MARINE CORPS Gazette
Professional Journal of U.S. Marines

MAY 2014 Vol. 98 No. 5 www.mca-marines.org/gazette

A publication of the Marine Corps Association & Foundation

Welcome to the digital edition of the *Marine Corps Gazette*

Welcome to the May digital edition. As we do every year, this month's focus is on Marine aviation. Please scroll to the bottom of any article to comment on the article directly. Join the debate.

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Editor, Col John A. Keenan, USMC(Ret)

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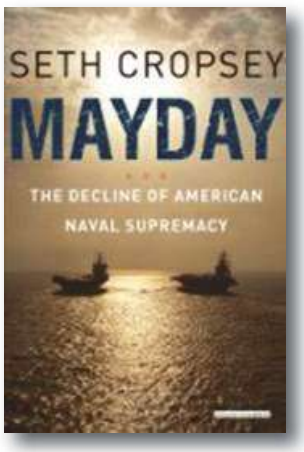
May 2014
Volume 98 Number 5

Marine Corps Gazette
Professional Journal of U.S. Marines

29 Cover Article
F–35Bs marshalling awaiting surge launch. *(Photo provided by Maj Adam Levine.)*

DEPARTMENTS



84 Book Review

IDEAS AND ISSUES

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MARINE CORPS Gazette
Professional Journal of U.S. Marines

MAY 2014

Editorial: The State of Marine Aviation

This month's issue focuses on Marine aviation. We have published some controversial articles in the past about aviation, most notably, "The ACE That Ate the Marine Corps" by LtCol James W. Hammond in January of this year, but it is inarguable that aviation is an essential part of the Marine Corps and is the element of the MAGTF that gives us our greatest distinction from the Army.

There are many changes that have already occurred in aircraft procurement and the replacement of legacy aircraft, with more to come.

The MV–22 Osprey is already deployed and, despite criticism, has proven to provide an increased capability to the Corps. Are there gaps in capability with the demise of the CH–46 Sea Knight (affectionately known as the "Phrog")? Yes, as several authors have detailed in past articles. But no one is arguing for holding on to a legacy aircraft, and even a little knowledge of the realities of procurement will lead to the conclusion that adding an existing aircraft such as the SH–60 to the Corps' inventory will not happen. We are necking down our type, series, and models of aircraft. Over the past 2 years, several authors have suggested in articles that perhaps a change in the mix of aircraft in the MEU aviation combat element (ACE) could still maximize the capability of the MV–22 and close the gap in capability created by the demise of the CH–46. They advocate additional UH–1Y Huey aircraft be placed in the MEU ACE even at the expense of the total number of MV–22s now deploying in the ACE. (See "A Different ACE Is Required" by Maj Scott Cuomo in the February 2012 issue, and "The Post-Phrog MEU" by Maj Matthew Lesnowicz in October 2013.)

The promise of the F–35 is just that—still a promise; however, it is imperative at this point that the program succeeds. There is no alternative for the Marine Corps. In February of this year, the television news magazine "60 Minutes" aired a piece titled "The F–35" that asked the question, is it worth it? This very informative piece is available at www.cbsnews.com, and includes an interview with the former Deputy Commandant for Aviation, LtGen "Rooster" Schmidle. As interesting as the piece is, it leaves unanswered what most Marines want to know: How will the F–35 improve close air support for Marines in contact? Just as aviation is what distinguishes us from the Army, it is close air support in proximity to ground troops that distinguishes Marine aviation from Navy aviation and the Air Force.

In perception, the demise of the EA–6B Prowler will lead to a capability gap in electronic warfare. In "Electronic Warfare and Unmanned Systems" on page 18 of this issue, the staff of HQMC's Aviation Department answers the question of how this vital function of Marine aviation will continue to be a capability retained in the Corps.

In summary, without Marine aviation, we lose the unique capability we bring to national defense. But in spite of what I previously wrote about the neck-down strategy, perhaps there is an opportunity as the Air Force divests itself of the A–10 fleet, an aircraft that from the ground up was designed to do what most Marines want Marine aviation to do as its most important function: support the grunt in contact.

John Keenan


BGen Brian D. Beaudreault


BGen Vincent A. Coglianese


BGen James W. Lukeman


BGen Carl E. Mundy III


BGen Daniel J. O'Donohue


BGen Richard L. Simcock II


BGen Gary L. Thomas

General Officer Announcements

On 27 February the Secretary of Defense announced that the President nominated the following for promotion to major general:

BGen Brian D. Beaudreault, currently serving as the Deputy Director, Joint Training, J–7, Joint Staff, Washington, DC.

BGen Vincent A. Coglianese, currently serving as the CG, 1st Marine Logistics Group, Camp Pendleton.

BGen James W. Lukeman, currently serving as the CG, 2d MarDiv, Camp Lejeune.

BGen Carl E. Mundy III, currently serving as the Deputy CG, I MEF, and CG, 1st MEB, Camp Pendleton.

BGen Daniel J. O'Donohue, currently serving as the Deputy Chief of Staff, Operations, International Security Assistance Force, Afghanistan.

BGen Richard L. Simcock II, currently serving as the Deputy Commander, Marine Corps Forces-Pacific, Camp Smith, HI.

BGen Gary L. Thomas, currently serving as the Deputy Director, Force Management, Application and Support, J–8, Joint Staff, Washington, DC.

The Secretary of Defense also announced that the President nominated Col John R. Ewers, Jr., to serve as the Staff Judge Advocate to the Commandant, and for appointment to the grade of major general. Col Ewers is currently serving as the Assistant Judge Advocate of the Navy, Department of the Navy.

COL WALT G. FORD, USMC(RET), *LEATHERNECK* EDITOR, DEPARTS

June is known around the Corps as a "hail and farewell" month—it marks the beginning of the summer turnover season for Marines. Here at *Leatherneck*, it's time for me to say goodbye and welcome Colonel Mary H. Reinwald, who recently retired from active duty after 26 years of service to Corps and country.

For me, time has really flown by since August 1999 when I checked in to take the reins of this much-loved magazine. Over time, I came to value the tremendous honor and privilege of working with a fantastic team here in *Leatherneck* and the Marine Corps Association & Foundation. I've also grown to know some giants in our Corps and worked with some incredibly talented authors. I have never had a bad day.

Leatherneck's mission, since 1917, has been to tell the Marine Corps story. During the 15 years I've been honored to be editor and publisher, *Leatherneck* has strived to be true to that mission. Responding to readers' comments, we have increased the percentage of each magazine devoted to the rich history of the Corps and devoted significant resources to the digital delivery of our content.

Now, Col Reinwald will bring her passion for the Corps and focus on detail to *Leatherneck* and the MCA&F team, moving out smartly to make *Leatherneck* even more of a resource for all those who want to know more about our Corps. She knows her way around the Corps.


RON LUNN

Col Walt G. Ford
USMC (Ret)


COURTESY OF COL MARY H. REINWALD

Col Mary H. Reinwald
USMC (Ret)

Col Reinwald came into the Corps after graduating from Penn State with a political science degree. During her career, she served a number of tours on the East Coast and in Okinawa, paying her dues at Headquarters, U.S. Marine Corps in various billets, and with a tour in the Department of Defense. She commanded the Marine Corps Personnel Administration School at Camp Johnson, N.C.

Along the way, she earned the Legion of Merit with a gold star for a second award and a Defense Meritorious Service Medal and obtained an MA in strategic studies at the Marine Corps University.

Of course, we will have to share her with her retired Marine infantry officer husband, Col Shawn Reinwald, and their four children. However, her abilities to balance a wide variety of extremely demanding requirements is well-known and will continue to serve her, the *Leatherneck* team and our readers well.

We are happy to have a Marine of her talents on board. She's more than ready to lean into the traces as the lead workhorse. Welcome, Col Reinwald. I know you will enjoy this opportunity.

