member of the Senate Armed Services Committee, stated regarding their proposed

Pacific Deterrence Initiative (PDI):

New land-based, long-range strike capabilities will provide a new source of resilient and survivable U.S. power projection ... with the aim of injecting uncertainty and risk into Beijing’s calculus, leaving just one conclusion: ‘Not today. You, militarily, cannot win it, so don’t even try it.’

Marine Corps force design will be critical to a successful PDI.

As the Senators go on to say:

Investments in theater missile defense, expeditionary airfield and port infrastructure, fuel and munitions storage, and other areas will be key to America’s future force posture in the Indo-Pacific. As one example, it doesn’t matter how many F-35s the military buys if very few are stationed in the region, their primary bases have little defense against Chinese missiles, they don’t have secondary airfields to operate from, they can’t access prepositioned stocks of fuel and munitions, or they can’t be repaired in theater and get back in the fight when it counts. The Pacific Deterrence Initiative will incentivize increased focus on posture and logistics, and help measure whether these requirements are being matched with resources.

By investing in *Force Design 2030*, the Marine Corps will ensure its budget reflects PDI priorities for expeditionary capabilities vice simply requesting continued funding for traditionally favored platforms that are becoming less relevant and are in diminishing demand.⁵

Threats

The missions discussed previously will require U.S. forces to operate within lethal range of adversary weapons. It is a near certainty that our adversaries will know generally where we are located, and it is likely they will often know precisely where we are. Our peer adversaries will have large inventories of long-range precision strike capabilities, while our lesser adversaries will possess smaller quantities of similar systems. In virtually all contested environments where we will operate, we will be vulnerable to attack. This will require us to develop robust organic sensing and military deception capabilities, early warning noti-

fiction, and stand-off weapons to allow our mobile forces to remain survivable.

The beauty of defending against a long-range precision strike is that it is long range and precise. Long-range means an extended time of flight allowing an aware target time to implement countermeasures. Precision means displacement distance to avoid a munition's effects will not be great. While it is unlikely a large ship can move to a protected posture given the nature of the sea domain, it is entirely possible for properly positioned and aware ground-based units or systems to move into protected or complex terrain that affords protection without requiring the unfavorable three or greater defensive shots for every incoming shot required of an active defense. When tied to the efficiency with which ground-based forces can provide persistent presence, EAB operations offer a strong value proposition by placing resilient stand-in forces within the enemy's weapons engagement zone. It provides a survivable extension of the fleet.

Traditional ground combat operations will be influenced in similar fashion by these sensing and strike technologies. Reconnaissance and counter-reconnaissance will be critical. The ratio of indirect to direct fire systems will have to increase and ground formations will more often position for optimum indirect engagement rather than position for traditional direct assault. Our infantry units will need to possess a wider range of sensors and a family of indirect fire means, including loitering munitions of various sizes. Each echelon from squad to division will necessarily possess a limited, but complete, kill chain—with each echelon connected through a federated network architecture, so that sensing and engagement options can be shared amongst all echelons for a fully composable organizational design allowing faster engagement of complex threats. Often, infantry operations will not be EAB operations oriented, but rather, they will conduct other missions both traditional and novel (e.g., operations in the information environment). In fact, such capabilities integrated across the GCE are precisely what 3/5 Mar recommended after the Marine Corps

Warfighting Laboratory's recent SEA DRAGON experiment series and is consistent with experimentation lessons learned over the past two decades in projects such as HUNTER WARRIOR and URBAN WARRIOR.

Force Design Priorities

Throughout the Marine Corps' history, we have added new missions and shifted focus of effort as required to meet the most pressing security needs of the Nation. Today is no different. Using ex-

“It will also require Marines trained and equipped for littoral warfare, enabled by unmanned systems, and networked to employ the advanced weapons systems and firepower the joint force can bring to bear.”⁷

—Secretary of Defense Mark Esper

“History shows that one of the most prolific causes for failure in overseas expeditions has been the inability or failure of the naval and military commanders concerned to work harmoniously together.”⁸

—BGen Eli Cole

cellence in combined arms combat as a foundation, we are expanding our capabilities to support advanced base operations under new technological and treaty alliance conditions. Distributed opera-

tions capable formations, with multi-axis indirect fires and organic ISR and C2, connected to adjacent and higher formations through a federated network architecture, will provide a force capable of operating across the spectrum on conflict. Unlike prior advanced base operations, technology allows us to project power at ranges only the afloat fleet could produce in the past. Rather than protecting coaling stations for the battle force, we will provide advance bases for information—extending sensor and C2 networks in a contested electromagnetic environment to the fleet and the joint force. We will provide fires consisting of long-range cruise missiles and loitering munitions projected from long-range unmanned surface vessels (LRUSV). If allied or partner-nation access is available, we will take advantage of terrain to provide survivability for our long-range precision fires. If allied or partner access is not available, we will deploy LRUSVs from surface and, potentially, subsurface vessels. We will task organize general purpose and specialized capabilities into force packages dictated by the mission. The anti-ship mission is important, but it is still a small percentage of the force. We are focusing attention on it because it is new, joint force commanders are demanding it, and we need to start new programs of record—but this does not mean it is the sole priority.

Personnel. This is the first priority because future distributed operations missions require better trained and more experienced Marines possessing a wider range of technical competencies. These attributes are similar to those required by Special Operations Command, and we will study how Special Operations Command handles talent management. We must keep key personnel such as squad leaders in their billets at the required rank. We will have to change how we recruit, train, and incentivize our Marines, and we will have to ensure that key billets are consistently staffed with the proper ranks and experience levels.

Navy-Marine Corps Integration. A single naval battle approach is a critical prerequisite for successful littoral operations—interoperability is insufficient. Integration with the Navy and their kill

chain will ensure we stay current with command, control, communications; computers intelligence, surveillance, and reconnaissance technology; engagement tactics, techniques, and procedures; and supporting functions such as the processing, exploitation, and dissemination of sensor data—thus ensuring we remain full players in joint force. It makes no sense to allow a seam that could be exploited by an adversary, so when performing anti-ship or anti-submarine offensive operations, we should be part of a single naval kill chain within a single naval battle contributing to the maritime campaign. Just as in World War II when Marines manned gun turrets on cruisers and battleships and flew missions from escort carriers in support of the naval campaign, in the 21st century, Marines will be manning “turrets” ashore—but still connected to “fire control” by an electronic C2 umbilical.

Unmanned systems. Unmanned systems will be critical enablers for every MAGTF element. The MQ-9B and follow-on medium altitude long endurance UAS will provide essential sensing capabilities and a communications gateway to connect our aviation and ground combat elements. They will also provide an air-to-ground strike capability that ground Marines and commanders have been requesting for more than fifteen years. A family of optionally manned and unmanned surface vessels with optional autonomy will help provide sensing, communications, and fires capabilities while unmanned air and ground resupply platforms will enable distributed logistics support. The most important initial investments in unmanned systems will be MQ-9B and LRUSV.

Organizational design. New technologies will drive new organizations, and to get them right, we will need to do significant force-on-force experimentation. The proposed infantry battalion design is unlikely to be the final design, but it is an excellent place to start experimentation to see what works and what does not work—and why. Trying to evolve the infantry organizations by experimenting with the current structure has been tried before, and it generally encumbers true experimentation

and falls short in demonstrating where change makes the impact. The proposed design is not perfect, but the insights we gain for a final design make it invaluable. This same “test article” dynamic applies to the Marine littoral regiment as well.

Some have questioned whether the Marine Corps will remain a capable crisis response force. The answer is yes.

Further, developing offensive and defensive fires organizations is a high priority. The artillery regiment and subordinate fires organizations must evolve and grow in capacity. For example, the artillery regiment could restructure into a fires group to provide air defense capabilities and employ general support loitering munitions and non-kinetic fires, as well as their traditional cannon and rocket systems. Joint tactical air controllers will become more numerous, with assignment to the platoon level and eventually to the squad level of the infantry battalion to enable employment of non-organic loitering munitions and other fires capabilities from the fires group, the aviation element, and joint force fires.

Posture

It will be important to adjust our force posture, especially in the Pacific. The People’s Republic of China (PRC) has developed its strategy and forces to address our current force laydown. Given the threat imposed by long-range missiles, our permanent infrastructure has provided the PRC with fixed targets around which they have developed a substantial arsenal of missiles and long-range bombers.

It would be a great disadvantage to enter into a competition where all of our plays are known in advance. We need to unhinge the PRCs projectile strategy by taking away their preplanned targets. This is ideally suited for the Marine Corps as an expeditionary force that is

mobile and sustainable. While it is easier for the Marine Corps to take the targets away, we must still consider thinning out forward-stationed organizations. This can be accomplished while increasing engagement with allies and partners in two ways. First, we can start by eliminating legacy systems and formations that no longer provide what joint force commanders and our policymakers require most, while also positioning formations in Alaska and in the continental United States. Second, we could place a robust group of liaison officers within host nation and ally organizations, with a specific focus on enabling the required naval kill chains to enhance conventional deterrence. This will increase actual daily combined interaction while reducing political and infrastructure burdens on our allies and partners while also placing our units where they can train effectively. A peer fight will require much higher levels of training than current challenges and placing units where they can efficiently and effectively train will be essential. Thus, our posture should be purposefully forward echeloned in depth, from continental United States to objective.

Skeptics

Some have questioned whether the Marine Corps will remain a capable crisis response force. The answer is yes. MEUs and other formations will be more capable and responsive because they will be better trained and possess a range of specialized capabilities previously only available to certain special operations forces. *Force Design 2030* reflects a purpose-built force, but it is not about optimizing the force for any single mission. Rather, it is focused on adding capabilities and aggregate utility for future operational environment vastly more challenging than the one we face today. *Force Design 2030* adds mission capabilities; it does not subtract missions.

Among the concerns voiced about whether the Marine Corps can remain appropriately capable, there has been a great deal of commentary about proposed reductions in current and planned aircraft. This is to be expected given that these aircraft are critical components of

a properly structured Marine Corps, but the currently planned force has become unbalanced with a disproportionate allocation of investment dollars allocated to aviation. We simply cannot afford the current Aviation Plan and still have adequately capable ground and logistics components. Moreover, even if we could afford the current Aviation Plan, we would still need to make adjustments because the role of manned aviation is changing. Given how we will employ as a stand-in force, our tactical aircraft are no longer survivable given the increasing range and precision of our adversary's missiles and their improved sensing capabilities. Manned attack helicopters are becoming too vulnerable to put pilots at such risk. Fortunately, unmanned systems will more than fill the void created by the proposed changes and for less money. There is ample evidence from the Israeli Air Force, the U.S. Air Force, and U.S. Army MQ-1C units that remotely piloted aircraft will be an essential component of any successful air element. That said, the Marine Corps will still possess the most capable (albeit expensive) tactical aircraft as well as heavy- and medium-lift rotorcraft in the world. The proposed reductions are simply a proportional reduction to divestments in the ground component.

The plan to eliminate tanks concerns many. Tanks have provided tremendous contributions to combat operations in recent operations and will continue to provide utility, though in a diminishing set of circumstances. However, when viewed from a departmental perspective, the Corps' ~150 tanks in its active formations are a very small capability that are disproportionately expensive for the Marine Corps to maintain. Increasing threats will require very substantial investments in training and countermeasures to ensure tanks remain viable. With limited training areas and such a small cadre of expertise, it is prudent to rely on the Army with its 6,000 tanks to support the Marine Corps when required, just as has been the case in every preceding war, including in Baghdad, the second Fallujah battle, and Najaf.

How does the addition of an anti-ship capability affect the Marine Corps' more traditional missions? III MEF is

the initial focus of effort, and there is much work to do to determine what the final design of the Marine littoral regiment will be. It might be that Marine littoral regiments are only in III MEF, given there is no need for the three MEFs to be mirror imaged. One of the least discussed capabilities in the proposed Marine littoral regiment is the LRUSV, which is highly relevant globally against peer and non-peer adversaries alike. A family of unmanned surface vessels of different sizes and configurations allow for a vast array of potential payloads. Sensors, mesh networking, a range of anti-ship and anti-sub munitions, and offensive mining are all possibilities. Such capabilities would also likely constitute critical elements of the initial wave of any assured access mission. Also, critically, LRUSV can be employed independent of access to allied and partner territory since they can be deployed directly from amphibious ships and other platforms.

... it is essential to work with the Navy to determine what the next amphibious ship will be.

Amphibious ships remain important until new options become available, and they will continue to act in traditional roles and in the future will function as mother ships for unmanned systems. However, it is essential to work with the Navy to determine what the next amphibious ship will be. It should have mission agility and be able to perform sea control and power projection missions.⁹ It must be a fully capable combatant and not a protected transport. In the future threat environment, it will be imprudent to concentrate so many Marines and Sailors in very large ships as is currently necessary given our current fleet architecture.

Conclusion

In closing, this article has demonstrated Gen David H. Berger's force design is far from heretical. Rather than changing

the culture or mission of the Corps, the Commandant is reviving it. The Marine Corps is perhaps a bit like the Scots-Irish in this regard (and as my 101-year-old Scots-Irish mother bears witness), and as former Secretary of the Navy James Webb has stated, "Change the fabric of their culture? It has not happened yet, not in two thousand years. And it will not happen now."¹⁰ Like the Scots-Irish, the Marine Corps' fundamental attribute of winning and first to fight has not changed in three hundred years, and it will not happen now.

Notes

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Change is Hard, and No Less So in the Marine Corps

The imperative to modernize

by LtGen David J. Furness

“There’s historically been resistance to change in any large organization, particularly an organization that has been so successful as the Marine Corps.”¹

**—Gen Charles C. Krulak,
10 October 1997**

>LtGen Furness is currently the Deputy Commandant for Plans, Policy and Operations, Headquarters Marine Corps. An Infantry Officer, he has commanded at every level in the Marine Corps from platoon to division and commanded the Combined Joint Task Force, Horn of Africa.

Every rifleman knows you are always checking out the next firing position, terrain feature, and axis of advance. Similarly, the Marine Corps continues to look beyond its current position to identify future challenges, potential missions, and likely adversaries across the globe. This constant probing allows the Service to see and understand a new strategic environment as well as significant changes in the character of war. Every Marine also knows that when the strategic situation changes, concepts and capabilities ought to follow suit. As Marine warfighting doctrine states, “war is both timeless and ever changing. While the basic nature of war is constant, the means and methods we use evolve continuously.”² The vision and courage to change is how we keep

our sacred promise to be “most ready when the Nation is least ready.”³ *Force Design 2030* serves as the main effort of our transformation to confront the changing operating environment. It is informed by the rapid advancements of America’s potential adversaries, the proliferation of sensors and long-range precision strike weapons, and information-related capabilities that present challenges to the Naval Services.⁴ *Force Design 2030* embraces the naval character, expeditionary nature, crisis response mindset, and warfighting ethos of the Marine Corps. It forces change where needed most while maintaining sufficient capability to ensure the Service meets the challenges of the present.

While the United States fought simultaneous wars in Afghanistan and Iraq, China, amongst numerous other potential foes, made major advancements in their military capabilities and developed concepts designed to counter U.S. military strengths. As a result, the Marine Corps has a brief window of opportunity and a moral obligation to our Nation to transform itself for future warfare. The Service is leveraging its most important asset—the tough, creative, and initiative-driven Marine—along with advances in technology to prepare for these looming challenges.

Accordingly, new concepts and tactics must reflect new battle-changing technologies and, ultimately, the changing character of war. Thus, we are in the midst of a long-overdue transformation rooted in our combat history and traditions.

Our History of Change

The history of the Marine Corps is filled with inspiring examples describing how the Service became the fighting force that America has grown so fond of.⁵ The Continental Marines manned guns, participated in boarding and landing parties, and ensured good order and discipline aboard Navy ships. Before the Civil War, the Marine Corps honed its amphibious capabilities at Vera Cruz and fought in the Halls of Montezuma during the Mexican War (1846). For the first three decades of the 20th century, the Marine Corps fought small wars in Asia, Central America, the Caribbean, and Latin America to protect American foreign interests. In World War I, Marines fought in Belleau Wood (1918) and on the plains of Western Europe as infantry battalions. By then, our Corps had nearly 150 years of loyal combat service to the Nation, and our victories in World War I represented the birth of the “modern Marine Corps.”⁶

In the 1920s, Army and Navy planners grew increasingly concerned over Japan's growing military strength and regional aggression.⁷ Pete Ellis began writing the initial idea that informed the *Tentative Manual for Landing Operations* in 1921. In 1925, the 13th Commandant, Gen John A. Lejeune, foresaw the need for change and suspended the Marine Corps Officers' Schools in Quantico so that its student officers could participate in joint Army and Navy studies, war games, and maneuvers on landing operations.⁸ Later in 1927, a document called the *Joint Action of the Army and Navy* defined the Marine Corps mission as "land operations in support of the fleet for the initial seizure and defense of advanced bases ... essential to the prosecution of the naval campaign."⁹ Seven years later in 1934, the Marine Corps published the *Tentative Manual of Landing Operations* (later published as a *U.S. Navy Landing Operations Doctrine Publication*).¹⁰ It was another eight years, in August 1942, before the Marine Corps finally demonstrated its amphibious combat capability on the beaches of Guadalcanal. The Marine Corps' first amphibious assault cost nearly 1,200 men over six months, but its success marked the start of America's strategic offensive in the Pacific.

We must never forget that the Marine Corps succeeded at Guadalcanal and in many other amphibious landings over the next three years because it started thinking, planning, and adapting to a changing military environment long before war erupted. Still, that period of transformation gives me pause. Seventeen years passed from Lejeune's actions in 1925 until the Service's first amphibious landing in combat using its new doctrine. Change is hard, and it takes time, but the Marine Corps today does not have the luxury of seventeen years to develop transformative changes.

Change is the norm in our Service. Despite the demonstrated success of amphibious operations in World War II, this would not be the last time the Service underwent a dramatic change. Marines in the 1970s and 1980s fought traditionalists and enacted a change to answer claims that the Service was "an under-gunned, slow-moving monument

to a bygone era in warfare."¹¹ Forward-thinking leaders, leveraging the Soviet threat and U.S. Navy *Maritime Strategy*, adopted pre-positioning strategies and created the doctrine of *Warfighting*.¹² When the strategic environment changes, our Service has always answered the call, and this is where we are today.

Change Feels Hard Because It is Hard

When Marines, as well as any student of war, look back on the Marine Corps' transformations with the benefit of hindsight, it is easy to forget how difficult the process was at the time. This is not unique to the Marine Corps. For instance, the Navy's nascent aviation community faced skepticism from the

Change is the norm in our Service.

surface community during the interwar period. Moreover, the Army did not appreciate the value of strategic bombing during the same period. During the Cold War, the Air Force questioned the value of intercontinental ballistic missiles and submarine-launched nuclear weapons as they remained locked in a World War II paradigm, "the bombers will always get through," and felt bombers provided an adequate strategic capability for the Nation.¹³

Why is change hard? There are at least two common-sense reasons why.

We get too comfortable. Fundamentally, military organizations, in the most practical sense, will strive to hold onto the ideas and technologies that succeeded in the past, unless jolted by catastrophic events. In World War II, the loss of Navy battleships during the Pearl Harbor attack propelled aircraft carriers to the forefront of battle. More recently in 2020, in the disputed region of Nagorno-Karabakh, Azerbaijan's forces used Turkish unmanned air combat systems and Israeli loitering munitions to overwhelm Armenian military forces. Azerbaijan wanted to avoid another war of attrition with Armenia—similar to the one they lost two decades earlier—so

they employed new tools and tactics to exploit the seams and gaps of their opponent. In contrast, the Armenians reinforced many of the same capabilities that helped them achieve victory years earlier and suffered those consequences on the modern battlefield.¹⁴ For too many, the old way of war seems like the right way of war, and past combat experiences often cause a mental lag that stymies adaptation to the changing character of warfare. If we just keep doing more of the same, we will incur costly battlefield adjustments that will be paid in blood, treasure, time, and credibility. We must avoid this fate.

It is hard to get it right. Former Secretary of Defense, Robert M. Gates once said, "Our [U.S.] record of predicting where we will use military force since Vietnam is perfect—we have never once gotten it right."¹⁵ Historically, the French paid the price during the interwar period as they expected another drawn-out war of attrition with Germany. They developed a "methodical battle" system that kept artillery and tanks at the division level and above, and they only advanced forces in a lock-step fashion so it could centrally manage and concentrate its most deadly weapon systems. However, this approach stifled the initiative of its lower maneuver elements and played into German hands. In contrast, the Germans emphasized rapid action, offense, and small-unit leadership to prosecute a lightning war against any weakness in French defensive lines. The French made significant changes in the interwar period, but they got it wrong, and the Germans would capture France within six short weeks in the summer of 1940.¹⁶

Secretary Gates was correct. The Marine Corps will not predict the next battle with complete certainty so there is always tension during organizational change. The Marine Corps is clear-eyed as it conducts analysis, wargaming, testing, experimentation, and major refinements to our force for a potential high-end engagement against a near-peer opponent. The Chinese military poses extreme challenges to our past way of naval warfare and our previous understanding of combined arms. Vast ocean distances, militarized islands, anti-access/area-denial systems, new warfight-

ing domains, and the natural advantages gained from their defensive posture and tight interior lines of communication are establishing a future combat environment that necessitates new ways and means. If today's Marine Corps is going to win tomorrow's fight, it cannot idle along or only make superficial changes on the margins. Not for the type of fight we see ahead of us.

I joined the Marine Corps in 1987 and have had the privilege to command infantry formations at all levels from platoon to division and have seen the Marine Corps undergo significant change in the 90s and then again in the early 2000s. From my perspective, the changes the Marine Corps is experiencing in *Force Design 2030* are indicative of the culture the Service fosters—that of a learning organization. I am encouraged by the ongoing debate surrounding Force Design, the work done in our military classrooms, and the many legions of thinkers and doers making this happen. Major changes in our combat organization should always spark a healthy and respectful discourse inside and outside of our Service. Debate is healthy. Debate demonstrates we are invested and care deeply about ensuring the Marine Corps' future success. I would be more concerned with an absence of spirited debate. I cannot recall any consequential decision during my service that did not include impassioned disagreement. Through a healthy discourse, we learn, we change, and we do it again until we get it right. The discourse is ongoing and will continue. This is how we become more lethal, mobile, survivable, and agile as a fighting force.

The Contemporary and Future Environment

The People's Republic of China—the Marine Corps' pacing challenge—is the threat by which the Service will not only measure its capabilities but also its rate of adaptation. Combined arms, a skill that served our Marines so capably in the past, is evolving into domains once considered science fiction. Marines are combining traditional arms with effects in space and cyberspace, the electromagnetic spectrum, and the information environment. Marines must now learn how

to integrate these arms on battlefields saturated by sensors, where technology accelerates kill chains, decreases decision space, and increases the number of attack avenues. While China remains the pacing challenge, it is not the only threat. The proliferation and diffusion of technology allow states with relatively meager resources to field capabilities that were once only the purview of great powers including deep strike unmanned

(MLR) represents just one key aspect of the Marine Corps' transformation as it represents a major bid for success in the Indo-Pacific arena. While critics of the MLR claim it represents an ill-informed detour from the proven Marine air-ground task force, this simply is not the case.¹⁷ The 3d MLR will lead Service experimentation efforts and inform the development of subsequent regiments. It is a logical outgrowth of years of concept

While the MLR is tailored for high-end maritime combat with peer competitors, we continue to enhance our MEUs and MEFs to provide flexible, amphibious combat units ...

aerial systems, loitering munitions that leverage artificial intelligence, and offensive cyber capabilities.

In a world of accelerating change, the Marine Corps' rate of adaptation matters. Our processes were designed in an earlier era where speed of adaptation mattered less and the U.S.'s technological superiority remained unchallenged. The Joint Capabilities Integration and Development System defines requirements, the Planning, Programming, Budgeting, and Execution process provides funding, and the Defense Acquisition System manages programs through a series of milestones and reviews. These processes are designed at *getting it right* instead of *getting it fast*. As a consequence, their inflexibility is poorly suited to "Competing in Time" against adversaries unencumbered by similar bureaucracies who transform at the pace of commercial innovation. Today, our commercial sector is driving technological advancements, and innovating at speeds that outpace defense acquisitions by years. Incremental defense solutions no longer set the speed of U.S. commercial innovation, nor are they pacing with the People's Liberation Army. Given where the Marine Corps stood in 2019, bold course corrections were required.

Enablers of Change

The Marine Littoral Regiment

development and wargaming, and it will continue to increase in lethality as we refine its missions and capabilities. The MLR is a standing formation, purposefully organized to support sea control, postured to win the reconnaissance and counter-reconnaissance battle, and ready to impose a range of challenges against the People's Liberation Army. Its story is far from over, and this formation is getting better every day through the hard work and dedication of Marines on the ground.

The challenge that the People's Liberation Army offers, and the speed with which they pursue advantage, denies the Marine Corps the luxury of building a less specific formation or maintaining this force in any lower state of readiness.¹⁸ While the MLR is tailored for high-end maritime combat with peer competitors, we continue to enhance our MEUs and MEFs to provide flexible, amphibious combat units that can operate across the entire spectrum of conflict.

The MEU and the MEF

Carefully structured to respond to a broad range of missions, MEUs continue to respond to our Nation's security demands even as they too transform.¹⁹ MEUs combine ground, aviation, and logistics elements under a single commander, embarking this force aboard

three of the Navy’s amphibious warfare ships, known as an amphibious ready group. MEUs deploy worldwide to perform missions including amphibious assaults, raids, embassy reinforcements, humanitarian assistance, and noncombatant evacuation operations. Marine expeditionary units, consisting of about 2,200 personnel, form the smallest of the Marine Corps’ MAGTFs. The Marine Corps is in the midst of deploying its first MEU with the Amphibious Combat Vehicle, and we will continue to experiment and transform these units for other future combat scenarios.

MEFs are the largest of the MAGTFs. The MEF exceeds 40,000 personnel with its command, ground, aviation, and logistics combat elements. The MEF will remain ready to respond to crisis, and in the future, they will incorporate MLRs into their concept of operations. Often with less fanfare than the MLR, our MEFs are transforming in subtle yet consequential ways to support the naval and Joint Force.

This includes well known shifts such as the divestment of tanks, prioritization of longer-range precision-guided fires over cannon artillery, and greater investment into the skills of our infantry Marines. We do not yet have it right. Our current infantry battalion experimentation, called IBX30, is showing us that we may need to make further adjustments to the infantry battalion; including novel combined arms formations that equip Marines with beyond-line-of-sight precision strike capabilities and requisite sensors.²⁰ Our traditional understanding of combined arms employs organic mortars, supporting artillery fires, rotary and fixed-wing aviation assets, all in support of infantry Marines maneuvering onto the objective—to locate, close with, and destroy the enemy. The 202X battlefield demands a refinement of the traditional employment of combined arms. Marine learning and experimentation are iterative and there is a long way to go before we are done.

Conclusion

As recently demonstrated during the difficult and tense withdrawal from Afghanistan, the Marine Corps remains America’s premier crisis response force.

The Service’s warfighting ethos is constant, and it is an essential source of strength. Accordingly, the Marine Corps grounds its force design efforts in its naval heritage and focuses on supporting the “broader naval campaign” just as it did a hundred years ago. *Force Design 2030* recognizes that the character of war is drastically changing and is driving us to re-conceptualize the future maritime battle. As our former commandant, Gen Alfred M. Gray eloquently wrote, “our approach to warfighting must evolve. If we cease to refine, expand, and improve our profession, we risk becoming outdated, stagnant, and defeated.”²¹ We must change to remain the most ready when the Nation is the least ready.

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Expeditionary Warfare School LTG John J. Yeosock Memorial Award 2019

Assuming the Threat Away

The Marine Corps Operating Concept's failure to address near-peer area denial missile threats

by CPT Benjamin Schiff, USA

As adversaries continue to develop new capabilities, the DOD must evolve to account for the new threats. If Marines established an expeditionary advanced base (EAB) today, they would face missile attacks directly on their position and would have no recourse. The *Marine Corps Operating Concept* (MOC) for 2025 attempts to make this transition by focusing on EAB operations.¹ However, the MOC has a critical gap that places significant risk on Marines deployed in the future operating environment. Specifically, the Marine Corps must innovate in response to the adversarial modernization of unmanned aerial systems (UASs), cruise missiles, and tactical ballistic missiles. Although ground and sea-based air and missile defense are Title 10 responsibilities of the Army and Navy, air and missile defense system development must be a critical focus for the Marine Corps. Therefore, to operate EABs and exercise local sea control in the future operating environment against a near-peer threat, the Marine Corps must develop a directed-energy air and missile defense system capable of defeating cruise missiles and short-range ballistic missiles (SRBMs).

One problem the MAGTF will face in the future operating environment is our adversaries' use of precision strike long-range rockets and ballistic missiles at the tactical level. UAS, cruise missile, and tactical ballistic missile threats

>CPT Schiff is an Air Defense Officer serving as the Senior Air Defense Artillery Fire Control Officer for the 108th Air Defense Artillery Brigade at Al Dahfra Air Base, United Arab Emirates.

have proliferated at an accelerated rate over the last two decades as the United States' adversaries pursue anti-access/area denial as a strategy to counter the U.S. military's strengths.² As adversaries increase their air and missile threat capacity, SRBMs will no longer be a strategic asset operating at echelons above corps. Marines will begin to face SRBM threats at the tactical level. In 2018, a DOD report stated that China had approximately 1,200 SRBMs capable of precision strike.³ Russia has already distributed its SRBMs to the brigade level.⁴ The proliferation of adversary ballistic missiles sheds more light on the Marine Corps' lack of any missile defense capabilities, despite the identification of this capability gap after the

... develop a directed energy air and missile defense system ...

Persian Gulf War.⁵ The rise of ballistic missiles and their new role at the tactical level of war poses a significant threat to Marine Corps operations in the future operating environment. Another problem is that the MOC does not account for the increased threat from UASs and missiles. The MOC states, "MAGTFs may be task-organized for missions to seize, establish, and operate multiple EABs."⁶ However, the Marine Corps does not have the capability to provide air and missile defense for the EABs. Without air defenses, the MOC assumes our adversaries will be unable or unwilling to target EABs because the Marines will not meet the threshold for an enemy to engage with air and missile capabilities.⁷ This assumption is invalid because it wishes away adversaries' capabilities and ignores the problem.⁸ With growing inventories of precision strike SRBMs, adversaries will be able to strike EABs within a weapons engagement zone despite the EABs' dispersion and small footprints. The threshold for U.S. forces to present a valid target for adversaries will continue to drop as adversaries' inventories of long-range rockets and SRBMs increase. EABs, no matter how small or dispersed, will break the threshold and present a valid target for the adversary to prosecute. The MOC's failure to account for realistic air and missile capabilities forces them to incur significant risk to mission and risk to

forces when operating inside an adversary's weapons engagement zone.

One reason the MOC fails to account for adversarial air and missile defense is that the Marine Corps views this defense as a capability solely under the force protection warfighting function.⁹ The Corps states that a priority in the future operating environment is to establish "local sea control and power projection into contested littoral areas,"¹⁰ and views sea control and power projection as a responsibility of the fires warfighting function, traditionally fulfilled by aviation and artillery assets. However, the Corps cannot accomplish sea control and power projection without a capable air and missile defense system. Without viewing this defense as a component of the fires warfighting function, the Marine Corps will not be able to truly have local sea control or project power into contested areas.

Some of the problems the Marine Corps faces with procuring and implementing this defense system are the cost of interceptors and the large sustainment

footprint required for traditional air and missile defense systems. Indeed, current interceptor-based air and missile defense systems cost more than the missiles they are designed to defeat. An Aegis SM-3 Block 1B interceptor costs around \$14 million, while the Chinese CSS-5 Mod 5 anti-ship ballistic missile only costs \$7 million.¹¹ The Marine Corps cannot afford to acquire an interceptor-based system at the expense of other capabilities. Traditional interceptor-based systems are also too large and require too much support equipment to be able to operate in the expeditionary environment described by the MOC. Additionally, it would be impossible for the Marine Corps to sustain air and missile defense interceptors in a quantity greater than adversaries' SRBM inventories, especially at EABs. An air and missile defense solution that allows the MOC to be effective must overcome significant cost and sustainment issues.

Currently, no air and missile defense system would meet the requirements for the MOC. It would require a mobile,

directed-energy system capable of being transported from ship-to-shore, similar to the Army's Intermediate Short-Range Air Defense system that consists of a reconfigurable turret mounted on a Striker.¹² This turret can be mounted on the joint light tactical vehicle, which is already in the Marine Corps' inventory.¹³ However, the new system would require a high-energy laser, greater than 50 kW, to have the capability to defeat enemy UAS cruise missiles, and SRBMs.¹⁴ This weapons system "burns through" enemy air and missile threats by directing the high-energy laser onto them while they are in flight.¹⁵ It expends no rounds when fired, thus reducing the lifetime cost and sustainment requirements. The only additional sustainment needed for this system is the fuel required to power the lasers. The ability to tie into a shore-based power grid when operating EABs reduces the sustainment requirements even further.

This new system is a solution for the MOC because it would provide force protection from air and missile threats for EABs established inside of enemy weapons engagement zones, despite the growing air and missile capabilities of the United States' adversaries. In addition to providing protection for its own forces, the Marine Corps could utilize EABs to project power and have local sea control with capable air and missile defense systems. Robust air and missile defense capabilities allow this power projection by imposing anti-access/area denial on the enemy. Incorporating this defense into the fires warfighting function will enable it to achieve sea control.¹⁶ Air and missile defense systems established at an EAB in a contested littoral environment would allow the Marine Corps to control the airspace in that environment, increasing the risk calculus for an enemy attempting to operate aircraft, missiles, or ships in that area. Additionally, U.S. Navy ships would have freedom of movement through that area under the protection of the EAB's defense systems. This would allow the Navy to utilize Aegis ships that would otherwise defend strategic assets in those areas for other purposes and extend the joint force commander's area of influence. Air and missile defense systems are more than



A standard SM-3 Block 1A being launched from the guided missile cruiser USS Decator (DDG73).
(Photo courtesy of the U.S. Navy.)

a force protection requirement for the Marine Corps; they provide a robust fires capability, allowing the joint force to extend its operations.

Furthermore, a directed-energy air and missile defense system would solve the cost and sustainment issues facing the Marine Corps. Traditional defense systems are prohibitively expensive to sustain. However, a directed-energy weapon can achieve a higher probability of kill than interceptor-based defense systems for less than \$30 per shot.¹⁷ This is a dramatic decrease from the Marine Corps' current Stinger system, which costs \$110,000 per interceptor.¹⁸ While sustainment and transportation requirements are a problem with traditional systems, directed-energy missile defense systems can easily fit into almost any unit's ability to produce power. The cost, transportation, and sustainment benefits of a directed-energy system require the Marine Corps to prioritize the development of a system capable of defeating advanced UASs, cruise missiles, and SRBMs.

An argument against the Marine Corps' procurement of air and missile defense systems stems from Title 10 responsibilities. Sea-based air and missile defense is a Title 10 responsibility of the Navy, while ground-based air and missile defense is a Title 10 responsibility of the Army.¹⁹ Opponents of Marine Corps air and missile defense would argue that, in a joint environment, the Navy can provide this defense while the MAGTF is afloat. The Army, then, can provide defense while the MAGTF is ashore. However, this is an unrealistic expectation that is incompatible with the MOC. The Army will be unable to provide this defense to the Marine Corps in the future operating environment because it will not participate in the seizure and operation of the EABs with the Marine Corps.²⁰ Additionally, the Army will need to utilize its limited air and missile defense systems to protect its own forces. If the Marine Corps relies on the Army to provide force protection and fires at its EABs, the argument could be made that the Army should seize and operate the EABs themselves. To perform its role in the joint force and to effectively execute the MOC, the Marine Corps

needs air and missile defense systems capable of operating in expeditionary environments, despite it not being a Title 10 responsibility.

Without a capable, directed-energy air and missile defense system, the Marine Corps cannot bring the capabilities of the MAGTF to bear against the United States' adversaries under the MOC. Although it is not a Title 10 responsibility, the Marine Corps needs to prioritize the development of a defense weapons system that provides the capability to defeat the growing UAS, cruise missile, and SRBM threats EABs are likely to face while executing the MOC in the future operating environment. Unless the Marine Corps procures a directed-energy air and missile defense system, Marines deployed to EABs in a near-peer fight face a significant risk of enemy air and missile attack.

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The Pentomic Division

A cautionary tale

by LtCol Thaddeus Drake, Jr.

“The American Army did not respond to the massive destructive firepower of tactical nuclear weapons as it historically and logically should have—with measured, conservative improvements to the formations that had brought it success in its recent major wars, modifications that might have focused on incorporating technologically advanced equipment. Instead, the Army implemented a completely new and untried organization that relied on a fleet of Air Force transport planes that did not exist.”¹

—Kalev I. Sepp

By most measures, the latter half of the 1950s was not a good time for the U.S. Army. The Korean War concluded with an unsatisfying whimper in 1953, the budget battles were beginning again with the Army sure to be the primary target for reductions, and there was wild speculation about the future of warfare—most of which did not include a robust ground force composed of conventional infantry, artillery, and tanks.² Fast forward 70 years, and a similar feeling exists for the Marine Corps. Although the Marine Corps was heavily involved in Operations IRAQI FREEDOM and ENDURING FREEDOM, decision makers within the halls of Congress and the Pentagon have largely relegated those conflicts to the status of ancient history. The *National Defense Strategy*, national security think tanks, and the military Services all believe that so-called great power conflict has replaced limited conflict again.³ Today, as the Marine Corps explores what that phrase actually means, it has quickly decided that the

>LtCol Drake assumed command as Inspector-Instructor, 1/24th Mar on 3 September. He is a graduate of Marine Corps Command and Staff College and the School of Advanced Warfighting.

previous way it conceived of contributing to great power conflict—World War II-style forcible entry operations, augmenting the Army to serve as a second land army when necessary, and large scale amphibious strikes and raids on enemy positions—is neither desirable nor workable. Thus, the thinking and planning for how to best configure the Marine Corps for an assumed future war has begun again. What was old is new again; just as the Army found itself in search of a mission in the late 1950s, the Marine Corps is now searching for the same. In response to the pressures of the late 1950s, the Army restructured itself to fit the unique context of the time; however, this context led to a number

of dangerously flawed assumptions and decisions. As the Marine Corps moves forward with redesigning the force for future war in the 21st century, we should look backwards to this time that “rhymes” with our own; we must recognize and beware the pitfalls of the “Pentomic Division.”

The Context: Then and Now

The geopolitical context of the 1950s was a fraught one. Although the United States emerged from World War II a victor, the broad specter of international communism rapidly emerged from the specific threat of the Soviet Union in the late 1940s. By the early 1950s, the threat was clear across the globe—and most obviously in the form of the Korean War. In the myopia of the present moment, the emergence of the Cold War often appears as a singular event on the historical timeline. At the time, it was nothing of the sort. There were contentious debates about the place of the United States in the world, which nations we should ally with, and how to best constrain what appeared to be the unrestrained ambition of the Soviet Union to spread its ideology.⁴ Although the specific substance of these debates is obviously different from modern discussions, there is nonetheless a background drumbeat of similarity to our current moment. Indeed, just as ongoing limited conflicts as well as large scale ideological competition shaped the geopolitics of the time, there are shadows of the same today. These include China’s maritime insurgency in the East and South China Seas, overt conflicts on many of the contested regions around its borders, extensive gray-zone activities in both physical and cyber domains, extensive “lawfare,” and a multitude of other actions that appear focused on competition with the United States, for example.⁵



The “Pentomic Era” saw U.S. Army development of tactical nuclear weapons systems like the M28/29 “Davy Crockett” recoilless gun with M-388 sub-kiloton fission warhead to arm novel infantry formations. (U.S. Government DOD/DOE photograph.)

Within the geopolitical context of the 1950s, the United States was also developing a rapidly changing and emerging technology based military strategy. Despite—or perhaps because of—the conclusion of the Korean War, the national strategy for the use of force that emerged from the Eisenhower administration in the mid-1950s was one focused almost entirely on the employment of nuclear weapons. The Army leadership and rank and file alike rapidly began to understand that this emerging strategy involved massive employment of these weapons—with platforms and systems that had little to do with the massed infantry, armored, and artillery divisions that won World War II and fought to a stalemate in Korea.⁶ The Army realized that national leadership had neither the desire nor intent to employ large formations of ground combat forces. In order to contribute (and indeed, in order to retain a large share of the defense budget), there would need to be a fundamental change in the structure and mission of the Army. This strategic reality again parallels the current Marine Corps’ emerging force design changes as the Corps reconfigures itself to exist in a world of new technology shaped by the modern geopolitical context described above. Indeed, the emerging consensus

within the Corps is that our previous methods of supporting the Joint Force (and therefore national strategic interests) are no longer viable, and thus there must be a fundamental change to both the structure and mission of the Marine Corps.⁷

Inside the 1950’s Army, the realization of the strategic need for change combined with a very new emerging tactical environment. Whereas the Army of World War II and Korea employed large massed formations to create local superiority, the emergence of tactical nuclear weapons turned this entirely on its head. Indeed, given the incredible destruction associated with a nuclear battlefield, massed formations fighting this sort of war would be a major liability.⁸ Dispersion thus became a new watchword across the Service, and this new reality aligned with new technology and manpower changes as well. There was a fervent belief across the Army that new communications capabilities would enable exactly the sort of dispersion that the nuclear battlefield would require. The Army also recognized that to be successful on this new, technologically advanced and dispersed battlefield, it would need better trained, older, and more intelligent soldiers in its front-line units. It rapidly became “bigger, smarter,

better paid, and more reliant on machines.” Concomitantly, it also became more specialized and fragmented.⁹ Many of these same issues appear in a slightly different guise in the current force design efforts within the Marine Corps (and throughout the larger defense establishment). Indeed, the belief in a need for dispersion almost over everything else has renewed vigor, although it is now comes from the broad proliferation of precision munitions and more capable enemy reconnaissance-strike complexes instead of ubiquitous tactical nuclear weapons.¹⁰ The need for more robust and capable communications enabling dispersion is still present (although the exact capabilities have obviously changed), and finally, there is again a plan to bring in older, more intelligent, more mature service members—although the retention problems associated with such an enlisted population were only ever partly solved by the Army and will be exceptionally difficult for the Marine Corps to solve as well.

Finally, in this era, the Army dealt with significant issues within the service regarding roles, responsibilities, and its mission. There were many debates regarding specific weapons and the thinking of the Eisenhower administration,¹¹ but ultimately, the key question that Army leaders and the rank and file asked themselves was, “in a world where the strategic position of the U.S. government is massive retaliation—thus ensuring that any conflagration immediately turns into a nuclear exchange—then what role does the Army have?” The mere fact that this question existed led to dissatisfaction within the ranks, unsure senior leadership, and lack of a clear narrative for the employment of the Army. Ultimately, the Army latched on to three things as the savior of the organization: tactical nuclear weapons, missile forces, and a massive reorganization that prized their employment within the context described above: the “Pentomic Division.” The modern Marine Corps has made a similar assessment; as the Marine Corps has searched for a mission in the context of the re-emergence of great power competition in the past several years, many Marines have asked, “what, exactly, do we do here?”¹² The Commandant has

focused the Marine Corps toward solutions that in many ways resemble the efforts of the 1950's Army; to succeed in implementing them, we must ensure we do not make the same mistakes with the "roll-out" and continued development of this new organization.

The Pentomic Division

Ultimately, the geopolitical, strategic, and bureaucratic context described above combined with technological changes that drove key leaders within the Army to perceive the imperative for the Pentomic Division. The overall concept was developed and forced on the Army in a "top-down" manner based on several flawed and incompletely tested assumptions.¹³ The Pentomic reorganization, officially known as the "Reorganization of the Current Infantry Division (ROCID)," focused around the idea of flattening the command structure, providing combined arms at lower echelons than the Army had previously attempted, and creating a capability for decentralized units to rapidly aggregate and mass firepower at the critical point on the battlefield.¹⁴ Although President Eisenhower originally directed Army Chief of Staff, GEN Maxwell Taylor, to treat it as an experiment and minimize public fanfare, the concept moved forward to a full organizational redesign long before the institutional Army was able to collect and refine the results of the "experiment."¹⁵ The redesign scrapped the proven structure of existing divisions for a more modern structure believed to enable the sort of decentralized action necessary in a nuclear fight. The new organization replaced the regiment and battalion echelons with five "battle groups," each commanded by a colonel. Each battle group, in turn, was comprised of five combined arms companies commanded by captains.¹⁶ Although the removal of the battalion-level echelon of command and some associated subordinate support units resulted in significantly smaller divisions, the reorganization greatly expanded the span of control for the division and battle group commanders. Despite the size reduction and expanded span of control, the Army somewhat disingenuously suggested that this provided a net *increase* in firepower

due to increased flexibility and mobility of the formations and a redistribution of manpower to provide more "frontline strength."¹⁷ Although it was a key planning assumption, the Army only sometimes directly stated that tactical nuclear weapons would be the key "gap filler" for these now understrength infantry and armor formations that would have to fight Soviet or Chinese armored and infantry divisions and corps. Several other key assumptions remained unstated and largely unexamined—mostly key tactical elements related to mobility, dispersion, and flattened command. Finally, there were significant issues with institutional "buy in" and further refinement.

Perhaps the most pernicious element of the transition to the Pentomic Division was the manner in which Army leadership pushed it onto the force. GEN Maxwell Taylor "announced [it] by fiat" at a public meeting without in depth consultation with his staff or those Army organizations tasked to plan for and develop new concepts for future war.¹⁸ GEN Taylor based this decision on incomplete testing in Korea by a single division, scripted "experiments," and limited wargaming efforts.¹⁹ The result of this effort was a force that neither believed in nor actively worked to support the success of the concept. Had it been developed and instituted with bottom up feedback and institutional buy in throughout much of the Army, it is entirely plausible that the units tasked with developing it could have facilitated iterative improvements and refinements. Instead, the rank and file did as they were told. They created the required Pentomic units but did not wholeheartedly accept the wisdom or utility of the change. At the first available opportunity, the Army declared the Pentomic Division a mistake and returned to something better—essentially the organization and structure that it used in World War II and Korea.²⁰

Although many of the changes in design and doctrine might have been executable and possibly even beneficial, the Army never had the opportunity to truly test them in large scale conflict. There were, nonetheless, many issues that the Army did not solve at the time and remain issues for units that intend

to operate in this decentralized and dispersed manner even today. Communications while dispersed and at range, logistics support for dispersed units that could be easily isolated, the firepower necessary to execute the concept, and the right culture and personnel to execute such a difficult and decentralized mission were all either obviously missing or remained outstanding questions throughout the 1950s.²¹ Many of the solutions the Army proposed for these issues relied on either technology that did not yet exist or capabilities that the military was simply unlikely to acquire. In this sense, the Pentomic Division really was more of a marketing strategy than a realistic reorganization.²²

There are many elements of the Pentomic Division story that the Marine Corps should keep in mind as it proceeds with sweeping reorganization focused on the next war. The importance of institutional buy-in and bottom-up refinement simply cannot be overstated. In a time of sweeping change inside the Service, there must be room for debate, discussion, and iterative improvements on this sort of concept. We must also proceed with intellectual humility and remember that despite our current focus; we must also be ready for the unexpected. Indeed, in the case of the 1950's Army, less than a decade after the sweeping changes that were intended to prepare it for nuclear war against the Soviet Union, it instead found itself fighting a very different war in South Vietnam—one for which its force redesign and assumptions about the future had left it entirely unprepared. The Army of the 1950s also spent insufficient time and effort on the most important piece of the reorganization it attempted—the manpower required to execute the concept. Although the concept itself was flawed, with the right people it may have evolved into something more useful. Instead, the real problems of the 1950's Army were "the far more mundane challenges of acquiring, training, and retaining the skilled labor and managers necessary to function during peacetime."²³ As the Marine Corps moves forward with *Force Design 2030*, it would serve us well to look backward toward a time with similar context and use it as a cautionary tale.

Notes

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Don't Lose Sight of the Lance Corporal

The unexpected effects of fleet experimentation and how to fix them

by 1stLt Matthew Shirey

Since the inception of our Corps, junior enlisted Marines have made decisions during conflicts that have had lasting tactical and operational impacts. The United States has asked these young men and women to decide and act in the fog and friction of combat, knowing that Marines ordinarily do not rise to the occasion but simply fall back on the foundation of their training and development. From early 2019 and on, HQMC has encouraged the fleet to experiment with *Force Design 2030* concepts. While this experimentation has yielded some great findings, three issues have come to the forefront as a result. These include a lack in utilization of the scientific method, a skewed benefit analysis of choosing experimental training over developmental training, and most importantly an overemphasis on rank changes in task organizations to solve trust problems. All three of these challenges directly correlate to a decreased focus on development of our junior Marines. The Marine Corps must tone down its push for fleet units to experiment with future force design capabilities and task organizations or it risks losing sight of our most vital asset: the decision-making ability of our junior enlisted Marines.

After analysis of multiple force design after-action reports and direct participation in an experimental exercise, it is evident that units in the fleet are not appropriately applying the scientific method to their experimental training. Experiments are procedures carried out to refute or validate a proposed hypothesis and are only one part in a larger six-step process called the scientific method. The scientific method consists of asking

>1stLt Shirey is an 0302 Infantry Officer, currently serving as a CAAT Platoon Commander with V34. He recently deployed with BLT 3/4 in support of the 31st MEU.

a question or observing a problem, researching, forming a hypothesis, testing the hypothesis, recording and analyzing data, and drawing conclusions. With this in mind, in the context of the Marine Corps' *Force Design 2030*, experiments take the form of training events which should serve to test proposed hypotheses. Instead, experimental training events are commonly being driven by

mitted to conducting experimentation, commanders and staffs at all levels need to deliberately apply the steps of the scientific method in order to maximize value.

In addition, we need to conduct deliberate analysis of the risks and rewards of choosing experimental training over developmental training. Developmental training seeks to improve the effectiveness of organizations and the individuals and teams within them. It focuses on immediate changes and improvements within that organization while also improving the longer term organizational and individual goals. On the other hand, experimental training seeks to prove or

The Marine Corps must tone down its push for fleet units to experiment with future force design ... or it risks losing sight of our most vital asset: the decision-making ability of our junior enlisted Marines.

objectives and outcomes. Hypotheses, not objectives or outcomes, drive experimentation. By improperly applying the scientific method, problems arise that lead to a lack of clarity in purpose of an experimental training event and lead to poorly designed exercises, incapable of proving or disproving anything. When valuable training time is allocated for experimentation, we are deliberately shifting our focus from personnel and unit development to the testing of a hypothesis. When this testing is poorly designed, our time to train and develop our Marines is wasted. If units are com-

disprove a proposed hypothesis. One directly focuses on human capital, while the other focuses on proving or disproving an idea. Upon analysis and experience with past experimental training, it is apparent that units focus large amounts of resources and manpower to ensuring the successful completion of such an event—and rightfully so. However, while there is training value to be gained through experimentation, unit leaders must conduct a few key actions before pulling the proverbial trigger: first, they need to define the audience of the proposed training; second, they need

to calculate the percentage of personnel conducting training versus personnel facilitating training and determine if the resources expended align with the value of the experiment; and third, they must look around the Marine Corps to ensure that the proposed experiment will provide unique and useful feedback. A common trend seen across after-action reports covering force design is the redundancy of experimentation. Units across the Marine Corps are conducting the same experiments and drawing similar conclusions. This stems from both a lack of information push and pull as well as creativity. If a unit leader is tasked to lead a training event that only trains 25 percent of the units participating and directly mimics a completed or soon-to-be completed exercise, they might think twice about the value of repeating it. The fleet is a great environment in which to hypothesize and test future force design concepts, but our primary responsibility is to train our current units to be more lethal and develop all of our people to be better decision makers not a select few.

Finally, an overemphasis on rank changes in infantry battalion tables of organization have pushed fleet units to experiment with these updated force design structures, limiting decision-making opportunities for junior Marines and establishing a dangerous precedent in choosing a Marine's rank over their proficiency. In a recent Marine Corps Warfighting Laboratory publication, a proposed table of organization outlined a 2030 rifle platoon with a ratio of officers, SNCOs, and NCOs to junior Marines as 1.75 to 1. Comparatively, the traditional rifle platoon maintains a ratio of one to two, assuming that all team leaders are NCOs, which is undeniably not the case in most units. Multiple battalions across the Marine Corps have tested and are slated to test this new task organization. However, it continues to be a focus of experimentation by other units within the fleet. While more data collection can be useful, this widespread experimenting comes with a price. First, by "demoting" unit leaders to billets below their paygrade in order to fit the proposed *2030 Force Design*, decision-making opportunities become limited to senior NCOs and higher because platoons now have

a disproportionate number of NCOs, SNCOs, and officers compared to junior Marines. Second, this experimenting has the tendency to lead to "false positives" if exercise design fails to include the use of a "control group" rifle platoon. Control groups are a valuable tool to aid the experimentation process because it provides a baseline for independent variables being tested. In this case, the indepen-

Our junior Marines today will be the leaders and decision makers of tomorrow's conflicts.

dent variable is rank, while the associated dependent variable is performance. In most exercises that have tested the new force design rifle platoon, SNCO squad leaders were provided freedom to conduct distributed operations away from the platoon headquarters for days at a time. However, no exercises have provided sergeant squad leaders the same opportunity. We must give sergeant squad leaders the same trust and freedom to operate in a distributed environment before we confirm the validity of this new force design structure. We cannot be lulled into a false sense of security thinking that increased rank will solve our problems when proficiency and problem solving are our primary means of lethality.

Looking ahead, commanders and staffs at all levels can take away three important lessons. First, if you are fully committed to conducting force design experimentation within the fleet with no external support from agencies specifically designed for experimentation and evaluation, you must deliberately apply the steps of the scientific method in order to maximize value and define hypotheses that you intend on testing. Hypotheses should drive exercise design, not the other way around. Second, there needs to be an honest conversation outlining the risks and rewards for choosing experimental training over developmental training. A victor

unit can surge immense support to a training event, but the priority of that support should be directed toward the development of decision makers not the testing of a hypothesis. Third, similar to how the Junior Enlisted Performance Evaluation System seeks to reward performance over time-in-grade and time-in-service, the Marine Corps must police itself in order to ensure that performance remains dominant over rank in formulating new force design tables of organization. Although rank may bring experience and experience may bring proficiency, we know that this logic does not always prove true. Our confidence in our ability to fight and win wars stems from the fact that unit leaders hold their positions because they are the most qualified and not because of the insignia on their collar.

Our junior Marines today will be the leaders and decision makers of tomorrow's conflicts. We must prioritize their training and development above all else, including experimentation. Dr. James Pierce, a retired Army colonel with the Strategic Studies Institute, published a study on Army organizational culture in which he stated,

The ability of a professional organization to develop future leaders in a manner that perpetuates readiness to cope with future environmental and internal uncertainty depends on organizational culture.¹

Over the course of the next decade, we must ensure that our organizational culture does not lose sight of the lance corporal.

Notes

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A Force-in-Readiness, or in Stasis?

Five questions about FD 2030

by Bing West

After U.S. combat in Iraq and Afghanistan sputtered to an unsatisfactory finish, the Marine Corps pivoted to preparing for a war with China. The pivot, called *Force Design 2030*, calls for “a nimble force capable of employing long-range fires in support of fleet operations.”¹ The key warfighting employment envisions seizing and then hopping from tiny islands in the South China Sea in order to fire missiles at Chinese warships. To pay for this, the Corps has given up its tanks and many artillery tubes. This transformation has been ongoing for two years. Sufficient time has passed to pose five questions:

1. Is the 2030 force vital for sea control?
2. Is the 2030 force credible at in its warfighting mission?
3. What are the opportunity costs?
4. Can the force so disconcert China that it is worth the opportunity costs?
5. Does 2030 force tie into a national policy sustainable for a generation?

1. Vital for Sea Control?

Force 2030 assumes the Navy needs Marines to prevent the Chinese fleet from sortieing across the Pacific. U.S. admirals will gladly accept the offer of the 2030 force. But sea control is not in mortal peril without Marine aid. Our naval aviators and attack submariners believe they are quite capable of sinking those Chinese vessels. In addition, thousands of missiles are lodged on board hundreds of U.S. Navy vessels. Conversely, the mission is not needed to insure the viability of the Marine Corps. The public prizes Marines as tough, disciplined warriors who without exception have fought in any clime or place. Con-

>Mr. West is a former Assistant Secretary of Defense and combat Marine. He has written ten books about Marines in Vietnam, Iraq, and Afghanistan. His latest is *The Last Platoon: A Novel of the Afghanistan War*.

gress and presidents support the Marine Corps as a stand-alone Service.

2. Warfighting Credibility

During any pre-war crisis, China will threaten any nation that grants landing rights. So, it is unlikely any nation will grant permission for Marines to land. The Chinese will have a plan for neutralizing every landing spot. Once hostilities begin, the Navy must place its amphibious ships in harm’s way to land Marines with scant organic firepower. This means the Navy must bring sustainment. But Wake Island in 1941 showed the Navy might decide not to send a relief force. In sum, island hopping in enemy waters is very high-risk.

Separate from capability is the issue of strategic credibility. Does the Chinese fleet really intend to reprise World War II in the Pacific? Yes, two novels—*Ghost Fleet* and *2034*—have featured a Chinese fleet sailing 6,000 miles to seize Hawaii and to drop nuclear bombs on U.S. cities. But to do so in real-life, those Chinese ships must refuel while avoiding our lethal attack submarines and carrier battle groups. Why would China throw away its fleet?

In war, the center of gravity rests upon the determination of the opposing peoples. China, under blockade and without fuel, will be ground down—if American spirit refuses to quit. But the Chinese leadership will be confident that

their society can endure privations longer than can American society. Worldwide shipping will cease, and cyber networks will be severely disrupted. Will the public endure months of hardships, including the loss of electric power, massive financial disruption, and the severe rationing of basic goods?

Rallying his countrymen during the Nazi 1940 bombing of England, Prime Minister Churchill declared, “I see the spirit of an unconquerable people.”² Recently, the historian Niall Ferguson wrote, “Americans today appear to have a much lower tolerance for risk than their grandparents and great-grandparents.”³ In a war, our national will is what China will test.

An article in the *Wall Street Journal* opined, “the generation born between 1995 and 2012 is far more risk-averse and more physically safe than its elders.”⁴ Does America as a society have the grit of “the greatest generation” during World War II? Would we pull together as a nation, or would our sharp cleavages result in the acceptance of Chinese terms?

3. Opportunity Costs

That existential challenge transcends our military. For the Marine Corps, the narrower question is whether the benefits of *Force 2030* outweigh its opportunity costs. Over the past century, America has fought six major wars and a dozen smaller conflicts. Naval planners foresaw

the 1942–45 War in the Pacific; all other wars and crises were not anticipated. So, the odds are about five to one that the next conflict will not be a naval conflict with China. *Force 2030* may be a force in stasis, never employed.

Force 2030, however, did give up tanks and many howitzers. Defense Secretary Jim Mattis and retired Gen Robert Neller invested heavily to modernize the essence of the Marine Corps—the squad. Their shared assumption was that close-in combat remained the lodestone of the Marine Corps. Under *Force 2030*, the squad will fight without tanks or continuous close-in fire support. Marines employed tanks in Vietnam, in DESERT STORM, and in the march to Baghdad. If the next conflict requires tanks or sustained fire support, Marines will have to task organize with Army units, lining up in a queue alongside the National Guard. Command relationships will be complex and time-consuming, enervating the Marine core concept of maneuver warfare. *Force 2030* runs the risk that the next conflict will require what has been discarded, meaning Marines will not be the first to fight.

4. Disconcerting China

Nonetheless, because China poses the largest threat to American interests, *Force 2030* is a bargain if it deflects China from its incremental, irredentist aggression. The historical precedent for this is the Maritime Strategy, circa 1978–88. Following the fall of South Vietnam in 1975, the Pentagon shifted from counterinsurgency to deterring a Soviet blitzkrieg against NATO. Funding and strategy concentrated on an anti-armor defense along the inner-German border, with the Navy playing a small role and reduced funding.

The Navy responded with a study called Sea Plan 2000 that advocated horizontal escalation. While Soviet armor was attacking south against West Germany, American carriers and submarines would surge north, sinking Soviet ships and submarines, including those with nuclear missiles. After wargaming, this evolved into the “Maritime Strategy,” embraced by the CNO and Secretary of the Navy. President Reagan authorized carrier exercises in the Norwegian Sea,

threatening the Kola peninsula. In response, a thoroughly alarmed Russian CNO pleaded with the Politburo for a major increase in funding. Instead, Gorbachev became more convinced that Russia could not compete militarily against America, thus hastening the end of the Soviet Union.

Similarly, *Force 2030* should apply such horizontal escalation, publicly advertising that its long-range missiles are not merely anti-ship; instead, they can also strike targets inside the Chinese homeland. If Chinese warships hid in port, Marine missiles would still go in after them. No sanctuary would be given. *Force 2030* would then get Beijing’s full attention, resulting in much diplomatic sputtering and a heavy Chinese investment in defense. Thus, during peacetime, explicit horizontal escalation by *Force 2030* would have an outsize effect enhancing deterrence, just as the Maritime Strategy had upon the Soviet Union. Viewed through this geopolitical aperture, *Force 2030* is a bargain for America’s security.

5. Is *Force 2030* Tied To a Firm National Policy?

However, unlike in the case of the Maritime Strategy, our national policy does not support *Force 2030*. For a quarter of a century, presidents from both parties have chosen not to take action as China built its littoral forts. U.S. combatant ships occasionally venture into the South China Sea to support international transit rights, but no effort has been made to quarantine or otherwise apply leverage to force China to deconstruct its forts.

Instead, in a feat of policy jiu-jitsu, the administration has used the island-hopping strategy to shrink the overall size of the amphibious force. The Marine Corps recommended constructing eight light amphibious ships to transport small packets of Marines among the contested islands, rather than risk sending in large amphibians. The administration decided that light amphibians could substitute for the construction of larger amphibians.⁵ The Marine Corps was penalized for its strategic initiative.

Whether our policymakers place real value in *Force 2030* is easy to determine.

Simply propose an exercise, to include landing rights, inside the South China Sea. If the White House approves and through diplomacy secures landing rights, then *Force 2030* will move from a paper concept to an operational reality that will genuinely disconcert China. If the answer is no, then we do not have a firm policy to check Chinese irredentism. In that case, the Marine Corps should not devote more resources that degrade the Marine ethos of being ready for combat in any clime or place.

Put bluntly, our policy toward China is too erratic to sustain *Force 2030* for the next twenty and more years. Because our national policy dares not risk even an amphibious exercise in the South China Sea during peacetime, it is highly unlikely our ships would operate there during war. My novel, *The Last Platoon*, described the heroic futility of Marines pursuing a wrong-headed policy in Afghanistan. Let us not repeat that mistake. There is no policy that firmly supports island-hopping in the South China Sea.

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Expeditionary Advanced Base Operations

Is the Marine Corps abandoning maneuver warfare?

by Marinus

The Maneuverist Papers have attempted to promote a conversation about Marine Corps doctrine. In so doing, they have always taken as their point of departure *MCDP 1, Warfighting*, which has stood essentially unchanged since the original version appeared in 1989. There have been two main objectives. First, to help today’s Marines understand the genesis of maneuver warfare doctrine on the premise that to understand where you are and where you are going, you should understand where you have been. Second, to encourage a discussion on whether a doctrine that was promulgated over 30 years ago, in a very different time, continues to serve the needs of the Marine Corps of the present and future. The elephant in the room

>Marinus is a group of retired or former Marines interested in the past, present, and future of Marine Corps doctrine. The group includes John F. Schmitt, Bruce I. Gudmundsson, LtGen P.K. Van Riper, Col Eric M. Walters, and Col James K. Van Riper.

(or perhaps dragon is a better metaphor) regarding this question is Expeditionary Advanced Based Operations (EABO), the new operating concept that underlies the most significant structural changes the Marine Corps has seen since after the Vietnam War. The authoritative source on EABO is the *Tentative Manual for Expeditionary Advanced Base Operations* (TMEABO),¹ according to which “EABO are a form of expeditionary warfare that involves the employment of mobile, low-signature, persistent, and

relatively easy to maintain and sustain naval expeditionary forces from a series of austere, temporary locations ashore or inshore within a contested maritime area in order to conduct sea denial, support sea control, or enable fleet sustainment.”² Another key document is *Force Design 2030*, which describes the future Marine Corps intended to execute that concept.

First, we should establish that a new operating concept—generally speaking—is not obligated to comply with existing doctrine. Presuming that the operating concept is a response to a real-world operational requirement, it is doctrine that should comply with the concept. One caveat, however, is that if maneuver warfare is a direct response to the fundamental nature of war, as the Maneuverist Papers have argued, then we should make certain that where EABO contradicts maneuver warfare it is not also contradicting the nature of war. (Many recent joint and Service operating concepts, such as Effects-Based Operations, have been inconsistent with the reality of war.) The key question is this: If EABO is going to be the future of the Marine Corps, does our warfighting doctrine need to change to support EABO?

While the *Tentative Manual* contains no explicit attacks upon the philosophy expressed in *MCDP 1*, the methods it proposes are based on assumptions about the nature of war that contravene



EABO are a form of expeditionary warfare employing small, mobile Marine units operating from temporary positions to conduct sea denial and associated missions. (Photo by PFC Sarah Pysher.)

the tenets of maneuver warfare. Moreover, the EABO concept in execution has little use for maneuver warfare, and we foresee the warfighting philosophy disappearing in relatively short order as a result—in practice if not in doctrine.

The Strategic Context

To understand EABO, it is necessary to understand the strategic context that begat it. EABO was conceived within the context of an Island Chain Strategy in a war in the Pacific with the People's Republic of China (PRC). The Island Chain Strategy was first proposed during the Cold War as a plan for containing the Soviet Union and PRC through a series of naval bases in the western Pacific from which to project U.S. naval power and deny sea access to the Soviets and Chinese.

In the context of a war with the PRC, it would involve the employment of long-range precision fires from positions along one or more chains of islands to prevent Chinese forces from breaking out of the East or South China Seas. The Island Chain Strategy is an attritional, cost-imposition strategy: the idea is to make projecting power through a line of anti-access capabilities prohibitively expensive for China. Most significant is the First Island Chain, which runs from the Kamchatka Peninsula in the north through the Kuril Islands, Japan, the Ryukus, Taiwan, and the northern Philippines to Borneo in the south (sometimes including southern Vietnam as its southern anchor). The most important of these is Taiwan, the possession of which is recognized as a major policy objective of the PRC. The Second Island Chain runs from Japan through the Bonin Islands, Volcano Islands, Marianas, and Caroline Islands to Western New Guinea.

Perhaps the most concise summary of the logic of the Island Chain Strategy is this:

The idea has an appealing logic: turn the anti-access/area denial (A2/AD) equation back against China. By transforming islands into “porcupines,” DoD aims to develop layers of constraint against Chinese maritime growth. This strategy is both economical and resilient, at least in theory.

Rather than matching China ship-for-ship and risk losing forces to the PRC's A2/AD capabilities, the archipelagic defense tries to put the United States and its allies on the right side of a cost imposition strategy. Pairing radars with shore-based, mobile anti-ship missiles could make a lethal but affordable combination. Moreover, there is no lack of islands in the western Pacific, so this offers the chance for “defense in depth.” The U.S. armed services have embraced the strategy with gusto. The Marines and Army, in particular, have been working on establishing their relevance in the Indo-Pacific.³

While the strategy has its supporters, we argue it is problematic.⁴

As a theater strategy, the Island Chain Strategy has a certain Maginot Line quality to it. One thing we know about Maginot Lines is that they encourage enemies to go to lengths to find ways around them. The example of the Cold War is instructive. The main conflict was always expected to be in central Europe, and the U.S. Army committed multiple corps to that theater for nearly a half-century. That massive conflict never occurred, fortunately, but plenty of

As a theater strategy, the Island Chain Strategy has a certain Maginot Line quality to it.

other conflicts (and other crises) flared up around the periphery, and the Marine Corps, as the Nation's force-in-readiness, was heavily engaged in most of them.

As what happened in Europe during the Cold War, implementing the strategy may involve committing combat forces to the region for years or decades, as China seems inclined to play a long game, patiently waiting until it has shaped the conditions that guarantee victory. As Sunzi, the forefather of Chinese strategic thought, wrote:

Anciently those called skilled in war conquered an enemy easily conquered. And therefore the victories by a master

of war gain him neither reputation for wisdom nor merit for valor. For he wins his victories without erring. “Without erring” means that whatever he does insures his victory; he conquers an enemy already defeated. Therefore the skilled commander takes up a position in which he cannot be defeated and misses no opportunity to master his enemy. Thus a victorious army wins its victories before seeking battle; an army destined to defeat fights in the hope of winning.⁵

Implementing the strategy will require that the EABs be in position before the onset of hostilities. According to the TMEABO: “*Rather than a force designed to fight its way into a contested area, the Marine Corps is building a force capable of persisting and operating forward as a critical component of a naval campaign.*”⁶ (Are we to infer that the Marine Corps is abandoning a forcible-entry capability?) By the logic of the concept, if U.S. forces must fight their way through the Chinese anti-access envelope merely to get into position, then the cost-imposition calculus is reversed. Further, moving forces into position before hostilities in sufficient strength to cause the PRC to feel penned in may trigger just the conflict it is intended to deter, especially if China sees force ratios with respect to the capture of Taiwan trending in the wrong direction.

There also would be significant political hurdles to implementing such a strategy. Host nations would have to authorize the positioning of U.S. forces on their territory indefinitely. Whereas the defense of Europe against the Soviet Union was undertaken by a strong and unified alliance, that condition does not exist in the Western Pacific. The United States would need to make arrangements with individual states for pre-conflict basing, and these would be difficult to arrange. For example, Taiwan would be an attractive location for basing, but any U.S. deployment there would trigger a ferocious Chinese response since the Chinese Communist Party considers Taiwan to be Chinese national territory. The Philippines would also be attractive because of its many islands near the South China Sea, but the Philippine government has been leery of U.S.

connections, its military is weak, and the country is extremely vulnerable to Chinese pressure. Vietnam might be willing to host U.S. forces, but it too has tried to remain neutral, recognizing the immense power of its northern neighbor. Japan has treaty connections to the United States and many U.S. bases but might not be willing to get involved in a conflict that did not directly attack Japanese territory. The Australians have allowed U.S. basing, but the country is distant from the likely venues of conflict.

Any state that allowed U.S. bases would come under continuous, intense economic pressure from China, in the form of both coercion and inducements, to deny U.S. basing rights. China has shown itself to be ruthless in this regard when it considers its interests to be opposed. (Just ask the Lithuanians, who recently lost access to the Chinese market for calling the Taiwanese embassy “Taiwanese” or the National Basketball Association, for that matter, which has repeatedly kowtowed to the Chinese Communist Party to keep access to that market.) Maintaining the system of basing sites, even if successfully established, would thus be an ongoing diplomatic challenge. In the event of conflict, the United States could never be sure that host countries would be willing to risk the immense dangers of confronting China.

A war with China in the Western Pacific cannot be considered in isolation. There is the question of how an Island Chain Strategy comports with other strategic imperatives in the region or around the globe. For example, the Democratic People’s Republic of Korea almost certainly would use a war between the United States and China as an excuse to invade its neighbor to the south. How does establishing a defensive line along the First Island Chain fit with the requirement to flow reinforcements to the Korean Peninsula in such an event?

All this effort might end up being focused on the wrong location. China is without question the greatest threat to U.S. national security interests, and a conventional, high-intensity conflict with China in the Pacific is a possibility—although not a likelihood. However, lesser conflict elsewhere around the

globe is a certainty—whether sponsored by China, Russia, Iran, or somebody else. In a highly insightful and intriguingly titled article, “Insurgency, Not War, Is China’s Most Likely Course of Action,” John Vrolyk writes:

Competing with China might include a great-power war in the Western Pacific—but it’s almost certainly going to consist of fighting proxy wars and insurgencies around the globe where American and Chinese interests clash. ... A great-power conflict today would involve high-intensity combat that would make World War II pale in comparison. Great-power competition, on the other hand, is likely to involve a new era of messy global entanglements, ranging from economic rivalry to intelligence operations to full-on proxy warfare and insurgency campaigns focused on the world’s most critical lines of communication.⁷

The most rational way for China to pursue its aim of displacing the United States as the dominant power in the region, according to Vrolyk, is to “rely more on bullying, proxies, and insurgencies than on hypersonic or nuclear interchange.”⁸

Even acknowledging the potential deterrent value of the Island Chain Strategy, this is far from the best employment of Marine Corps forces. The Army is much better prepared and equipped to provide the landbased missile forces that are the backbone of the concept. If the Marine Corps were so committed, who then would fulfill the force-in-readiness role? Is it in the Nation’s interest to tie up limited Marine forces—built for rapid deployability to “any clime and place” and warfare across the spectrum of conflict—indefinitely in anticipation of a war that may not occur?

Some may argue that the Marine Corps today is merely doing what the interwar Marine Corps did in developing amphibious capabilities based on War Plan Orange. The critical difference, however, is that those amphibious capabilities found utility in nearly every theater of the Second World War and in numerous instances since, while EABO appears to be applicable to one very specific feature of maritime terrain in the western Pacific.

Part of the motivation behind this concept likely is the understandable desire to return the Marine Corps to its naval roots after two decades of employment essentially as a second land army. However, there are other ways to do this without tying the Marine Corps down to a narrow mission within a single theater. No doubt, some of the motivation is the desire to be part of the main fight rather than a sideshow, but Marines should remember that during the Cold War they maintained a global posture as a force-in-readiness and were not focused specifically on the central front in Europe (although they did maintain capabilities that were relevant to that theater). This approach was successful. The Nation and the defense establishment recognized that the United States had global responsibilities it could not walk away from.

The Operational Context

The operational context of EABO is a maritime campaign for sea control/sea denial by means of an integrated network of sensors and shooters designed to detect and engage advancing Chinese naval forces with long-range precision fires. EABs would serve as essentially inanimate nodes within that network, operating from supposedly survivable positions inside the enemy’s weapons engagement zone to attack the enemy’s anti-access capabilities from the inside out. As operating concepts go, this one fits squarely in the methodical battle/attrition warfare school of thought.

The TMEABO identifies several missions and tasks for EABs, including air and missile defense, forward sustainment, forward command and control, and forward arming and refueling point operations.⁹ But clearly, the preeminent mission of EABs—and the one resulting in the most dramatic changes in structure—is expected to be engaging enemy ships with missiles from shore-based batteries or unmanned surface vessels launched from the EAB. The EABs will serve essentially as firebases launching anti-ship missiles at distant targets. A networked sensor system will detect the targets, and a networked naval commander will make the engagement decisions. The EAB will be just

another set of launchers in the network, augmenting the much greater number of launch cells aboard Navy ships and on Air Force, Navy, and Marine Corps aircraft.

Although the new concept might brief well, it has several major deficiencies. The first problem is fundamental. This is warfare reduced to dueling kill webs, warfare as a giant Lanchester equation, which we hardly need point out is attrition warfare in pure mathematical form.¹⁰ (See *Maneuverist No. 10, "Defeat Mechanisms," MCG, Jul21.*) It reflects a mindset not uncommon in the Navy and Air Force—which see war essentially as a clash of technologies—but fundamentally inconsistent with the nature of war as described in *MCDP 1, Warfighting*.

A second problem is a discounting of combined-arms maneuver. EABO is a firepower-based concept premised on defeating the enemy's advance at a long distance. Under such a concept, tactical maneuver becomes irrelevant. (The EAB commander's latitude for positioning and repositioning for security purposes hardly qualifies as maneuver.) But we know this to be unrealistic; history tells us that at some point enemy forces will penetrate the friendly anti-access barrier, and when they do, the outnumbered and isolated small Marine units will be fighting for survival without the benefit of cannon artillery or tank support.

Third, the security of the EABs will be problematic. EABs are expected to rely on remaining undetected through

mobility, concealment, and low signature. According to the TMEABO, the bases will be small, austere, and temporary, based on the rationale that any prepared emplacement within the PLA's weapons engagement zone will be detected and vulnerable to destruction. This logic is problematic. First, any emplacement that remains in place for any period of time will start to accumulate infrastructure. This was the case with firebases in Vietnam, which were originally intended to be temporary positions but over time became ever more elaborate, incrementally providing additional security, comfort, and functions. If the stand-in forces at the EAB are engaged in security cooperation activities prior to hostilities, as is envisioned, their presence will be well known to the local population. That population almost certainly will be infiltrated with human intelligence sources.