—Col W. G. "Walt" Ford, USMC (Ret)

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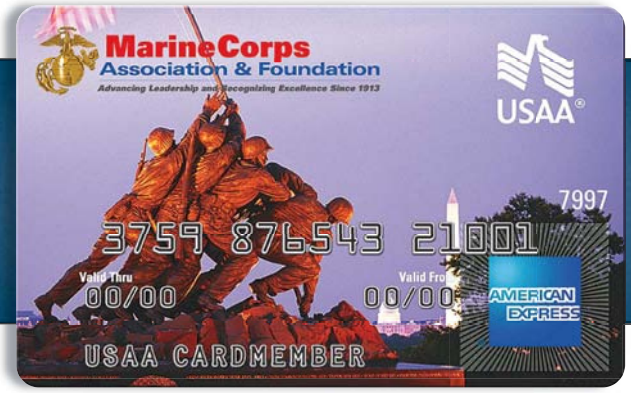

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Reunions

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Dates: 21–24 August 2014
Place: Rochester, MN
POC: David Crawley
507–273–7183
rocketsup@charter.net

Org: **USS *Iwo Jima* (LPH 2/LHD 7) Shipmates**
Dates: 27–31 August 2014
Place: Jacksonville, FL
POC: Robert G. McAnally
757–723–0317
yujack46709@gmail.com
ussiwojimashipmates.cfns.net

Org: **U.S. Navy Amphibious Force Veterans Association**
Dates: 7–10 September 2014
Place: New Orleans, LA
POC: John J. Walsh
732–367–6472
navyguys@verizon.net

Org: **Marine Air Traffic Controller Association**
Dates: 10–14 September 2014
Place: Rapid City, SD
POC: Robert Young
605–382–5247
mudcreek@nrctv.com

Org: **G–3–1 Korea Association**
Dates: 29 September–3 October 2014
Place: Beaufort, SC
POC: "Bing" Bingham
775–265–3596
bingbingham@msn.com

Org: **Marine Air Groups**
Dates: 1–4 October 2014
Place: Branson, MO
POC: James M. Jordan
417–535–4945
james.m.jordan@hughes.net

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The PFC Herbert A. Littleton Staff NCO Trophy for Operational Communications Excellence

Master Sergeant Bradley D. Faulkner
The PFC Herbert A. Littleton NCO Trophy for Operational Communications Excellence

Corporal Richard A. Reynoso
The PFC Herbert A. Littleton NCO Trophy for Electronic Maintenance Excellence

Marine Wing Communications Squadron 28
The LtCol Kevin M. Shea Memorial Unit of the Year Award

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C4

Military Sealift Command Shipping for Operations

In response to the article published in the March 2014 issue of the *Gazette* titled "Military Sealift Command Vessels," I would like to commend 2dLt Wisotzkey for his thought-provoking and timely article regarding real-world use of Military Sealift Command–type vessels in support of theater security cooperation missions. The use of alternative platforms to enable building capacity and establishing relationships with our partner nations is essential to sustaining our enduring presence around the globe and improving our ability to deploy, employ, and sustain as a naval expeditionary force.

To that end, together with the Navy, the Marine Corps is exploring and plans to experiment with potential alternative platforms such as the new Mobile Landing Platform, littoral combat ships, joint high-speed vessels, and the Maritime Prepositioning Ships. For example, using the T-AKE *Lewis and Clark*–class dry cargo ships, Large Medium-Speed Roll-On/Roll-Off Ships, and Mobile Landing Platform from Maritime Prepositioned Ships represents a core capability set to conduct at-sea transfers with LCAC surface connectors. HQMC has coordinated with Marine Forces, Pacific, on a proof of concept to "operationalize" the Maritime Prepositioning Force ships to support theater security cooperation and other operational initiatives in the Pacific. Additionally, HQMC, in conjunction with the Operating Forces, will look for limited affordable enhancements to these ships aimed at interoperability, capacity, and capabilities for the future joint operating environment.

Recently signed by the Commandant, *Expeditionary Force 21* challenges Marines to rethink how we train, equip, organize, and employ naval forces in the future. 2dLt Wisotzkey's article embraces the spirit of *Expeditionary Force 21*. Bravo Zulu, lieutenant!

LtGen William M. Faulkner,
Deputy Commandant, Installations and Logistics, HQMC

Naval Surface Fire Support

In their February 2014 article, "Naval Surface Fire Support," Capt Walker and LT Lee provided important and relevant information concerning the future of NSFS [naval surface fire support] capabilities to include the Advanced Gun System and tactical TLAMs [Tomahawk Land Attack Missiles], both of which are intended to make NSFS more relevant to the landing force. In their conclusion, they ask if "NSFS can remake itself as a premier supporting arm for amphibious landing forces." As part of this remake, an adjustment should be made to standardize the naval gunfire call for fire with the artillery/mortar call for fire.

Though there are similarities in the formats now, the different terminology and procedures add another obstacle to requesting this asset. Having a single format with considerations based on the asset being used would simplify the request and training to employ naval surface fires. With implications for NATO, the Navy, and the Marine Corps, this requires a coordinated effort amongst all involved parties, but any remake of NSFS should start with the call for fire.

Capt David Gilliland

Having read the article "Naval Surface Fire Support" in the February 2014 issue, I could not agree more with the authors' final recommendation that naval surface fire support (NSFS) can make itself a premier supporting arms option for amphibious landing forces. As a fire supporter, I am a big believer in the concept that the more assets available, the more likely a commander can get the effects on target that he desires and better shape the battlefield. However, the hurdle to overcome is apathy. The bottom line is that not too many people care about NSFS. The reality is that the Navy is not focused on amphibious operations, let alone fire support in amphibious operations. With a shrinking military budget, the Navy is not going to spend money on a mission it deems not important due to the unlikeliness of execution. Its focus will be on "blue" Navy operations and capabilities as a naval force projection arm of the Department of Defense. The Marine Corps, although focused on amphibious operations, has become very air-centric when it comes to fire support in amphibious operations. We realize fighting the Navy over NSFS takes a back seat to more important issues like number of amphibious ships, delivery platforms for landing forces, and command and control for *Ship-to-Objective Maneuver*. Requesting more requirements, whether in the form of personnel or equipment, is not going to sit well with either the Navy or the Marine Corps.

I am not advocating the abandonment of NSFS as an amphibious fire support option. What needs to happen is that Marine fire supporters must trumpet the capabilities of NSFS and demonstrate the value of this "tool in the fire support toolbox." If the Marine Corps wants NSFS, it needs to learn it, train with it, and employ it. The Marine Corps must embark on those *Arleigh Burke*–class destroyers and *Ticonderoga*-class cruisers and establish a relationship with its supporting arms coordination centers. Invite ships to participate in Marine Corps exercises, to include command post exercises. A supporting/supported relationship must be fostered and nurtured if NSFS is to become a viable fire support option. If commanders understand and acknowledge NSFS as a fire support capability they require, NSFS will become more relevant and will receive more support from both the Navy and Marine Corps.

LtCol Lou Palazzo

Fitness Reports

I commend LtCol Bracknell for his article, "Performance Evaluations," in the February 2014 issue and for reminding officers of their core principle of integrity in ensuring fair and accurate evaluation reporting of their Marines, and most of all, not favoring lower performers over Marines choosing to separate. His article reminds me of an inherent flaw we expounded upon in our December 2012 article in the *Gazette*'s digital edition, "Performance Evaluation System: Really taking care of Marines"

Letters of professional interest on any topic are welcomed by the *Gazette*. They should not exceed 200 words and should be DOUBLE SPACED. Letters may be e-mailed to gazette@mca-marines.org. Written letters are generally published 3 months after the article appeared.

The entire *Gazette* is now online at www.mca-marines.org/gazette.

[*marinecorpsgazette.epubxp.com/i/93780/93*]. In that article, we emphasized that current policy does not require reporting seniors to provide the math behind the markings to the reviewing officer (or the evaluated Marine, for that matter). The result—a reduced level of oversight by the reviewing officer in ensuring accurate and objective reporting.