Fourth, logistic support likewise will be an issue. Every resupply mission or other logistics contact risks giving away the EAB's position, which is why EABs are meant to be largely self-sustaining. Despite YouTube videos of TBS lieutenants being taught to slaughter and roast pigs, we understand that local sustainment primarily means living off the local economy through greater operational contract support. Like security cooperation activities do, self-sustainment presents a major operations security risk. Interactions with the local population will expose the EAB to detection by human intelligence. EABs are likely to be pinpointed every bit as

much as if they had been detected by high-technology sensors.

The Implications of *Force Design 2030*

In designing the force to implement the EABO concept, *Force Design 2030* calls for dramatic structural changes. The infantry battalion—the base ground maneuver unit, the moral heart and soul of the Marine Corps—will be reduced dramatically in both number and manpower strength. Marine Corps statements indicate that decision is driven by a desire to find budget savings rather than by any analysis of operational requirements. The number of active battalions will be reduced from 24 to 21. Only one of those will be permanently stationed in 3d MarDiv. The 1st MarDiv will have twelve infantry battalions, but six of those will be committed to Marine Littoral Regiment (MLR) and MEU rotations, leaving only six battalions for other commitments. The 2d MarDiv will have eight infantry battalions, but four of those will be committed to MLR and MEU rotations, leaving barely a regiment for other requirements.¹¹ (See Figure 1.)

The TMEABO insists that the Marine Corps will be able to make these drastic changes and still meet its statutory missions, but we are unconvinced.¹³ We question whether a Marine Corps with this decreased infantry structure can meet its global requirements. Unless the Marine Corps is being written out of war plans, the numbers do not seem to add up.

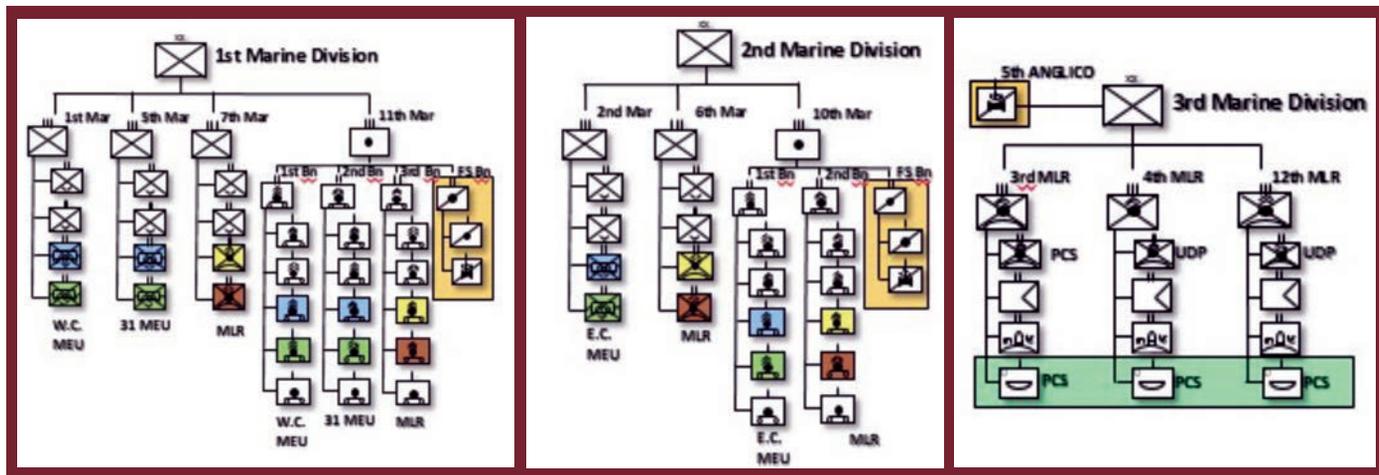


Figure 1.¹² (Figure provided by author.)

We understand that the exact organization of the infantry battalion is still under development, being the subject of ongoing experimentation, but per the TMEABO the infantry battalion will see a *one-third* reduction in manpower strength, from 965 to 648.¹⁴ This will dramatically impact the battalion's resilience in the face of the casualties that can be expected in a war with a peer competitor.

With the reduction in infantry battalions, the *Commandant's Planning Guidance* calls for roughly proportional cuts in aviation and other support.

Artillery will get smaller and undergo a transformation. According to the *Commandant's Planning Guidance*,

we remain woefully behind in the development of ground-based long-range precision-fires that can be fielded in the near term which have sufficient range and precision to deter malign activities or conflict. Our capability development focus has fixated on those capabilities with sufficient range and lethality to support infantry and ground maneuver. This singular focus is no longer appropriate or acceptable. Our ground-based fires must be relevant to the fleet and joint force commanders and provide overmatch against potential adversaries, or they risk irrelevance.¹⁵

In practical terms, this means a transition from cannon artillery to rockets and missiles. It is these units that are expected to perform the task of providing precision anti-ship fires in support of sea control/sea denial called for in the concept. Per the TMEABO, cannon artillery in the active forces will be reduced to five total batteries.¹⁶ Clearly, the *Commandant's* guidance signals a shift away from fires in support of ground maneuver, a task requiring massed and sustained area fires and one not suitable for precision rockets and missiles, some of which cost nearly \$2 million per round. With the reduction of cannon batteries, the ability to perform traditional fire support missions like suppression, marking, illumination, and obscuration fires will be nearly nonexistent.

Additionally, as practically every Marine now knows, tanks have been eliminated outright from the inventory.¹⁷ The elimination of tanks, the

drastic reduction of cannon artillery, and the dramatic reduction in the number and size of infantry battalions unequivocally signal that the Marine Corps has little intention of being involved in high-intensity ground combat in the future. The infantry's mission of locating, closing with, and destroying the enemy clearly will be a thing of the past. Marine infantry will become little more than a security force for rocket/missile batteries and aviation and logistics assets. The debilitating impact on ethos and culture will be profound, even to the point of undermining the Corps' foundational belief in "every Marine a rifleman." It is ironic that one of the stated objectives of the reorganization is to transition away from two decades of counterinsurgency because, except for the MLRs optimized for a naval campaign in the western Pacific, the rest of the Marine Corps seems to be getting reduced to little more than constabulary forces incapable of high-intensity, combined arms combat.

The principles of maneuver warfare and mission command and control permeate all actions of littoral forces conducting EABO, from planning through execution. During planning, commanders aim to create conditions during execution that enable subordinates to operate guided by the essential elements of mission command and control: *low-level initiative, commonly understood commander's intent, mutual trust, and implicit understanding and communications*.¹⁹

The passage hits all the right notes, but as we read the manual, we have to wonder how much need there will be for mission command. How much latitude is there really for low-level initiative when the EAB will be little more than an inanimate firepower node in a massive kill web comprising myriad sensors and shooters linked together in a comprehensive digital network? The EAB commander's role will consist essentially of securing and sustaining his position

As we have discussed, mission tactics (or mission command) are the defining feature of maneuver warfare ...

Finally, the Marine Corps must consider the risk it is accepting by divesting itself of capabilities before new ones come online.¹⁸ Regardless of which missile the Marine Corps eventually buys, that capability will not become operational for several years. But the divestments are happening now—and in some cases have already happened. The Marine Corps of today is a less capable force than the Marine Corps of only two years ago—and it continues to shed capability—which of course undermines national security.

Mission Command

The concept of mission command merits special mention. As we have discussed, mission tactics (or mission command) are the defining feature of maneuver warfare (Maneuverist No. 12, "On Decentralization," *MCG*, Sep21). The *Tentative Manual* makes the necessary head nod to the concept:

on some littoral while the entire fight takes place over the horizon. There will be no maneuvering against the enemy or engaging in close combat—the historical strength of the Marine Corps—that is, unless the concept has utterly failed and it is time to fire the final protective fires (which, by the way, apparently will be limited to a small number of 81mm mortars). Movement generally will consist of local repositioning to avoid detection or counterbattery fire.

Moreover, there is an internal contradiction in espousing mission command within the context of a centralized network-centric approach. This problem is by no means unique to EABO. Practically every Service or joint operating concept of the last decade has paid lip service to mission command while making operations increasingly dependent on a comprehensive digital network. *Joint All-Domain Command and Control* is only the most recent, and perhaps most

ambitious, effort. It is difficult to see how mission command will survive in such a command and control (C2) environment characterized by centralized situational awareness and detailed control through information technology. It is not practical to say that mission command will take over when the network goes down. (And does anyone believe that taking down the U.S. information network will not be a primary enemy objective in any war?) Mission command requires training and practice; it is not something that can simply be turned on when the network goes dark. A force that has trained and operated under tightly controlled and highly centralized decision making becomes acculturated to that.

Conclusion

Returning to the question that began this paper: If EABO is going to be the future of the Marine Corps, does our warfighting doctrine need to change to support EABO? Based on assumptions about the nature of war that run counter to *MCDP 1*, the EABO concept has little need for maneuver warfare. We believe that doctrine will change. We believe EABO would be better served by a doctrine based on technical and procedural proficiency and limited latitude in the performance of constrained tasks, but we also believe that is not what the Nation expects or needs from its Marine Corps.

History tells us that the track record for accurately predicting the next fight is very poor.²⁰ China is the pacing threat, without a doubt, but that is a far cry from concluding that the next war will be a high-tech fight with China in the western Pacific. Yet, with EABO and *Force Design 2030*, the Marine Corps seems to be going all-in on just that fight while hobbling the Corps' ability to perform other missions.

The Marine Corps has a history of fearing for its survival any time it comes out of a long period of war in which it has been employed indistinguishably from the Army. We have no doubt the Commandant believes he is protecting the Marine Corps by making it more relevant to the future security environment. The Commandant deserves, and

has received, credit for making bold moves. Boldness is a tenet of maneuver warfare, but we fear that the TMEABO and *Force Design 2030* risk transforming the Marine Corps into a niche force optimized for one specific war that must be considered unlikely while rendering it ill-equipped to respond to the many types of crises and conflicts that history tells us are certain. By stripping the Marine Corps of the ability to carry out the crisis-response and combat missions the Nation has long expected of it, the Commandant instead may be consigning it to irrelevance—or worse. As *Warfighting* advises, “boldness must be tempered with judgment lest it border on recklessness.”²¹

Notes

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

2. Ibid.

3. Lyle Goldstein, “Bad Idea: Turning A2/AD against China with ‘Archipelagic Defense,’” *Defense 360°*, (December 2021), available at <https://defense360.csis.org>. To be fair, Goldstein is no supporter of the concept. The very next paragraph begins: “However, archipelagic defense is a bad idea for political, economic, environmental, and military reasons.”

4. See, for example, Andrew F. Krepenovich, “How to Deter China: The Case for the Archipelagic Defense,” *Foreign Affairs* (February 2015), available at <https://www.foreignaffairs.com>. See also Thomas G. Mahnken, “A Maritime Strategy to Deal with China,” *Proceedings*, (Annapolis, MD: U.S. Naval Institute Press, February 2022).

5. Sun Tzu, *The Art of War*, trans. by Samuel B. Griffith, (London: Oxford University Press, 1963).

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

7. John Vrolyk, “Insurgency, Not War, Is China’s Most Likely Course of Action,” *War on the Rocks*, (December 2019), available at <https://warontherocks.com>.

8. Ibid.

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

10. Lanchester’s Laws are a set of differential equations for calculating the strength of two battling military forces over time based on the relative rates of attrition between the two. They were first developed by English polymath and engineer Frederick Lanchester around the time of the First World War.

11. It is worth noting that these numbers are based on two-battalion rotations rather than three-battalion rotations, meaning six months on and six months off, which the Marine Corps has previously found unsustainable for MEU rotations. Switching to three-battalion rotations to ease the operational tempo would leave even fewer infantry battalions ready for immediate deployment.

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

13. Ibid.

14. Since the mid-1980s, between the decrease in the number of infantry battalions from 27 to now 21 and the reduction in the size of those battalions, the number of Marines in infantry battalions has been cut essentially in half.

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

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

17. And with the tanks also the necessary skills to rebuild the capability, as career Marine tankers unwilling to transition to other MOSs have been forced to transfer to the Army.

18. Not to mention the risk of never seeing the savings of those divestitures recouped in other capabilities gained.

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

20. See, for example, Lawrence Freedman, *The Future of War: A History* (New York, NY: Public Affairs, 2017).

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



Sustaining Stand-in Forces

Evaluating the logistical supportability for Expeditionary Advanced Base Operations

by Maj Daniel Katzman

“In a distributed and contested environment, logistics is the pacing function of the Marine Corps.”¹

As the Marine Corps returns to its naval roots, there is a renewed focus on how the Marine Corps can support the naval force. *Expeditionary Advanced Base Operations* (EABO) has a foundation in the *Marine Corps Operating Concept* and outlines how the Marine Corps can enable the naval force. EABO is not the only role for the Marine Corps; however, it is emerging as a critical role across the conflict continuum against peer competitors. It will be most challenging logistically during an outright war.

EABO describes how Marines will distribute among a series of expeditionary advanced bases (EAB) to support the maritime portion of a peer conflict. EABs—characterized by their small size, dispersion, mobility, and low signature—are designed to operate in the littoral areas around key maritime terrain, within the enemy’s weapons engagement zone (WEZ). These EABs are task-organized to provide various capabilities, such as ground-based fires or logistical support for the fleet, as required by the Maritime Component Commander. Regardless of the EAB’s capability, they will enable friendly operations while reducing the fleet’s risk.

In a modern, high-end conflict, EABO is not logistically supportable given the

need to persist and operate within the enemy’s weapons engagement zone at a significant distance from friendly support bases. EABs used for fires in support of sea control or forward arming and refueling points (FARP) provide the required sustainment scope to appreciate the logistics dilemma. When these EABs operate simultaneously to realize operations at scale, a logistics distribution challenge arises that is greater than the Marine Corps or joint force can support.

Fires EAB Vignette

An EAB supporting sea control using landbased anti-ship cruise missiles (ASCM) will require shooting platforms, personnel to operate the platforms, ordnance, and fuel to support operations. While the Marine Corps does not have a shorebased ASCM firing capability yet, a HIMARS or Joint Light Tactical Vehicle (JLTV)-like platform firing the Naval Strike Missile (NSM) is the envisioned solution.² Those systems provide an example from which size and fuel consumption can help determine EAB logistics requirements. Each platform is assumed to carry and shoot one NSM at a time based on similarities to the current HIMARS capability to carry and shoot one Army Tactical Missile System, which has similar physical dimensions to the NSM. The NSM and its shooting platform provide the critical component of fires EABs.

A fires EAB needs to produce a salvo sufficient to achieve a mission kill on an

enemy combatant to prove effective in supporting sea control. In the Wayne Hughes book *Fleet Tactics*, a historical analysis of ASCM missile engagements outlines that the probability of a missile hit against a defended ship is 0.264.³ Assuming a shot doctrine of two missile hits to achieve the desired mission kill, the EAB would need to be capable of firing eight missiles against one defended enemy ship. The shooting platforms do not have to be collocated but need to be close enough to mass their fires on the enemy ship within the overlapping ~100nm range of the NSM. It is prudent to anticipate that enemy ships will not operate independently in a conflict but instead in a surface action group of at least three ships. Therefore, additional ordnance would be required for rapid reloading and engaging the other ships in that group. The capability for multiple salvos from each shooting platform will require an ammunition truck to carry ordnance for a quick reload to continue to provide effective sea control.

Using the Marine Corps proposed Navy-Marine Expeditionary Ship Interdiction System force structure, a platoon would consist of 9 launchers and 30 personnel, not including attached support personnel from the battery HQ.⁴ An additional twelve Medium Tactical Vehicle Replacement-like (MTVR) vehicles would transport supplies and ordnance for multiple salvos. Twenty-four Marines would operate them from the headquarters battery, also filling vital roles such as

>Maj Katzman is a Logistics Officer, currently serving as Plans Officer, 1st MLG. This article was written while a student at Maritime Advanced Warfighting School.

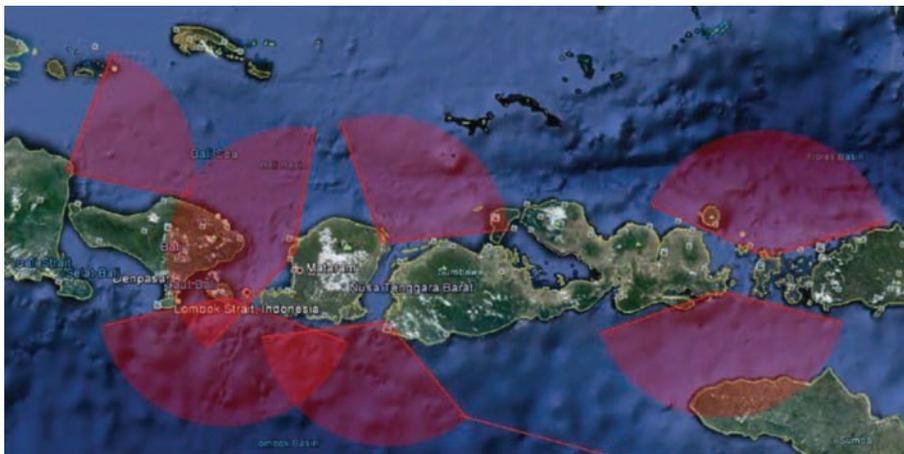


Figure 1. Example fires EAB laydown.⁸

communications, ordnance, and service personnel. Finally, an additional platoon of 36 Marines would be required to provide local security, including 9 JLTV-like vehicles to provide their needed mobility. In total, a fires EAB would require 90 personnel, 18 JLTV-like vehicles, and 12 MTRVs. Sustainment would require 5,400 pounds of subsistence and 9,956 pounds of fuel per day; each 8 missile salvo would require a resupply of 7,048 lbs of ordnance.⁵

A 2013 RAND study provides several potential employment scenarios that detail the EAB locations required to establish sea control along the first island chain.⁶ Using the Lombok Strait and surrounding passages in Figure 1, seven separate EABs will be necessary. Given the geographic separation, each EAB will need to produce its own eight missile salvo. This requirement drives each EAB's need to have the complete set of personnel and equipment outlined in the previous paragraphs. Of note, these EABs are not specific sites but instead broadly defined Position Areas Artillery where Navy-Marine Expeditionary Ship Interdiction System platoon and attachments will be able to fire, displace, reload, and be prepared to fire the next salvo.⁷ The previously mentioned mobility is vital to their ability to execute survivability displacements after firing.

When scaled to the Lombok Strait and surrounding passages, the associated set of EABs would require a total of 63 shooting platforms, 84 supply vehicles, 63 security vehicles, and 630 personnel. For sustainment, the fires EAB vignette

requires 37,800 pounds per day of subsistence, 69,673 pounds per day of fuel, and 7,048 pounds of ordnance per salvo or more likely 21,144 pounds per engagement with a 3-ship surface action group. Assuming one engagement per day, this vignette requires approximately 65 short tons per day of sustainment delivered to the 7 geographically separated sites.

FARP EAB Vignette

A FARP EAB supporting aviation operations would provide rearming and refueling for Marine Corps and Navy aircraft to extend time on station or increase sortie rates.⁹ These EABs will require aviation fueling equipment, vehicles to transport equipment and supplies, and

material handling equipment to support ordnance movement from storage or transportation to the aircraft. Again, any equipment that is not self-mobile would require transportation assets to enable mobility within the area of operations. Distributed Short-Take Off Vertical Landing Operations (DSO), as a subset of Distributed Aviation Operations, outlines the concept for the employment of mobile FARPs in EABO.¹⁰

The premise of DSO is that F-35Bs can operate from land or sea bases outside the enemy's WEZ, utilizing mobile FARPs to increase sortie generation.¹¹ A DSO study outlines a scenario where nine mobile FARPs, supported by three mobile distribution sites (MDS), can provide 24/7 FARP support to 28 F-35Bs per day.¹² Each FARP has mirrored personnel and equipment to provide all required aviation ground support capabilities. The FARPs collectively service each F-35B twice per day with fuel and ordnance. Not all mobile FARPs will be active at once; they will rotate sites as depicted in Figure 2 to increase survivability. While the FARP size is scalable, the medium size is the smallest that can provide 24/7 operations, requiring a total of 1,479 personnel and 387 vehicles to support the 9 mobile FARPs and 3 MDS.¹³ These sites would consume 88,740 pounds of subsistence and 162,213 pounds of fuel per day. Assum-

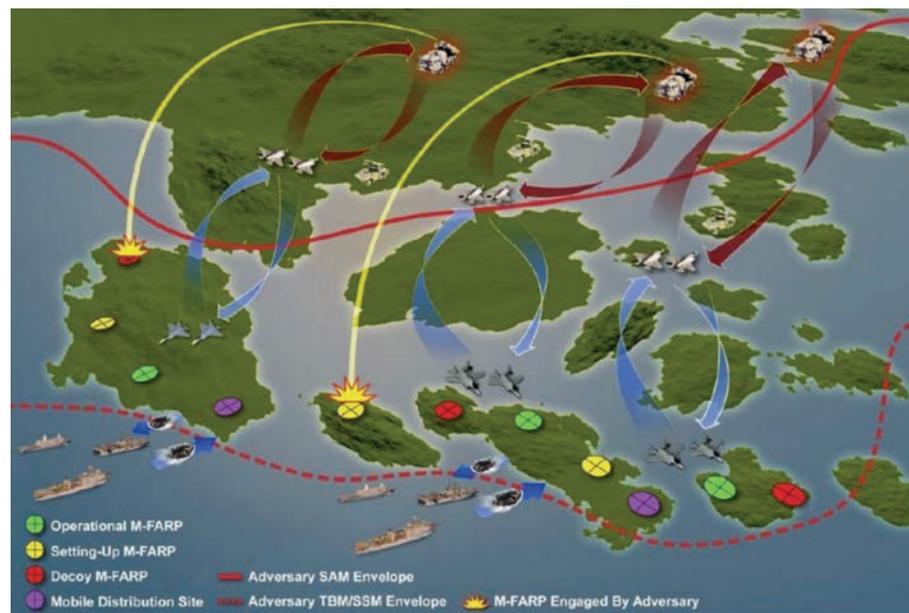


Figure 2. Notional mobile FARP laydown.¹⁵

ing the aircraft would require 12,000 pounds of fuel and resupply of ordnance each time, the daily requirement would be 672,000 pounds of fuel and up to 560,000 pounds of ordnance.¹⁴

Support to Navy aircraft, like the P-8, will increase the fuel and ordnance requirements for these FARPs. For example, P-8s based out of Guam, conducting maritime patrol and reconnaissance somewhere inside the first island chain, could be supported by a FARP in the Philippines, such as one of the mobile FARPs above.¹⁶ Departing from Guam and operating on station for approximately 4 hours, a P-8 would need 30,000 pounds of fuel to return to Guam safely. It would require P-8s rotating every 4 hours to provide 24-hour coverage on a target area. The supporting aircraft would require refueling support from the FARPs in the Philippines six times a day and may need an entire reload of sonobuoys and Harpoon missiles or MK54 torpedoes.¹⁷ The total sustainment would be 180,000 pounds of fuel and 63,096 pounds of ordnance and sonobuoys per day.

When you combine the support to Marine Corps and Navy aircraft, the subsistence requirement remains the same at 88,700 pounds per day, assuming supported aircraft crews require no subsistence. On a daily basis, the fuel requirement aggregates to 1,014,213 pounds while the total ordnance requirement is approximately 623,096 pounds. Therefore, the complete daily support for FARP EABs would be 863 tons.

Combining the Vignettes and Supportability

As described, the proposed vignettes will each require significant logistical support to provide an enduring presence. Furthermore, the anticipated scale of EABO means simultaneous execution of the vignettes.¹⁸ The result is that their logistics requirements are additive, there is no economy of scale to be gained, and they will likely compete for priority of logistics support. The vignettes' combination results in a daily sustainment requirement of 928 tons, establishing the logistics requirement for EABO.

There are countless permutations of combining connector types for accom-

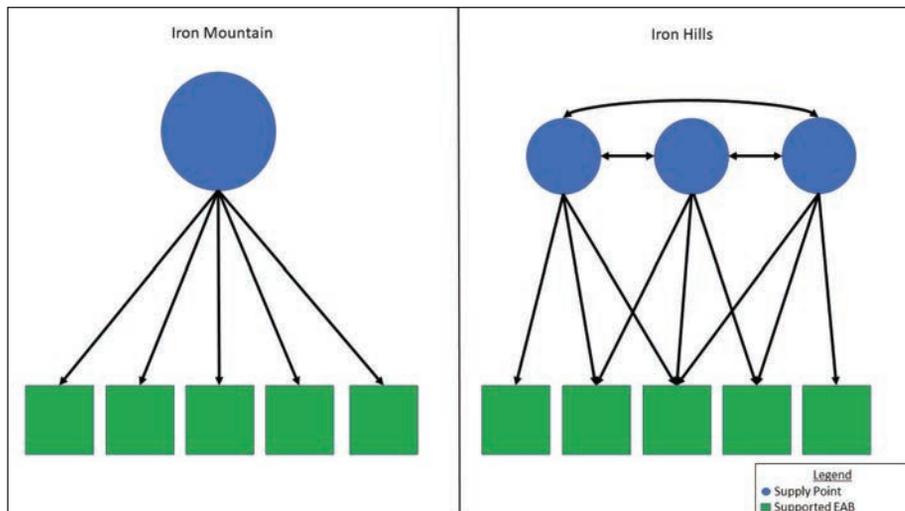


Figure 3. Notional supply and distribution networks.

plishing the daily sustainment requirement. Total deliveries will range from 8–180 per day depending on the type of connectors used and their respective capacity.¹⁹ This quantity of deliveries places an extremely high demand on the distribution system and creates an EAB observation vulnerability. Any attempt to reduce deliveries by increasing the delivery size will require additional ground or mobile storage. With the distribution requirement established, additional factors only complicate the challenge.

Supply and Distribution Network

In light of the enemy threat, supply points for distributed operations, like EABO, must evolve to be more dispersed and located outside the enemy's WEZ. The traditional model for an "iron mountain" assumes significant sustainment risk, which led to the idea of dispersing supplies to multiple "iron hills," which will avoid disastrous loss.²⁰ The risk reduction loses economy of scale. Increasing supplies and distribution capacity to manage stockage levels between these supply points provides partial mitigation to the loss of economy of scale.²¹ The net result is the increased cost for extra supplies and a more complex, less efficient distribution network to overcome the dispersion. Figure 3 depicts the differences in the distribution and supply models and demonstrates the complexity and increased distribution capacity requirement resulting from dispersing supplies to multiple supply points.

Additionally, geography, long distances, and enemy action complicate the distribution network. The most challenging geography for EABO is non-contiguous terrain, like the Lombok Strait and surrounding passages from the fires vignette. EABs operating in areas separated by water cannot leverage a common ground resupply point, requiring air or naval assets to distribute supplies. Furthermore, with supply points located outside the enemy's WEZ, lines of communication will be longer both in terms of distance and time.²² This time-space challenge requires additional distribution capacity to ensure constant deliveries. Finally, enemy actions will result in losses in the distribution chain.²³ These cannot be avoided in a high-end, modern conflict and will destroy both the distribution asset and its payload. These factors' resulting impact is the requirement for redundant capacity that sits underutilized or gets re-tasked until losses occur.

Push vs Pull Logistics

In addition to the intricacies of the distribution and supply network, push versus pull logistics adds another complexity level. Push logistics are forecastable items, including the subsistence, fuel, and ordnance requirements outlined earlier. While less efficient than pull logistics, it is the best way to ensure logistics support given the time-space considerations for distribution. Conversely, EABs cannot forecast pull logistics, which are often critical items such

as repair parts. EABs can bring a Class IX block, but since it is impossible to bring every part, equipment will become degraded or deadlined as a result of lack of parts, negatively impacting the EAB's capability. While repair parts are a single example of a pull item, they illustrate any other unforecasted supply requirement's challenges. The timely delivery of logistics in EABO will depend on a robust and resilient supply and distribution system capable of meeting both forecasted and unforecasted requirements.

Other Logistics Function Requirements

Other selected functions of logistics highlight some additional sustainment challenges created by EABO. Distanced from higher levels of care, casualty and medical evacuation become incredibly challenging. Given the current doctrine's consolidation of medical capabilities, operations at distributed EABs will only be capable of minimal medical treatment for any sustained injuries. This increases the risk to personnel because of impacts on the "golden hour," and any casualty or medical evacuation will compete for the same distribution assets required for resupply.

Maintenance will be a challenge for EABs operating in austere environments with minimal supplies and personnel. As previously mentioned, EAB forces can bring a parts block, increasing their sustainability—assuming that the operators can repair the equipment. When special tools, equipment, or maintainers are required, they will either have to be part of the EAB force or be readily available for support to widely dispersed forces. Even if available, these personnel and equipment still have the challenge of getting to the EAB. If the equipment's repair cannot be done on-site, recovery and evacuation for maintenance add another complexity level.

While not all-inclusive, these selected functions demonstrate more competition for logistics priority within EABO. These competing logistics priorities are subject to the same distribution complexity resulting from inefficient distribution networks, losses to enemy actions, and unforecasted requirements. Moreover, logistics support will com-

pete with the movement and maneuver operational function for the same surface or air assets. These factors only further complicate the daily challenge of distributing 928 tons of supplies, making EABO at scale unsupportable in a modern, high-end conflict. Gen Berger testified that

the operational logistics system, both ground and aviation is insufficient to meet the challenges posed by a peer/near-peer conflict, especially in the Indo-Pacific where significant distances complicate sustainment of a deployed force.²⁴

How It Could Be Supported

Others would argue that EABO is logistically sustainable and there are mitigations for the complexity and challenges. First, the Marine Corps is already executing limited EABO. Second, joint capabilities provide additional capacity for sustainment, enabling the expansion of EABO. Finally, future capabilities throughout the joint force are sufficient to provide the necessary support.

In 2019, the 31st MEU conducted EABO, demonstrating a FARP supporting aviation and support to HIMARS fires missions. The MEU seized an airfield and set up a FARP that could support

The *Tentative Manual for EABO* identifies Operational Contract Support (OCS) and prepositioning as key enabling logistics capabilities. OCS can leverage local sources of supply to reduce distribution requirements for common logistics items significantly. Fuel and water are two of the most considerable sustainment requirements for EABO that OCS can fulfill. Prepositioning can provide the initial supplies while OCS gets up and running. Furthermore, it can reduce deployment requirements by having equipment staged in the operating area. Combined, OCS and prepositioning will lessen movement and sustainment requirements, resulting in a significant reduction of distribution requirements.

From a joint perspective, the Air Force and Navy will also serve as critical enablers for EABO sustainment. The Air Force's air mobility assets provide a distribution capability that can access many of the forward areas utilized for EABs from bases outside of the enemy's WEZ.²⁶ With substantially more capacity than Marine Corps Aviation, the Air Force will make considerable contributions to sustainment. From the Navy, the Marine Corps can "begin with leveraging joint maritime efforts such as

The timely delivery of logistics in EABO will depend on a robust and resilient supply and distribution system capable of meeting both forecasted and unforecasted requirements.

both rotary-wing and KC-130J aircraft.²⁵ The ability to support larger fixed-wing aircraft demonstrates significant progress toward supporting EABO at scale in a conflict, given the increased sustainment requirements for providing that capability. The MEU then conducted a notional adjacent island seizure, leveraging the first EAB to support the operation. The second island served as a base for HIMARS to conduct long-range precision strikes. This is an example of EABs supported with equipment, personnel, and capabilities organic to a standard MEU.

Naval Logistics Integration, Seabased Logistics, and Distributed Agile Logistics."²⁷ The inherent lift capacity of ships, their ability to serve as mobile supply points, and their capability to carry surface connectors will be critical to enabling EABO at scale. These seabased assets will reduce the distances for lines of communication and provide significant increases in distribution capacity. Furthermore, the development of new platforms will increase distribution across sea lines of communication in the future.

The Marine Corps and Navy are pursuing new amphibious platforms to enable distributed operations. Most promising is the Light Amphibious Warship (LAW). Its design incorporates sufficient range to carry supplies from distant landbased supply nodes or sea-based supply nodes from amphibious or maritime prepositioning ships.²⁸ The LAW, augmented by new unmanned surface and air vehicles, can drastically increase distribution capacity, making EABO sustainable.

Rebuttal

Previous success in demonstrating EABO and joint force capacity does not guarantee supportability moving forward. The examples from the 31st MEU are not to scale, which fails to show EABO's true logistics challenge. The scope of EABO's logistics problem and the competition for distribution assets within the joint force will demand too much of current capabilities and capacities. The joint competition extends to future budgets, which places the future programs intended to make EABO supportable at risk.

While OCS and prepositioning of resources can significantly reduce the sustainment distribution for EABO, they have inherent risks. For prepositioned equipment and supplies, there is the risk that they will be discovered or damaged before their use. If the compromise of these assets goes undiscovered, critical shortages will result that will degrade or prevent an EAB's operations. Similarly, OCS requires trust that the host nation's support will be available and reliable during a time of conflict. The sustainment requirements of EABO demand reliability and neither prepositioning nor OCS can provide guarantees.

The assets identified as critical joint enablers for EABO are the same resources needed to support competing concepts from other Services. The Army's Multi-Domain Battle Concept advertises to provide very similar sea control capabilities to those outlined in the fires vignette above.²⁹ Sustainment for the Army will require many of the same seabasing and air mobility assets, competing with those necessary to support EABO. Additionally,

the Air Force aims to distribute their aviation operations to increase survivability in a modern conflict, increasing requirements for finite and limited air mobility assets.³⁰ Finally, the Navy is likely to execute distributed maritime operations, resulting in an increased distribution requirement for sustainment, which will demand more from an already stretched Combat Logistics Force (CLF).³¹ These CLF ships are the same that will be required to resupply any seabases supporting EABO. Given competing priorities across the Services, the Marine Corps cannot expect to be the sole recipient of the joint assets. When combined with the risk of losses as a result of enemy action discussed earlier, joint assets are not a guaranteed solution for supporting EABO.

The combination of the LAW and unmanned vehicles promises to provide relief in the future but provides no assurances. Acquisition programs, new and old, are plagued with schedule delays and cost overruns. For the fiscal year 2021, the LAW program's approved funding was \$24 million, already 20 percent less than the requested \$30 million.³² There is no guaranteed budget to support future capabilities necessary for sustaining EABO. Each program competes for resources within the Service, and the Services compete within the DOD.³³ The competition for funding is never-ending, and the possibility of reductions to the defense budget only exacerbates the problem. In a fiscally constrained environment, the prioritization of logistics programs like the LAW is doubtful. Despite these challenges, procurement must be sufficient to meet distribution throughput with enough redundancy to overcome combat losses to make EABO sustainable. Even if these programs make it through the acquisition process in the quantities required, they are subject to the same interservice competition outlined previously.

Each Service's distributed operations concept is likely individually supportable. The joint force cannot consider these concepts in isolation, though, as they all combat the same threat and are likely to be executed simultaneously. The competition for existing capabili-

ties and capacities combined with future programs' uncertainty furthers the complexity of EABO in a modern, high-end fight.

Conclusion

The vignettes demonstrate the enormous scope of the logistical requirement to sustain EABO. The distribution of these supplies would take a herculean effort, mired by the distribution challenges explored here, which only begin to scratch the surface of the issue's true intricacy. The complexity of the logistics requirements makes EABO potentially unsustainable in a modern, high-end conflict.

This analysis does not doom EABO to failure in the future. As discussed, the joint force may have the capacity, but the Marine Corps must compete for it. Likewise, future capabilities may prove successful in meeting the distribution challenge, but they do not exist yet. Using these assumed logistics capabilities and capacity for planning before they are tested would be premature as they are too uncertain to be considered reliable. Knowing that the pacing function is logistics, sustainment must be appropriately prioritized and resourced for EABO to be successful.

Moving forward, more fidelity is required to refine the total logistics requirement. Better defining the concept of employment will enable the development of a feasible concept of support. In developing the concept of support, more analysis is needed for prepositioning, OCS and the associated risk, and a detailed distribution analysis given current and future distribution platforms. There are many permutations for combinations of land and seabased supply points, distribution paths, and connectors. The most promising of these must be thoroughly developed and wargamed or experimented with to determine their ability to support EABO. In this analysis, inter-Service competition and future capabilities are critical factors.

>For footnote information, please visit <https://mca-marines.org/wp-content/uploads/Katzman-Sustaining-Stand-in-Forces.pdf>.



The Flawed Argument for Change

Service componenty and *FD 2030*

by Gen Anthony C. Zinni (Ret)

In the *Force Design 2030* report of March 2020, the CMC states as his “Argument for Change” that “Our current forces design, optimized for large-scale forcible entry and sustained operations ashore, has persisted unchanged in its essential inspiration since the 1950s.” Understandably, many of us who have served as Marines during that period from the 1950s until today take issue with this statement since we believe our Corps has undergone many significant changes and innovations over those 70-plus years. Past Commandants like Generals Wilson, Barrow, Gray, Krulak, and others saw the “character of war” change with the advent of air-

>Gen Zinni retired in 2000 as the Commander of U.S. Central Command.

ture that is often misunderstood. This legislation is worth reviewing to fully understand its effects on the Marine Corps.

The Goldwater-Nichols Act

This act elevated the Marine Corps to full-service component status within the combatant commands. Prior to the enactment of Goldwater-Nichols, the Marine Corps’ operational forces were

assigned them support responsibilities such as training, equipping, organizing, and maintaining their forces. Under this arrangement, the Services provided the forces and the combatant commands integrated and employed those forces.

Componenty

Combatant commanders request Service forces to be assigned or allocated to them to meet operational and planning requirements. The Secretary of Defense approves the assignment or allocation. The Services establish component commands in each combatant command and assign forces to them as directed. The Services retain administrative control while the component commands exercise operational control under the command authority of the combatant commander. In his *Commandant’s Planning Guidance*, Gen Berger stated, “Our MARFORS [Marine Forces Component Commands] are intended as administrative headquarters that advise their respective commands on the Marine Corps.” This is clearly not in accordance with Goldwater-Nichols or the established chain of command authority. The Marine Corps established its first component commands in 1992, Marine Forces Pacific and Marine Forces Atlantic. These components initially answered to multiple combatant commands until the Corps established separate components in each combatant command (COCOM). Through the years since, the Marine Forces Component Commands and the MEFs had to prove their ability to meet the challenging requirements placed upon them by COCOMs. In the war plans of CENTCOM, EUCOM, PACOM, and the U.S Forces Korea

The Services retain administrative control while the component commands exercise operational control ...

power, nuclear weapons, insurgency, and other new technologies and forms of warfare. They adapted, made changes, integrated new technology, and adjusted our warfighting concepts, doctrine, training, and education in thoughtful approaches that fully engaged the leadership of the Corps. During this period, the Marine Corps also created and employed a deliberate and methodical combat development process needed to turn new ideas into proven capabilities.

A profoundly significant opportunity for the Marine Corps came with the passing of the Goldwater-Nichols Act of 1986. This act directed important changes to roles and missions, lines of authority, conduct of operations, and support. It resulted in a complex struc-

designated as FMF, which required them to operate primarily under Navy fleet commands though in accordance with *Title 10* of the U.S. Code the FMF could operate outside this principal role “as the President may direct.” After World War II, Marine operational forces were often deployed in this additional role. The end of the Cold War saw a significant reduction in U.S. military forces and the Marine operational forces were committed to greater roles in combatant commanders’ operations and war plans.

Goldwater-Nichols also established the chain of command authority as running from the President to the Secretary of Defense to the combatant commanders. It removed the Service Chiefs from the operational chain of command and

Command, Marine Headquarters, including Service component commands, were given significant roles as combined corps-level forces, joint task forces, and joint functional commands. The Corps still provided FMF to the Joint Force Maritime Component as well. Gen Berger has reportedly reduced the staffing of component headquarters and lowered the grade of at least one component commander.

Component commanders answer to two masters, the combatant commander and their Service chief. Several issues such as conflicting service doctrine, employment of forces, joint exercise requirements, and organization for employment can be sources of friction and require cooperation and coordination conducted through the component commanders. Although the authority lines are clear, the relationships can be difficult and are compounded by the additional role of service chiefs as members of the Joint Chiefs of Staff and their influence as advisors to the Secretary of Defense and the President. In my experience serving in three COCOMs and commanding one, the best component commanders enthusiastically promoted their service capabilities and constantly looked for opportunities to be included in COCOM plans and operations. As CENTCOM commander, I often had Service chiefs personally contact me to discuss employment and structure issues, contemplated changes to their assigned or allocated forces, and many other issues that affected both commands.

Combatant Commands

COCOMs, in addition to having service component commands, many also have subordinate unified commands and joint task forces in their command structure. COCOMs may further have subordinate joint functional component commands, such as a Joint Force Special Operations Component, a Joint Force Land Component, a Joint Force Air Component, and a Joint Force Maritime Component. The Service component may be directed to provide forces to these functional components or to serve as one of these functional components. The Service components may

also be directed to be the core of a Joint Task Force established by the combatant commander. Marine operational forces have filled these assigned roles in several operations and in COCOM war plans.

Back to Our Roots or Backward to Our Roots

The CMC has said we will “get back to our roots.” By that, he seems to be retreating to the Marine Corps’ pre-1986 operational status as FMFs, providing tactical type-commands under a Navy Fleet. His *Commandant’s Planning Guidance* gives every indication that this is the direction he wants to take the Corps. Obviously, the Marine Forces Component Commands can still fulfill their historic FMF role under the current structure by assigning forces to the Navy or Joint Forces Maritime Component Commands. In fact, recent naval integration efforts by several Marine component commands offer a case in point—these headquarters remain on an equal footing with their Navy counterpart and maintain a direct line to the combatant commander. To return to the FMF role solely or primarily, however, is a very narrow approach that we have long since moved past to provide a more expansive role that better meets COCOM and national security requirements. In those years from the 1950s, previous Commandants developed balanced, ready, expeditionary forces flexibly able to task organize for any mission across the spectrum of conflict. Goldwater-Nichols presented the Marine Corps with the opportunity to demonstrate these unique service capabilities. A great deal of blood, sweat, and tears went into building an operational capability that provides a powerful complement to our sister Service capabilities. The Corps has demonstrated this operational capability time and time again. Since the 1980s, numerous Marine general officers have been selected to command COCOMs and others to serve in senior joint assignments. This recognition of the operational skills and experience of our leadership is being diminished by the CMC’s intended withdrawal from the major role we have established at the operational and strategic levels. To reduce the operational forces of the Marine

Corps to primarily a tactical naval role is a clear step backward.

Through all the rhetoric regarding the CMC’s plans to bond solely with the Navy, we have not heard from the Navy. Does the Navy support the amphibious ship requirements, maritime preposition ship requirements, or the light amphibious warship program? Have Navy leaders described the Navy’s role in the littoral strategy the Commandant espouses? When we developed the Maritime Strategy in the 1970s and 80s to control the northern flank of NATO, Marines had a true partnership with the Navy. Does that exist now or is this just a one-sided partnership?

A Global and Ready Marine Corps Force for All Theaters

The myopic focus on one theater and one narrow role described in the Stand-In Forces and Expeditionary Advanced Base Operations concepts presents a very limited view of how Marine Corps operational forces can best serve our nation’s national security interests. Pursuing a limited mission as a “reconnaissance/counter-reconnaissance service” eliminates a well-established and varied set of capabilities that Marine operational forces can provide to combatant commanders.

All of us who have served in our Corps of Marines through decades of changing conflicts and commitments understand the need to adapt and incorporate new technology and new ways of meeting our mission requirements. We have in our experience, however, affected those changes through carefully established processes that incorporated the new with the tried and true. The ad-like promotional media for *Force Design 2030* begins by quoting the *U.S. Code Title 10* mission of the Marine Corps. It does not describe the role of the Marine Corps in subsequent legislation or how it has expanded and evolved since Congress enacted *Title 10*.



Revisiting Wake

An expeditionary advanced base Decision Forcing Case

by LtCol Roy M. Draa

The Navy and Marine Corps have published *Expeditionary Advanced Base Operations* and *Littoral Operations in a Contested Environment* as the future of naval doctrine for great power competition in the 21st century. The *38th Commandant's Planning Guidance* states:

The Marine Corps will be trained and equipped as a naval expeditionary force-in-readiness and prepared to operate inside actively contested maritime spaces in support of fleet operations. In crisis prevention and crisis response, the Fleet Marine Force—acting as an extension of the Fleet—will be first on the scene, first to help, first to contain a brewing crisis, and first to fight if required to do so.

This imperative was subsequently reinforced with the publication of *Force Design 2030*.

The Decision Forcing Case is a valuable tool in our arsenal to help us tease out questions and discuss solutions to our modern problem of “operating inside actively contested maritime spaces” through the use of an historical examination of a similar problem set. We have sailed these seas before. In 1933, the Marine Corps created the FMF, published new doctrine in *A Tentative Manual for Landing Operations* in 1934, and established the Marine Defense Battalions in 1939 in response to the 1938 Hepburn Board’s report on fortifications in the Pacific.

For the purposes of this problem, you are Commander Winfield S. “SPIV” Cunningham, USN, Naval Aviator, and up until mid-November of 1941, the Navigation Officer of the seaplane tender USS *Wright* (AV-1). You are about to assume command of the Naval Air Station on Wake Island (19° 16’N., 166° 37’E.), currently under construction, reporting to Commander, 14th Naval

>LtCol Draa is a Marine Corps Infantry Officer currently serving as the Current Operations Officer for Training and Education Command. He has previously published commentary for the Center for International Maritime Security. He has deployed with 22 MEU, SPMACTF-CRAF, participated in several OIF, OEF, and UDP deployments, and served overseas with Headquarters U.S. Forces Japan.

“The Strategic importance of Wake is increasingly evident, as one enquires into the means by which the Pacific Fleet may carry on offensive operations to the westward ... [a]s an operating patrol plane base, it could prove valuable to us in observing the Marshalls, or in covering advance of our forces toward the Saipan-Honshu line. In the hands of the Japanese, it would be a serious obstacle to surprise raids in the Northern Marshalls, or on Marcus, Port Lloyd, or Saipan, and would be capable of causing serious interference with other secret movements of our forces ... [i]f Wake be defended, then for the Japanese to reduce it would require extended operations of their naval force in an area where we might be able to get at them; thus affording us an opportunity to get at naval forces with naval forces. We should try, by every possible means, to get the Japanese to expose naval units. It is therefore recommended that units of a marine defense battalion be progressively established on Wake as facilities there permit.”

**—ADM Husband E. Kimmel, USN
Commander Pacific Fleet, 18 April 1941**

District in Pearl Harbor as your higher headquarters. You have read the Hepburn Board report, are well aware of War Plan Orange, and understand that Wake Island is intended to be an early warning outpost for the Pacific Fleet. You have a good idea of what is currently on Wake and have read the construction reports back at Pearl: ordnance magazines, fuel tanks, docks, a few buildings and utilities, incomplete barracks, and hospital. No hardened hangars. The real question is time. There is no way of knowing how much time you have. *How will you prioritize your efforts? What is your focus: construction of the airfield or hardening the defenses, reinforcing the garrison or building up fuel and ordnance stockpiles?*

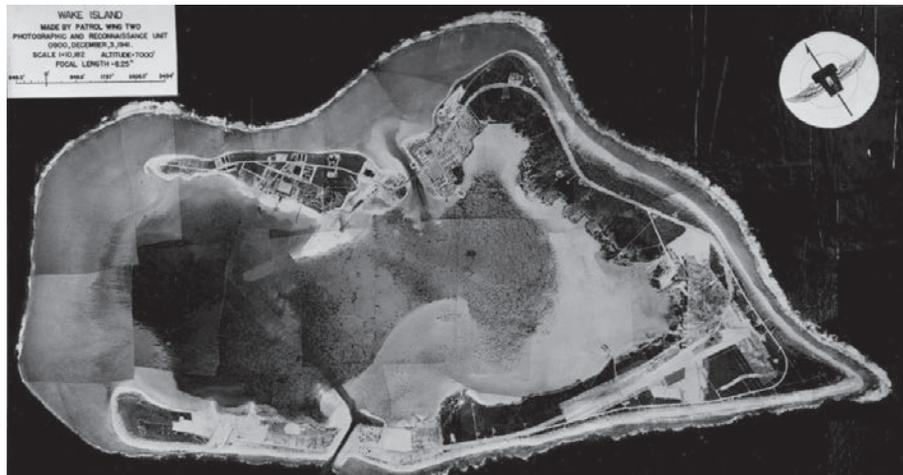
Situation: It is 28 November 1941. You are on board the *Wright* approaching Wake to take command of the Naval Air Station on the island. Over 1,000 miles to the east lie the Hawaiian Islands, 700 hundred miles to the west lies Mar-

cus Island, and over 600 miles to the south is Kwajalein. From the starboard bridge wing, you can see all three of the low-lying islands surrounded by reefs and heavy surf. It is not the bare sandy spit you had expected. There are large forested areas and dense undergrowth. The beach drops from 4 to 2¹/₂ feet at the high watermark and varies in depth from 20 to 170 yards out. There only appear to be two channels through the coral reefs into the lagoon. The airfield (5,000 x 200 feet) appears to be relatively complete and there are a handful of blue and grey U.S. Navy monoplanes lined up along the tarmac. All the islands have small structures, houses, and the beginnings of a barracks and hospital on Peale Island to the west. You climb down the cargo net over the side into a pitching motor launch on the rise of the swell with the rest of your staff. As the launch motors through the breakers and the lagoon to the Navy seaplane dock

on Wilkes Island, you see Pan-American Airlines' Martin 130 Flying boat, the *Philippine Clipper*, moored nearby and several small lighters docked to the east. A few hundred yards behind in the channel, three other boats are filled to the gunwhales with Marines from the *Wright*. Maj Walter L.J. Bayler is one of them, the senior MAG-21 representative to the island garrison. He will return to Pearl once the airfield is operational. Lt Robert J. Conderman, OIC of the detachment from MAG-21, will run airfield operations with his 49 Marines. A Marine fighter squadron, VMF-211 is due to fly in from the *Enterprise* in a few days. Waiting on the dock is a small knot of Marines and naval officers, as well as some civilians.

You meet with this reception committee as you walk to a waiting staff car, and they provide you with their unit personnel and equipment status reports as follows:

Maj Devereux: "Sir, Maj J.P. Devereux, commanding a detachment of the 1st Marine Defense Battalion, the rest of my battalion is spread out between Pearl Harbor, Midway, and Johnston Atoll. We landed here on 19 August. I have, including myself, 15 Marine officers and 373 enlisted Marines in Batteries Able, Easy, Dog, George, and Love. Dog Battery is the only unit with fully operational fire control equipment, so we will have to relay targeting data by field telephone. George is a searchlight battery, but we lack our sound detection equipment and have no radar equipment. We have a small medical detachment headed by LTJG Gus Kahn. I have eight deuce and half trucks, but only seven are operational if we need to tow guns or move ammunition. We haven't had the chance to dig in the guns; we only have hand tools and a lot of our time is spent hand pumping aviation fuel for the airfield. My boys are all artillery and support types, but we're trained as provisional infantry with a mix of Springfields, Colts, hand grenades, and a few BARs. I only have one and a half units of fire for the three- and five-inch guns, good for about ten days of sustained combat with disciplined fire. VMF-211 is expected to arrive in a few days. We have 90 days of rations.



Wake Island. (Official U.S. Navy Photograph, now in the collections of the National Archives. U.S. Navy History and Heritage Command.)

Here is the status of my weapons:

Crew Served Weapons:

- -30x .30 Cal, water cooled M1919 Browning Medium Machine Gun : Range 1,400m-18x .50 Cal, air cooled M2 Browning Heavy Machine Gun (HMG): Range: 1830m.
- -12x 3in. Anti-aircraft Automatic Cannon: Range: 6,400m, 1x of 12 Auxiliary Predictors operable (mechanically computes trigonometric targeting solutions), 8x of 12 Altitude Finders operable.

Coastal Artillery:

- -6x 5-inch/155mm: 6 guns Range 15.6km.
- -2x Sperry 60 inch Searchlight: Range 18.2 km."

CDR Keene: "CDR Keene, Patrol Wing 2. I have 4 officers and 30 sailors with 2 Brewster Buffaloes and 1 Catalina PBV (Seaplane). The Buffaloes are little slower than the Marines' Wildcat, but they handle better in a turn and carry the same armament, to include 2x 100 pound bombs. We'll be here until VMF-211 gets in. The airfield support group has 5 officers and 30 sailors. They have one surgeon, and two pharmacist's mates. We also have two small boats from the tender.

PBV-3 Catalina: 3x .30 Cal Browning Medium Machine Gun (2x nose, 1x tail: 1,200 rounds each), 2x .50 Cal M2 Browning HMG (2x waist: 1,200 rounds each) 2x 500 pound bombs, 4x depth charges, Range: 2,520 miles, Service Ceiling: 15,800 ft., Speed at sea level:

125 mph (Cruise), Max: 195 mph."

Mr. Peters: "Sir, N.D. Peters. I'm the general superintendent for the Morris-Knudson construction crew here on Wake with 1,200 construction workers. Fought in the Great War myself, and some of my men did as well. We have three operational bulldozers, four half-ton trucks, a grader, two steam shovels, and a steamroller. I have enough food on hand for six months and a hospital on the north end of Wake. We still have several projects with a way to go. There are also 70 Pan-Am employees and Chamorros (Melanesian workers) on Wilkes that work for Pan-Am Airlines."

What are your orders, what do you report back to your higher headquarters, Commander, 14th Naval District?

On the morning of 4 December, your tiny garrison is reinforced by the anticipated arrival of VMF-211, Maj P.F. Putnam, Commanding. Maj Putnam has 11 officers and 47 Marines. One of the F4F Wildcats pancaked on landing, crushing its landing gear and leaving 11/12 ready basic aircraft (RBA). They lack reserve external tanks, and their electric bomb releases do not mate with the 57 100-pound bombs you have in the airfield's magazines. Later that day, another Wildcat is flown off the USS *Enterprise* to bring the complement back up to 12/13 RBA. At least you have a hangar queen for spare parts. As expected, the Navy Patrol Wing 2 detachment departed Wake once VMF-211 arrived.

Equipment: 12/13 Grumman F4F Wildcats, 4x .50 Cal M2 Browning HMG (450 Rounds each), 2x 100 pound bombs, Range: 860 miles, Service Ceiling: 37,000 feet. Speed at sea level: 281 mph.

What are your orders, what do you report back to your higher headquarters, Commander, 14th Naval District?

On 8 December, Maj Devereux arrives at your bunker with a message from the Army Air Corps signal station that Pearl Harbor is under attack. At 1155, you received a report from the Marine Defense Battalion Fire Control Center of 36 Japanese bombers approaching from the west. At 1200, they dropped their payloads on the airfield, destroying seven wildcats, a fuel storage tank, and killing 23 Marine and Navy aviation ground support personnel. The attacks occurred again at the same time between 8-10 December. On the 8th, a bomb hit a storage shed on Wilkes Island where some dynamite was stored for construction. All the guns and ammunition positioned there were destroyed and the crews were severely injured. On the 9th, a Pan-Am Martin 130 flying boat landed to pick up its American employees, leaving the Chamorros to fend for themselves, and the hospital and radio buildings on the air station were destroyed.

It is now 1215 on the 10th, what are your orders? What do you report to 14th Naval District?

11 December 1941 No 2

The Marine garrison on Wake Island has been subject to four separate attacks in the last 48 hours by enemy aircraft and 1 by light naval units. Despite the loss of part of the defending planes and the damage to material and personnel, the defending garrison succeeded in sinking one light cruiser and one destroyer of the enemy forces by air action. A resumption of the attack and a probable landing attempt is expected. The Marine garrison is continuing to resist. The above report is based on information received up until noon 11 December.

At 0300 on December 11th, you received reports of ship silhouettes offshore. By 0530 the eastern sky is beginning to lighten, and the cruiser *Yubari*

and destroyers *Kisagari* and *Havate* as well as two transports are identified. Minutes later, about 5,000 yards offshore, three Japanese ships open fire on Wake. The cruiser is struck in its fore-castle and is listing to port. A destroyer turns away, but two more cruisers steam about 8,000 yards to the west of Wilkes Island. As one makes a run at the island, it is hit head on with a two-gun salvo and appears to break in two. Another cruiser puts about and is trailing smoke. At a range of 10,000 yards, another destroyer squadron begins pummeling Peale Island. By 0700, the bombardment ceases and the ships are all steaming west, some still trailing smoke, but another bombing run by three divisions of attack aircraft are intercepted by VMF-211. The naval construction authorities at Pearl also want a status report on the dredging in the lagoon, it was due yesterday.

What are your orders? What do you report to 14th Naval District?

14 December 1941 No 7

There have been two additional bombing attacks on Wake Island. The first was light, the second was undertaken in great force. Two enemy bombers were shot down. Damage was incons-

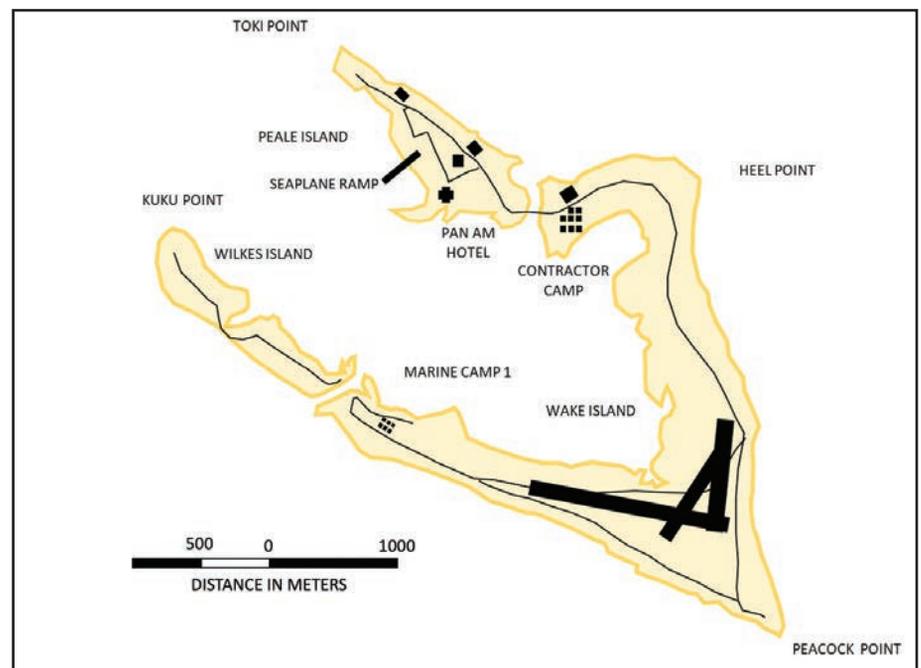
quential. The Marines on Wake Island continue to resist. Enemy submarines are known to be operating in the Hawaiian area. Vigorous attacks are being made against them. The above is based on reports up until noon today.

19 December 1941 No 12

The Navy Department issued the following communiqué, on the naval situation as of 9am today:

Central Pacific. There have been two additional air attacks by the enemy on Wake Island. The first occurred on the night of the 17th-18th and was comparatively light. The second was in greater force and occurred in the forenoon of the 19th. Wake Island continues to counter these blows.

On 20 December a Navy PBY was able to establish the first radio communications with the island since the 14th. Task Force-14 is enroute with another defense battalion and a fighter squadron. That was two days ago, and they should have been here already. On the 21st, the PBY took off with Maj Bayler hand-carrying your reports along with those of Maj Devereux and Maj Putnam. Shortly after, the atoll is hit again, leaving only two guns on Wilkes Island.



Wake Island. This diagram can be used to draw your defensive positions, fire support control measures, and obstacles as well as vertical/horizontal construction. (Map by author.)

Only one AA battery of 4x 3 in guns remains operable. Battery D is the only battery with four working height-finder devices. It is now 0200 on 22 December. There has not been a landing attempt since the 11th, but the bombing raids have been like clockwork. The Marines' guns knocked out the *Yugari* and the Wildcats sank the *Kisagai*, but after ten days of fighting only two planes are RBA. Mitsubishi Zeros have been escorting short-range bombers, so there must be carriers right over the horizon. It is only a matter of time before another landing is attempted. You have not been able to talk to Pearl for more than a week and Task Force-14 should have been here already—or at least, the promised fighter squadron. Have they been destroyed or just simply turned around?

What are your orders? What do you report to 14th Naval District? Can they even hear you?

In the early darkness of 23 December, a second Japanese amphibious assault force materialized on the southern horizon. By 0215 it was evident that another landing was being attempted; at 0235, Marines on Wake reported hearing large engines over the surf to the south. The first special landing force naval infantry came ashore near the south end of the airfield at 0245, but your naval guns could not traverse to engage the transports. At 0300 all communications lines between the batteries are cut. As the Japanese stormed the beach, the Marines engaged with the 3-inch guns, machine guns, and small arms, but were eventually forced back to the airfield. Your only remaining mobile reserve is a truck with eight Marines and three .30 caliber machine guns. One of your 3-inch guns lays directly on a beached destroyer escort then shifts to another on Wake's southern beach. The explosions light up the sky and you can see Japanese infantry swarming over the sides onto the surf and up the beach. By 0500 the sun is rising and the assault was supported by fighters and bombers from the carriers *Soryu* and *Hiryu*. There are no ground assaults yet on Peale or Wilkes Islands; on Wake, the defense battalion Marines could not man their AA and naval guns while they were dealing with a ground assault. The battery at Peacock Point

is taking machine gun and mortar fire.

What are your orders?

At 0700, a battered and tired Maj Devereux enters your command post:

Commander Cunningham, Sir. My men can't hold out much longer, we're down to four rounds of rifle ammunition per man, I've lost all my guns and only have three working machineguns. Sir, the Task Force is either at the bottom of the Pacific or CINCPAC has written us off, we should have seen their squadrons by now. We can't hold the island any longer. I recommend we surrender before throwing away any more lives.

What are your orders?

Taskforce-14, of course, never made it to Wake Island. The island was written off on 21/22 December by acting Pacific Fleet Commander, RADM Pye, who felt, in the absence of ADM Nimitz, he could not risk the ships to keep the island. The Marine Defense Battalions lacked mobility, were ill-equipped, and undermanned. They were not adequately supplied with sufficient ammunition and had outdated and refurbished weapons systems. Radar and surface combatant support were not available to augment and direct ground-based fighter patrols toward an approaching raid or landing force. Nevertheless, CDR Cunningham and the Wake defenders were able to repel one amphibious assault and tie up two enemy carrier air groups and destroyer squadrons for almost two weeks. They accounted for over 30 downed enemy aircraft and sank 2 destroyers, destroyed 2 landing craft, and significantly damaged an additional 8 enemy ships. When we consider emergent Navy-Marine Corps doctrines such as *Expeditionary Advanced Base Operations* and *Littoral Operations in a Contested Environment*, as well as the 38th CMC's Planning Guidance and Force Design 2030, *what are important lessons learned from the defense of Wake Island?*

- What does Wake have to say about the future mission of a Marine littoral regiment with respect to sea control/denial?
- What capabilities might be required for a Marine littoral regiment to support the maneuver of naval littoral task force/group?

- How would this naval expeditionary force integrate with a higher or adjacent naval force?
- What naval force would you use to defend Wake today?
- What emergent technologies or capabilities could be leveraged for Wake to act as an EAB with a mission to support sea denial and allow a modern-day TASKFORCE-14 to close with an adversary naval force?

Notes

1. Samuel Cox, "Vice Admiral Pye's Decision," *Naval History and Heritage Command* (December 2016), available at <https://www.history.navy.mil>.
2. Robert Cressman, *A Magnificent Fight: Marines in the Battle for Wake Island* (Washington, DC: Marine Corps Historical Center, 1992).
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Still First to Fight?

Shaping the 21st-century Marine Corps

by LtCol Frank G. Hoffman, USMCR (Ret)

The headline in the Saturday *New York Times* on 1 June 1918 read “Marines—First to Fight.” The day before, a brigade of Marines attached to the U.S. Army’s 2nd Division had raced to the front to halt a breakthrough threatening Paris. They stopped the Germans cold, and five days later, the brigade successfully counterattacked at Belleau Wood—becoming the first publicly identified American unit to enter combat in World War I. Ever since that epic battle, the Corps has embraced “First to Fight,” initially as a recruiting slogan and then as an ethos that reflects its place in the country’s security architecture. As part of that ethos, the Marine Corps has promoted an institutional mindset about a high level of readiness for crises both small and large. Since 1952, the Corps has been designed and postured as an amphibious “force-in-readiness” poised for immediate use in a wide variety of missions, exploiting its expeditionary tool kit and naval mobility. When faced with a crisis, Marines believe one of the first questions from the White House should be: “Where are the Marines?”

Marine Force Design 2030

The Marine Corps has earned its reputation within battle, but it has also excelled at anticipating demands for new capabilities to deal with the changing character of war. After the end of the Cold War, as it adapted to the age of terrorism and a generation of operations in Iraq and Afghanistan, the Marines made small steps forward. When he became Commandant of the Marine Corps last year, Gen David H. Berger signaled that the time for distinctive change had arrived.¹ In articulating his vision of a future Marine Corps, Gen Berger concluded:

>Dr. Hoffman retired from the Marine Corps Reserve in 2001. He is a graduate of the University of Pennsylvania’s Wharton School and holds a doctorate from King’s College, London. He spent much of the first 33 years of his government career in the Department of the Navy in variety of roles, including a Force Structure Analyst, Advanced Concepts Developer, and Strategic Planner. He is currently a Researcher and Professor at the National Defense University. These remarks are his own and do not represent the views of the DOD.

The rapid expansion of China’s area-denial capabilities, coupled with its pivot to the sea as the primary front in a renewed great-power competition, have fundamentally transformed the environment in which the U.S. military will operate for the foreseeable future. For the first time in a generation, sea control is no longer the unquestioned prerogative of the United States.²

His guidance was seen as both revolutionary and refreshing by pundits and reformers. It was seen as refreshingly frank, taking on cherished assumptions, and willing to reduce personnel to gain funding for needed modernization.³ Subsequently, the Commandant has shown that he was willing to gore a few sacred cows and has detailed the proposed force changes developed for a 21st-century Corps aligned with the *National Defense Strategy*.⁴ This plan has generated both plaudits and concerns from defense analysts outside the Corps and retired Marines. Any change would be controversial, especially when you move away from combat proven capabilities to accept tradeoffs and embrace a different future. In this short article, I briefly detail the proposed changes, assess the general shifts represented in the design, and evaluate some issues related to the plan. This assessment indicates that the capability and capacity changes are aligned with both the *National Defense Strategy* in general and the changes in the projected operating environment.⁵

Force Design 2030

The design includes a number of increases and decreases in capacity. Some of the shifts are significant, including the elimination of tanks and the large reductions in truck-towed cannon. The Marines have been using tanks since World War II and used them in Iraq and Afghanistan for mobile shock power, especially in urban fighting. Their shock and firepower in combat is valuable. But they, like the artillery, are heavy and reduce the agility of the force. In particular, they are of limited value in the emerging realities facing us in maritime operations in the Pacific where greater distances and precision is needed against near-peer competitors. The gist of the major changes is displayed in Table 1.

The new plan also alters the ACE of the Marine air-ground team, cutting 108 airplanes by eliminating squadrons and aircraft totals assigned to fighter/attack squadrons. Three unmanned vehicle squadrons are added, as is a refueling squadron that will help extend the operating range of the fifth generation F-35 Lightning being procured.

Another significant change is the expansion of missile batteries to extend the range of Marine fires. This shift allows the Corps to support what Andrew Krepinevich has called “Archipelagic Defense” in the Pacific.⁶ To support such an approach, U.S. ground forces would be postured in and around the first island chain and apply cross-domain

capabilities to deny freedom of maneuver to adversary surface forces. Marine units would deny the People’s Liberation Army (PLA) Navy use of the seas with shore-based anti-ship cruise missiles from distributed operations in the Pacific. At the same time, other land-based air with missile defense assets—including Patriot, THAAD, and possibly railguns—would ensure the PLA could not use its air power. This strategy is in line with ideas expressed years earlier by Dr. T.X. Hammes.⁷ The new Marine concept being tested to operationalize this mission is *Expeditionary Advanced Base Operations* (EABO), and it has been subjected to several years of study and war gaming.⁸ This concept and others like *Littoral Operations in Contested Environments* extend the Corps’ unique naval skill sets and strengthen its integration with the Navy for maritime operations in the Pacific.⁹

Capability Shifts

There are six distinctive shifts in this

design. These are shifts in degree, not necessarily in kind. Each appears consistent with the emerging environment, as well as the intent and vectors of the *National Defense Strategy* issued in January 2018.¹⁰

- *From manned to unmanned.* This design reduces manned aircraft and numerous helicopters while doubling the Marine’s unmanned air assets; for now these are more accurately titled as remotely operated vice unmanned. But they offer lower operating costs and endurance in support. Ground systems are also being added to generate man/machine teaming optional to enhance combat effectiveness and logistics.
- *From quantity to quality.* Some Services focus on technology, and some U.S. Armed Services focus on their overall size. The Marines value their human capital and invest extensively in selection and initial recruit training. Gen Berger intends to stress quality and rejuvenate the Corps’ infantry training and educational systems to

reinforce it.¹¹ In the design, the Marines tradeoff some personnel to better balance the manpower/modernization tradeoff. The emphasis is on quality in their Marines while also freeing up limited investment capital.

- *Greater precision and range.* The plan adds greater range and precision to Marine fires and opens up a potential family of munitions for different missions and targets. The ground-launched missile systems will increase range significantly from 40km to 70km or more. U.S. forces need to ensure that they are neither outgunned nor outranged by adversaries.¹²
- *Combined arms to cross-domain.* The Marines excel at traditional combined arms, but the capability mix, particularly the advanced avionics of their F-35s and the new missile batteries, allow the Marines to extend and integrate their targeting and strike assets. This enhances cross-domain applications, including from land-based forces against naval surface targets, which is of particular value in the vast Pacific.
- *From general purpose to strategically shaped.* But a shift from a “ready for anything” full-spectrum utility to a more focused and strategically relevant posture against more capable competitors is explicit in the new design. The proposed design is more agile and resilient against defined priority challenges.
- *From expensive to cost effective.* The manpower reductions and the cuts in jets and helicopters in the plan provide more balance in capabilities as well as freeing up capital to invest in critical modernization needs. It also strategically prepares for anticipated leaner budgets. The Marines have accurately anticipated not just their warfighting needs but the Nation’s priorities and capacity to modernize in the coming years.

Assessment

As noted earlier, the proposed shifts in the unique Marine set of capabilities are derived from the *National Defense Strategy* and do reflect the priorities and desired investments that the Pentagon’s planning documents calls for. A good strategy should document choices and

	2020	2030	Percentage Change
Ground Combat			
Infantry Regiments/Battalions	8/24	7/21	-12.5
Fire Support			
Artillery Batteries	21	5	-76
Missile Batteries	7	21	+300
Tank Companies	7	0	Elimination
Light Armor Companies	9	12	+33
Amphibious Vehicle Companies	6	4	-33
Rotary Wing			
Heavy Helicopter Sqdrns	8	5	-37.5
Medium Helicopter Sqdrns	17	14	-17.6
Light Attack Helicopter Sqdrns	7	5	-28.5
Strike and ISR			
Unmanned Aerial Vehicle Squadrons	3	6	+ 100
Fighter Attack Squadrons	18	18	Same total, 50 fewer aircraft

Table 1. Marine Corps force structure change summary.

clear prioritization, and its implementation should strive to align means to ends. The Pentagon did that in its strategy and framed explicit priorities as well as the risks for lower priorities. Some risk comes from making choices. Especially at this time of crisis and limited resources, discipline in execution should become critical for U.S. military leadership as we attempt to maximize our security. *Force Design 2030* details clear tradeoffs and investments in line with those thrusts. While the force design holds up well against the shifts suggested by that strategy and today's dynamic security environment, two areas warrant comment.

Joint force design. Joint interoperability at the strategic level is important. One cannot objectively evaluate the Marine force design in the absence of a holistic understanding of the other Services, so an understanding of how the Joint force is designed would be helpful. In the past, the Services resisted the idea of Joint force “interdependence.” With best case defense budgets in the future declining or at a plateau, an integrated Joint force design is more salient than ever—making it imperative to ensure there are no gaps and far less redundancy in the overall armed force. How the Marine Corps changes impact the U.S. Army's armor force needs to be understood. Even more important will be clarity on how the Navy supports the Marines when deployed in expeditionary operations Navy support in terms of theater-level mobility, intelligence and surveillance, and logistics may be more salient than ever. I am sure that the Commandant realizes this and engaged with the Chief of Naval Operations to generate an integrated *naval* design.

Strategic and operational risk. The cardinal virtue in defense planning, the late Colin Gray often stressed, is prudence.¹³ This includes a reasonable appreciation for uncertainty, the consequences of choices, and the need for adaptability. There is some risk involved in shaping the force for the Pacific. I have always held that forces that can achieve multiple missions should be considered at a premium over single purpose forces. Force designs that cover multiple strategic futures are preferable to a design oriented on one threat, although such

specialization is needed for key capabilities. As Secretary James N. Mattis said when he rolled out the latest defense strategy, the United States

cannot adopt a **single preclusive form of warfare**. Rather we must be able to fight across the spectrum of conflict. This means that the size and the **composition of our force matters**.¹⁴

It matters since the Joint force has to cover a wide range of missions and terrain; they have to be rugged and reliable, instead of exquisite and expensive.

In his initial guidance, the Commandant signaled that while he conceived of the Marine Corps as the Nation's force-in-readiness, it was not designed to operate across the range of military operations (ROMO):

but rather, a force that ensures the prevention of major conflict and deters the escalation of conflict within the ROMO.¹⁵

That is a redefinition of the Corps' mission as articulated by Marines since the

end of the Cold War. Gen Berger's intent was to create a Corps

optimized for naval expeditionary warfare in contested spaces, purpose-built to facilitate sea denial and assured access in support of the fleets.¹⁶

He explicitly noted that this “single purpose-built future force” could be used in many other missions around the globe, but the force would *not* incorporate investments for those contingencies.¹⁷ The new force structure reflects that guidance.

Yet, reforming the Marines solely around one scenario, instead of multiple futures and challenges, reduces versatility to some degree. A study on alternative Marine Corps force designs several years ago that I produced with a colleague concluded:

The future will be highly complex, and a premium should be placed on versatile forces, not narrow, specialized or single-purpose assets. The Corps must find a new balance between maintaining the



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enduring traditional logic of its role as soldiers of the sea and meeting the challenges of a new security environment. It cannot just become a smaller version of its pre-Iraq force design.¹⁸

This has led some, including myself, to publicly express concerns that the force design stressed one mission in one theater.¹⁹ The critics accurately point to the versatility of the Marines in scenarios over the last fifteen years like Iraq.²⁰ Other analysts and Marine veterans expressed this same concern,

a Marine Corps that is custom-designed for distributed operations on islands in the Western Pacific will be poorly designed and poorly trained for the land campaigns it is most likely to fight.²¹

However, a detailed look at the published report on the design reveals a robust force with sufficient flexibility over multiple tasks. With its tailorable force building blocks, along with the additional precision strike assets, the 21st-century Marine Corps retains utility across numerous contingencies, including conflicts like eastern Ukraine and the likely proxy wars of great power competitions.²² These are far more likely in eras of great power competition, especially a contest between nuclear armed competitors as we have now. Yet, *Force Design 2030* reduces risk in the Pacific theater and accepts some readiness tradeoffs in potential secondary tasks or unknown crises. That is a risk in all force development efforts.

Strategy and force planning are about choices with different risk tradeoffs with constrained resources. The new Marine force *is* more strategically shaped, and it prudently reduces risk in what U.S. strategy defines as the primary challenge of our times. But it has not eliminated the Corps' ability to respond to many scenarios as an overview of threats shows.²³ *Force Design 2030* is not a hammer with only one purpose, retaining the ability to defeat an array of rivals. In fact, the Corps' agility, lethality, and resilience are enhanced in key ways and targeted to meet strategic requirement rather than general utility. Yet, the Marine "Leatherman tool" task organization remains, with new attachments.