LtCol Peter Wittkoff, USMC(Ret)

The Basic School

In response to the article in March 2014 titled "The Basic School," The Basic School (TBS) may have finally been established at Camp Barrett in 1958, but more than 1100 new second lieutenants and some allied officers were in the 3–54 Basic Officer Course who lived and attended TBS at Camp Barrett from 15 July to the end of December 1954.

Officers with regular commissions returned after the New Year to mainside where they attended another month of training on additional administrative matters including the issuance of the *Marine Corps Manual* and its maze of rules and regulations.

The period of the late '40s and early '50s is bereft of factual information regarding the Guadalcanal Area of Quantico, TBS, and its location. As a corporal, I lived at Camp Barrett with its hundreds of quonset huts leftover from World War II in the summer of 1949 where the Platoon Leaders Course was billeted and trained. The huts were still there in 1954 when I went through TBS as a second lieutenant, but were mostly gone when I again was at TBS/Camp Barrett from June 1960 to June 1963 as a captain and instructor.

Don't blame the current commanding officer and author, as he wasn't born yet. By the way, the "1100" is not a typo. HQMC obviously did not ramp down its input of lieutenants fast enough when the Korean War requirements eased. We did a lot of hiking to and from training areas, as Quantico just did not have the motor transport available to move Able through Fox Companies (oops—I mean Alpha through Foxtrot) to and fro and provide more time for actual training.

LtCol Edward C. Tipshus, USMC(Ret)

Thank you for the fine article by Col Desgrosseilliers and LtCol Hoffman describing recent changes to the organization and structure of The Basic School (*MCG*, Mar14). I was disappointed, however, that the authors included only favorable comments by Basic Officer Course students and enlisted instructors on the TBS reorganization survey. History is clear that we can learn more from criticism than from flattery.

LtCol J.P. Feeney, USMCR(Ret)

Lessons Learned

My reaction upon reading "On Not Forgetting" (*MCG*, Mar14), author Damien O'Connell's proposal for publishing Marines' tactical experiences for future lessons learned, was, "What are we waiting for?"

While O'Connell opines that the U.S. Army may have outdone our Corps in years past, a Marine Corps version of Fort Benning's classic, *Infantry in Battle*, to which O'Connell refers in his article, would be especially valuable because we Marines have our own fighting style that Marines and soldiers can compare and contrast.

The author alludes to the past 12 years—yet I would go further back and still find relevance. As I sat on the sidelines, retired, during the Iraq and Afghanistan conflicts, reading and talking to veterans, I found myself amazed again and again that so much of what we learned the hard way in small unit actions in Vietnam had to be relearned all over again. An especially neglected subject in the annals of lessons learned is the vast change in how we fought in the course of the Vietnam War. When I had my retirement interview with the Historical Division, it struck me when my interviewer asked if there was a difference in the Vietnam-era Marine Corps between my first combat tour in 1965–66 and my second in 1969. My response was, "Night and day!" To summarize, Marines had learned how to fight an elusive enemy, we were better at night, and we had gained the flexibility to outwit him at his own game of deception and surprise. Many of the lessons I learned in the course of my two tours—especially the second—were highly relevant to my work in the 1980's putting together modern concepts under the umbrella of "maneuver warfare." So *much* of that had to do with putting yourself in the mind of the enemy and making decisions fast—and it has taken years of reflection to recount just how we did it and how it worked out.

If other veterans will join in, we can produce a Marine Corps blockbuster. Gentlemen, get out your pens and start your engines!

Col Michael D. Wyly, USMC(Ret)

Correction to April 2014 Issue

In the April issue of the *Gazette*, Matthew Collins proposed in his article, "The Infantry Officer Course Experiments," that women officers be allowed to choose the ground intelligence officer MOS (0203) and follow the training track for that MOS including attendance at the Infantry Officer Course (IOC). Since the article was written and the April issue composed, the policy on assignment of women to the 0203 MOS has changed. In *MarAdmin 513/13, Announcement Of Change To Assignment Policy For Ground Intelligence Officers (MOS 0203)*, the MOS was opened to all. To be awarded the MOS, the officer must complete all required schooling including IOC. To read the MarAdmin, go to www.marines.mil/News/Messages/MessagesDisplay/tabid/13286/Article/151189/announcement-of-change-to-assignment-policy-for-ground-intelligence-officers-mo.aspx.

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Standout Logistician

Keeping the Corps light on its feet

by Roxanne Baker

Gen James F. Amos; Mark Johnson, Senior Vice President, Oracle Public Sector; GySgt Anabell Nevels; MajGen Ed Usher, USMC(Ret); LtGen William Faulkner; SgtMaj Micheal Barrett; and MGySgt Dan Furiak. *(Photo by Ron Lunn.)*

GySgt Anabell Nevels gets the Marines moving. From obtaining a single Marine's visa to managing large-scale movements overseas, Nevels is the go-to logistician to get the task done. The Texas native's latest undertaking was moving more than 4,000 Marines with the 13th MEU for deployment.

Nevels and her team coordinated troop transportation for ships and airlines, out-of-country paperwork, and gear transit, all while saving the government more than $1 million in expenses by getting the lowest bids possible.

The effort is all about supporting those deploying Marines and handling the logistics so they can focus on their mission.

"Even though we're not on the front lines, we can still make a difference," Nevels said. "It's important nothing stops their mission, no time delay. They need to get into country, do what they have to do, and then come home safely."

Nevels' successful execution of the MEU movement turned heads. She was recognized as the Enlisted Logistician of the Year at the Marine Corps Association & Foundation's (MCA&F's) Ground Logistics Awards on 27 February. The Commandant of the Marine Corps, Gen James F. Amos, and Sergeant Major of the Marine Corps, SgtMaj Micheal Barrett, presented the award.

>Roxanne Baker is the writer and media coordinator for the MCA&F. She is an experienced multimedia journalist with hundreds of published works, and is married to a Marine.

"I was speechless and overjoyed," Nevels said. "I'm so thankful and proud to win it for the [Distribution and Management Office] community."

It's not often that logistics teams are recognized, she said, but recognizing those behind-the-scenes teams builds their motivation and pride.

"I think it's great MCA&F tries to recognize different MOSs because it shows that everyone appreciates the hard work," she said. "I hope to show that to my Marines, that they are important and we're making a difference."

Nevels is back at Camp Pendleton with this year's mission in full focus—keeping her Marines on the move.

>Author's Note: MCA&F's Marine Excellence Awards Program awards are provided to Marines of all ranks and recognize outstanding achievement in scholastic, leadership, and technical efforts. For more information, visit www.mcafdn.org.

PFC Jalen R. Freiberg of Phoenix, AZ, received the Chesty Puller Recruit Company Honor Graduate Award at his 14 February L Company graduation for 3d Recruit Training Battalion, Marine Corps Recruit Depot San Diego. PFC Freiberg is pictured with his Senior Drill Instructor, SSgt Gilbert A. Diaz. (Photo by LCpl Bethanie C. Sahms.)