Every Marine will have different ideas about how to tweak this plan. There could be more of a hedge, perhaps more unmanned systems, or adjust the missile/artillery mix in order to retain some artillery. These can be sustained in the Marine Reserve as a hedge against uncertainty.²⁴ We can almost certainly expect communications and logistics difficulties as the creative operational concepts are put to the trial, and future adversaries will exploit them. The Marine Corps Warfighting Laboratory is no doubt aware of this and is studying a range of potential solutions. More details on counter-UAS capabilities are needed. The possibility of intensive urban operations needs to be considered, Fallujah's deadly battle come to mind.²⁵ That said, reformed Marine infantry units, with increased firepower, man/machine teaming, and long-loitering armed UAS support should remain capable of urban fighting.

With its tailorable force building blocks, along with the additional precision strike assets, the 21st-century Marine Corps retains utility across numerous contingencies ...

Thus, these are near-term, strategy-driven changes based upon clear strategic priorities, as well as known adversary capabilities and changes in the character of modern warfare. The next generation of Marine innovators are promoting a number of creative concepts worthy of consideration.²⁶ They begin the path toward more transformative changes tied to advances in technologies like artificial intelligence, robotics, additive manufacturing, and hypervelocity missiles.²⁷ These should continue to be explored via experimentation over the next few years.²⁸ Their true battlespace potential will emerge over time and will be part

of the continuous process of rigorous force development and change that the Marine Corps has demonstrated for generations with helicopters, remotely piloted vehicles, tilt-rotor planes, etc.

Conclusion

Ultimately, this is *not* a radical shift of force capabilities or capacity. Nor is it risk free. But it is a response to strategic direction that recognizes stronger competition from adversaries who have gone to school on our methods and invested to thwart our power projection approach. In so many ways, the force design represents a measured step forward in response to both strategic direction established in the *National Defense Strategy* and to emerging challenges in the strategic environment.²⁹ The proposals take the Marines two long strides forward into the 21st century. Gen Berger has crafted a positive vision about how the Corps should posture itself for this unfolding century, vice a repeat of the old missions and outdated tactics from the last one. Clearly, in such a dynamic age, we need more than just a shrunken version of the Corps pre-Iraq 2001 force structure. Given the intensive efforts that major states have made in developing robust anti-access capabilities against the predictable pattern of deploying U.S. forces, the Marine plan is actually overdue.

Rather than radical, the shifts in the 2030 plan are quite deliberately measured. The Marines are not just "First to Fight," but often also "First to Adapt," and *Force Design 2030* reinforces that history. When future Presidents call to "send in the Marines," will they still be both ready and successful? The answer to that question seems to be a clear "Yes."

>For footnote information, please visit <https://mca-marines.org/wp-content/uploads/Still-First-to-Fight.pdf>.



Winning Battles Will Not Be Enough in a Great Power Conflict

Credible deterrence requires more than tactical warfighting concepts

by Col Thomas C. Greenwood, USMC (Ret)

“You know you never defeated us on the battlefield,” said the American colonel. The North Vietnamese colonel pondered this remark a moment. “That may be so,” he replied, “but it is also irrelevant.”¹

—Conversation in Hanoi, April 1975

The on-going debate within each of the Services about how best to re-purpose and, in some cases, significantly re-design Army, Navy, Air Force, and Marine combat units to more effectively contribute to a Joint Force that can compete with and, if necessary, fight and prevail against great powers is both necessary and healthy. Necessary because after nearly two decades of conducting Middle East counter-insurgency and nation-building operations, the return of great power competition has significantly altered the global security environment. It requires U.S. forces to re-hone their conventional (and hybrid) warfighting skills to help credibly deter potential adversaries.² The debate is also healthy because the concept development process should drive any discussion about how to compete with great power adversaries, which, in turn, informs how military organizations will design, scrutinize, test, adopt, and ultimately implement viable warfighting approaches to meet tomorrow’s emerging threats.

Yet, much of the discussion to date has focused on the disparate Service ap-

proaches’ tactical and operational considerations with scant attention to the broader strategic landscape that shapes military campaigns and imparts purpose to new warfighting concepts being developed by the Services and the Joint Staff.

This article attempts to bridge that gap by suggesting warfighting concepts must do more than promise tactical victory. As reinforced by the Hanoi conversation in the above epigraph, warfighting concepts must also advance attaining the Nation’s political objectives and promote strategic success as part of a larger joint force design. In the case of China and Russia, this means recognizing and embracing three major imperatives: the need to help the United States avoid a major conventional war with either adversary, finding off-ramps that preserve U.S. national interest should conflict oc-

cur, and, most importantly, removing potential catalysts for escalation that increase the likelihood of any great power crossing the nuclear threshold. None of these three imperatives seem to be commanding much attention within the respective services warfighting concepts that are being developed. This must be rectified.

Nuclear States Don’t Make War on Each Other

Nuclear powers generally try to avoid making war on each other because of the risk that conflict could escalate to the point where one or both sides introduces nuclear weapons, potentially triggering an action-reaction response that spirals out of control.³ This “mutual vulnerability” (especially if both sides have a survivable second-strike nuclear capability), where war could produce massive casualties and unprecedented physical destruction, explains why nuclear states have, for the most part, carefully avoided direct confrontation with each other since World War II.⁴

Although the United States devoted significant time and resources to develop and deploy tactical nuclear weapons to Europe during the Cold War for deterrence (war prevention purposes), their

>Col Greenwood is a research staff member in the Joint Advanced Warfighting Division at the Institute for Defense Analyses. He was an Infantryman with subsequent assignments in the Pentagon and the National Security Council staff. The views, opinions, and findings expressed in this article should not be construed as representing the official position of either the Institute for Defense Analyses or the DOD.



Throughout the Cold War, the United States devoted significant resources to maintaining the Nuclear Triad, including strategic bombers like the B-52 Stratofortress. (Photo by Airman 1st Class Alexa Ann Henderson.)

warfighting and even strategic utility was constantly questioned. Bernard Brodie, one of the leading U.S. nuclear strategists at that time, was highly skeptical that a *limited* nuclear war would remain *limited* for long. Brodie remarked that it is “difficult to imagine both sides adopting *meaningful limitations* on the use of nuclear weapons, such as would prevent the complete devastation of the Continent.”⁵

This historical context helps rationalize why nuclear states have often focused on carefully using conventional forces or proxies to pursue limited political objectives, manage conflicts toward a viable off-ramp while preserving sufficient political and military maneuver space to secure a negotiated settlement. As Kenneth Payne observed,

Nuclear weapons change the character of warfare. They raise the destructiveness to the point that protagonists cannot realistically use actual force to achieve their goals and struggle to use the *threat* of it coercively. This is radical and, depending on one’s nomenclature, might be considered revolutionary.⁶

Utility in Non-Use

This does not mean nuclear weapons are irrelevant—quite the contrary. In fact, a central argument of this ar-

ticle is that the Services’ concepts inadequately account for the geo-strategic reality that drives states to shoulder the burden of acquiring, testing, maintaining, and safeguarding nuclear weapons in the first place. Unquestionably, it is to inoculate themselves against regime change and existential defeat. Thus, in the context of China and Russia, ongoing unclassified discussions at U.S. war colleges by past and future military planners about how to draft a “theory of victory” fall into the twin categories of surreal and probably unattainable, given that nuclear warfare is not a curriculum priority nor are the connections between conventional and nuclear war well understood.

As Dr. Hoffman has observed,

Some military strategies may be thought of as a ‘theory of victory,’ obtaining a distinct goal over an opponent or adversarial coalition. The idea of a theory of victory is well established at the Army War College and studied by students at the Air University.⁷

But, Hoffman cites the thoughtful work done on this issue by Eliot Cohen and Jeff Meiser and supports their view that a “theory of success” is a more useful approach given that a strategies purpose is “rarely to defeat an adversary but to develop institutional muscle and apply

statecraft to [achieve] desire [sic] strategic ends.”⁸

Long before Beijing or Moscow surrenders to the United States in a major conventional war, they will almost assuredly feel compelled to accept the risks and costs of crossing the nuclear threshold to preserve their regimes and protect their national sovereignty. Thus, in the realm of peace and war, the vernacular statesmen and generals use assumes unparalleled importance and underpins William Martel’s insightful observation that:

When policy-makers use force to achieve political ends, they use the word “victory”, yet its meaning is frequently left unclear. Policy-makers are using force for many purposes other than unconditional surrender, including peace operations, state-building, democracy promotion, counterinsurgencies and counterterrorism. But the language and thinking necessary to provide practitioners and scholars with explanatorily satisfactory definitions of victory in these new situations has not kept pace. The essential problem is that the term victory is imprecisely described as a concept for guiding decisions about the desired outcome in military intervention.⁹

Yet, military interventions are a means to a greater end and not an end unto themselves. So, Martel is correct that the language being used today to describe the strategic outcome great powers seek from a clash of arms with each other begs for much greater specificity than *victory*, *winning*, *destroying*, or *defeating* another hostile power—especially if one’s adversary possesses nuclear weapons.¹⁰

New Thinking about an Old Problem

Nuclear strategist Matthew Kroenig argues that the nuclear balance of power between states not only matters but was the dominant factor in determining the outcome of the four most important crises in the nuclear era: the 1962 Cuban Missile Crisis, the 1969 Sino-Soviet Border War, the 1973 Arab-Israeli Conflict, and the 1999 Kargil Crisis between Pakistan and India. In each case, Kroenig’s research revealed that,

nuclear superior states are ten times more likely than their inferior com-

petitors to achieve their goals in a high-stakes crisis ... policymakers pay attention to the nuclear balance of power and believe that it effects their strategic position; nuclear inferior states are less willing to escalate dangerous crises; and nuclear superior states more often achieve their basic crisis objectives.¹¹

Surprisingly, his research also reveals that while the conventional military balance of power may have helped “shape” some of each crisis, it played a subordinate role to nuclear weapons in determining the outcome.¹² Kroenig concludes that these case studies validate his “superiority-brinkmanship theory” by demonstrating the nuclear balance of power accelerates crisis resolution in favor of the dominant state.

However, he is overly dismissive of the “nuclear taboo” that every U.S. administration since President Truman’s has considered inviolable.¹³ This included the United States accepting defeat in Vietnam for fear that expanding the war to achieve “victory” would have made nuclear war more likely.

Beware of the Underdog

Ironically, in Kroenig’s four case studies, the “underdog” state (side with fewer nuclear weapons) initiated each respective crisis but ultimately failed to achieve its objectives. This was most pronounced in the 1999 Kargil Crisis when Pakistan badly miscalculated that India would not respond militarily to its illegal seizure of abandoned Indian outposts on the Indian side of the Line of Control in disputed Kashmir. In fact, Pakistan thought its small nuclear arsenal would constrain the more powerful India from responding:

neither the conventional military imbalance with India nor the existence of offsetting nuclear capabilities dissuaded Pakistani planners from launching the Kargil infiltration because they (Pakistan) believed that the combination of surprise, military *fait accompli* on superior terrain, and a well-considered denial and deception strategy would impede India from dislodging the troops occupying Indian territory before the onset of winter, which would freeze military posts and thus enable Pakistan to restock its forward military posts and make permanent its

territorial gains across the LOC [Line of Control].¹⁴

India did respond conventionally by deploying two divisions and aircraft to the disputed sector. Some scholars believe Pakistan’s limited nuclear arsenal may have kept New Delhi from escalating horizontally and attacking Pakistani forces elsewhere along the border.¹⁵ But any hopes that Pakistan harbored about its small nuclear arsenal deterring India so it could continue its asymmetric support to the Kashmir insurgency were short-lived.¹⁶

While nuclear war was ultimately averted between India and Pakistan, a limited conventional war under the “nuclear umbrella” did occur. And Pakistan’s excessive risk taking in the crisis prompted a number of scholars to apply the “stability-instability paradox” to the Kargil crisis: nuclear states may achieve a degree of stability in knowing their nuclear adversary is mutually deterred from escalating to employing nuclear weapons. However, this same restraint may foster instability by making lower levels of violence appear more attractive and less risky.¹⁷ In short, Kargil demonstrated that nuclear weapons do not necessarily prevent all forms of war and that escalation, while certainly possible and maybe even likely, is not inevitable.¹⁸ Yet,

Kargil also reaffirmed how difficult crisis management and escalation control can be between rival nuclear powers.¹⁹ Not surprisingly, a new norm emerged after Kargil: nuclear powers might squabble over relatively minor differences, but they almost never fight each other when their vital interests are at stake.²⁰

Neighborhood Squabbles Gone Deadly

Today, China’s strategic arsenal is inferior to that of the United States and other nuclear states in the West. The imbalance is significant: China has approximately 300 nuclear weapons compared with an estimated 2500+ warheads in the U.S. arsenal, to say nothing of the modes of delivery available to the two sides.²¹ Experts believe China will attempt to close this gap in coming decades as it seeks quantitative parity with the United States.²² Nevertheless, Chinese leaders believe their nuclear weapons are intended to prevent nuclear coercion and deter nuclear attack:²³ being able to execute *assured retaliation* to “survive a first strike and then launch a retaliatory counterstrike.”²⁴ Importantly, China’s leaders do not appear to seriously contemplate engaging in nuclear warfighting (with lower yield tactical/theater level nuclear weapons) or using nuclear weapons to try to deter or defeat conventional threats.²⁵



The sheer mass of China’s conventional forces cannot be taken lightly. (Photo by PO 2nd Class Dominique Pineiro.)

But China's nuclear underdog status should not make the United States complacent. In 1969, 30 years before the Kargil Crisis discussed previously, a major imbalance in nuclear forces did not stop Chinese troops (similar to Pakistani forces at Kargil) from ambushing Soviet forces on the disputed Zhenbao Island in the Ussuri River. The crisis quickly spiraled into a conventional conflict that China could not win; nevertheless, it recklessly signaled that it might use nuclear weapons:²⁶

China started a war in which it believed nuclear weapons would be irrelevant, even though the Soviet arsenal was several orders of magnitude larger than China's, just as the U.S. arsenal dwarfs China's today. Once the conventional war did not go as planned, the Chinese reversed their assessment of the possibility of a nuclear attack to a degree bordering on paranoia ... ambiguous wartime information and worst-case thinking led it to take nuclear risks it would have considered unthinkable only months earlier. This pattern could unfold again today.²⁷

So much for low-level neighborhood squabbles between nuclear states being non-threatening to global peace and security.

China's Intermingling of Full Spectrum Capabilities

Few articles about China's growing military capabilities today discuss the implications of Beijing intermingling its conventional and nuclear forces. This is a major oversight. Beijing could perceive U.S. mainland attacks against China's conventional forces—air defense systems, command and control (C2) networks, and rocket forces, to name only a few—as a preemptive U.S. attack to decapitate communist regime leadership or to destroy China's second-strike nuclear capability.²⁸ As one scholar has noted, it is a big problem when “nuclear and conventional C2 centers are not separated but function under the same command. In this case, the escalatory, transitional levels from conventional conflict to a nuclear, inadvertent escalation are blurred. Put differently, nuclear strategy becomes part of conventional fighting through the notion of inadvertent escalation.”²⁹

Irrespective of the exact motive Beijing might ascribe to U.S. offensive actions against the Chinese homeland, it would be prudent to assume there would be significant escalatory pressure on China to employ its inferior nuclear arsenal before it had been significantly attrited and Beijing had lost its safeguard against existential defeat.

Why Fight?

Today, China would likely hesitate to start a shooting war with the United States given that its adroit use of political, economic, and informational power (and coercion) has enabled it to achieve many of its policy goals at a fairly low cost. Remarkably, China has achieved, and is likely to sustain, its asymmetric advantage without “firing the first shot”—a provocative act it knows would earn it international condemnation as an aggressor, and likely serve as a *casus belli* (legal justification) under international law—prompting U.S. and Allied forces to respond in kind. For example, China has already undermined and penetrated the U.S. treaty alliances with both the Philippines and Thailand. A possible wild card, of course, could be Taiwan if China resorts to force to resolve this long-standing question. While some argue that the 1979 Taiwan Relations Act serves as a defacto Mutual Defense Treaty between Washington and Taipei—not to mention the shared democratic, human rights, and rule of law values—it is not pre-ordained that the United States will be willing to escalate toward the conventional-nuclear precipice, even if Taiwan's fate were in question, given the risks and costs of miscalculation. This is especially true if China uses information, political, and economic warfare vice attempting a cross-channel amphibious assault.

Game on! But Go Slower, Not Faster

Should a *casus belli* occur and a conventional U.S.-China or U.S.-Russia war begin, a new set of variables related to decision making and the use of force will likely be introduced. First, the White House (along with NATO in the case of Russia) will involve itself in virtually every significant use of force decision:

finding an off-ramp and preventing escalation will have become the existential U.S. national security imperative. The singular strategic focus will be ensuring that state-of-the-art, U.S. long-range hypersonic missiles (that can reach deep into an adversaries' homeland) do not inadvertently trigger unwanted escalation:

Targeting C2 centers was one of the weapons' first mission during the [G.W.] Bush Administration. The counternuclear mission was directed against rogue states' nuclear weapons, but those same weapons can also be used against states' C2 centers that manage conventional weapons systems. In other words, in A2/AD operational environments, long-range weapons that can be fired from outside the enemy's envelope will acquire further strategic value.³⁰

As strategist John Warden astutely observed, this is why such a conventional crisis would quickly become a “competition over the limits on violence” between both sides, as they intentionally impose competing restrictions on the use of conventional force.³¹ These limits would be self-imposed as both sides race toward an off-ramp that requires them to demonstrate their commitment to avoiding escalation.

Thus, decision-making authority will likely migrate quickly up the U.S. chain of command—not downward as current military thinking espouses. Civilian leaders will want to carefully calibrate the movement of U.S. ships, planes, and troops as painstakingly as they did during the 1962 Cuban Missile Crisis.

Not surprisingly, the U.S. President and his closest advisors were personally involved in *all* four of the case studies (analyzed by Dr. Kroenig) previously discussed in this article. What evidence do we have that the process will be any different in 2030 under similar circumstances?

Critically, decision makers will want to slow things down—not speed them up—so they have time to deliberate over a range of possible off-ramps, bargaining chips, and ways to expand their decision space in order to engage in meaningful negotiations with the other side. This all but guarantees that new rules of engagement will be promulgated across

the joint force that are best described as “weapons tight.” Meaning, except in cases of self-defense, the use of deadly force will require positive approval from senior command echelons.

Early War Termination is Success (and Victory)

A key component in any conventional conflict between rival nuclear states is that both parties must be confident they can achieve an acceptable outcome without resorting to nuclear war.³² The less favorable the outcome to one party, the more it will be motivated to cross the nuclear threshold.³³ As Jeremiah Rozman notes:

Competition between nuclear powers is like a game of chicken. The side that can convince the other that it cares more is likely to achieve its aims. The adversary’s aggression in its own region does not threaten U.S. vital interests, while a U.S. led response would require penetrating and destroying the adversary’s defenses that it extends from its homeland to create the A2/AD bubble over the territory that it captured. The adversary would likely see this as a threat to its vital interests.³⁴

Thus, the central question for U.S. leadership today is: *Should our conventional warfighting concepts seek the destruction or defeat of U.S. nuclear rivals, when America’s grand strategy since the end of World War II has been and remains terminating limited conventional wars before they can escalate and go nuclear?*

The answer is *Yes*. Adversaries must believe the United States has both the military capabilities and political will to use force to prevent a *fait accompli* or serious threats to its vital interests and those of U.S. allies. And, contrary to what Dr. Rozman asserts, these threats will sometimes occur far away from the U.S. homeland in its rivals’ backyards. On the other hand, the amount of conventional force applied must be reasonable to achieving the stated political objectives, which—when going against another nuclear armed state—will always be fixated on how to terminate conflict soonest without paying too high a price.

Threading the needle to effectively manage this strategic conundrum will



There has been little written about China’s intermingling of conventional and nuclear forces.
(Photo by PO 2nd Class Dominique Pineiro.)

not be easy; however, two near-term actions can potentially help advance this effort. First, we should take a page out of the Cold War playbook and invest much more in peacetime exercises, operations, and warfighting experiments that not only will build readiness but crucially signal U.S. adversaries. These global events should be DOD-wide, institutional priorities that message just how ready U.S. and Allied forces are to effectively operate across all domains—air, land, sea, space, and cyberspace. Moreover, these peacetime events should be accompanied with aggressive information operations campaigns that highlight U.S. warfighting competence and showcase how we are helping bolster allies and friends in contested regions.³⁵

Second, when military planners consider the assumptions and range of options available to the United States should it go to war against China and Russia, they should reflect on how nuclear powers have historically behaved with each other since 1945. Finding ways to impose costs on any adversary that elects to initiate hostilities is necessary and prudent. Over the top rhetoric about defeat mechanisms, victory (in the traditional sense that one side is going to surrender to the other), and regime change inhibits sober strategic thinking about less apocalyptic approaches

to achieving a successful outcome and sustaining the peace.

We now live in a world where deterrence portends to be more difficult than winning battles. As Cathal Nolan instructs:

War evolves. Total war seems for now to have slipped back in history, ushered off the stage of policy choices by strategic ICBMs that can deliver complete annihilation even of the mightiest of the Great Powers in under an hour. The balance of terror, of mutual nuclear threat, waits in silos and under arctic ice in silent submarines, however little unwary publics are conscious of that fact since the end of the Cold War lessened their worry but not the capabilities of nuclear states. Tactical even more than strategic nuclear weapons appear to make all-out war by immense conscript armies unnecessary and unwinnable, robbing conventional war as it developed to 1945 among the major states of the power of decision.³⁶

>For footnote information, please visit <https://mca-marines.org/wp-content/uploads/Greenwood-Winning-Battles-Will-Not-Be-Enough.pdf>.



Between a Rocket and a Hard Place

MCDP 1, Warfighting, and Force Design 2030

by Dr. Heather Venable & LtCol Nate Lauterbach

In seeking to put the Vietnam War in the past, CMC Leonard F. Chapman Jr. stated, “We got defeated and thrown out, the best thing we can do is forget about it.”¹ In the continuing cycle of the Marine Corps seesawing between a land-focus and a sea-focus, he then advocated pursuing increased ties to the Navy. His successor, CMC Robert E. Cushman Jr., similarly stressed the importance of “redirecting our attention seaward and re-emphasizing our partnership with the Navy.”² Over the next two decades, as Marines prepared for potential conventional conflict with the Soviet Union, they increasingly refined and centered their ideas about warfare on the concept of maneuver warfare—as epitomized by the publication of *MCDP 1, Warfighting*, in 1989.

Origins of and Problems with a Land-Centric *MCDP 1*

Even today, *MCDP 1* continues to be heralded as a unique blend of theory and doctrine that makes it perhaps the most important, foundational text of any military institution. However, there is an important flaw that must be addressed in a subsequent rewrite to adhere to Gen Al Gray’s admonition that *MCDP 1* is a living, breathing document.³ Somewhat ironically, given the Marine Corps’ determination to reconnect with its naval roots after the Vietnam War, *MCDP 1* is too land-centric. Indeed, it is difficult to reconcile its emphasis on maneuver warfare with naval warfare.

In some ways, *MCDP 1*’s focus on land warfare can be understood in light of the direction the Corps took after Vietnam, as seen in three particular ar-

>Dr. Venable has written *How the Few Became the Proud: The Making of the Marine Corps’ Mythos, 1874–1918* and is a non-resident fellow at Marine Corps University’s Krulak Center.

>>LtCol Lauterbach is the Plans Officer for 2d MAW. He is an Aviation C2 Officer and a graduate of the Marine Corps School of Advanced Warfighting.

reas. First, the Corps attached significant importance, understandably, to pursuing technology that complimented its acceptance of maneuver warfare. The light armored vehicle, for example, represented a kind of “compromise of sorts” between “mechanizers and infantry-philies.”⁴ This solution epitomized the Corps’ deliberate rejection of the Army’s embrace of heavily-armored tanks.⁵ But these debates tended to reaffirm the Corps’ land-centric leanings in the first place, just in a different direction than the Army.

Second, the Corps derived much of its theoretical underpinning for maneuver warfare from John Boyd. Although Boyd gained his operational experience flying aircraft for the Air Force, he subsequently determined through his historical studies that a “blitz/guerilla style of war” offered the greatest likelihood of victory.⁶ Thus, his land-centric theory of victory mirrored and reinforced the kinds of technological debates that animated the Corps at this time.

Finally, from the larger perspective of its theoretical focus, *MCDP 1* derives its inspiration from one of the most respected of all war theorists: Carl von Clausewitz. Yet, for all his profound insights into the nature of war and its myriad complexities, including the human element, Clausewitz fundamentally offers

a land-centric view of warfare. As naval officer J.C. Wylie—who himself sought to develop a broad theory of war—makes clear, soldiers generally espouse a kind of continental approach to warfare shaped primarily by the land domain’s natural emphasis on terrain.⁷ And, historically, Marines have been soldiers, albeit soldiers of the sea.

This mentality makes an early appearance in *MCDP 1*, which begins with two quotes from Clausewitz and Liddell Hart regarding the complexity of war and the importance of properly stressing the human will. But then *Warfighting* cites A.A. Vandegrift’s idea that

[p]ositions are seldom lost because they have been destroyed, but almost invariably because the leader has decided in his own mind that the position cannot be held.⁸

Vandegrift’s idea certainly exemplifies ideas about maneuver warfare in its emphasis on changing the opponent’s “mind” rather than “destroy[ing]” something. But this idea of holding territory does not translate seamlessly to the naval domain.

Furthermore, *MCDP 1* describes levels of Marine organization from division to fire team with constant references to “battlefields,” a term rarely used in the context of naval warfare.⁹ *MCDP 1* likewise enjoins Marines to be skilled first and foremost in “military art,” an idea

that easily could be rephrased as naval art, yet it is not.¹⁰ Indeed, it is not until more than halfway through *MCDP 1* that one reads at last of Marines needing to be “skilled” in relation to the “water.”¹¹

Other examples of the land-centric nature of *MCDP 1* are evident in how it repeatedly characterizes the battlefield. *Warfighting* describes “formations on the battlefield,” explaining how in the past they tended to consist of “linear formations and uninterrupted linear fronts.” Such language transports the reader to a largely ground-centric conflict such as World War I.¹²

By contrast, prominent naval thinker and retired Capt Wayne Hughes argues that naval warfare is deeply nonlinear in nature.¹³ Retired naval officer Roger Barnett echoes him, stating that it is highly problematic to “carry over wholesale in the realm of the sea” ideas that “govern” land warfare.¹⁴ But Clausewitz and Sun Tzu are the theorists that animate *MCDP 1*, not Mahan or Corbett or even Wylie, who attempted to blend the various domain-based theories into a “general” theory.¹⁵ Clausewitz and Sun Tzu merit their places in *MCDP 1*, but they must make room for naval theory, too.

Attrition vs Maneuver in Naval Warfare

This land-centric emphasis carries over into how *MCDP 1* places warfare along a “spectrum of attrition and maneuver.” Technically, *MCDP 1* allows for elements of attrition *and* maneuver, although debates between both camps divisively fractured this spectrum.

The word “attrition” became a stand-in for a host of issues, such as tensions over centralized control, as manifested in a series of letters published in the *Marine Corps Gazette* known as the Attritionist Letters from 2010 to 2013.¹⁶ Similarly, attrition has become almost a bad word in the DOD writ large. While *JP 3-0, Joint Operations*, defines “maneuver,” it omits “attrition” from its glossary.¹⁷ One Marine author even goes so far as to conclude that there is “really no such thing as attrition warfare” as no “book” or “theorist” advocates for it. In his opinion, attrition is not even a real concept

but, rather, a “bin for ineffective tactics and leadership styles.”¹⁸

By contrast, Hughes argues that the indirect approach, or maneuver warfare, is irrelevant to naval warfare because it is inherently “hard fought and destructive.”¹⁹ Hughes insists that the “predominance of attrition over maneuver is a theme so basic that it runs through” his book.

It is also important to note how *MCDP 1* defines attritional warfare as focused on the “cumulative destruction of the enemy’s material assets,” which it largely rejects given its preference for maneuver.²⁰ This notion of cumulative warfare, however, receives key emphasis in RADMJC Wylie’s theory.

Wylie divides warfare into two categories: cumulative and sequential. Sequential anticipates a progression across the land or sea, such as the Pacific campaigns in World War II. Yet, this is only

tribute lethality by providing landbased options for increasing the number of sensors and shooters beyond the upper limit imposed by the quantity of sea-going platforms available” in order to support the Navy.²²

Currently, though, advocates of the concept tend to view the concept primarily from the lens of maneuver warfare. At least one former Marine, for example, insists that this concept is workable if one can “make it difficult for the other actor to maneuver.”²³ Another author goes so far as to claim that the Corps’ “very existence rests upon the axiom that the sea is maneuver space.”²⁴ But, by its nature, naval warfare functions in opposition to key elements of maneuver warfare, which advocates not attacking enemy strength but *weakness*. This emphasis on maneuver warfare needs to be better reconciled with the thinking of naval warfare experts

MCDP 1 defines attritional warfare as focused on the “cumulative destruction of the enemy’s material assets” ...

one portion of naval warfare, which is also fundamentally cumulative in that it seeks to destroy or attrite an enemy’s platforms. While he argues cumulative strategies are not decisive on their own, Wylie also insists that the “strength of the cumulative strategy has meant the difference between success or failure of the sequential.” Thus, two of the Navy’s most prominent naval thinkers challenge the contention that officers should not advocate for attrition.

The Marine Corps’ Pursuit of Expeditionary Advanced Base Operations (EABO) in the Context of *MCDP 1*

If the Marine Corps intends to prepare for future warfighting in order to support the Navy, it only makes sense that it incorporate the ideas of key naval thinkers into *MCDP 1*, including the need to support a cumulative strategy in addition to a sequential one.²¹ Indeed, such an approach compliments the EABO concept, which seeks to “dis-

Two other issues should be considered in light of possible updates to *MCDP 1*. EABO further places significant emphasis on pursuing long-range precision fires to attack ships.²⁵ In this light, it is important to examine the goal of destruction in maneuver warfare, which ultimately centers on hastening the “enemy’s systemic disruption.”²⁶ *MCDP 1* explains that maneuver ultimately seeks a kind of shortcut around the enemy by aiming to “eliminate a key element which incapacitates the enemy systemically.”²⁷ At this point, the Marine Corps sounds a lot like the Air Force, which at times has sought to use strategic attack to paralyze the system as a whole—as epitomized by the thinking of John Warden.²⁸

Second, the “seat of purpose” continues to be on the land.²⁹ In emphasizing ship killing, most discussion of EABO occurs at the tactical level of war. But this is problematic because there is more to air or naval or any other employment of military force beyond simple

targeting. The larger question is how successful targeting turns into strategic effect, which so often only achieves decisiveness in relation to actions on the ground. Airpower, for example, is most decisive when it “enables friendly ground power to seize, hold, and exploit.”³⁰ But the Corps, by stepping into the role of a long-range artillery force, could be setting itself up to pursue a kind of proverbial whack-a-mole game of naval targeting.

Conclusion

While the implicit homage that *MCDP 1* pays to Clausewitz makes it timeless in many ways, it also provides one explanation for why it is so land-centric. The Corps will struggle to prepare for future warfare as long as its foundational theories of victory and its key doctrine are removed from the realities of naval warfare, as expressed by experts like J.C. Wylie and Wayne Hughes.

The reappraisal of *MCDP 1* thus necessitates revisiting the spectrum of maneuver and attrition to consider how the balance between the two accords with the realities of naval warfare. Similarly, the emphasis of maneuver warfare in paralyzing an enemy should be considered in light of the somewhat limited capabilities of long-range precision fires, at least as currently envisioned, to affect such a paralysis.

Meanwhile, the Corps runs the risk of pursuing a single path that undercuts its traditional role as a flexible force in readiness. In the late nineteenth century, Capt Henry Cochrane creatively tried to make a case for the Corps’ main mission to be a kind of “naval artillery.” But he conceded the problems with this idea, admitting it could not place the Corps in a position where its “value would never be questioned.”³¹

The Corps has begun discarding key capabilities that shape its trajectory of the last several decades, moving away from infantry toward long-range precision fires. In order to continue pursuing innovative ideas, the Corps must revisit its foundational theory and doctrine. It is time that *MCDP 1* gets its sea legs, becoming not only a theory of warfare but a theory of naval warfare. Only then can the Marine Corps step off in confi-

dence to ensure it has properly aligned itself to support the Navy.

Notes

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2. Ibid.
3. Gen Alfred M. Gray, “Preface,” in Headquarters Marine Corps, *MCDP 1, Warfighting* (Washington, DC: 1997).
4. *A New Conception of War*.
5. Ibid.
6. Ibid.
7. Joseph C. Wylie, *Military Strategy: A General Theory of Power Control* (Annapolis, MD: Naval Institute Press, 2014; reprint, Rutgers University Press, 1967).
8. *MCDP 1*.
9. Ibid. Similarly, see an example of a “forest” on 93 but not an analogous water-based example. Also see 95 with its example of supporting an infantry breakthrough and preventing the opponent from using roads to reinforce.
10. Ibid.
11. Ibid. Also see 54 for its “unique amphibious capability.” There is also mention of amphibious operations on 96 in the context of a wide range of possible uses of the Corps. The word “amphibious” is in fact used only four times.
12. Ibid.
13. Wayne Hughes, *Fleet Tactics and Coastal Combat*, 2nd ed., (Annapolis, MD: Naval Institute Press, 2000).
14. Roger Barnett, *Navy Strategic Culture: Why the Navy Thinks Differently* (Annapolis, MD: Naval Institute Press, 2009).
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16. See, for example, “Attritionist Letter No. 12,” *Marine Corps Gazette* (Quantico, VA: April 2011).
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19. *Fleet Tactics*.

20. *MCDP 1*.

21. *Fleet Tactics*.

22. Headquarters Marine Corps, *EABO*, (Washington, DC: 2018); and Gen David H. Berger, *38th Commandant’s Planning Guidance* (Washington, DC: 2019).

23. Quoted in Shawn Snow, “State of the Marine Corps: Inside the State of the Marine Corps: Inside the Corps’ Warplans to Sink Ships,” *Marine Corps Times*, (September 2019), available at <https://www.marinecorpstimes.com>.

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27. Ibid.

28. Col John Warden, “The Enemy as a System,” *Airpower Journal*, (Maxwell AFB, AL: Air University Press, Spring 1995).

29. *Fleet Tactics*.

30. Colin Gray, *Airpower for Strategic Effect* (Maxwell Air Force Base: Air University Press, 2012).

31. Heather Venable, *How the Few Became the Proud: Crafting the Marine Corps’ Mystique, 1874–1918* (Annapolis, MD: Naval Institute Press, 2019).



The Crisis

Operations in the South China Sea

by Dr. Benjamin Jensen

The following is the first in a series of fictional accounts of a U.S. joint maritime campaign based on unclassified war games conducted by the TECOM Warfighting Society (TWS), which was introduced in the June 2019 edition of the Marine Corps Gazette. The story is based on observations from five iterations of fighting a contemporary scenario with students from the Marine Corps University, School of Advanced Warfighting (SAW), members of the TWS, and Soldiers from the 75th Innovation Command in the U.S. Army Reserve. The first article introduces the crisis. In the tradition of *Defense of Duffer's Drift*, a classic military book published in 1904 by Sir Ernest Dunlop Swinton, the subsequent articles will analyze the outcomes of the unclassified war games as different dreams the joint task force commander has the night before a major battle. The references in the article demonstrate the unclassified nature of the material and establish key background for readers interested in exploring contemporary great power competition, joint maritime campaigns, and territorial disputes in the South China Sea.

LtGen Ender "Ellis" Wiggin, Commander of U.S. Marine Forces Pacific, drove to work while listening to a podcast round up of the daily news. During a diplomatic standoff over maritime boundaries, Chinese and Filipino forces exchanged fire.¹ The Philippines claimed they were acting in self-defense; Chinese news reported the attack was unprovoked, leading to a social media protests and spiraling unrest.

When he got to work, a young staff officer's hands shook as he handed Wiggin a tablet with his classified read book. A wave of cyberattacks had crippled the Philippines.² Chinese mobs attacked the Filipino embassy in Beijing. Filipino mobs attacked ethnic Chinese

>Dr. Jensen is a Professor of Strategic Studies at the Marine Corps University and a Reserve Officer in the U.S. Army Reserve 75th Innovation Command. He is also a Scholar-in-Residence at American University, School of International Service, and a Senior Non-Resident Fellow at the Atlantic Council.

citizens and businesses in Manila. In response, China deployed two surface action groups into the South China Sea; began conducting anti-surface/anti-air drills at facilities in Subi, Mischief, and Cross Reefs; and established a large air defense identification zone.³ Using anti-

... subsequent articles will analyze the outcomes of the unclassified war games ...

ship missiles fired from the militarized reefs, Chinese forces sank two Filipino Navy modernized Hamilton-class cutters. The ships were originally from the U.S. Coast Guard but were later sent to the Philippines under a Foreign Military Sales program.⁴ In addition to the cutters, the Chinese sank three multi-purpose attack craft built in Taiwan while enforcing an exclusion zone with combat air patrols. Chinese media outlets blamed the Philippines and countries supporting Manila's armed forces, including the United States, Japan, and Taiwan. There were indications and warnings that Beijing was preparing for possible large-scale attacks against Taiwan and Japan. On the diplomatic and economic front, intelligence analysts predicted China would leverage debt obligations across the region linked to the Belt Road Initiative to keep Southeast

Asian countries on the sidelines.⁵ These countries were already littered with 5G infrastructure that gave Chinese officials a backdoor to spy on the entire population.⁶

LtGen Wiggin took the tablet and walked to the INDOPACOM Commanding General's office. There was already a horde of restless modern-day camp followers clogging the outer office. Contractors, would-be think tank prophets, and staff telling low-level political appointees and journalists on the phone to "please hold" created a growing cacophony. The general's aide grabbed LtGen Wiggins by the arm and pulled him into the inner office. ADM Corbett, Commander INDOPACOM, was there with her primary staff. They were busy finalizing plans to stand up a joint task force (JTF) to respond to the unfolding crisis. The JTF would build on a forward deployed littoral combat group (LCG), a formation Wiggin had pioneered as a MEU commander some years ago, currently operating on the western side of the Philippines.⁷

The LCG consisted of an amphibious transport dock (LPD), a guided-missile destroyer (DDG), and a littoral combat ship alongside forward deployed elements from 12th Marines (one x HIMARs battery) and an aviation detachment with unmanned aerial vehicles (Shadows), heavy-lift (CH-53s), and Marine wing support squadron enablers.⁸ Over the last month, the LCG had been conducting exercises with Filipino Marines and supporting two Special Operations Command Pacific detachments as part of a

larger theater exercise designed to deter Chinese aggression.