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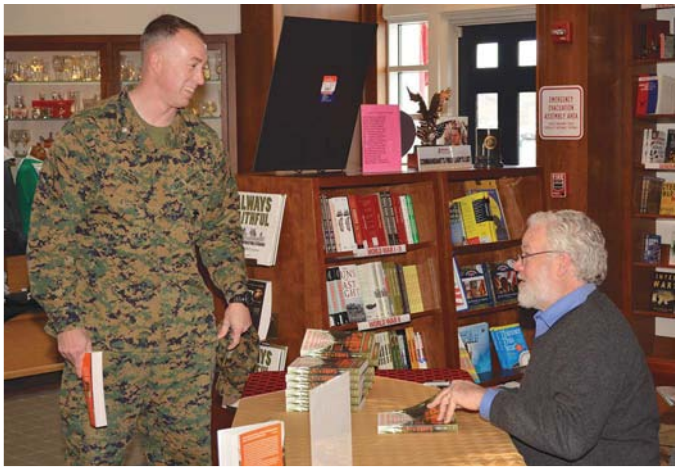


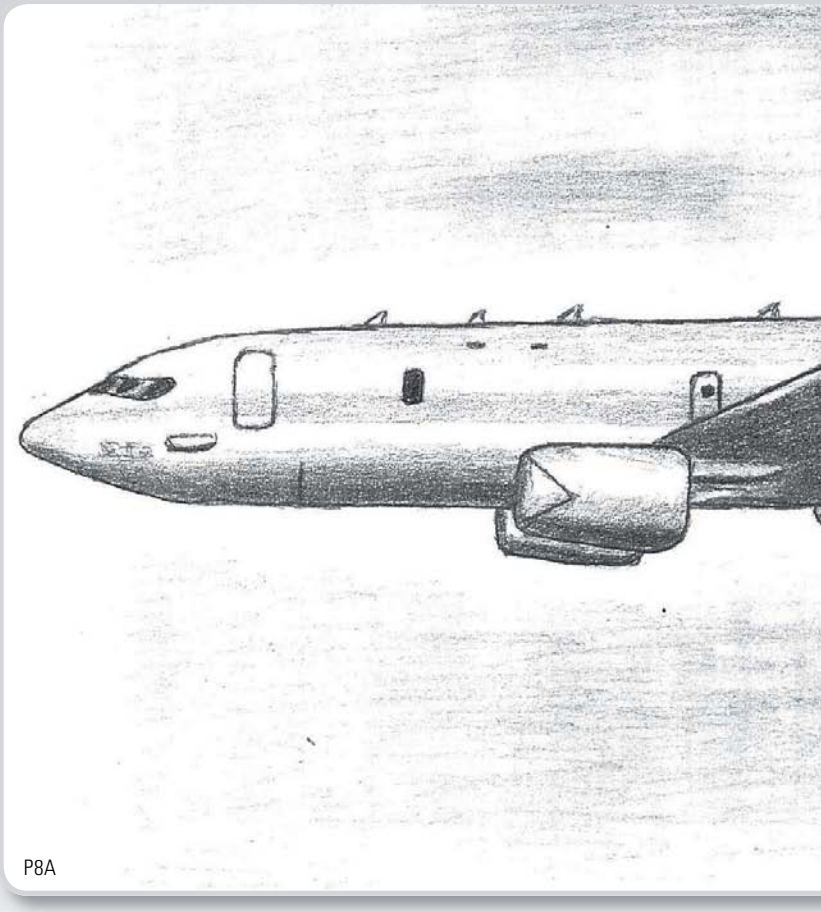
Military journalist and bestselling author Thomas E. Ricks held a book signing at The *MARINE* Shop *aboard Marine Corps Base Quantico on 12 February. He signed copies of his books including* The Generals *and* Making the Corps. *Ricks was raised in Afghanistan and accompanied American troops on overseas missions for nearly 30 years. (Photo by Ron Lunn.)*

MCA&F, together with various military sponsors, recognized 13 Marines for their dedication to the Corps at the Combined Awards Ceremony at Marine Corps Base Quantico on 3 February. Gen James F. Amos and SgtMaj Micheal Barrett awarded the Navy and Marine Corps Commendation Medal to the Marines for their stellar performance. (Photo by Ron Lunn.)

The MCA&F's unit library program had a standout year in 2013, outfitting 120,453 Marines with both books and e-readers to prepare them for deployments and training—an increase of 27,296 Marines served since 2012. The total amount of funds granted for the 2013 libraries was $159,684. (Photo courtesy Q Battery, 5th Battalion, 11th Marines.)

LCpl Jonathan McKinley of Arrowhead Glendale, AZ, received the Chesty Puller Recruit Company Honor Graduate Award at his 28 February B Company graduation for 1st Recruit Training Battalion, Marine Corps Recruit Depot San Diego. LCpl McKinley is pictured with his Senior Drill Instructor, SSgt Justin Barnes. (Photo by LCpl Samantha R. Shelton.)

Dedicated
in loving memory
to my mother,
DOROTHY M. SEGAL,
for her service to the Navy Department, Bureau of Aeronautics, Naval Air Experimental Engineering Command, in Philadelphia, Pennsylvania, as a civilian during World War II. Her work involved assisting in the preparation of confidential reports on radar, loran and sonar.



P8A

MARITIME PATROL AND RECONNAISSANCE FORCE

During World War II flying boats played a role
Then successor aircraft were flown by squadrons on patrol

The P5M Marlin and the P2V Neptune
started the progression
Then came the P3C Orion
and the P8A Poseidon in succession

Air stations at Jacksonville and Whidbey Island
are where the Navy would stay
For the Marine Corps it was in Hawaii at Kanoehe Bay

The P3C celebrated its 50th anniversary
of worldwide operation
Now the P8A will be the new sensation

For the P3C the primary mission was anti-submarine warfare
It used intelligence, surveillance and reconnaissance
and would always be there

With the SLAM-ER, maverick and harpoon missiles
it was ready to attack
With radar and sonobuoys it could locate and track

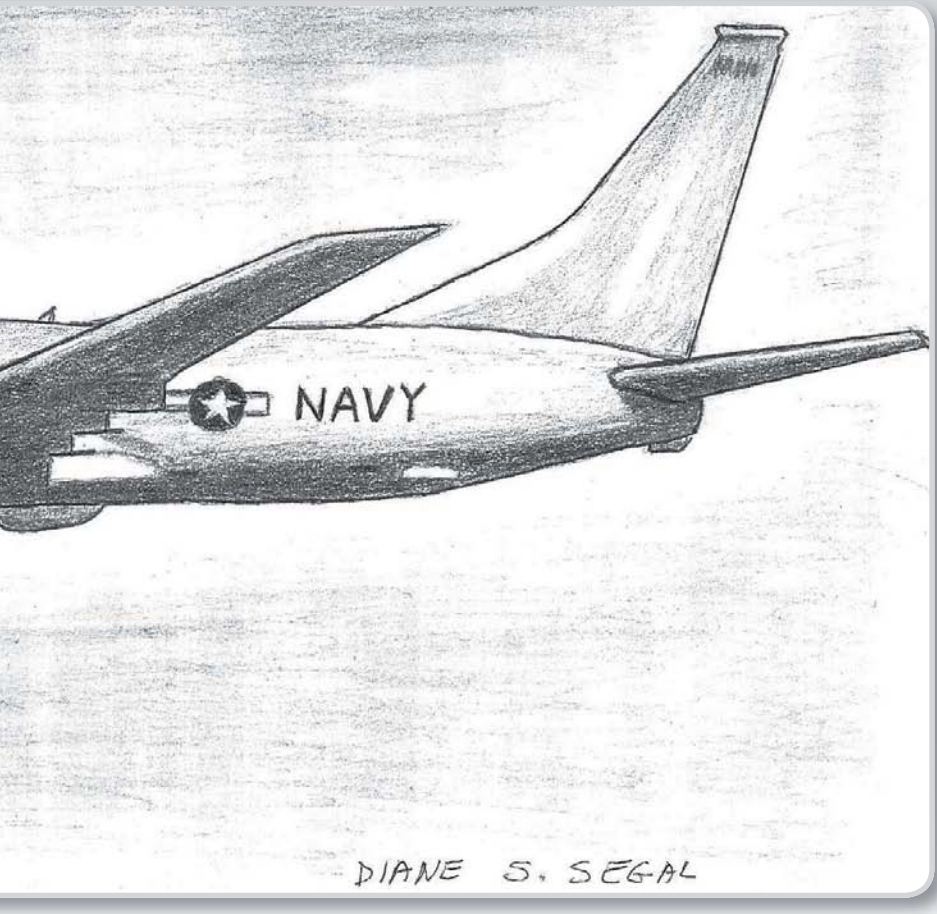
The wing span measures over 99 feet
But it is 123 feet for the Poseidon, the new and elite

The Poseidon P8A will replace the Orion P3C
To the Boeing 737 fuselage
the Poseidon with have 83% communality

The P8A offers ASW, intelligence
and surveillance as a selection
In addition to electronic support measures
and early warning self protection

A heads-up display for the cockpit design was created
And information to the ground, ships and other aircraft
by sensors could be disseminated

The P8A Poseidon is replacing the P3C Orion in due course
To improve the Maritine Patrol and Reconnaissance Force.

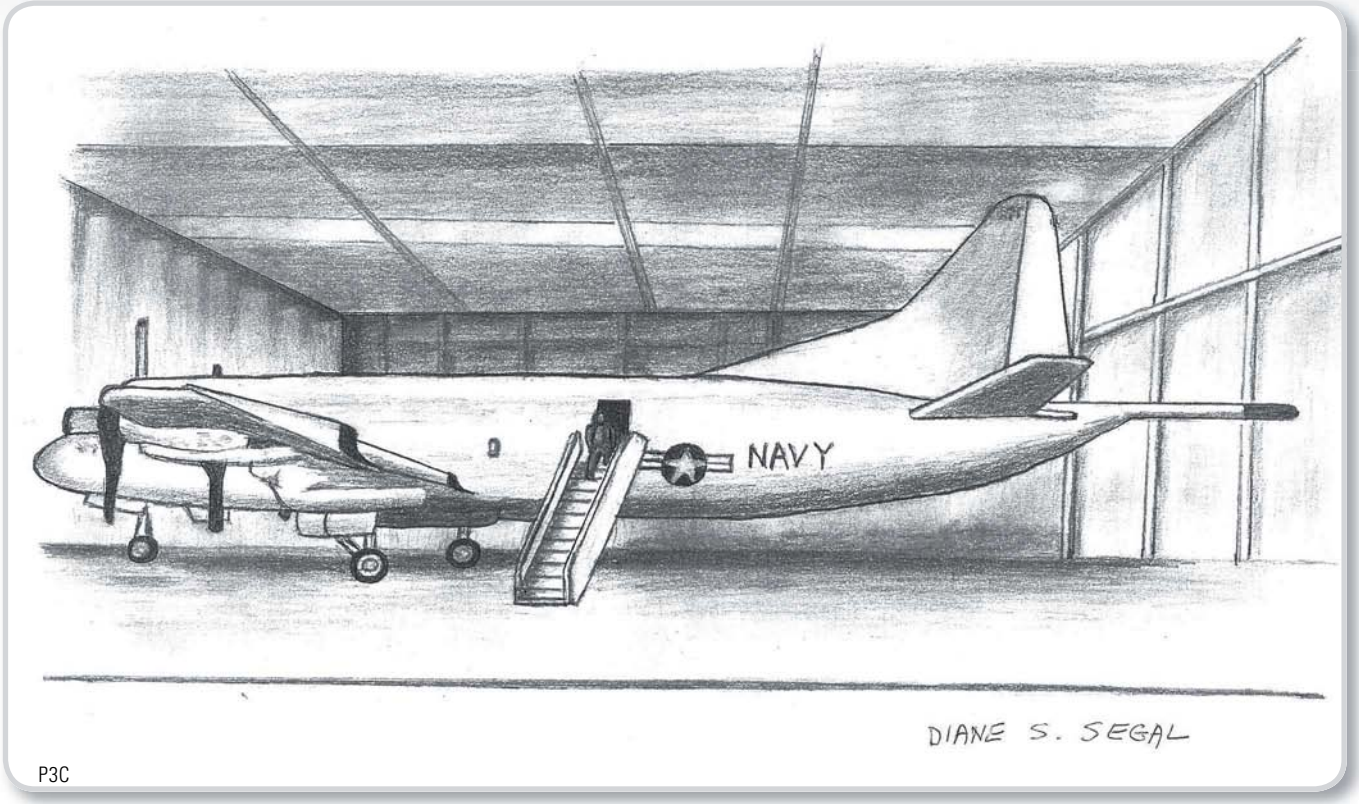


Written and

Illustrated

by

DIANE S. SEGAL



P3C

The State of Marine Corps Aviation

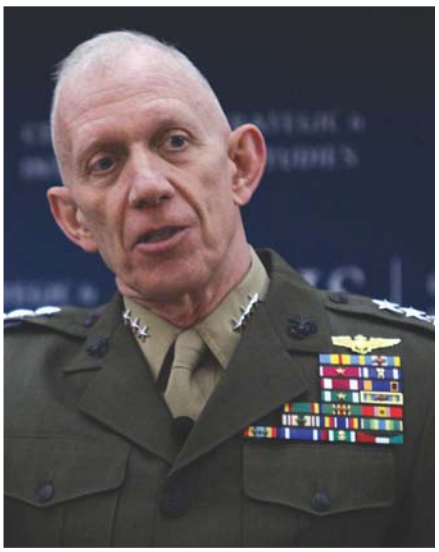
Enabling the future expeditionary force

by LtGen Robert E. Schmidle, Jr.

"This is a time of unsettling change for our military. . . . We will use this situation as an opportunity to shape the future naval force to sustain its relevance and affordability. . . . We both see a future naval force that thinks together, plans together, trains together, and deploys together. . . . Like today, our future naval force will be where it matters, when it matters, by maintaining a robust forward presence."

—Gen James F. Amos, Commandant of the Marine Corps, and ADM Jonathan Greenert, Chief of Naval Operations

On 22 December 2013, 160 Marines and sailors from the Special Purpose MAGTF–Crisis Response (SPMAGTF-CR) flew aboard two KC–130s and four MV–22B Ospreys from their temporary base in Moron, Spain, and forward staged at Camp Lemonier, Djibouti, and Entebbe, Uganda. The 4,400 nautical mile ingress (equivalent to flying from New York to Hawaii) was conducted in response to unrest in southern Sudan. The timely response by SPMAGTF-CR enabled the evacuation of U.S. Embassy personnel. The operational reach and rapidity of response was only possible by the combined capabilities of our MV–22 and KC–130 aircraft.



LtGen Robert E. Schmidle, Jr., during a speech to the CSIS Military Strategy Forum, 20 February 2013. *(Photo by Jesse Swanson, CSIS.)*

The capabilities of SPMAGTF-CR will remain critical because of continuing unrest and humanitarian crises—often occurring simultaneously—in places like Libya and Sudan. Moving across the vast distances of the Maghreb, Sahara, and Sahel regions requires unique aviation capabilities. The operational reach provided by the aviation combat element (ACE) allows the combatant commander (CC) to influence areas at the time and place of his choosing that were previously unreachable.

As the Marine Corps emerges from a 13-year period of sustained land combat, we will focus on rapid deployment and forward presence. We will evolve the way we organize, train, and equip our ACE in support of MAGTF operations. As we adapt to an increasingly distributed environment and rebalance to the Pacific, forward basing is a critical requirement. Amphibious ships will provide the freedom of action and survivability needed for execution in a complex and contested environment. The Marine Corps will support the CCs with increased naval integration through innovative combinations of technology, amphibious ships, surface combatants, and alternate maritime platforms in support of the CCs crisis response requirements.

Modernizing the ACE in Support of Tomorrow's Expeditionary Force

As we support new concepts like SPMAGTF-CR, the ACE continues to prepare for future MAGTF operations. The strategic environment com-

>LtGen Schmidle was the Deputy Commandant for Aviation at this writing.

The CH–53 will provide maneuver and crisis response lift capability. *(Photo by LCpl Michael Thorn.)*

pels the Marine Corps to operate in an increasingly distributed manner. In order to respond rapidly to dispersed global threats, we are moving toward a model wherein infantry units *deploy* as battalions and *employ* as companies. We are beginning to think of units as small as the company landing team (CLT) as separate maneuver elements. By increasing the proportion of our forward forces, we will conduct steady-state activities to promote diplomatic access and position Marine Corps forces to effectively respond to crisis.