ADM Corbett's staff discussed the crisis. The situation was rapidly deteriorating. The majority of Chinese surface combatants and aircraft appeared to be mobilizing for possible strikes against Taiwan and Japan while retaining a large surface action group and dedicated aviation and missile regiment assets to support surface action groups operating in the South China Sea. China was gambling they could use the crisis to change the regional balance of power. The political risk of strikes against Taiwan and Japan meant INDOPACOM would have to divert two carrier strike groups to deter Chinese efforts to expand the conflict. That would leave limited forces to support the Philippines. The staff scrambled and came up a plan.

After debating a range of options to respond to the South China Sea crisis, the staff recommended forming a small force, JTF-77, consisting of an expeditionary strike group, naval aviation assets, an agile combat employment (ACE) group from PACAF, and an Army multi-domain task force.⁹ The expeditionary strike group would consist of an amphibious assault ship (LHA), an amphibious transport ship (LPD), two guided-missile destroyers, a guided-missile cruiser, an attack submarine, and two supply ships. The Marine element included a HIMARs battery, an infantry company, two platoons of LAVs, and additional ground support assets alongside F-35s, light attack aircraft, and MV-22s. There would also be a naval aviation detachment with patrol aircraft (P-8s), unmanned surveillance aircraft (MQ-4C Triton), and tactical airborne early-warning (E-2). The ACE would consist of F-22s, B-1 bombers, global hawks, and a mix of refuelers and airborne early-warning and command and control platforms (E-3s) operating out of Guam and Australia. JTF-77 would also have an Army multi-domain task force that consisted of air defense artillery (one x patriot battery), long-range precision fires (one x MLRS battery), a Stryker company with additional electronic attack assets, and combat support to coordinate cyber, electronic, and space-based effects along with an

LCU 2000 (Runnymede) for littoral mobility.¹⁰ No additional forces were available given additional Chinese task forces standing up and oriented toward Taiwan and Japan and the threat of a larger "Pacific war."

ADM Corbett briefed LtGen Wiggin his staff would form the nucleus of the JTF. The admiral wanted them moving out with the expeditionary strike group as fast as possible to link up with the LCG and develop viable military options for de-escalating the crisis and defending U.S. treaty commitments.

While the strike group was sailing toward the crisis, power went out at an airport on a key island in the Philippines and a series of cyberattacks disrupted local communications. There were initial reports that a People's Liberation Army (PLA) airborne element seized the airfield. U.S. and allied special operations elements on the island reported interdicting Chinese special operations forces surveying beach-landing sites. Social media reported Chinese military vehicles operating in the vicinity. Intelligence reports indicated there were at least three amphibious ships (Type 71s) full of Chinese Marines heading toward the island along with a large surface action group including destroyers and

from intermediary nations confirmed this posture saying China did not seek a "strategic war" against the United States. Chinese forces were not attacking space-based assets, and there was no change in the posture of facilities associated with counter-space activity, a move that surprised many U.S. observers.¹² At the same time, there were indications and warnings of strategic mobilization activities indicative of a possible large-scale conventional attack against Taiwan and naval and air actions against Japan continued at an accelerated pace. Global stock markets plunged, and the price of gold skyrocketed.

On a secure line, ADM Wiggins brought LtGen Wiggin up-to-date on the larger strategic situation. During a National Security Council meeting, the U.S. President requested viable military options for countering Chinese aggression that demonstrated U.S. capability and resolve, reassured treaty partners in the region, and avoided nuclear escalation. Following the meeting, the Secretary of Defense contacted ADM Corbett. In consultation with the Joint Chiefs, they determined that countering the Chinese through conventional operations targeting Chinese forces involved with seizing the Filipino airfield was the

Chinese forces were not attacking space-based assets, and there was no change in the posture of facilities associated with counter-space activity, a move that surprised many U.S. observers.

frigates likely to link up with airborne forces at the airfield.¹¹ China had not declared war. Media outlets linked to the Chinese Communist Party reported that "sympathetic elements" were conducting a non-combatant evacuation operation to save Chinese tourists.

Wiggin's J2 briefed him aboard the LHA. There was no change to Chinese nuclear posture and their road mobile missiles and subs remained at low-alert levels. Intelligence reports indicated this posture was signaling a desire to avoid nuclear escalation. Diplomats

only viable military option to manage vertical and horizontal escalation risk. They stressed that the operation must involve limited military objectives that did not signal a threat against mainland China and avoided striking dual-use nuclear facilities.

The INDOPACOM Commander worked with his planners and adapted portions of a key contingency plan. The plan called for using flexible response options—with an emphasis on diplomacy to build a counter-China coalition and apply economic pressure while conduct-

ing a limited military operation to demonstrate capability and resolve and signal the risk of further conventional military escalation.¹³ With multiple carrier strike groups and larger portions of the U.S. Air Force tied up with separate plans to defend Japan and Taiwan, the task fell on JTF-77. The inside force was going to war.

INDOPACOM ordered JTF-77 to support Filipino forces clearing the island of Chinese military forces. The purpose was to ensure that Chinese forces did not use the island as a lodgment to threaten key sea lines of communication and other islands in the Philippines, that the conflict was contained, and China had crisis off-ramp options while U.S. treaty commitments were upheld. INDOPACOM ordered JTF-77 to seize the airfield in order to establish a secure lodgment for follow-on forces and establish sea control at least 100 km west of the island in order to secure sea lines of communication in the area.

JTF-77 planned to keep the expeditionary strike group at a distance until it established local air superiority. Planners envisioned using a combination of tomahawk land-attack missiles and joint air-to-surface standoff missile attacks by B-1 bombers against reclaimed island installations to lower Chinese aircraft sortie generation and the PLA's ability to control the South China Sea as well as project power into the Sulu Sea. Once these conditions were set, the expeditionary strike group would link up with the littoral combat group and conduct an amphibious assault to seize the airfield. Expeditionary advanced bases already set up by the littoral combat group would provide additional forward air refueling points for aircraft and strike sites for HIMARS platoons to support ground forces assaulting the airfield and establishing blocking positions to prevent Chinese amphibious forces from reaching the base.¹⁴ These fire assets would link up with unmanned intelligence, surveillance, and reconnaissance platforms operating from the expeditionary advanced bases to attack Chinese surface connectors and initial troop concentrations on the beach.

After reviewing the initial plan, Wiggins walked around the tight headquar-

ters assembled on the ship and finalized a video teleconference with the larger staff section operating remotely. He told his team to get some rest so they would have a clear mind for the days to come. Wiggins walked into his own quarters. As he went to sleep, his mind raced across the darkness. He thought about the battles ahead of him. He saw flashes of staff officers shouting at computer screens distorted by the chaos of battle as icons fluctuated on and off the screen and human emotion collided with machine reporting. He heard layered whispers as the voices from old tomes on military history and theory he read across the years and his mentors debated what would happen and why. Once he was finally asleep, he dreamt.

Notes

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> *Author's Note: The views expressed are his own.*



The Second Battle

Operations in the South China Sea

by Maj Robert Spodarek & Benjamin Jensen, PhD

The following is the third in a series of fictional accounts of a hypothetical engagement between the Chinese and U.S. militaries in the South China Sea.¹ The road to war was first published in the Marine Corps Gazette in February 2020 and explained the diplomatic crisis that escalated through initial hostilities between China and a U.S.-treaty ally in the region. The second account, in the Defense of Duffer's Drift style, detailed how the first battle might occur as the U.S. deployed a joint task force (JTF) to the area to link up with elements of a littoral combat group (LCG) and Marine littoral regiment.² Similarly, this account revisits the same battle scenario. However, it envisions a scenario where the JTF, LCG, and MLR reap the benefits from investments in disruptive technology, electromagnetic spectrum operation (EMSO) capabilities, and partner nation infrastructure projects including subterranean facilities. This story is based on observations from eight iterations of fighting a joint scenario with participants in the TECOM Warfighting Society and School of Advanced Warfighting as part of their capstone planning exercise series Agile Competition and Agile Response.

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LtGen Wiggin stirred in his sleep, dreaming about how a battle between a U.S.-led coalition and China could unfold in the South China Sea. Unlike his previous dream,³ he began to imagine fighting the battle using the Mosaic Warfare concept the United States had been experimenting with since he was a junior officer.

Mosaic Warfare envisioned fighting networked swarms of unmanned systems like a Mongolian horde constantly conducting feints, spoiling attacks, and reconnaissance pull to dislocate the en-

>Maj Spodarek is a Ground Intelligence Officer and 0505 MAGTF Planner currently serving in MARCENT G3 Future Operations. He is also qualified as an 0506 Red Team Member and completed his Master's thesis on Mosaic Warfare while attending the School of Advanced Warfighting.

>>Dr. Jensen is a Professor of Strategic Studies at the Marine Corps University and a Reserve Officer in the U.S. Army Reserve 75th Innovation Command. He is also a Scholar-in-Residence at American University, School of International Service, and a Senior Non-Resident Fellow at the Atlantic Council. The views expressed are his own.

emy.⁴ The concept called for integrating command and control (C2) automation, artificial intelligence (AI), and fleets of low-cost, partially autonomous unmanned autonomous systems capable to hold the enemy at risk in multiple domains.⁵ Mosaic formations possessed swarming capabilities with hundreds of small unmanned aerial systems armed with multi-mission payloads constantly probing to identify surfaces and gaps.⁶ The central idea was to create a web of smaller, more lethal, survivable, and adaptable forces that outpaced the adversary's decision-making cycle and created the conditions for a defeat in detail.⁷ The mosaic force constantly pulsed the environment, forcing the adversary to respond, creating simultaneous bait and ambush opportunities. In this manner, the swarming fleet of interoperable sensor and shooter platforms increased joint battlespace awareness and enabled the force to operate in more distributed formations that increased survivability without sacrificing lethality. The enemy could defeat any single swarm but found it difficult to track and respond to them all at once. Additive manufacturing capabilities printed new swarms on demand to generate combat power forward and compound the dilemma.

While he was a student at the School of Advanced Warfighting, Wiggin partnered with DARPA to develop a concept

of Mosaic based on studying Gen Krulak and the Hunter Warrior experiments in the 1990s.⁸ Despite years of fielding autonomous and human-on-the-loop platforms, many of his colleagues still acted as if they were Napoleon or Frederick the Great, great commanders whose intuition allowed them, individually, to identify patterns and positions of advantage. He found this nostalgic thinking not only antiquated but dangerous. Machines were better at pattern recognition—the heart of coup d'oeil—but humans were more creative. Wiggin knew that taking advantage of Mosaic capabilities required changing how commanders thought about battle networks.⁹ They needed to know when to trust the machine and when to challenge the underlying logic in AI models driving rapid target identification and optimized course of action recommendations. The modern commander developed a theory of victory and concept of operation with their staff mindful of shifting strategic conditions and limitations and let the machine optimize force flow, phasing and sequencing, and targeting based on intent.

Modern battle networks had to be resilient and capable of self-forming. Traditional linear kill chains proved brittle. Sever the sensor link and the weapon was lost. Every major competitor, from China to Russia, had concepts for paralyz-

ing the United States by degrading and denying C2. Consistent with network theory, interoperable sensors that could re-establish larger connectivity or form localized kill chains would provide flexibility and response options. Along with the C2 sensor interoperability offered by Joint All-Domain Command and Control (JADC2), Mosaic's Context-Centric Command, Control, and Communications (C3) created more resilient C2 and communication pathways.¹⁰ JADC2 overhauled legacy platforms to enable interoperability amongst C2 and sensor systems, while Mosaic's Context-Centric C3 leverages manned-unmanned teaming to harness C2 automation, AI decision-making aids, and multiple communication pathways, including decentralized wireless networks and future wireless ad hoc networks (WANET).¹¹ Hardware though required new software and the most important algorithm in war remained the thinking warrior.

Still dreaming, Wiggin's mind wander through a collage of memories—the tired faces of his staff across multiple, brutally honest after-action reports. He had conducted hundreds of hours of wargames and exercises, even mandated individual battle studies and wargaming known as the Fight Club,¹² to practice mission command in an environment characterized by JADC2 and Mosaic. He helped his teamwork through how not to get lost in the flood of data, to separate the signal from the noise working with—not against—the machines, and when to press the attack with dispersed, automated formations that survived the initial salvo.

Wiggin's dream shifted. His mind turned to strategic infrastructure required for 21st-century power projection and staging Mosaic capabilities forward. His dreamscape recounted how the U.S. diplomatic and military infrastructure investments in Indo-Pacific partner nations over the last decade enhanced Mosaic options for advanced basing and deception operations. As a young officer, he loved these rotations. He would land with a company on short notice and simulate using autonomous air and sea platforms to move tons of supplies forward during the initial stages of a missile exchange while his teams

pushed out decoys. Forward-positioned airheads and underground facilities that stored key parts for Mosaic swarms and critical munitions generated scalable response options. These infrastructure investments offered deception options to increase ambiguity, as the combined force could increase activities at multiple locations to disrupt China's ability to discern signals from noise. The facilities also helped on the diplomatic front by reassuring partner nations similar to his grandfather's stories about caves in Norway during the Cold War. U.S. investments with willing Indo-Pacific partners provided senior U.S. decision makers with multiple options to distribute the force and quickly aggregate combat power from disparate locations.

Wiggin's dream pulled him from his youth to his possible future. He saw himself in the operations center receiving his morning commander's update brief on the eve of confronting the Chinese in the South China Sea. His staff assessed that China would likely rely on its long-range sensor networks and precision-guided munitions to defend their occupation of a partner nation airfield. According to LtGen Wiggin's staff and Mosaic AI-decision-making aids, the Chinese Southern Theater Command's most likely course of action was multi-domain sea denial. The Chinese would establish a guard force of frigates and missile boat hiding in the littorals. To scout potential JTF intentions, China would employ high-altitude, long-endurance unmanned aerial vehicles (UAVs) paired with cyber and space-based assets to provide indications and warnings of U.S. force activities. Type 93 Shang Class nuclear attack subs would be forward searching for high value unit vessels and critical supply ships. The Southern Theater Command's surface action groups (SAGs) and carrier strike groups would remain in vicinity of Taiwan to provide a robust counterattack option while reinforcing ambiguity on China's true intentions. China would then deploy continuous combat air patrols from airfields on the mainland and in the South China Sea to pull U.S. forces into their Integrated Air and Missile Defense weapons engagement zones (WEZ). By pulling the United States

into the weapons engagement zones, China could leverage their home field advantage near the mainland—which provided greater magazine depth, greater advanced missile capabilities (extended ranges and hypersonic speeds), and robust sustainment—to launch converging attacks at key chokepoints. LtGen Wiggin's staff assessed that China's military objective was likely to hold territory in and around the U.S.-treaty ally and use this territory as a bargaining chip for future negotiations while keeping the confrontation non-nuclear. China envisioned a short, conventional victory over the United States to dictate diplomatic terms and advance their nine-dashed line claims while signaling the risks of getting involved to other Asia-Pacific nations. At the conclusion of the commander's update brief, LtGen Wiggin thanked the staff for their hard work and told his team to “keep pressing.”

In his dream, LtGen Wiggin saw himself leave the meeting and go outside to get some fresh air aboard the Expeditionary Strike Group (ESG) flag ship. As he peered out at the Pacific from the catwalk underneath the flight deck of the flag ship, LtGen Wiggin reflected upon his tall task of upholding treaty commitments to retake the key airfield in a U.S.-treaty ally's territory while containing the conflict and preserving crisis off-ramp options with China. He believed the JTF did not possess adequate forces within the ESG, LCG, and MLRs to accomplish this task, so he requested additional forces from USINDOPACOM—to include support from a carrier strike group and Air Force Expeditionary Forces. As LtGen Wiggin returned to the combat operations center, he was flooded with scouting analysis on the disposition and potential intentions of Chinese activities, based on manned-unmanned teaming and analysis from the JTF's staff and *Mosaic interpreters and analysts*—a collection of Marine data scientists similar to operations researchers trained on narrow AI applications.¹³

LtGen Wiggin reviewed the latest version of the JTF's course of action based on his commander's guidance and directed changes. The JTF's staff, operational planners, and *Mosaic interpreters*

and analysts recommended simultaneous anti-scouting operations to create firepower opportunities to isolate and exploit radars associated with the PLA's early warning networks and Integrated Air and Missile Defense systems.¹⁴ Specifically, destroying the PLA's high-altitude, long-duration UAV—the Soar Dragon—would significantly degrade the PLA's near realtime ability to scout and disrupt the PLA's decision-making and targeting kill chain. Next, multiple Mosaic formations would employ deception decoys and jamming via selective EMSO in multiple domains to increase ambiguity and enhance the effects of the anti-scouting operations. Additionally, willing partner nations and *Inside Forces* would increase activities at key airheads and logistical sites to create additional power projection and deception options.¹⁵ These counterforce decoys and deception operations would entice PLA formations to illuminate radars and firing positions, and create opportunities for U.S. lethal strikes and swarms to neutralize low-density ballistic missile and anti-ship cruise missiles firing assets across the battlefield.¹⁶ In essence, the JTF would take advantage of its converging geometry to confuse the PLA with respect to its avenues of approach and basing options, as well as which elements would strike the PLA first.

After isolating and blinding radar networks, the anti-scouting operations would then create opportunities to roll-back portions of the PLA's weapons engagement zones to achieve local sea control and air superiority by surging U.S. air sorties to destroy the PLA's vulnerable radars and Integrated Air and Missile Defense systems with long-range anti-ship and joint anti-surface standoff missile. Effective anti-scouting operations would disrupt PLA kill chains and degrade their ability to sense and observe U.S. maneuvers.

With these conditions set, the JTF would begin sequencing Mosaic amphibious formations forward, activating forward positioned airheads and expeditionary advanced bases (EABs) as needed, and deploying swarms of UAVs to isolate and overwhelm radars associated with the remaining PLA's Integrated Air and Missile Defense Sys-



The JTF's guided missile destroyer's defenses helped protect the ESG and LCG but not without cop. (Photo by Seaman Trevor Welsh.)

tems. The concentrated fires delivered from the distributed force would create a penetration opportunity for ESG elements to link up with the littoral combat group and conduct an amphibious assault to seize a friendly airfield held by PLA forces. EABs already set up by the LCG would provide additional forward air refueling points for aircraft and strike sites to support ground forces assaulting the airfield and establish blocking positions to prevent Chinese amphibious forces from reaching the base.¹⁷ LtGen Wiggin remembered first seeing the potential of this maneuver from observing how insurgents linked together cheap drones, cruise missiles, and ballistic missiles to attack Saudi Aramco facilities in 2019.¹⁸

As he reviewed the plan, the flag ship suddenly stirred with commotion as general quarters buzzers erupted and sailors and Marines sprinted to prepare battle positions. JTF sensor networks informed the combat operations center and combat information center of multiple vampires inbound toward the LCG, potential ballistic missile launches, while the AEGIS, global hawks, and F-35s reported a sharp increase in PLA activity toward the ESG—J-15s and J-31 fighters likely providing escort to protect H-6s loaded with anti-ship cruise missiles and land-attack cruise missiles. The Mosaic sensor networks had already created adaptive cross-domain kill webs (ACKs) and had autonomously deployed munitions and unmanned systems to in-

tercept these anti-ship cruise missiles and land-attack cruise missiles like the Navy's Close-In Weapons System (CIWS) in self-defense of the ship.¹⁹ The PLA was simultaneously attacking two different target sets, which appeared to be U.S. navy warships and key land bases. Even with the Mosaic technology and Marine Air Defense Integrated Future Weapon System, some missiles from the PLA's missile salvos hit a series of EABs, focusing on fuel sites and cratering runways.²⁰

Although the PLA experienced some initial success, Mosaic's ACKs had been calculating the most lethal and cost effective ways to reduce PLA threats from the JTF's fleet of legacy and autonomous systems. In firing the first salvos, the PLA illuminated many of their firing systems and radars, which uncovered their locations and enabled Mosaic's ACKs to generate multiple targeting solutions to destroy these PLA platforms. In response to the PLA's preemptive strikes, LtGen Wiggin ordered the JTF to execute the plan immediately and authorized commanders to prosecute ACK webs according to the theater rules of engagement. LtGen Wiggin's mind raced as he reflected on the multiple wargames that helped shape the rules of engagement and whether the plan managed escalation well enough to provide crisis off-ramps that kept the situation from becoming World War III.

The PLA attempted to mass a second wave of anti-ship cruise missiles

salvos from missile boats, frigates, and subs targeting the LCG. Many of these strikes, however, were far less accurate and missed their intended targets. The degraded accuracy was likely the result of effective JTF anti-scouting operations that destroyed Soar Dragon ISR platforms and multiple radar and sensor networks. Multiple attempts to deny JTF communications networks were also largely unsuccessful given the resilient Context-Centric C3 capabilities. The JTF's guided missile destroyer defenses destroyed most of the incoming rounds to protect the ESG and LCG, but one Amphibious Transport Dock and a Landing Dock Ship took multiple direct hits.

The fighting lasted over two hours and both sides sustained losses, with the PLA sustaining more damage based on tonnage of shipping sunk, damage to radar and sensor networks, ballistic missile units, and aircraft. The PLA expended much of their magazine arsenal—many on U.S. decoys and false basing sites—and also lost credibility within the international community for striking first. On the U.S. side, the Amphibious Transport was lost, but the remaining Mosaic naval force formations were able to establish local maritime superiority thanks to JTF CAP and airstrikes. JTF aircraft from Japan and Guam arrived and shot down 25 Chinese fighters around the Island, losing only 5 aircraft to a combination of air-to-air combat and HQ-9s SAMs launched from the SAG and the islands. Legacy B-1s also successfully attacked a PLAN SAG and installations in the South China Sea, sinking four ships and destroying multiple surface-to-air missiles sites and associated radars and isolating the PLA forces occupying the airfield.

LtGen Wiggin's dream turned to a flood of news feeds and commentary as the world digested the results of the skirmish. Following the intense fighting between his JTF and PLA, decision makers from the U.S.-treaty ally, United States, and China reviewed damage to infrastructure and the losses sustained by all parties. Although the PLA sustained more damage than the United States, the costs and risks were unacceptable to all countries and drove negotiations by the

U.S. partner nation for a cease-fire with the Chinese. Tensions remained high with sporadic cyber and air-to-air engagements in the South China Sea. ASEAN states held an emergency summit and demanded an end to all hostilities. UN representatives were involved behind the scenes but weary of a veto by either China or the United States. The economic costs were devastating. Both the Chinese and U.S. currencies lost value and stock markets continued to crash around the world. In Washington, cabinet officials had to debate pressing the fight without significant allied support or bailing out U.S. businesses that were failing. Unlike the early 2000s, the United States could no longer "print money" by buying government debt. Interest rates were higher and rising fast because of the risk premium placed on U.S. debt by the risk of World War III. Despite winning a local battle, the U.S. military had to pullback while diplomats negotiated a ceasefire and brokered larger talks to reduce the arms race and deployments that had increased tensions in the region.

In the after action, Mosaic technology and long-term investments in partner nation infrastructure, EABs, and underground facilities proved beneficial. Specifically, anti-scouting and counterforce operations from EMSO, decoys, and deception operations created multiple opportunities for the JTF to exploit vulnerable PLA systems. Mosaic technology provided the joint force the credible decoys and unmanned systems to create a more survivable force while also buying down the risk of losing U.S. lives and expensive, legacy platforms.

Investments in Mosaic technology and infrastructure also provided ample firepower options. Regarding the targeting process, Mosaic's ACKs accelerated decision making and provided options to commander's that may not have been possible without operating at machine speeds offered by C2 automation and AI. Manned-unmanned teaming enabled Mosaic systems to compose the most optimal formations and firing solutions in each aspect of the mission increasing lethality while once again buying down risk. The swarming capabilities delivered by the unmanned systems car also was a boon to U.S. firepower and counterforce

capabilities. They were also cheap, which would become increasingly important given the economic shock of the crisis.

Although the United States and China avoided World War III, the conflict revealed the dangers associated with future war in the precision-strike age and how a limited conflict would affect senior decision makers and the will of the people—with high casualties and wartime destruction as an unacceptable outcome for most Indo-Pacific nations, the international community, and the U.S. population. China's *fait accompli* proved somewhat successful, as the United States and its ally cut short the U.S. mission to expel PLA forces in order to avert a potential World War. Autonomous systems, AI, and infrastructure provided the JTF a competitive military advantage but at the cost of revealing new technology and secretive basing options. Further, effective employment of autonomous systems and AI had prompted a technology arms race, creating a security dilemma amongst world powers. The new systems were a blessing and a curse.

Wiggin woke up. It was just before dawn. The calm was deceiving. He knew the day ahead was only filled with hard choices.

>Editor's Note: The authors wish to dedicate this series of articles to the memory of Col Arthur J. Corbett, USMC(Ret) who passed away suddenly on 3 February 2021. Col Corbett was the intellectual driving force and principal author behind many Marine Corps Concepts including Expeditionary Advance Base Operations. Semper Fidelis.

>For footnote information, please visit <https://mca-marines.org/wp-content/uploads/Spodarek-Jensen-The-Second-Battle.pdf>.



The Third Battle

Operations in the South China Sea

by Dr. Benjamin Jensen

The following is the fourth in a series of fictional accounts of a hypothetical engagement between the Chinese and U.S. militaries in the South China Sea.¹ The road to war was first published in the Marine Corps Gazette and explained the diplomatic crisis that escalated into an initial battle between China and a U.S.-treaty ally in the region. The second and third articles explored how the fight might occur given the new Marine Corps force design and separate initiatives associated with Mosaic warfare and harnessing complex adaptive swarms.² This final story is a pre-mortem less about technology and more about political intrigue and human cunning. It specifically takes the position that all technological solutions have vulnerabilities in the clash of wills that defines politics and its continuation in war. Like the previous accounts, the article is based on observations from eight iterations of fighting a joint scenario with participants in the TECOM Warfighting Society and School of Advanced Warfighting as part of their capstone planning exercise series Agile Competition and Agile Response.³

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LtGen Wiggin had not slept in two days. America was not at war, but it did not feel like peace. The Marines and sailors steaming to the South China Sea had been on constant alert, threatened by a mix of spoofed sensors, sub detections, and the fear of what lay ahead. Chinese submarines and largely unmanned commercial container ships likely operated by People's Liberation Army (PLA) front companies, or hijacked by technical means, kept materializing along their route. Random explosions appeared along their bow, possibly old mines delivered by stealthy submersibles, always close enough to scare younger sailors but not meant to damage the ship.

>Dr. Jensen is a Professor of Strategic Studies at the Marine Corps University and a Reserve Officer in the U.S. Army Reserve 75th Innovation Command. He is also a Scholar-in-Residence at American University, School of International Service, and a Senior Non-Resident Fellow at the Atlantic Council. The views expressed are his own.



"Despite traveling dark, in emission control, sailors and Marines were addicted to the web and snuck peeks at the global coverage of the crisis." (Photo by SSGt Chad Simon.)

Some sailors were cracking under the weight of knowing they were constantly watched and vulnerable. Despite traveling dark, in emission control, sailors and Marines were addicted to the web and snuck peeks at the global coverage of the crisis. Every time their personal device pinged the network, they received tailored propaganda and messaging.⁴ There were even reports of brawls on multiple ships because of deep fakes implying sorted infidelity rings involving many of the sailors' partners and close friends. Enlisted Marines were overwhelmed by fraudulent Red Cross messages. Naval officers were subject to identity theft and bombarded by angry emails from

creditors and concerned families about empty bank accounts. Rumors of extremist groups and white nationalists undermined morale and cohesion across the ranks.

Wiggin pondered his options. Publicly, the treaty ally he was deploying to defend had diplomatically back tracked from the military crisis with China, leaving U.S. forces in a no-win situation. Despite losing aircraft and surface vessels,⁵ the U.S. treaty ally ordered their military forces to stand down. Through back channels, they asked the Americans to still deploy in order to deter further Chinese military action. Chinese forces still occupied a key island airfield

under the auspices of evacuating non-combatants. Worst still, the Chinese had expanded their exclusion zone for that operation to cover large swathes of international waters in a direct challenge to the United States. The move left the Littoral Combat Group (LCG)⁶ and forward elements of a Marine Littoral Regiment (MLR)⁷ in the engagement zone and at risk of being overrun in the next 24 hours. INDOPACOM wanted Wiggin's joint task force to link up with the LCG for a freedom of navigation operation, knowing full well that the Chinese were almost certain to engage. He was heading to a gun fight where he was overmatched and would not have the element of surprise. Leaders told him he was re-establishing conventional deterrence, but it felt more like walking into an ambush.

The fact was the entire operational plan Wiggin and other officers had worked on for years to address this exact contingency fell victim to a spoiling attack in the gray zone.⁸ Chinese firms called in a series of loans while dark pool trading caused a run on the U.S. treaty allies stock exchange and currency.⁹ News media buzzed with a series of sordid scandals involving the U.S. military personnel—all lies—but the truth did not matter as salacious lies raced across social media sowing distrust. The political leadership of the U.S. treaty ally had to station additional police around the U.S. embassy once protests started. A wave of cyber-attacks originated from servers in a third country hit U.S. businesses, especially firms involved in defense and transportation, but the malicious code carried hallmarks of Chinese operatives.¹⁰ The Chinese had created the conditions that forced America to look like an imperialist aggressor, giving Beijing a strategic fait accompli.

LtGen Wiggin got off a secure call with the Commander, INDOPACOM commanding general. Based on guidance, his task force—which consisted of an Expeditionary Strike Group and additional aviation assets—would proceed with its mission, linking up with the LCG and MLR to conduct a large freedom of navigation operation. They were authorized to use deadly force, with the INDOPACOM Commander restricting

any targets on mainland China to avoid inadvertent escalation.¹¹ The general's words clung to his bones, "we need to re-establish conventional deterrence. We cannot have the Chinese bullying our partners without consequences. Win this battle so we can avoid a protracted war."

Wiggin's opted for a form of armed reconnaissance optimized for a maritime fight. He wagered he could either find a gap in Chinese defenses or buy enough time for political leaders to develop an alternative to armed confrontation. He used loitering drones as a cavalry guard moving in front of his task force.¹² In the best-case scenario, they would force the enemy to reveal the key links in their sensor-to-shooter network, giving him an opportunity to disrupt their ability command and control (C2) a massive attack against his forces.¹³ At a minimum, they would buy him time and space to maneuver.

But the Chinese cluttered the battlespace, leaving a mix of what appeared to commercial fishing vessels, maritime militia,¹⁴ and Type 22 fast attack boats along the maritime red line. Wiggin knew he could also expect subsurface contacts and high-altitude drones as he got closer—all networked to land and air-launched anti-ship missiles, including hyper sonic weapons. He also knew, despite no confirmed contact yet, that his aircraft flying behind the guard force would quickly find themselves engaged with PL-15 air-to-air missiles fired from PLAF stealth aircraft and long-range surface-to-air missiles from artificial islands once the fighting broke out.

He had seen this exact scenario before at a think tank war game years ago. Lobbyists from defense manufacturers and so-called technologists, futurists, and innovation experts—usually brash, young political appointees and pundits—told him how AI would be the key to victory. An all-knowing brain would calculate risk, optimize engagement area development, and reduce the clash of wills to a targeting exercise. AI applications would identify targets and recommend attack options in an effort to break the enemy kill chain.

LtGen Wiggin lived through seeing the military buy and build new AI-enabled weapons that promised speed

and decision. He watched as civilian contractors, usually retired colonels, preached old ways of fighting the next war—substituting AI-enabled fires for command relationships and judgment. Over the years, he came to fear the entire American way of war had a technological Achilles' heel. If the enemy revealed its critical requirements, the U.S. military would fire at machine speed without consideration of second and third order effects. The whole system seemed brittle and susceptible to denial and deception.

LtGen Wiggin stirred in his sleep, pulled back into his dream by the buzz or the command deck. They were 30 miles from the LCG and in mutual support range of expeditionary advanced bases (EABs) established by the MLR. Screens bled red with multiple contacts, a mix of missiles from the sea and air targeting his surface combatants and EABs. His advanced guard's loitering munitions communicated with space-based sensors and long-endurance UAVs, passing radar tracts to a War Cloud, a cloud-based AI application that left Wiggin with a computer-generated choice: engage now or risk losing 50 percent of your formation in the next 30 minutes.¹⁵ It did not really feel like a choice. In fact, he had seen other commander's relieved for not acting on AI-generated course of actions.

He looked at the screen, only seconds had passed but already staff in the combat operations center were tense, repeatedly asking him "permission to engage sir. War Cloud says we have a window." "What are your orders, sir; we need to move now." His gut grew tense and his neck stiffened. Wiggin was reluctant but felt he had no choice. "Execute War Cloud's optimal strike package." It was done.

Wiggin saw the command screen flash blue and trace a series of hypothetical attack trajectories, all shifting as war cloud managed the counterattack and defensive measures simultaneously. His crew broke into applause, with some younger sailors who had never seen combat getting almost euphoric, shouting "hell yeah." They all thought the battle was over and all he had done—all they had done—was press a button.

Pressing that button was not cheap. Over the past decade, War Cloud

ended up being so expensive that the Navy reduced the number of ships in its inventory. It turned out that training an AI-enabled cloud required constant intelligence updates that trained pattern-recognition algorithms to recognize enemy aircraft, ships, and combat formations under different weather conditions and radar tracks. It turned out that War Cloud had an insatiable appetite for data and collecting that data proved time consuming and costly. To make matters worse, legacy contracting processes and regulations left U.S. defense vendors reluctant to share data. Cost overruns were rampant, and the entire DOD lacked the ability to freely exchange data limiting its ability to optimize U.S. defense processes much less fight futuristic enemies in dynamic, real world settings. The bureaucracy proved to be more resilient than the promise of algorithmic warfare.

Wiggin snapped back to sounds of his attack going horribly wrong. A Sailor spoke first, cutting through the cross talk, "It's not working sir." The blue arches of U.S. missiles from EABs and attacking loitering munitions started to dissolve on the screen. He pulled up an imagery feed. Most of the munitions were hitting decoys or narrowly missing PLA missile boats. Age-old deception practices and simple maneuvers were too much for War Cloud to adapt to after firing. Worst still, the Chinese used calculations from the attack to vector in pre-launched cruise missiles at the EABs. The MLR was devastated. Marines watched their equipment stores and fuel depots burn, knowing that dispersed and reduced to small arms they were not even worth the Chinese attacking. Chinese special operators appeared to finish the job using improvised defeat mechanisms. The remaining Marine unmanned assets were getting beat by old fashion techniques like high-flying kites with hundreds of wires and fishing nets at sea.

War Cloud opened a screen and presented Wiggin with another Hobson's choice: disengage or risk losing 65 percent of his combat power. Wiggin looked at sterile letters on the screen. Only twenty minutes earlier, he was supposed to attack. It was easy for a ma-

chine to change its mind and forgot the past, hard for the commander who had to write letters to the families of dead sailors and Marines.

His intelligence officer's voice cut through the noise of the combat operations center, "we have a problem, sir." Videos of the battle were being manipulated and spread across social media in realtime. The Chinese were claiming that the United States pre-emptively attacked peaceful Chinese forces. They were giving all U.S. forces 24 hours to leave the area and threatening to attack U.S. forces across the region if they did not. The stories were tailored propaganda, too good for users not to share. Lies had no weight; even the slightest push and they traveled far and wide. The effect was immediate, bots tracking social media showed a 33 percent drop in public opinion for the United States globally with projections it could fall even further over the next 24 hours. He received word from INDOPACOM to pull back and wait for further guidance. INDOPACOM also wanted to peel off the MEU that was traveling with ESG to reinforce multiple embassies in the area. Protests against the United States were increasingly likely and planning for non-combatant evacuations was already underway. He was left with just enough forces to collect the dead. China even used this as a propaganda opportunity, staging its hospital ships to receive kidnapped Americans wounded in the attack and showing them drugged and thankful for "Xi's mercy."

Allies and partners were also quietly in retreat. Cabinet officials called their counterparts in the United States, all expressing concern but calling for calm. While the attack was underway, the Chinese had opened a separate front. Customs officials impounded goods from major firms while currency markets and bond yields fluctuated, hit by mysterious trading and speculation that China might use its economic reach to coerce smaller states. Wiggin remembered hearing a school classmate from a partner nation once bemoan the fact that his country was reliant not just on Chinese trade but also on Chinese students. The fact was interdependence gave the Communist Party a thousand

levers to pull that made military threats less necessary.

In the end, World War III was nothing more than a small skirmish around some of the last few sparsely populated islands on the planet. There were no mushroom clouds, no statues of heroes, no fanfare. The world seemed to live more in what could happen than what actually transpired.

Over the next 30 days, pundits and strategists from competing political parties in America did more to exploit the attack than Chinese forces. Each side blamed the other filling hours of talk shows and flooding the web with bitter memes and conspiracy theories. In the investigations that followed, Wiggin was vindicated but then again so was War Cloud. No one stopped to ask if a machine, no matter how exquisite, could adapt as fast the nonlinear complex system that is war—Clausewitz's two wrestlers fighting blind and pulled by politicians and screaming masses. Lobbyists from defense firms twisted the engagement to call for additional defense funds to release War Cloud 2.0.

Wiggin turned to his side, still lying-in bed. He knew he was awake, but his dream cast a shadow over his thoughts. He could see himself waking up in that world, half broken and lost. He could see the faces of all the Marines and sailors he let down. He took a deep breath. Today was not that day, and it was time to find a way out of this trap.

>Editor's Note: The authors wish to dedicate this series of articles to the memory of Col Arthur J. Corbett, USMC(Ret) who passed away suddenly on 3 February 2021. Col Corbett was the intellectual driving force and principal author behind many Marine Corps Concepts including Expeditionary Advance Base Operations. Semper Fidelis.