Marine aviation is central to dispersed maneuver elements. Our actions in places as diverse as mainland Japan during Operation TOMODACHI, the Philippines during typhoon disaster relief, and in south Sudan for crisis response illustrate the need for agile, lean Marine Corps forces ready to move on short notice; Marine aviation enables such rapid response now. With aviation weapons systems like the F–35B, MV–22, and RQ–21, the MAGTF will be equipped to quickly respond to crisis at all levels of intensity.

Amphibious Shipping

Amphibious shipping provides the ideal maneuver, logistics, and command and control (C^2) for our forward deployed MAGTF. With amphibious shipping in high demand, alternative sea-based maneuver is required. Platforms such as the Mobile Landing Platform afloat forward staging base have potential for future employment. A shipboard capability that employs a CLT with assault support assets is a powerful concept. Marine aviation envisions leveraging the coming Mobile Landing Platform 3, 4, and 5 to provide afloat staging bases from which up to six CH–53Es, six MV–22Bs, or a combination of up to seven H–1 attack helicopters can deploy. These alternate platform combinations provide maneuver and crisis response capabilities to fulfill CC requirements, some of which have historically gone unfulfilled. The combination of maritime elements with enhanced situational awareness and sensor capabilities will provide creative and flexible solutions across the naval force. We are constrained only by our imagination.

F–35B

Compositing or aggregating forward deployed MAGTFs takes on a whole new meaning with the lethality of the F–35B. The F–35B uniquely postures the MAGTF to fight in antiaccess/area denial (A2/AD) environments. With the F–35B, our MEUs and MEBs will have a fifth-generation low observable strike and sensor platform providing a unique and critical role in joint forcible entry operations. To counter the threats in an A2/AD environment, Marine aviation developed an operating concept for F–35B short takeoff and vertical landing (STOVL) operations across the battlespace. In order to ensure survivability and enable maximum operational effects, the F–35Bs will be employed from dispersed locations. To enable these distributed STOVL operations, Marine aviation enablers are postured to activate a shifting network of expeditionary airfields, tactical

The F–35B (STOVL) will operate from dispersed locations. *(Photo by SSgt Jessica Smith.)*

landing zones, and forward arming and refueling points, thus complicating enemy targeting solutions. These Marine forces draw ordnance and fuel from amphibious ships, maritime prepositioning ship squadrons, prepositioned stocks, or host-nation supplies, and distribute them using Navy and Marine Corps surface and air connectors.

MV–22

The MV–22 provides the MAGTF commander increased capability and flexibility to respond to global crisis. The range, speed, and versatility of the MV–22 complement the F–35 and increase the lethality and power projection capability of amphibious ships. The MV–22 will support distributed STOVL operations by providing timely logistics to the shifting network of expeditionary airfields and forward arming and refueling points. The MV–22's ability to rapidly move personnel, equipment, and fuel across the battlespace enables basing flexibility crucial to the F–35's survivability. The increased operating reach made possible by the MV–22's range and speed provides increased protection from antiship cruise missiles. When based aboard amphibious shipping, the MV–22's increased operating radius allows amphibious ships to operate synergistically with Navy carriers at increased standoff ranges in an A2/AD environment. The sanctuary afforded by the MV–22's range will enable sea-based CLT operations against mobile enemy threats.

The MV–22 will provide measured capability and feasibility to the MAGTF commander. *(Photo by MCSN Jesse A. Hyatt.)*

RQ–21

The RQ–21A Blackjack builds upon the expeditionary capabilities of the MEU and provides a dedicated, shipboard-capable reconnaissance system to enhance the commander's situational awareness in real-time. Initial Blackjack capabilities will include full-motion video (FMV), communications relay, signals intelligence, and multiple collection capabilities. Additionally, the unmanned mission commanders' operations station will integrate Blackjack into the Link 16 network and distribute the sensor data to multiple users throughout the battlespace, contributing to the common operational picture. Recently demonstrated RQ–21A cyber/electronic warfare payloads, as well as emerging data relay and hyperspectral payloads, will revolutionize the way the MAGTF communicates, collects, and targets in the near future. The RQ–21 launched from an amphibious ship provides the MAGTF commander with the freedom of action and flexibility to execute without layers of coordination and constraint. RQ–21 will be the new eyes and ears of the MEU commander.

Common Aviation Command and Control System in support of Weapons and Tactics Instructor Course. *(Photo by PEO L/S photographer.)*

Command and Control

In order to synthesize and fully leverage the new capabilities of the modernized ACE, the MAGTF commander requires an effective C^2 system. The Marine air command and control system exploits the lessons learned from multiple combat deployments controlling MAGTF battlespace and supports

Expeditionary Force 21 objectives with systems that maximize the capabilities of the ACE. The speed, range, and operational capability of these aviation weapons systems are complemented by the TPS–80 Ground/Air Task Oriented Radar (G/ATOR). The G/ATOR is an expeditionary radar able to detect and track low-observable/low-radar cross-section targets such as guided rockets, artillery, mortars, and missiles; this system also provides a new level of protection to ground forces. The Common Aviation Command and Control System will act as a ground-based gateway, fusing real-, near-real, and non-real-time data derived from the F–35, RQ–21, G/ATOR, and other inputs into an integrated tactical picture providing the ground combat element new levels of situational awareness and advanced decision support tools. The ability to C^2 MAGTF battlespace continues to be a core capability of the ACE. The new systems of the Marine air command and control system allow the MAGTF commander to "see" and exploit opportunities with speed and precision.

Integration Through Innovation and Experimentation

A year ago, the May 2013 *Gazette* article on the state of Marine aviation discussed a vision of the MAGTF made more lethal through innovation and digital interoperability. Since that time, Marine aviation has facilitated experimentation and collaboration in multiple venues. On 15 December 2013, Marine lieutenants from the Infantry Officer Course planned and conducted a long-range raid from Marine Corps Air-Ground Combat Center Twentynine Palms to Fort Hood, TX—a distance of 1,083 miles—that featured collaborative planning between Ospreys en route using tactical links and tablet computers. The mission executed by the Infantry Officer Course would have been difficult, if not impossible, using earlier generations of aircraft and technology. Today the range and speed of the MV–22, combined with the integration of cutting-edge technology, enable more effective, lethal, and survivable long-range operations.

During Weapons and Tactics Instructor Course 1–14 at Marine Corps Air Station Yuma, Marine Aviation Weapons and Tactics Squadron One conducted several tactical demonstrations that highlighted emerging technologies and concepts. In one tactical demonstration, an MV–22 was equipped with a keyboard and monitor that allowed control and observation of an RQ–21 FMV sensor. This capability allowed the Marine in back of the MV–22 to direct the FMV sensor in support of his mission. During a similar mission, an electronic countermeasures officer in the combined electronic warfare coordination center was able to see and remotely control an electronic warfare payload aboard an unmanned aircraft system hundreds of miles away. The application of these emergent technologies will provide new levels of situational awareness to Marines aboard MV–22s, increase the lethality of the MAGTF, and enhance our crisis response capability.

Summary

As the Marine Corps emerges from 13 years of sustained land-based combat operations, we are refocusing on amphibious operations and our role as the Nation's forward deployed crisis response force. Marine aviation will continue to modernize and provide the MAGTF commander with aviation weapons systems that increase combat power, enhance decisionmaking, and enable future Marine Corps operational successes. With the new capabilities of the ACE, the MAGTF is constantly reassessing new tasks to determine new possibilities. Our young Marines understand this better than anyone else. Their innovative spirit is one of the driving factors propelling the MAGTF to unprecedented levels of tactical and operational excellence.

Electronic Warfare and Unmanned Aircraft Systems

Integrating EW and cyber payloads on UASs

by Department of Aviation, HQMC

The Marine Corps' comprehensive plan to address post-EA–6B Prowler electronic warfare (EW) requirements is the MAGTF EW concept, which leverages emerging technologies and operational efficiencies. MAGTF EW will integrate multiple aviation platforms (unmanned, fixed-wing, and rotary-wing assets); payloads; ground-based EW nodes; and cyber effects to provide commanders with an organic and persistent EW capability. MAGTF EW transitions the Marine Corps from a focus on low-density/high-demand EW capability to a distributed, platform-agnostic approach.

Any available digitally interoperable sensor, particularly those hosted on unmanned aircraft systems (UASs), can be connected with another to build a scalable, responsive, and cost-effective integrated system, delivering capabilities such as EW, cyber, and signals intelligence on demand. This approach will also allow the Marine Corps, as a middleweight expeditionary force, to retain direct access to its capability investment throughout the operations as organic and inseparable features of the MAGTF. MAGTF EW will complement joint EW assets in support of ground forces and fifth-generation aircraft flying against sophisticated integrated air defense systems (IADSs).

Coupling new UAS employment concepts with emerging EW payloads offers the Marine Corps a unique opportunity to counter a complex IADSs with a formidable alternative to the EA–6B. UASs can create opportunities with smaller, lighter, faster, more maneuverable platforms that are able to accept more risk than manned aircraft.

The RQ–21A Blackjack fills the small tactical unmanned aircraft system role in the Marine Corps' UAS family of systems. *(Photo provided by Insitu, Inc.)*

The Marine Corps has been leveraging new technologies from industry to conduct tactical demonstrations (TacDemos) that have validated the concept of full-spectrum EW from a UAS. These TacDemos have taken place at multiple Weapons and Tactics Instructor (WTI) Courses at Marine Aviation Weapons and Tactics Squadron One in Yuma, AZ. A multirole UAS is critical to the MAGTF EW vision. In today's tight fiscal environment, both are currently unfunded.

Persistence and Payoff

Unmanned systems have advantages over platforms, especially in the EW role.

- UASs can attack IADSs with multiple payloads operating from multiple platforms. This multinodal attack capability enables an asymmetrical approach to countering a robust IADS. UASs of varying sizes and power output, operating at ranges commensurate with their capabilities, can collaborate and assume more risk than manned aviation assets. This collaborative effort is enabled by the MAGTF EW architecture.
- UASs are less expensive than manned platforms.
  - UASs exist in a variety of different sizes and price points, from the smaller Group 1 systems to the largest Group 5 systems. The tactics, techniques, and procedures for

collaborative EW missions against threat systems are under development, but UASs provide a variety of cost-effective platforms.

- Because the Marine Corps does not currently have a large, EW-capable UAS, a representative Group 5 UAS program of record (POR) will serve as a basis of comparison for this article. The fiscal year 2014 Department of Defense–reimbursable cost per flight hour was our basis of comparison for the EA–6B Prowler versus the Group 5: The EA–6B cost per flight hour is over $10,000, while the Group 5 cost per flight hour is less than $1,100. In other words, manned EW aircraft are almost 10 times more expensive to operate. The tradeoff: The EA–6B, a jet, has a larger performance envelope than does the propeller-driven Group 5.
- The RQ–21A Blackjack is the Marine Corps' POR small tactical UAS. It is capable of carrying payloads under 35 pounds and will serve as a viable platform for an EW node in a variety of operational environments. The objective programmatic flight hour cost for the RQ–21A Blackjack is $500. The RQ–21A is also shipboard capable, which provides the MAGTF afloat a limited organic EW capability.

• UASs typically offer longer endurance times than manned platforms; such persistence is a requirement for MAGTF EW. Again comparing the EA–6B to the Group 5, this time in a case study in EW mission endurance profiles:

- The EA–6B has 2 hours of endurance and then must refuel. During its aerial refueling phase, the EA–6B cannot conduct electronic attack missions.
- By contrast, the Group 5 UAS could have up to 40 hours of endurance. Longer endurance means greater flexibility for the MAGTF commander, and that fewer overall assets provide the same level of EW capability.

• UASs are inherently safer for their operators. UASs can be employed at closer ranges to threat systems because they can accept more risk than manned platforms. The UAS is a multipart system; when the air vehicle is operating in a threat envelope, the preponderance of the UASs (other air vehicles, the ground control station (GCS), and the network architecture) remain out of harm's way.

One potential vulnerability for a UAS, however, is its command data link (CDL). The majority of today's UASs are not fully autonomous systems; therefore, UAS control is dependent on an uninterrupted CDL. CDLs connect the airplanes to the GCS to transmit and receive flight command data inputs. Because CDLs utilize the electromagnetic (EM) spectrum, they are susceptible to electronic attack. In order to protect against hostile electronic attack, UASs must be designed and employed with EM hardening, spectrum management, emission control, and autonomous capabilities.

Determining Mission Effectiveness

In fall 2013 a TacDemo evaluated the capability of a remotely piloted aircraft to conduct EW missions in concert with other UASs and EA–6B Prowlers in a multinode approach against an IADS. The event expanded upon a TacDemo in a spring 2013 WTI exercise and focused on delivering a more integrated and networked EW capability.

Industry provided a Group 5 UAS equipped with a jamming pod that was controlled by a GCS. The payload proved to be effective, and was integrated with the Group 5 avionics and command and control (C^2) architecture. The Group 5 was also able to integrate into a Marine Corps C^2 network, enabling control of the aircraft's EW payload and other assets to deliver effects across the EM spectrum. This C^2 capability was exercised from the cyber/EW coordination cell located at Marine Corps Air Station Yuma, and supported a large aircraft strike package which addressed simulated targets located hundreds of miles away.

"We [the Marine Corps] demonstrated operational concepts using a layered approach to electronic warfare," stated BGen Matthew Glavy, Assistant Deputy Commandant for Aviation. "By conducting multiple events with a networked, pod-based jamming system, we were able to evaluate the viability of [UASs] to conduct electronic warfare missions against enemy air defenses in support of tactical strike aircraft." Future demonstrations will examine additional capabilities beyond EW, and will extend the network by linking aircraft to effects across the EM spectrum.

Roadmap

The UAS roadmap in the 2012 *Marine Aviation Plan* lays out the vision for a UAS to replace the RQ–7B Shadow and incorporate the EW capability into its multimission role. The Marine Corps is currently developing requirements documentation for this future, multimission UAS. This UAS will likely be a joint program, sharing a common platform with one or more of the other Services. The initial operational capability target date for this UAS is after 2020.

A Blackjack readies for launch aboard amphibious shipping. Its 35-pound payload bay can host an EW capability. *(Photo provided by Insitu, Inc.)*

The Marine Corps has committed over 100 electronic countermeasure officer billets from the EA–6B community to the Marine unmanned aircraft community. This manpower transition begins in 2015 and will be the first step in transferring aviation EW expertise to the Marine unmanned aircraft community.

In addition to the integration provided by the EW services architecture, other components essential to MAGTF EW are:

- Intrepid Tiger II (IT–2): an EW pod for communications-based targets, expandable to radar-based targets, currently deployed with MEUs. Variants include:
  - IT–2 V(1): fixed-wing aircraft.
  - IT–2 V(2): UASs.
  - IT–2 V(3): rotary-wing aircraft.
- SRP (software reprogrammable payload): a software-definable, remotely reprogrammable, multichannel digital technology for radio relay, network management/monitoring, Internet routing, and dynamic EM spectrum bandwidth allocation. SRP provides the gateway and adaptability necessary to conduct distributed operations.

Demonstrations during the WTI Course at Marine Aviation Weapons and Tactics Squadron One continue to inform Marine Corps UAS EW requirements. Until now, urgent operational needs statements have been the forcing function for MAGTF EW development of the IT–2 EW pod and the SRP. The intent for MAGTF EW is to transition to a POR. Efforts continue to transition IT–2 and SRP capabilities to unmanned platforms.