>For footnote information, please visit <https://mca-marines.org/wp-content/uploads/Jensen-The-Third-Battle.pdf>.



The Seventh Cornerstone of Naval Operations

The home team has the advantage

by Dr. Jim Holmes, BGen William J. Bowers & Col Thomas D. Wood

On 12 October 2018, the President of Marine Corps University (MCU) hosted select students and faculty from the Naval Postgraduate School during a World War II case study on the opening of the Solomon Islands Campaign. The gathering was particularly meaningful because among the participants was the eminent naval tactician, author, historian, and professor emeritus, CAPT Wayne P. Hughes, Navy (Ret).¹ At the time, CAPT Hughes had just published a third edition of the highly influential treatise *Fleet Tactics and Naval Operations*, which was well on its way to being added to the Marine Corps Commandant's Professional Reading List and was being widely read, cited, and discussed by students in schoolhouses at both Quantico and Monterey. As a result of his indelible impact on naval warfare, MCU asked CAPT Hughes to write the preface to its 2019 anthology *The Legacy of American Naval Power*. The founder of MCU and 29th Commandant of the Marine Corps, the legendary Gen Al Gray, had suggested "reinvigorating maritime strategic thought" as the theme for the anthology and for MCU's 2018–2019 academic year.²

Weeks later, and just months before he passed away, CAPT Hughes submitted his draft, underscoring how the six existing cornerstones of naval expeditionary operations he posited were also lenses through which to examine America's employment of maritime strength across our history. But with an eye to the fu-

>Dr. Holmes is J.C. Wylie Chair of Maritime Strategy at the Naval War College and a Nonresident Fellow at the Brute Krulak Center, Marine Corps University.

>>BGen Bowers commands Marine Corps Installations Pacific (MCIPAC), overseeing thirteen bases, camps, and air stations spread across three nations that support more than 65,000 Marines, sailors, and family members.

>>>Col Wood possesses fifteen years of Pacific service and is MCIPAC's Deputy Commander. Like MajGen Schulze, he commanded 3/3 Mar.

The authors presented this paper in May 2021 at the Naval Post-Graduate School's "Naval Warfare Symposium" in Honor of the late CAPT Wayne Hughes, USN (Ret), 1930–2019.

ture, he added a seventh cornerstone: "The Home Team Has the Advantage."³ His rationale for adding this new cornerstone is worth quoting at length because it appears to have been shaped by the students' insights gleaned from the Solomon Islands case study:

For the Marine Corps and its expeditionary operations there is a seventh cornerstone related to getting there first. In littoral warfare, *the home team has the advantage*. This is not merely an issue of offense versus defense. It is a recognition that the littorals, where Marines traditionally operate, are dynamic, complex fighting environments where all operational and geographical domains intersect. Each combat circumstance is unique. Therefore, local knowledge of topography, geography, hydrography, and oceanography plays a critical and variable role in the tactical employment of forces.

Where Marines have traditionally operated, the invading force is at a disadvantage and must redouble its efforts to understand the local environment. The seventh cor-

nerstone puts the burden on the Marine Corps to set conditions for success early by knowing the terrain, the people, and culture of the people. Building relationships with allies and partners can give the Marine Corps the home team advantage in the face of aggressive attempts to seize territory. The year-long Solomon Islands campaign during the Second World War was a brilliant example of Navy-Marine air-sea-ground collaboration. On the other hand, it is far better today ... to prevent conflict from getting out of control and escalating into a world war. Today a maritime containment strategy is particularly applicable against China and/or Russia, and perhaps Iran.⁴ (Emphasis in original.)

This article proceeds in the spirit of CAPT Hughes's observations, and its purpose is twofold. First, it provides a thorough analysis of what "home team advantage" means within the context of great-power competition within the Western Pacific, an area where competition is intense and allied naval expedi-

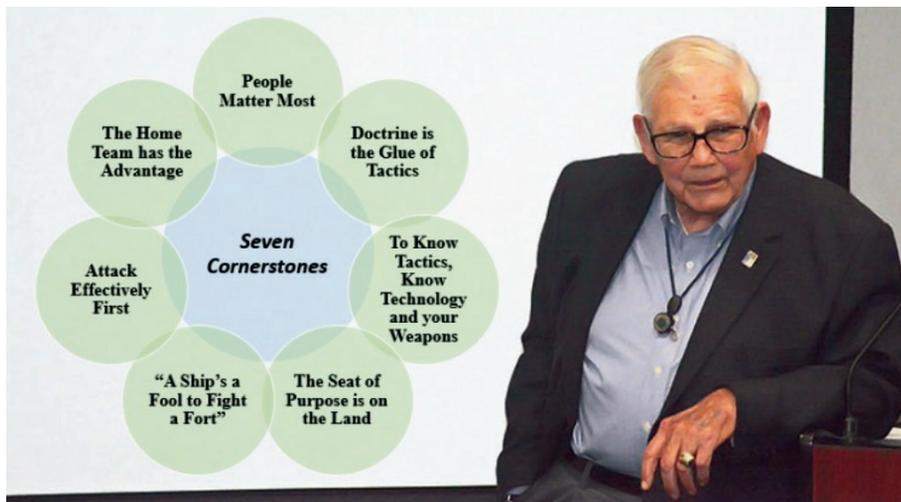


Figure 1. The legendary CAPT Wayne P. Hughes and his seven cornerstones of naval operations. CAPT Hughes published his “six cornerstones” in the first edition of *Fleet Tactics and Naval Operations* in 1986, and they have been credited by former Chiefs of Naval Operations as providing “a solid common foundation for understanding throughout the U.S. Navy” and that they “should be committed to memory and beyond; they should become instinct.” *Fleet Tactics and Naval Operations*, pp xvii and xxvi. Photo from BGen Bowers’ 2018 presentation “*Future of Naval Expeditionary Operations*.” (Source: U.S. Navy photo by MC2 Victoria Ochoa.)

tionary forces will come under serious challenges within the decade. Second, it draws upon Alfred Thayer Mahan’s admonition that the three pillars of naval power are commerce, fleets, and bases to explore an undervalued and under-analyzed, yet often most tangible and visible expression of our alliance commitments. Namely, our advanced naval bases and how they contribute to a “home team advantage”—particularly as the United States and its home-team Asian allies face an increasingly coercive and aggressive competitor in the Indo-Pacific.

Home Team v. Home Team

Wayne Hughes sensibly maintains that the home team has the advantage in warfare. A multitude of advantages go to the contender that knows the terrain, has bases, manpower, armaments, and resources of all types close at hand, and can strike out to sea with land based aircraft and missiles as well as seagoing forces. An away team—an expeditionary combat force—finds it hard to surmount these advantages, outmatching the home team on its own field.

CAPT Hughes’s insight is doubtless correct, but the rule of home team primacy holds imperfectly amid crowded geostrategic terrain. Geography may not

be destiny, but it has situated not one but *multiple* home teams, including Russia, the opposing Korean states, China, and Japan, in Northeast Asia. Residing in close proximity to one another across the Okhotsk, Yellow, and East China Seas, these powerful nations compete on the same field and know it well. The latter two contestants, which are our focus, have carried on an intermittent and often fierce competitive relationship ever since the seventh century. That is when Prince Shōtoku, the Japanese regent and crown prince, reputedly rebuffed Chinese diplomatic communications intimating that Japan should accept the status of a “tributary.”

Tributaries were lesser states that afforded the Chinese court political deference in return for material benefits such as the right to trade in the Middle Kingdom. In 607 AD, the regent opened a note to the Sui emperor thus: “From the sovereign of the land of the rising sun to the sovereign of the land of the setting sun.”⁵ The language signified sovereign equality rather than relations between a superior and an inferior. Such effrontery evidently did not sit well with the emperor, who made no reply. The exchange set the tone for Sino-Japanese relations, putting China’s rulers on notice that Japan refused to accept a subordinate

place in Asia’s Sinocentric hierarchy. Rivalry has typified bilateral relations ever since. Now as in the age of Prince Shōtoku, both teams are intimately acquainted with Asian geography. Both station militarily relevant resources in abundance within easy reach of potential battlegrounds in the Yellow Sea or East China Sea. Hughes’s dictum implies that both teams can harness the intrinsic advantages that go with protecting one’s home turf. However, it says little about who prevails when both teams boast those advantages on the same field. This anomaly beckons our attention to Northeast Asia.

But the strategic configuration today is more intricate than that of antiquity. One of the home teams, Japan, has played host to a visiting team, the United States, since the end of World War II. Some 54,000 American Sailors, Marines, Airmen, and Soldiers, along with more than 53,000 U.S. civil servants, contractors, and family members accompanying the force, are a visible, human reminder of the United States’ commitment to the U.S.-Japan alliance. They make up the Seventh Fleet at Yokosuka and Sasebo, the III MEF at Okinawa and Iwakuni, the 5th Air Force at Okinawa, Yokota, and Misawa, and elements of the Army. These armed U.S. contingents fly, sail, and operate alongside Japan’s Self-Defense Force and are what the 2018 U.S. *National Defense Strategy* refers to as “contact” and “blunt” layer forces.⁶ Contact forces compete beneath the threshold of armed conflict, while blunt forces deter aggression or deny an opponent its aims should it resort to arms. Barring a rift within the U.S.-Japan alliance, this is the composite home/away team that would take the field against China.

The U.S.-Japan team can also summon reinforcements from the Eastern Pacific, namely the U.S. Pacific Fleet. Affiliated joint forces would come from bases in Guam, Hawaii, and the U.S. West Coast. Yet, China’s People’s Liberation Army (PLA) has built a formidable array of anti-access/area denial (A2/AD) weaponry precisely to keep U.S. reinforcements from arriving on station in time to intercede decisively against Chinese aggression. In the ideal case from

Beijing's standpoint, anti-access measures would keep the U.S. Pacific Fleet out of the Western Pacific altogether; a more realistic goal for the PLA is to keep the Pacific Fleet from reaching the scene of battle in time to make a difference. Either way, PLA commanders hope to present Tokyo and Washington a *fait accompli*, a done deal, and dare them to reverse it at prohibitive cost and danger to themselves. For their part, the allies can try to blunt PLA anti-access strategy, helping reinforcements gain entry to embattled waters, skies, and shores. They can also attempt to encumber Chinese access to the Western Pacific—imprisoning Chinese shipping in home waters.

Balance of Home-Team Advantages

Strategic grandmaster Carl von Clausewitz fashions an instrument to help a martial competitor discover how many resources it must mobilize to wage strategic competition or war. First, he says a contender must examine its “own political aim and that of the enemy.” Second, “we must gauge the strength and situation of the opposing state.” Third, “we must gauge the character and abilities of its government and people and do the same in regard to our own.” And fourth, “we must evaluate the political sympathies of other states and the effect the war may have on them.” Space constraints rule out assaying a comprehensive net assessment here. Indeed, Clausewitz himself noted that Sir Isaac Newton would quail at the countless factors that have to be appraised to produce an accurate net assessment. Only through intuition informed by information can a war leader gauge the correlation of national power.⁷

Three elements of a Clausewitzian net assessment, most salient to the dual home team competition between China and the U.S.-Japan alliance, stand out: political aims, geography, and military power. First, China's political aims are encapsulated in what Chinese Communist Party (CCP) general secretary Xi Jinping labels the “Chinese Dream,” a national rejuvenation following a long “century of humiliation” (1839–1949) at the hands of seaborne conquerors—chiefly European and Japanese empires.⁸ As Professor Sally Paine notes, the cen-

tury of humiliation reached a nadir in 1894–1895, when the Imperial Japanese Navy crushed the Qing Dynasty's Beiyang (or Northern) Fleet off the Korean coast. Japan's stunning victory displaced China from its perch atop the Asian order. The Qing navy was China's last serious navy, but Beijing does not accept the verdict of 1895 as final. Ever since, says Paine, “the focus of Chinese foreign policy has been to undo [the war's] results whereas the focus of Japanese foreign policy has been to confirm them.”⁹

Repealing traumatic history and restoring Asia's Sinocentric order is China's dream. Xi's all-consuming project demands that China make itself prosperous, enabling Beijing to accumulate lineaments of military might and diplo-

belonged to imperial China and thus, by implication, belongs to China for all time—regardless of who is in charge in Beijing.

Japan will not readily capitulate to its giant neighbor's demands. Japan and its American ally want to preserve what is, not to take something from China. They are conservators of the regional order as it has existed since the downfall of Imperial Japan in 1945 and the emergence of the U.S.-Japan security partnership. Defending a status quo is strategically defensive in nature. The allies can content themselves with a prevent defense whereas China must bid for outright victory to fulfill its political goals. Of course, football aficionados would remind us that a prevent defense yields

Defending a status quo is strategically defensive in nature. The allies can content themselves with a prevent defense whereas China must bid for outright victory to fulfill its political goals.

matic influence. It will use newfound national power to revise the Asian and world orders to suit China's interests as CCP magnates construe them. For instance, the Treaty of Shimonoseki, which ended the Sino-Japanese War, transferred Taiwan to Japanese administration, where it remained until 1945 before becoming home to the Republic of China in the late 1940s. Japan also solidified its claim and authority over the Senkaku Islands, another object of lingering dispute, in the Sino-Japanese War's aftermath.¹⁰ Reversing the debacle of 1895—and fulfilling its national dream—demands that China regain this offshore real estate by whatever means necessary. Only thus can it turn back the clock.

Communist China, in other words, must pursue strategically offensive aims vis-à-vis Japan to make its dream come true. It wants back what Japanese arms wrested from the Qing Dynasty. Now, Beijing will not concede that it is playing offense. It will cast its goals as strategically defensive, insisting that it merely wants to recover property that once

ground in hopes of preventing a decisive strike—and ground is what China covets. A passive defensive mindset is something to avoid. Sports metaphors have their limits.

Second, geography is a friend to the allies. A hybrid continental/sea power, China occupies a central geographic position in maritime Asia. Like all contestants that share land frontiers with potential rivals, China cannot neglect terrestrial defense, even as it turns its attentions seaward in pursuit of regional eminence. Yet, Beijing's maritime project confronts a stubborn geostrategic problem even apart from competing demands of land defense. Namely, what Chinese strategists call Asia's “First Island Chain” lies athwart the sea and air lanes connecting the PRC mainland with the broad Pacific. U.S. allies or partners occupy the entire island chain, which, if fortified, could obstruct China's access to the high seas and thus its commercial, military, and diplomatic prospects in Asia and the wider world. Accordingly, Chinese strategists regard the island chain as a “metal chain” that could bar their ac-

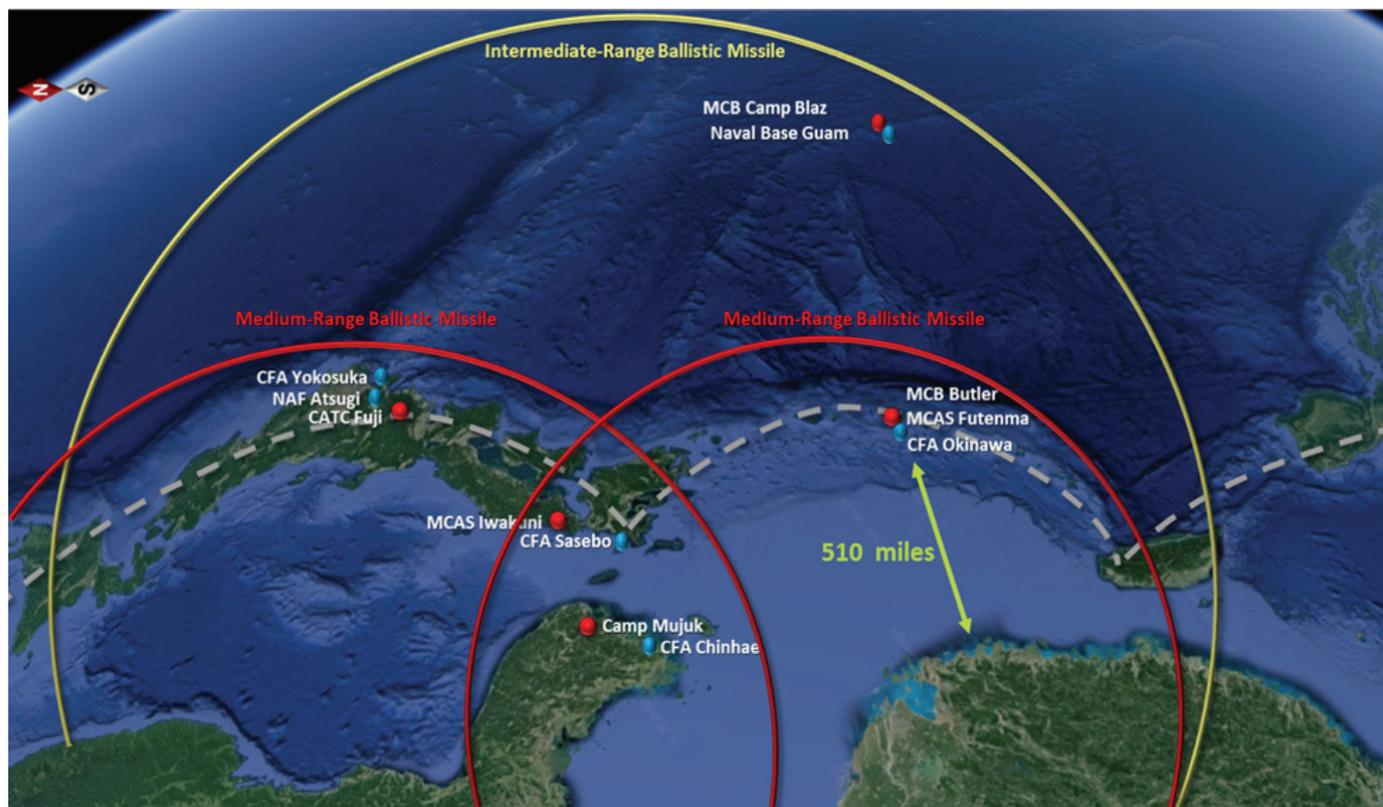


Figure 2. Mahan’s “chain” in the contemporary missile era. (Source: Col Robert Castro, USMC(Ret).)

cess to the high seas and ruin China’s dream of commercial and political supremacy.¹¹

CAPT Alfred Thayer Mahan, arguably history’s most influential maritime historian and theorist, likewise uses the metaphor of the chain. He depicts sea power as a “chain” connecting domestic production with foreign distribution of goods.¹² The sea—the maritime thoroughfare whereby seafaring commercial societies transport wares and military power—constitutes the central link in Mahanian sea power. A maritime state that sees that central link fractured, curbing its access to the sea and foreign harbors beyond, sees its nautical fortunes falter. The first island chain, which runs north-south, thus crosses and obstructs China’s Mahanian sea-power chain, which runs mainly east-west. In other words, Chinese mercantile and military shipping and aircraft must transit through the island chain’s littoral “chokepoints,” or narrow seas—which it does not control—if China is to prosper as a trading, military, and diplomatic competitor.

A glance at the map conveys this grim reality. When CCP leaders and commanders look offshore, they cannot help but notice that the first island chain completely encloses the mainland’s continental crest. No Chinese seaport outflanks it, furnishing a ready outlet to the high seas. Just as worrisome, it is inhabited entirely by American allies and partners, some of which play host to U.S. forces and bear impressive military forces of their own. That well-armed potential foes overshadow China’s entryways to the sea stokes consternation in Beijing—and hands these opponents a geostrategic lever.

Third, the balance of military power is hard to gauge, as Clausewitz might have foretold. The balance appears roughly equal by raw quantitative measures such as numbers of ships, warplanes, and other military implements. The U.S. Navy numbers 297 battle-force warships in total, including 11 nuclear-powered aircraft carriers, 114 surface combatants, and 68 nuclear-powered submarines (of which 18 are *Ohio*-class missile submarines meant for nuclear

deterrence or conventional shore bombardment, not fighting hostile navies).¹³ The Japan Maritime Self-Defense Force operates a fleet that includes 45 surface combatants, 21 conventional attack submarines, and associated mine-warfare, amphibious, patrol, and logistics vessels.¹⁴ Against this democratic armada the PLA Navy arrays an approximately 350-ship fleet centered on 2 aircraft carriers, 143 surface combatants, and 68 nuclear and conventionally powered submarines (6 of which are for nuclear deterrence, not sea combat), along with associated mine-warfare, amphibious, patrol, and logistics vessels.¹⁵

Brute numbers, however, obscure the asymmetries between rival sea forces. This is an age of *joint sea power*. Sea power, that is, is no longer the sole province of navies, to the extent it ever was. It is a truism, including for CAPT Hughes, that “a ship’s a fool to fight a fort.” But today the fort’s “guns”—anti-ship and anti-air missiles—are no longer rudimentary cannon with ranges measured in a few miles. They can reach hundreds if not thousands of miles out to sea with

precision, supplementing the fleet's firepower at distant scenes of battle. Battlefield strategy is about making oneself stronger than the foe at the decisive place at the decisive time. It matters little how a unit of combat power is delivered to the scene, whether by a fighting ship or by a shorebased warplane or cruise or ballistic missile. Strategists are remiss if they neglect to factor in landbased sea power when tallying up relative power. Fortress China would contribute to a sea fight—so would Fortress Japan.

It appears the PLA holds marked advantages in its variant of theater-wide A2/AD strategy, while the allies can avail themselves of their own advantages to

If they use geography wisely, the allies can leverage their advantages at manageable cost relative to China. It does not take an über-pricey cruiser or carrier to plug up a strait to maritime or air traffic. It takes missile- and sea-mine-armed surface and subsurface craft operating in and around the straits in concert with troops firing missiles from the islands and aircraft flying overhead. Light combatants can bear the brunt of fighting along the defensive line of scrimmage that is the first island chain—leaving heavy forces to prowl behind the line in case PLA forces break through into the backfield. There is no substitute for monitoring and continually updating

arena. He declares that combining strategic offense with tactical defense offers good prospects for success in a limited war—a war in which the combatants have no intention of fighting to the finish and imposing terms on the vanquished. In all probability, any Pacific war will be a limited war, as no one relishes a fight to the finish in the atomic age.¹⁸ Waging tactical defense in concert with strategic offense, says Corbett,

presupposes that we are able by superior readiness or mobility or by being more conveniently situated to establish ourselves in the territorial object before our opponent can gather strength to prevent us. This done, we have the initiative, and the enemy being unable ... to attack us at home, must conform to our opening by endeavoring to turn us out. We are in a position to meet his attack on ground of our own choice and to avail ourselves of such opportunities of counter-attack as his distant and therefore exhausting offensive movements are likely to offer.¹⁹

It seems, then, that possession is nine-tenths of the law in battlefield strategy just as in everyday life. Terrain, geographic distance, and the initiative work on the defender's behalf, making counterattack a daunting prospect for the challenger. Moltkean logic is doubly compelling in the marine realm. Corbett proclaims that if "the territorial object is sea-girt and our enemy is not able to command the sea," that augurs well for the defender's chances of holding the disputed ground.²⁰ Islands are nothing if not sea-girt. Maritime command converts the sea into a barrier, helping confound the attacker's attempts at tactical offense. *This is an intensely joint, amphibian vision of littoral operations in a contested environment.*

How can the U.S.-Japan team augment its strategic advantages, priming itself for success in strategic competition or war? With apologies to CAPT Hughes, there is far more to the challenge than fleet tactics, indispensable though his brand of tactical artistry remains. This is a grand strategic challenge. Let us work from the political and grand-strategic levels down toward force design, operations, and tactics. First of all, the alliance—like any international consortium—could prove fissile under

... combining strategic offense with tactical defense offers good prospects for success in a limited war—a war in which the combatants have no intention of fighting to the finish and imposing terms on the vanquished.

deny China access to the Western Pacific. It is hard to be more precise than that. As strategist Edward Luttwak notes, an adversary's military implements are "black boxes" in peacetime.¹⁶ A potential opponent, that is, can count up widgets and analyze them by their outward appearance, but it cannot peek inside. Observers cannot confidently judge a weapon system's capability and quality without seeing it put to the test of combat—the final arbiter of what does and not work in any armory. Analysis is doubly difficult in our software-driven age. If the PLA Navy has made a leap to technological parity with allied fleets, it may command an edge in fleet-on-fleet actions—especially when counting the shore based arsenal as part of the force mix. If the PLA's impressive looking armaments remain a generation or more behind, the advantage may still reside with the allies. After all, numbers are not everything. Remember that the Soviet Navy always outnumbered Western fleets during the late Cold War by massive margins in platforms such as nuclear-powered submarines. Few analysts pronounced it the superior combat force.

appraisals of the situation in the Western Pacific—not just through static analyses such as this but through a regimen of frequent wargames, exercises, and maneuvers.

Becoming the Stronger Home Team

The U.S.-Japan team boasts one fundamental strategic advantage, namely that it is easier to hold something than to take it. The allies hold the prized real estate; China would have to take it. In that sense, the PLA is the visiting team along the island chain, at the eastward edge of the playing field. Field Marshal Helmuth von Moltke the Elder, the military architect of German unification and one of history's foremost martial practitioners, lays out the logic succinctly: "The tactical defense is the stronger [form of war], the strategic offensive the more effective form—and the only one that leads to the goal."¹⁷ In other words, the contender that seizes or occupies some site or object, then defends it tactically, positions itself for strategic success.

Mahan's contemporary, maritime historian Julian S. Corbett, imports Moltkean insights into the near-shore

the stress and strain of competition. As master statesman Klemens von Metternich once noted, “with alliances as with all fraternizations ... if they do not have a strictly determinate aim, they disintegrate.”²¹ Beijing also gets a say in relations between Washington and Tokyo. China is a consummate breaker of alliances and will grasp at any opportunity to divide America and Japan. Despite their longstanding security fellowship, it behooves the teammates to ensure that the U.S.-Japan alliance has a strictly determinate aim—spelling out precisely what the allies will and will not do should China call this or that play on the field of competition.

Second, the allies must answer an unobtrusive but crucial strategic question: should they exempt PLA forces not at sea or aloft from attack? The temptation to allow the PLA a sanctuary on the mainland will be powerful. China is a nuclear-armed antagonist. Even conventional strikes on its homeland raise the possibility of atomic retaliation. Striking the mainland, furthermore, could cement popular support for Xi Jinping’s policies—making China an even tougher and more spirited foe. On the other hand, ruling the mainland off-limits would permit the PLA to lash out at allied forces with impunity from shore airfields and missile batteries. In effect, Tokyo and Washington would instruct expeditionary forces to try to evade or absorb a beating without hitting back at the force administering the beating. And what about the politics of sanctuary? Whether the Japanese and American people would allow their leaders *not* to hit back when their sons and daughters were under siege—and being wounded or killed—is likewise worth mulling.

Teamwork depends on the allies agreeing on a common approach. If they do declare Fortress China a safe haven, Moltke’s logic may apply weakly along the first island chain—if at all. The PLA could simply pound away at allied forces at its leisure until they stood little chance of withstanding a breakout attempt from the PLA Navy or Air Force. The allies’ geostrategic advantage could be forfeit. How much forbearance to exercise is a question of utmost import for team captains.

Third, the allies must render combined forces as resilient and heavy-hitting as possible—more so if they do designate the mainland as a PLA haven. They should make every effort to “harden” fixed facilities such as bases against air and missile attack. Hardening could mean bolstering passive defenses through such measures as moving key infrastructure underground, dispersing it, and improving repair capability to restore it to action after an assault. It could mean augmenting active air and missile defenses. It could also mean identifying and equipping temporary anchorages or airfields to which ships and planes could scatter if an attack appeared imminent. Dispersed and diverse infrastructure challenges PLA targeting and reduces destructive outcomes when struck. In aggregate, hardened and dispersed infrastructure enables allied forces to “stand in” and persevere in the face of adversary attack. Creating a network of strong, resilient littoral bulwarks in the first island chain underwrites deterrence on the home field, which Japan and China share.²²

Fourth, the allies would be wise to leverage the relative maturity of the Korean theater. The U.S.-Republic of Korea alliance benefits from 70 years of sustained investments in prepositioned equipment and ordnance, mature airfields and ports, and an array of highly capable bases manned by formidable forces. While some might express reasonable skepticism about the political viability of involving an additional home team in any conflict involving China, the realities of munition and fuel consumption alone demand that allied leaders examine Korea’s role in Western Pacific contingencies. Expanding the scope of exercises on the Korean Peninsula to account for regional conflict is as critical as it is prudent. Laying the diplomatic groundwork for tripartite cooperation is crucial in light of fraught relations across the Tsushima Strait. Allied officials should begin now if they hope Seoul will join with Tokyo and Washington to frustrate aggression.

The same principles of hardening and improved resiliency that apply to ground facilities apply to fleet design. While it seems doubtful that future sur-

face combatant ships’ hulls will feature heavy armor, their most basic passive defense against attack, naval leaders have committed themselves to such passive defenses as improved electronic warfare to fool or blind incoming enemy weapons. They are also pushing active defenses such as long-range anti-ship and anti-air missiles, including hypersonics, along with directed-energy weapons able to dazzle or—once engineers boost their power output markedly—shoot down hostile ordnance. Acknowledging that no technological advance will render individual combatants impervious to attack; however, naval leaders have resolved to procure more, smaller, and cheaper platforms that can fan out on the map or nautical chart. Each unit will comprise a smaller percentage of the fleet’s aggregate fighting power. A fleet made up of many fighting ships could afford to lose one or a few in action yet battle on, whereas losing a carrier, cruiser, or major amphibious transport today would deduct a major share of the fleet’s strength—debilitating the ability of the fleet as a whole to prevail in a trial of arms. And prevailing despite losses is what strategy and operational art are all about, which gets to the heart of what is most essential in the Western Pacific: *effective deterrence*.

Bases, Posture, and 21st-Century Deterrence

In 1911, on the eve of World War I and informed by his voluminous research on British sea power, Mahan opined that “[f]ortified bases of operations are as needful to a fleet as to an army.”²³ Nine years later, and just months after the Great War’s armistice, MajGen Commandant John A. Lejeune declared before the House Naval Affairs Committee that “[f]leets cannot survive without bases.”²⁴ RADM Bradley Fiske likened naval stations’ purpose to “supplying and replenishing the stored-up energy required for naval operations,” much as travelers plug into USB ports periodically to charge the batteries in their portable devices.²⁵ Although more than a century has passed since Mahan, Lejeune, and Fiske left their fingerprints on thinking about the relationship between bases and sea power, their admoni-



Figures 3–6. Giants of strategic thought about sea control, the littorals, maritime logistics, and the irreplaceable value of advanced naval bases. From left to right: MajGen Commandant John Lejeune, ADM Arthur Hepburn, RADM Bradley Fiske, and CAPT Arthur Mahan. (Sources: Marine Corps University and the U.S. Navy’s Naval History and Heritage Command.)

tions have direct relevance to home-team advantage in today’s hypercompetitive Western Pacific.

The evolution of thinking about advanced naval bases during the twentieth century provides an instructive prologue for understanding today’s linkages between home-team advantage, efforts to assure allies of American steadfastness and prowess, and deterrence. In the summer of 1938, as the international-security situation was deteriorating, the Secretary of the Navy directed ADM Arthur J. Hepburn, the commandant of the 12th Naval District in San Francisco, to: survey the Navy’s shore-based infrastructure, identify existing bases in need of additional investments, and make recommendations for the construction of new naval bases. Hepburn intuitively understood sea control and sea denial, as well as the critical role shore based capabilities could play in sustaining forward naval power.

A veteran of combat at sea during the Spanish-American War, Hepburn had served in five battleships and, during World War I, commanded a submarine-chaser base in Ireland. In late 1938, he submitted an exhaustive report to Congress recommending massive investments and base expansions in the Pacific. According to the U.S. Army’s Center for Military History, the report declared that Guam

should be developed into a fully equipped fleet base with air and submarine facilities ... The advantages of establishing a strong base at Guam were

enormous ... [and] such a base would create “the most favorable conditions ... for the prosecution of naval operations in the Western Pacific,” and would contribute greatly to the defense of Hawaii and the continental United States. By limiting hostile naval operations to the south, a fortified base at Guam would also serve to protect the trade routes to the Netherlands [East] Indies and greatly simplify naval problems “should the fleet ever be called upon for operations in the Far East.” And even if the

1938, investments in Pacific installations remain difficult to realize. In stark contrast to the 1930s, however, today’s guided-missile era raises the stakes and makes investments in advanced naval bases more essential to harnessing the home-team advantage and achieving a balanced approach to deterrence—an approach weighted less towards “deterrence by punishment” and more towards “deterrence by denial.” Deterrence by punishment aspires to convince an op-

Today’s advanced naval bases—descendants of the coaling stations of Mahan’s era—continue to serve a vital purpose in assuring allies that the United States will keep its security commitments ...

United States withdrew from the western Pacific, the base at Guam ... would have great value as a deterrent to any nation “contemplating a hostile move from the general area towards the Hawaiian Islands.”²⁶

Today’s advanced naval bases—descendants of the coaling stations of Mahan’s era—continue to serve a vital purpose in assuring allies that the United States will keep its security commitments, competing below the threshold of traditional armed conflict, deterring potential adversaries, and, should deterrence fail, reducing response times in the face of crisis. As was the case in

ponent not to do something it prefers to do by showing that its actions will trigger unbearable consequences after the fact. Deterrence by denial aspires to convince an opponent it stands little or no chance of accomplishing its goals. Punishment is reactive, denial proactive.

Advanced naval bases strengthen deterrence in three major ways. First, advanced naval bases are a tangible manifestation of the political solidarity of the U.S.-Japan alliance. President Joseph Biden’s recently published interim national-security guidance highlights the premium the U.S. administration places on both direct and extended deterrence,

stating: “At its root, ensuring our national security requires us to ... promote a favorable distribution of power to deter and prevent adversaries from directly threatening the United States and our allies.”²⁷ The multitude of bases scattered throughout the Japanese archipelago are the locations where more than 100,000 U.S. service members, civilians, and family members project democratic values and stand shoulder-to-shoulder with thousands of Japanese citizens, many of which have been in service on U.S. military installations for decades. Advanced bases underscore another CAPT Hughes’ truism: “people matter most.”

Second, the allies’ network of mutually supporting bases within the first island chain amounts to a diversified array of platforms from which the alliance can perform sea-control and sea-denial missions while reducing undue dependence on any one node. Recent progress aboard co-use bases by U.S. and Japan Self-Defense forces is advancing complementary capabilities and expanding the options naval expeditionary forces can employ in a contingency. Adding cooperative security locations—in essence “warm” bases with prepositioned logistics, supporting infrastructure, and minimal staffing—is an innovative and proven model ripe for adoption in Japan. This is especially true in areas where establishing permanent bases would be a doubtful prospect on political grounds. The imperative to improve *base interoperability* is another factor spurring efforts to develop a deeper understanding of how to bolster the resiliency of these bases. Overseas base defense for U.S. forces is actually homeland defense for Japan, and they take it very seriously, highlighting another of CAPT Hughes’ truisms: “the seat of purpose is on land.”

Third, the aggregate of alliance solidarity and expanded capabilities generated by complementary bases can bolster deterrence by denial. There is an emerging consensus that the “stable balance of terror” deterrent logic so prevalent during the Cold War is ill-suited to the challenges of the 21st century, particularly in the Pacific.

Bases can help deflate such misperceptions among Chinese leaders, show-



A tangible manifestation of our Nation’s commitment to allies and their commitment to us. Nearly half of the workforce required to operate installations in Japan are local professionals and skilled craftsmen. (Source: LCpl Karis Mattingly, Marine Corps Installations Pacific.)

ing that Washington cares just as much about its regional commitments as does Beijing. As Mahan and Corbett foresaw, overseas bases combine the attributes of resiliency, utility, and depth with the virtues of forward presence. Within the first island chain, these littoral bulwarks underwrite the U.S.-Japan maritime alliance. Beyond their military utility, these bases are the most concrete expression of a decades-long commitment to mutual defense. A politically unbreakable home team settles important strategic questions before the outbreak of conflict, improving its odds of deterring a conflict—and succeeding should deterrence fail. Balancing future investments in interoperable and ready forces, lethal capabilities, and a credible deterrent posture is essential to building a winning home team in the Pacific.

Conclusion

In the end, then, CAPT Hughes’ seventh cornerstone, *the home team has the advantage*, is a grand-strategic concept that encompasses far more than fleet tactics. The late, great Marine-warrior-statesman-scholar, George Schultz, who accumulated vast experience in the Pacific over his long and distinguished career, once wrote:

We must recognize the complex and vexing character of this world. We should not

indulge ourselves in fantasies of perfection or unfulfillable plans or solutions gained by pressure. It is the responsibility of leaders not to feed the growing appetite for easy promises and grand assurances. The plain truth is this: We face the prospect of all too few decisive or dramatic breakthroughs; we face the necessity of dedicating our energies and creativity to a protracted struggle toward eventual success.²⁸

That is the situation the U.S.-Japan alliance and other democracies face in the Pacific: a protracted strategic struggle and, with the right leadership, eventual success. Strengthening home-team advantages will be more of a challenge and a more team-oriented activity than ever before, but one that the current and future teams of U.S. and Japanese naval expeditionary forces must embrace if they hope to deter conflict and if necessary, fight to win.

>Authors’ Note: The views presented here are those of the authors and do not necessarily reflect the views of the Department of Defense, the Department of the Navy, or the Marine Corps.

>For footnote information, please visit <https://mca-marines.org/wp-content/uploads/Livingston-Vargas-Aug22-WEB-REVISED-for-posting.pdf>.



The Battle of Dai Do and Marine Corps *Force Design 2030*

Looking at future operating concepts through the lens of past battles

by MajGen James Livingston (Ret) & Col Jay Vargas (Ret)

“For those who fight for it, life has a flavor the sheltered will never know.” This quote, often attributed to Theodore Roosevelt, was reportedly posted on a handmade sign at the Khe Sanh Marine Base, Vietnam in 1968.

Battles may be shaped deep, but they are decided up close. The two Marine Corps operational concepts most touted today as visionary (*Force Design 2030* and Expeditionary Advanced Base Operations) are almost exclusively focused on long-range, precision rockets and missiles to win future battles. Marine infantry and the close and rear battles are virtually ignored.

The neglect of the close and rear battles is baffling for anyone who knows and appreciates Marine Corps history. The dogma that long-range, precision rockets and missiles can win future battles by themselves is even more perplexing. The conviction that Marines need only watch computer screens and push buttons to dominate the enemy, while appealing to some, will not survive first contact. It is an illusion based on a fundamental misunderstanding of warfighting. It is dangerous.

The emphasis on long-range, precision rockets and missiles and new organizations, such as Marine Littoral Regiments and Stand-in Forces, to win future battles has stripped Marine infantry of the armor and cannon artillery needed to win the close and rear fight. *Force Design 2030 (FD 2030)* and the *FD 2030 Annual Update* of May 2022

>MajGen Livingston is a career Infantry Officer. He was awarded the Medal of Honor while serving as the Commanding Officer, Company E, 2/4 Mar during the Battle of Dai Do.

>>Col Vargas is a career Infantry Officer. He was awarded the Medal of Honor while serving as the Commanding Officer, Company G, 2/4 Mar during the Battle of Dai Do.

are leaving Marine infantry dangerously exposed. With apparently little or no appreciation for close combat, Marine Corps leadership has jettisoned all tanks and emasculated direct support cannon artillery. Plans are also underway to deactivate two attack helicopter squadrons and two amphibious assault companies and cut the number of fixed wing aircraft. If this was not bad enough, three infantry battalions and an infantry regimental headquarters have already been deactivated and the number of Marines in the remaining infantry battalions are being reduced. The toolbox of Marine Corps capabilities needed to support Marine infantry in the close and rear battles is being dangerously emptied to self-fund new operational concepts that are experimental and lack proper validation.

Unless you have experienced prolonged close combat against a significantly larger and determined enemy, at times hand-to-hand and under almost constant artillery and mortar fire, you may wrongly assume that Marine infantry can fight and win without the help of robust and immediately available supporting arms. Long-range rockets and

missiles are not substitutes for strong infantry battalions, sufficient cannon artillery, attack helicopters, and armor, capabilities that are essential to enable and sustain the close and rear fight.

Those of us who have fought a determined, much larger, and superbly equipped enemy have a deep, special, and abiding appreciation for artillery, close air, naval gunfire, and armor. But more than anything else, we have the undying admiration and respect for Marine infantry, whose fighting spirit, bravery, and tenacity are a national treasure. We know all this from experience.

For three days (30 April, 1 May, and 2 May) in 1968, 2/4 Mar, the “Magnificent Bastards,” fought one of the fiercest, hotly contested but little-known battles of the Vietnam War. The battle was fought to keep 3rd MarDiv headquarters in northern Quang Tri Province from being overrun. Outnumbered six-to-one or more at times, the Magnificent Bastards, fewer than 1,000 Marines, crippled three full regiments of the North Vietnamese 320th Division (estimated at 6,000-10,000 regular North Vietnamese [NVA] soldiers) during the Battle of Dai Do, sometimes known as

the Battle of Dong Ha. The Marines ultimately prevailed, but after suffering casualties so significant that most of the battalion's four companies (Echo, Foxtrot, Golf, and Hotel) were reduced to fewer than 50 men per company. Those of us fortunate enough to survive owe our lives to our fellow Marines and to supporting arms.

Fighting began on 30 April and would rage until the NVA were finally forced to withdraw across the Demilitarized Zone. The fighting on April 30 centered on the villages of Dai Do and Dong Xuan, during which the Marines of Capt James Butler's Foxtrot Company and Capt James Williams' Hotel Company were repeatedly exposed to heavy machinegun, rocket, mortar, and long-range artillery fire. Reinforced with Marine armor and strongly supported by Marine air and artillery, the Marines of Hotel Company, under the cover of white phosphorus and colored smoke fired by Marine artillery, crawled across 500 meters of open ground before attacking and securing Dong Xuan at 3 p.m. that afternoon.

The Marines of Foxtrot Company attacked to secure Dai Do but were stopped about 300 meters short of the hamlet when the company came under increasingly accurate recoilless rifle, mortar, and machinegun fire from NVA soldiers strongly entrenched in a well-fortified bunker complex and from enemy long-range artillery fire.

That night both companies consolidated their positions at Dong Xuan so they would have only one perimeter to defend. Earlier that day, Capt Jay Vargas' Golf Company had attempted to reinforce Butler outside Dai Do, but the operation had to be called off when the NVA attacked the landing zone. Later that afternoon, the Marines of Bravo Company of 1/3 Mar conducted a supporting attack into nearby and heavily defended An Lac/Xi hamlet. Encountering heavy recoilless rifle, machinegun, and mortar fire, the company was only able to secure about half the village before the attack stalled when the commanding officer was killed.

Throughout the day, the Marines made skillful use of air, artillery, and naval gunfire, keeping the enemy pinned

down and preventing the NVA from gaining a decisive advantage.

Fighting resumed on 1 May when Golf Company, reinforced with two tanks, moved through An Lac/Xi and attacked Dai Do from the south. Fighting was fierce. As the Marines moved forward, they came under increasingly intense enemy mortar, rocket, and artillery fire. NVA soldiers were firmly entrenched and determined to stop the advance. At times, fighting was hand-to-hand. The Marines were forced to clear heavily defended and mutually supporting bunkers, destroying them one by one. The attack would have stalled numerous times had it not been for the courage and indomitable fighting spirit of Marine infantry and the close and continuous support of Marine artillery and naval gunfire.

By 2 p.m., after suffering heavy losses, Golf Company reached the northern end of Dai Do. Almost immediately, the NVA launched a series of fierce counterattacks from the north, south, and west, forcing Capt Vargas to move his seriously depleted company to just outside the eastern edge of the hamlet, where the Marines established a strong defensive perimeter. The enemy probed Vargas' lines all night, but the Marines, heavily supported by continuous artillery fires, held firm. Both Foxtrot Company at Dong Xuan and Bravo Company B in An Lac/Xi had attempted to reinforce Golf Company, but enemy fire was so overwhelming that the Marines were forced to return to their original positions.

Throughout the day, the Marines had repeatedly and skillfully used close air, artillery, and naval gunfire to support their attacks and to keep from being overrun.

Just prior to daylight on 2 May, Capt Jim Livingston ordered the Marines of his Echo Company to fix bayonets (as much to arouse their martial ardor as to give them an advantage in the expected hand-to-hand fighting), attack Dai Do, and relieve Golf Company. Livingston's men immediately came under heavy enemy machine gun and mortar fire but continued to push ahead. The fighting intensified. Supported by artillery, close air, and naval gunfire, Livingston's

men destroyed over 100 mutually supporting bunkers, forcing the enemy to begin evacuating that part of the hamlet. During the fighting, Marines used grenades, white phosphorus, light anti-armor weapons, satchel charges, and flamethrowers to destroy and demoralize the NVA soldiers. Bayonets, knives, and fists also played an important role.

Attacking simultaneously with Echo Company, the Marines of Golf Company encountered well entrenched and heavily defended enemy positions in southern Dai Do. Like Livingston's men, Vargas' Marines rooted the enemy from the mutually supporting bunkers, often in fierce hand-to-hand fighting. By 9:30 a.m. Livingston's and Vargas' Marines had secured Dai Do. The Magnificent Bastards now turned their attention to the hamlets of Dinh To and Thuong Do.

At 1 p.m. 1stLt Scotty Prescott, who had earlier assumed command of Hotel Company when Capt Williams was severely wounded and medevaced, led his Marines around the left flank of Livingston and attacked toward Dinh To. Before reaching the village, Prescott's Marines came under heavy enemy fire which stalled the advance. The company was greatly outnumbered and pinned down by machinegun and mortar fire. Realizing their advantage, the NVA launched a battalion-size counterattack, resulting in furious fighting, at times hand-to-hand. 1stLt Prescott notified the battalion commander, LtCol Bill Weise, that he was surrounded and in danger of being overrun. Without waiting for orders, Capt Livingston, down to about 30 Marines, immediately moved his depleted company to Prescott's support. Fierce fighting erupted but the company pushed on until joining forces with the beleaguered men of Hotel Company. But before Livingston's men had arrived, 1stLt Prescott was severely wounded and 2ndLt Vic Taylor assumed command of the company.

The combined companies continued the attack, driving through the NVA forces to their front. Taylor later described the fighting: "It dwarfed the fighting that had gone before in intensity and volume. I recall seeing banana trees and the masonry walls of a hooch cut

down by the NVA automatic weapons fire. The bushes to our front seemed to be alive with heavily camouflaged NVA soldiers.” During the fighting, which at times involved bayonets, rifle butts, and bare hands, Capt Livingston was severely wounded. Unable to stand and realizing that his and Taylor’s companies were too depleted to continue the attack, Capt Livingston suggested to LtCol Weise that they pull back. Weise agreed and ordered them back to Dai Do. Marine air and artillery covered their withdrawal by laying down a solid wall of fire, preventing the NVA from encircling and isolating the Marines as they withdrew under fire.

At 4 p.m., Vargas’ Golf Company (now down to 40 men) and Butler’s Fox-trot Company (now down to 80 men) began a two-pronged attack to clear Dinh To and then Thuong Do. Encountering little resistance, Golf Company, in the lead, attacked through Dinh To and headed toward Thuong Do. Upon reaching the outskirts of the village, the company came under intense enemy fire from across a small stream.

Meanwhile, Butler’s men were advancing slightly farther east when they came under heavy machinegun, mortar, and artillery fire. The Marines, unable to advance, were widely separated from Vargas’ seriously depleted company. Taking advantage of the situation, a large force of NVA soldiers maneuvered between the two companies and fiercely counterattacked Vargas’ men at Thuong Do. Supported by an intense barrage of artillery fire, the Marines fought gallantly before eventually withdrawing to link up with Butler’s men. The remnants of both companies withdrew to Dinh To and then to Dai Do.

The overwhelming artillery support (which at times had been called in as “danger close” and at other times as fire missions almost on top of the Marines) had been crucial. Marine artillery had pounded the NVA continuously for much of the afternoon and late into the night, enabling Vargas’ and Butler’s men to survive and inflict devastating casualties on the NVA soldiers in their immediate front.

On the morning of 3 May, the Magnificent Bastards were relieved by the

Marines of 1/3 Mar, who swept through Dinh To and Thuong Do with no resistance. The NVA had moved out of the area.

Three days of almost continuous fighting had greatly depleted the battalion’s ranks. Casualties were high on both sides, especially for the NVA. No one will ever know the NVA’s exact losses, but Vic Taylor vividly remembers various conversations he had several years after the battle with now retired MajGen Dennis Murphy about enemy casualties. Murphy’s recollections probably provide the most accurate information about the number of NVA killed in action. According to Vic, Murphy (who was the S-3 Operations Officer for the 3rd Mar during the battle) told him several times that in the days after 3 May, the dead NVA soldiers left on the field were recovered, placed in groups of 25, and meticulously counted. The total was 2,653.

The Magnificent Bastards also paid a terrible price. We mourned the loss of 81 of our brothers-in-arms, who had been killed in action. An additional 297 had been medevaced due to the severity of their injuries; 176 more had been wounded but not severely enough to require evacuation.

Taylor also remembers the carnage and wreckage still on the battlefield after the fighting had stopped. Around noon on 3 May, he was among a group of Marines sent to recover any dead Marines or corpsmen not already recovered. Vic recalls finding one Marine “that had obviously been wounded, captured, bound with comm wire and later executed.” He also remembers finding another dead Marine “with the bayonet of his empty rifle buried to the hilt in the chest of a NVA gunner.” And he recollects walking past hundreds of enemy KIAs and seeing “many blood trails leading off in the direction of their retreat.”

The Marines of 2/4 Mar had kept the NVA from overrunning the 3rd MarDiv Division headquarters at Dong Ha and from taking control of the Bo Dieu and Cua Viet Rivers, which would have cut the supply routes to all Marine bases near the Demilitarized Zone. The battalion’s tactical victory had prevented a strategic defeat.

In 1999, LtCol Weise (then a retired brigadier general) interviewed retired LtGen Tran Van Quan, who had commanded the NVA forces at Dai Do. During the interview, Quan told Weise that artillery had done more damage to his forces than small arms or air.

None of us would have survived the fighting in and around Dai Do without the unshakable leadership of the officers, staff noncommissioned officers, and noncommissioned officers; or more importantly, without the magnificent courage, performance, and tenacity of the individual Marines, who were fighting against great odds; and finally, without the close, continuous, and accurate support provided by artillery, helicopter gunships, fixed wing aviation, and naval gunfire. Marine tanks, though limited in number, were also important. Additional tanks would have helped immensely.

Close combat is no less important to winning future battles than past battles. But Marine infantry cannot be expected to fight and win with one hand tied behind its back. The jettisoning of all tanks, the deactivation of three infantry battalions, the gutting of direct support cannon artillery, and the loss of two attack helicopter squadrons, all to self-fund new experimental capabilities, is unwise and dangerous. *FD 2030* and the *FD 2030 Annual Update* are leaving Marine infantry vulnerable and dangerously isolated, stripped of the support needed to locate, close with, and destroy the enemy. Battles won in the past, such as Dai Do, will likely be lost in the future. Simply stated, we do not believe the Magnificent Bastards could win the Battle of Dai Do today, given the significant cuts in essential force structure and supporting arms. Even more damaging is the fact that we are unnecessarily and foolishly risking the lives and limbs of our most precious asset, the individual Marine.



Budapest 1944

Unity of command

by Mr. Joseph Miranda & Dr. Christopher Cummins

Joint Publication 3-0 Joint Operations, Appendix A-2, 2f (2), states, “Unity of command means all forces operate under a single commander with the requisite authority to direct all forces employed in pursuit of a common purpose. Unity of command may not be possible during coordination and operations with multinational and interagency partners, but the requirement for unity of effort is paramount. Unity of effort - the coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization - is the product of successful unified action.”

Wargame players often have far more control than realistically possible with their ability to see the entire battlefield and move every individual unit precisely across the game map. Only a few wargames are designed to be played by teams with an overall commander and sub-commands.

More frequently, a design divides a force into components. A game depicting a battalion versus battalion battle might divide the forces into companies with individual unit counters for platoons and teams. Markers for each company go into a separate cup for each side and players alternatively drawing a random marker from their cup. In some games, the markers for both sides are mixed, with the potential for one side to draw consecutive markers. Markers may be added for artillery or air strikes, events, OODA loop advantage (for example, a chit marker that allows the player to choose any unit to act, effectively giving that unit two actions). Disruptions in command and control (C2) can be simulated by a random chit being pulled from the cup and set aside, meaning that chit will not be in play for a turn and the players will not know what unit is disrupted until the last chit is drawn.

Decision Games’ Budapest Campaign 1944 (Budapest ‘44) wargame (*World at War* #85) models the decisions made in unifying separate commands in pursuit of operational objectives.

Budapest ‘44 covers the Soviet Red Army offensive in central Hungary that culminated in the capture of that country’s capital city, heavily defended by Axis forces. The campaign included operational maneuvers by both sides and a siege of the city of Budapest. The fighting was fierce since there was not only the importance of Budapest itself but also the Hungarian oilfields upon that the Germans relied on to fuel both their war industry and the *Wehrmacht* armed forces. The campaign involved considerable C2 challenges for both sides.

The Soviets committed two *fronts* (army groups), each composed of several armies with considerable mechanized formations. Additionally, there was the Romanian army that

>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.

had recently defected to the Allied side which had to be accounted for. Each of these groupings had their own command setup and lines of communications, and there was a certain element of competition among their commanders to take the most ground.

Similarly on the Axis side, there were several groupings of forces. For convenience in the simulation, I divided these into the German *Armee Kommando Nord* (AKN, Army Command North), *Armee Kommando Sud* (AKS, South), and the Hungarians who were still in the fight. These too had available some powerful armored forces.



The way I modeled this situation was to give each side a pool of command markers, each corresponding to the above force groupings. These markers are placed in a pool and drawn at random. The player then initiates an operational impulse in which the units controlled by that sub-command are moved and initiate combat. Operations are conducted via an interactive sequence of play, resulting in players alternating the activation of sub-commands. Thus, a Soviet front may launch an offensive, a German *armee kommando* can counterattack, and then another Soviet front will respond.

The system requires the players to think in big picture terms, maintaining their drives along axes of advance towards objectives; the game is won in large part by taking critical cities and oilfields. You must think in terms of individual operations adding up to a bigger picture. This gets back to: “Unity of effort—the coordination and cooperation toward common objectives, even if the participants are not necessarily part of the same command or organization—is the product of successful unified action.”

As noted, each player has a multinational force. The Red Army fronts are vastly more powerful than the Romanians, and the *Wehrmacht* is somewhat more effective than the Hungarians. Since these sub-commands do not operate together in the same operational impulse, players must think in terms of using your more powerful forces to make the main offensives while the allies follow-on or hold sectors of the line.

Added to this is the randomization of the sub-command activations. You never know what is coming next. This was a design decision based on various fog of war and friction factors. We could have created systems for various command lines, intelligence pictures, and operating across front/*armee kommando* boundaries. This would have bogged the game down in detail. Instead, the approach is effects based, integrating the overall impact of all these factors into

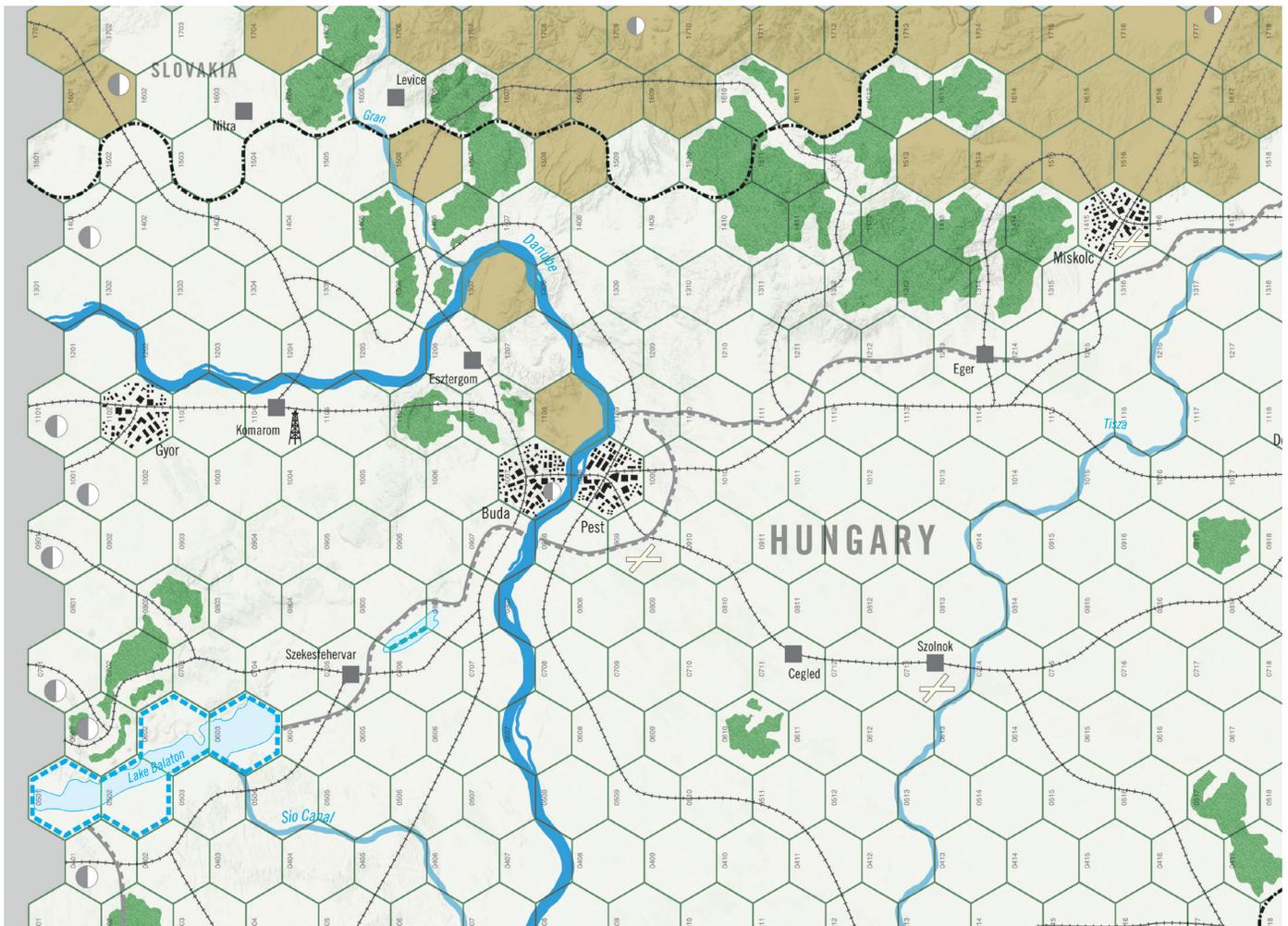
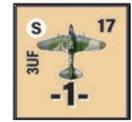
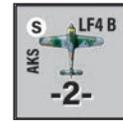
the randomization of sub-command activation.

One other aspect of the sub-command activation system is each player has a set of special command markers, representing operations that can be used once each per game. These markers represent the staff planning and logistical buildup for major offensives. The Soviets have a *Frontal Operation* which activates both Red Army fronts. This allows for a single turn of unified effort across the game map, and the player can use it strategically to create a breakthrough.

The Axis has several special offensives such as Operations *Konrad* and *Sudwind* to activate an *armee kommando* for one additional impulse in a

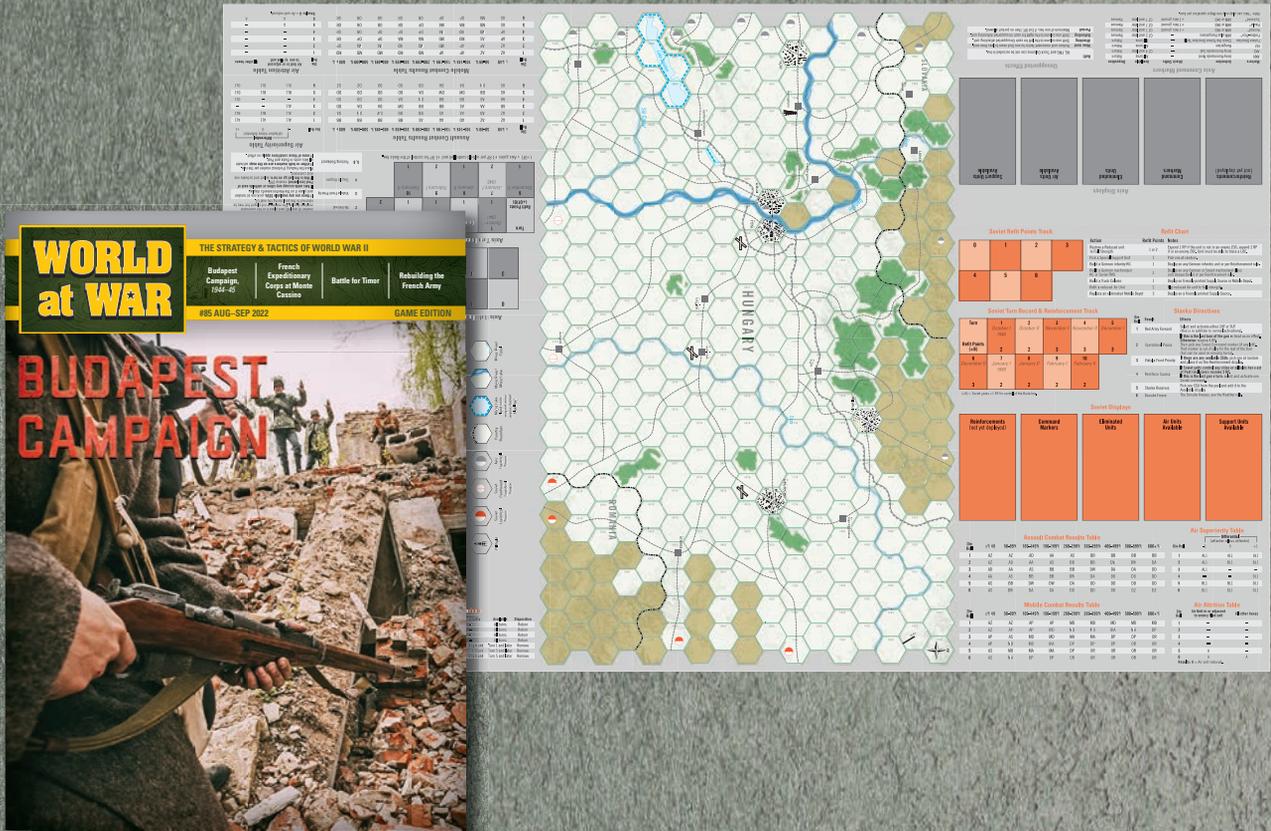
turn. This allows the Axis to concentrate mobile forces to drive deep across the map. There is a certain amount of asymmetry to play as the Soviets and Axis each possess certain advantages.

One other aspect is that each side can weight their operations by employing airstrikes and special support units (the latter representing heavy armor and army echelon artillery). These units are held off map and commuted to critical combats. They provide a means to unify efforts above the level of the various commands. These systems can all add up to a successful effort on the Hungarian front in the final year of World War II.



World at War Issue #85

Budapest Campaign



Budapest Campaign is a wargame of the Soviet offensive in Hungary in late 1944 and early 1945 which culminated in the conquest of the city of Budapest. Throughout this campaign the Axis launched successive counterattacks which regained ground but, in the end, failed to stem the Soviet tide. Each side is divided into sub-commands.

For the Axis, this includes Armee Kommando Nord, Armee Kommando Sud, and Hungarian forces. The Soviets have Second and Third Ukrainian Fronts, as well as the Romanian army. Budapest Campaign ends just prior to the start of Spring Awakening (World at War #73) which covers the final German offensive on the Eastern Front.

System: Boots variant, **Map:** 22x34 inch, **Counters:** 176 5/8-inch, **Players:** 2 (Axis vs. Soviets), **Counter Level:** Corps equivalents, **Hex Scale:** 11 miles (18 km), **Turn Scale:** 3 weeks, **Game Length:** 11 game turns



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Fleet Tactics and Naval Operations

reviewed by Maj Skip Crawley, USMCR (Ret)

Fleet *Tactics and Naval Operations* by CAPT Wayne P. Hughes Jr. is the Third Edition of his highly regarded book *Fleet Tactics: Theory and Practice*—first published in 1986.¹ Hughes' intent for writing the First Edition of *Fleet Tactics* “was to write a timeless description of fleet tactics, chronicle their evolution, and describe current practices.” I read *Fleet Tactics: Theory and Practice* many years ago. It was an interesting and informative book, and I can attest that CAPT Hughes accomplished his purpose.

With the collapse of the Soviet Union, Hughes felt “much of the [First Edition] had been influenced by the Cold War threat and a single set of strategic circumstances.” Post-Cold War, “the U.S. Navy was devoted to the projection of power and influence around the world ... at the same time the focus ... was shifting to the coastal regions.” Published in 1999, *Fleet Tactics and Coastal Combat* “reflected both those developments.”

With his Third Edition, *Fleet Tactics: Theory and Practice*, Hughes sets out “to describe the interrelationships of tactics, logistics, and operations in historical campaigns” in order “to make explicit the kinds of refocusing that the Navy—or any navy—undergoes periodically.” Hughes utilizes historical case studies to inform readers as to what he believes the Navy needs to do to meet future threats brought on by peer-warfare.

CAPT Hughes has “concluded that in the twenty-first century the fleet’s

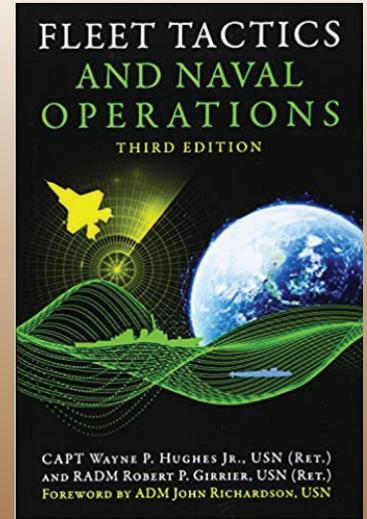
>Maj Crawley is a former Infantry Officer who served during Operation DESERT SHIELD/DESERT STORM. He is currently the Central Regional Network Coordinator for the Marine for Life Network.

new emphasis should be on gaining access to and fighting in dangerous littoral waters.” Though CAPT Hughes' last work was published in 2018, *Fleet Tactics and Naval Operations* is quite timely given that the essence of EABO is fighting in contested littoral regions.

Why should a Marine officer read a book whose “most important reader ... has always been the American naval officer” and that is focused on us-

... the essence of EABO is fighting in contested littoral regions.

ing history, historical constants and present-day trends to inform change in the Navy? First, as “Soldiers of the Sea,” Marines ought to have a working knowledge of the dynamics of naval warfare, which have a tendency to be quite different from ground combat. Second, according to one commentator, “[Gen] Berger got the original idea for *Force Design 2030* from Capt (Ret) Wayne Hughes, author of the classic *Fleet Tactics*.”² We will discuss a few of the great historical constants and



FLEET TACTICS AND NAVAL OPERATIONS. By CAPT Wayne P. Hughes Jr., USN(Ret) and RADM Robert P. Girrier, USN(Ret). Annapolis: Naval Institute Press, 2018.

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present-day trends of maritime warfare to establish a foundation of understanding of some of the dynamics of naval combat. Then we will discuss what CAPT Hughes has to say about littoral warfare and Information Warfare and compare his perspective with what the *Tentative Manual for Expeditionary Advanced Base Operations (TM EABO)*³ and *Force Design 2030 (FD2030)*⁴ say concerning these issues.

Constants and Trends

Constants are practices that have not changed over centuries of naval operations and so are not likely to change in the future. *Trends* are developments that have changed in one direction and so are likely to continue in the same direction in future operations.

One historical constant is “there have been far fewer sea battles than land battles throughout history.” Why? The most fundamental reason is that people live on land and the ultimate purpose of navies is to “seek to influence events ashore.” Furthermore, “navies are dif-

difficult to replace.” Ships are expensive and take years to build.⁵ Naval combat also has different dynamics than land combat: “At sea the predominance of attrition over maneuver is a theme so basic that it runs throughout this book. Forces at sea are not broken by encirclement; they are broken by destruction.” In the first four months of the Guadalcanal Campaign, two major fleet actions (carrier versus carrier) and at least four separate major surface engagements were fought before the Japanese Navy’s power was broken, and they were forced to evacuate Guadalcanal.

Directly related to the above, is the “decisiveness and destructive nature of naval combat.” During the entire 6-month Guadalcanal Campaign, the United States and Japanese both lost 26 major warships, with numerous others severely damaged. “At sea the essence of tactical success has been the first application of effective offensive force,” or to put it more succinctly, “*attack effectively first.*” In the Battle of Midway, the U.S. Navy was outnumbered four to three in carriers. But by some fortuitous circumstances and their own bravery and skills, our naval aviators were able to turn three of the four Japanese carriers into burning hulks in less than ten minutes—prior to our carriers being on the receiving end of a Japanese air attack—and our Navy went on to win a decisive victory. Hughes also points out that many naval battles have a tendency to teeter on the knife edge between victory and defeat before one side wins.

One important trend is the improvement in “scouting effectiveness.” “Until the twentieth century surface raiders and pirates routinely evaded searches for months at a time.” But “aviation enabled ... scouts to cover wide swaths of ocean and report the raiders’ positions by wireless radio. Within a decade, the raiders had all but disappeared.”⁶ Another aspect of scouting is that it “seems to be that there is never enough of it.” A closely related corollary is that many more resources than people think need to be devoted to scouting. At the Battle of Jutland, “Jellicoe committed 25 percent of his heavy firepower to scout-

ing, Scheer allocated almost as much.”⁷ At the beginning of World War II, 50 percent of a Navy carrier air group was made up of “dual-purpose scout bombers for tactical reconnaissance.”

Littoral Warfare: “*A single, integrated battlespace*”

[Littoral Warfare is the] “complicated interaction of land, sea, air, space and cyberspace forces with tactics that crosses boundaries.”

Missile attacks to and from the sea add to the already prevalent strikes by aircraft, *blurring the longstanding tactical distinction between sea and land combat.* The engagements that have been fought for the control of coastal regions have been most effective when land and air forces have acted in concert, using missiles as the principle weapons. [Italics added by reviewer.]

As stated above, CAPT Hughes makes clear that a major purpose of this Third Edition of *Fleet Tactics* “is to describe littoral combat” and spends a considerable amount of time discussing tactics and operations in contested littoral waters. I believe that the first, and most important thing, to understand about littoral combat, is CAPT Hughes’ contention that “the longstanding tactical distinction between sea and land combat” is essentially gone and the necessity to consider the land and sea portions of a littoral as a single whole. The second most important thing to consider is that just as land and sea need to be thought of as a single whole, one must think of information operations, cyberoperations, space operations and combat operations as a single whole. CAPT Hughes goes so far as to suggest that “Perhaps the navies of the world should no longer refer to naval tactics at all, but instead should think in terms of littoral tactics, which include warships.”

Is CAPT Hughes view consistent with EABO? Definitely.

Modern sensors and weapons range hundreds of miles both seaward and landward, blurring the distinction between operations at sea and on land and necessitating an operational approach that treats the littorals as a single, integrated battlespace.⁸

CAPT Hughes’ view of littoral combat is consistent with TM EABO. What about Information Warfare?

Information Warfare

At the most fundamental level, information warfare is about how to employ and protect the ability to sense, assimilate, decide, communicate and act—while confounding those same processes that support the adversary.

Interestingly enough, in his chapter discussing information warfare, CAPT Hughes includes “scouting with unmanned aerial and undersea vehicles,” Artificial Intelligence, cryptography and cyberwarfare, deception and “exploitation of space satellites.” A crucial point CAPT Hughes makes is the shift “from *information* superiority to *decision* superiority. How does one make best use of the avalanche of information available to the operator and commander?” [Italics in the original.]

FD2030 is quite aware of the importance of information operations, cyberwarfare and space operations:

We believe that in a conflict with a peer adversary, first moves may be in space and cyber, so we must enable our Stand-in Forces, MEUs, and MEFs to integrate with, and have access to, those capabilities now.⁹

Operations in the Information Environment (OIE) Doctrine. The Service lacks adequate OIE doctrine or training standards. This leads to a lack of awareness, education, and experience often reflected in commanders and staffs grappling with operating in a multi-domain environment and applying and integrating information capabilities.¹⁰

Conclusion

CAPT Hughes’ *Fleet Tactics and Naval Operations* gives readers a larger context to put *TM EABO/FD2030* in. I found *Fleet Tactics and Naval Operations* as interesting and informative as CAPT Hughes’ original *Fleet Tactics: Theory and Practice* and even more timely. Given that *TM EABO* and *FD2030* have the Marine Corps operating and fighting in the contested littorals, CAPT Wayne Hughes’ *Fleet Tactics and Naval Operations* is

a must read for anyone interested in the unique dynamics of naval combat; present day trends in naval tactics and technology, and littoral combat. Highly recommended.

Notes

1. CAPT Hughes died in December 2019.
2. Owen West, "Are the Marines Inventing the Edsel or the Mustang?" *War on the Rocks*, (May 2022), <https://warontherocks.com>.
3. Headquarters Marine Corps, *Tentative Manual for Expeditionary Advanced Base Operations*, (Washington, DC: 2021).

4. Headquarters Marine Corps, *Force Design 2030 Annual Update*, (Washington, DC: 2022).

5. Compare and contrast. *USS Enterprise*, the Navy's first nuclear powered carrier: Keel laid 1958; launched September 1960; commissioned November 1961; initial operational deployment June 1962; participated in Cuban Missile Crisis October 1962. *USS Ford*: Keel laid in November 2009; christened November 2013; delivered to the Navy May 2017; commissioned July 2017. Has yet to deploy as of May 2022.

6. Coincidentally this reviewer was reading *Bismarck: The Final Days of Germany's Greatest Battleship* while reading *Fleet Tactics and Naval Operations*. Consider that in the first two years of World War II the *Kriegsmarine* was able to utilize surface raiders such as the battleship *Bismarck* to attempt to interdict the convoys supplying Great

Britain and successfully positioned merchant ships throughout the Atlantic to refuel them. From 1942, onward this ceased due to the increasing effectiveness of aircraft reconnaissance and improved radar.

7. ADM John Jellicoe, C-in-C of the British Grand Fleet and ADM Reinhard Scheer, C-in-C of the German High Seas Fleet.

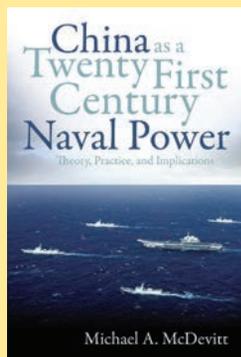
8. Headquarters Marine Corps, *Tentative Manual for Expeditionary Advanced Base Operations*, (Washington, DC: 2021).

9. Headquarters Marine Corps, *Force Design 2030 Annual Update*, (Washington, DC: 2022).

10. Ibid.



For Further Reading



CHINA AS A 21ST CENTURY NAVAL POWER: Theory, Practice, and Implication. By RADM Michael A. McDevitt USN(Ret). Annapolis, MD: U.S. Naval Institute Press, 2020. ISBN: 978-1682475355, 320 pp.

reviewed by Michael Janay

China as a 21st Century Naval Power

RADM Michael A. McDevitt (Ret), who had four at-sea commands in the Western Pacific, has written a book that talks about the Chinese Navy (The PLAN: The People's Liberation Army Navy) and the service's maturing capabilities and strategic focus. The PLAN is the largest Navy in the world. The author's assessment of the Chinese Communist Party's and the PLAN's intentions predicts an attack on the Western United States around 2035 but no later than 2050 with ten attack carrier groups, submarines, and sea-based missiles.

When China sees itself as a great maritime power, it will penetrate our Naval defense and bypass Hawaii. They know they lack battlefield experience and logistic acumen, but they are working diligently to overcome these shortfalls. They know the U.S. Navy has tradition, skill, and operation experience.

By studying the Marine Corps' agile *Force Design 2030*, the PLAN plans to overcome the U.S. naval strategy in the Western Pacific. In the near term, their "three-sea forces" focus is an attempt to neutralize U.S. dominance. This focus is their version of a defense in depth, making full use of the Chinese Coast Guard and the Chinese Maritime Militia.

This book should be required reading for anyone involved in developing policy to compete with or counter China as well as those preparing to deter or fight the Chinese Navy.

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- **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.

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