Future Force

The MAGTF must be prepared to confront a diverse range of challenging scenarios, from civil unrest to disaster relief to operating in the face of sophisticated IADSs. This range of scenarios compels our unique requirement for balance as the MAGTF maintains simultaneous and enduring requirements to employ forces seamlessly across land, air, and sea environments. We will conduct full-spectrum contingency operations, potentially unsupported by many of the advanced EW capabilities across the Department of Defense portfolio.

This means that for the critical, high-stress periods at the onset of combat operations, the MAGTF may be called on to project combat power supported primarily by its organic EW and cyber capabilities until such time that more robust joint packages arrive. The portfolio of EW and cyber capabilities must be sufficiently diverse, distributed, expeditionary, and technologically capable to project combat power from these varied environments at an acceptable level of risk. The integration of EW and cyber payloads on a multimission UAS is a crucial step to reaching that end state.

USMC

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The CH–53K

Marine heavy lift: Transition to the king of all stallions

by Department of Aviation, HQMC

By 2024 the Marine heavy helicopter (HMH) community will be midway through its transition to the CH–53K. It is imperative that the HMH community and the Marine Corps learn from previous transitions. Historically the operational employment provided by new aircraft has been limited by lack of familiarity with the improved capabilities they bring as compared to the legacy system they replace. By examining recent CH–53 operations, we can identify areas where our current frame of reference for vertical heavy lift may artificially limit the initial exploitation of the CH–53K's capabilities. By educating the HMH community and MAGTF planners about the CH–53K's significant improvements in capability, reliability, and digital interoperability, we can ensure the CH–53K is incorporated into all facets of MAGTF operations.

Since 11 September 2001 the HMH community has been heavily committed in support of Operations Iraqi Freedom and Enduring Freedom (OEF). CH–53D and CH–53E squadrons in Iraq and Afghanistan have supported the full range of assault support lift missions ranging from light to heavy and filled gaps created during the H–1 and MV–22 transitions. Supporting prolonged operations ashore in high, hot ambient environments has created a frame of reference for heavy lift which is significantly less than what the CH–53K will provide.

During OEF, CH–53Es routinely carried both internal and external loads ranging from 8,000 to 12,000 pounds during general support missions. Missions requiring more than 12,000 pounds of lift typically required detailed planning. Though the HMH community successfully recovered multiple downed aircraft (up to and including 22,000-pound CH–47s and MH–47s), these missions were the result of close coordination that identified the best crews and the strongest aircraft, and provided the optimal power margins by stripping those aircraft of nonessential equipment. External movement of up-armored HMMWVs and M–777 lightweight 155mm howitzers also required detailed planning, although those missions did not typically require reconfiguring the aircraft. With the next generation of CH–53 helicopters, the frame of reference for heavy lift will shift. The tactical recovery of aircraft will always require detailed planning; however, the aerial transport of vehicles and cargo as heavy as 27,000 pounds will be as routine for the CH–53K as 8,000- to 12,000-pound loads were for the CH–53E during OEF.[1]

Engineering Demonstration Model #2 was delivered for testing in December 2013. *(Photo provided by Department of Aviation, HQMC.)*

> ***The tactical recovery of aircraft will always require detailed planning. . . .***

Since the inception of the CH–53K program, its design has been governed by its key performance parameters. First and foremost amongst those key performance parameters has been the ability of the airframe to perform its primary mission—heavy lift. The CH–53K has been designed to carry a 27,000-pound external load 110 nautical miles (nm) to a landing zone (LZ) at a pressure altitude of 3,000 feet on a 91.5 degree Fahrenheit day and return to the original pickup zone with 30 minutes of fuel in addition to the prescribed minimum fuel requirements. Furthermore, it is required to perform this mission at the maximum allowable engine degradation.[2] Mandating that the CH–53K be able to perform its

primary mission on a high, hot day at maximum allowable engine degradation marks a significant advance in aircraft design and will ensure the relevancy of the CH–53K throughout its service life.

Though optimized for the external delivery of cargo, the CH–53K features numerous design improvements that significantly improve the internal transportation of cargo, vehicles, and passengers. While the CH–53K can accommodate 12 standard warehouse pallets, a revolutionary aspect of the internal cargo handling system is its compatibility with U.S. Air Force 463L pallets. The internal cargo handling system allows two standard 463L pallets or five 463L half pallets to be rapidly loaded and locked into place. The interoperability of the CH–53K with 463L pallets will expand the possibilities for efficient joint operations. In the optimal "tail-to-tail" scenario, cargo from C–5s, C–17s, and C–130s would be transferred directly into CH–53Ks for delivery to its final destination. The overwhelming majority of air-delivered logistics arrives on a 463L pallet. The smooth transition of cargo to the CH–53K without breakdown is a major advance in timely logistics delivery. As distributed operations become more prevalent, the CH–53K becomes a critical part of the solution to supporting the company landing team. Logistics pallets designed for the company landing team can be built in the continental United States for seamless delivery via strategic lift to the CH–53K to an LZ within meters of the warfighter.

The Marine Corps plans to implement civilian sector logistical advancements to optimize its MAGTF logistical efficiency and throughput. Advancements in real-time tracking of cargo and personnel are being tested and implemented with the use of radio frequency identification tags. The Marine Corps envisions integrating these radio frequency sensors into both Marine Corps enterprise and MAGTF networks. Leveraging this technology will yield near real-time, global situational awareness of all cargo and passengers embarked and delivered by the CH–53K. These advancements, coupled with the increased rotary-wing logistical throughput provided by the CH–53K, will sustain the increased operational tempo of the MAGTF.

The CH–53K's significant internal cargo carrying and handling capabilities are exceeded only by its external cargo carrying capabilities, which will figure prominently in lifting and transporting vehicles, fuel, cargo, and artillery pieces. The CH–53K incorporates a triple hook system that will facilitate the delivery of three separate external loads to as many as three different LZs. The triple hook system will minimize the time spent in congested airspace around logistical hubs, thereby increasing efficiency and throughput.

The following vignette illustrates the efficiency provided by the triple hook cargo system, which is typical of operations in support of OEF. A typical resupply mission in Afghanistan may consist of three tasks: (1) delivering 9,000 pounds of fuel 90nm to Forward Operating Base (FOB) A; (2) delivering 9,000 pounds of fuel 60nm to FOB B; and (3) delivering 9,000 pounds of supplies 30nm to FOB C. With a CH–53E this would require three sorties from Camp Bastion, one for each FOB. During the hottest months of the year, this profile could require refueling between each leg. If we assume 15 minutes for each fuel stop, 5 minutes for each external pickup, 1 minute for each drop off, and 120 knots during the en route portions of the flight, this mission would take 3 hours and 48 minutes to complete and would consume approximately 13,500 pounds of fuel in the best case scenario.[3] A CH–53K would be able to perform this mission by running a ring route from FOB C to A or vice versa. This would eliminate the empty legs and minimize legs in and out of the hub, time spent in the fuel pits, and time spent conducting the external hookup. A CH–53K with a triple hook system could perform this mission in approximately 1 hour and 58 minutes while only consuming approximately 9,300 pounds of fuel.[4]

On a high, hot day, the CH–53K will be capable of lifting 100 percent of the 2024 vertical battalion landing team (BLT) and 74 percent of the surface BLT to an LZ 110nm from the ship. By comparison, the CH–53E would only be able to carry 35 percent of the vertical BLT and 16 percent of the surface BLT under those conditions.[5] The CH–53K has been designed specifically to be an aerial connector to enable the MAGTF to rapidly transfer

Integrated Test Team pilots, Steve McCulley of Sikorsky Aircraft Corporation and LtCol Jonathan Morel of HX–21, spin the rotor head of the CH–53K Ground Test Vehicle for the first time. ***(Photo provided by Department of Aviation, HQMC.)***

Marines and their gear from the ship to the objective area. The ability to simultaneously undersling vehicles while internally carrying vehicle operators is one of many ways that the CH–53K will provide tactical mobility to the vertical BLT. Vehicles and weapons systems that will be certified for external transport by the CH–53K include, but are not limited to, the following: dual-slung HMMWVs and the Joint Light Tactical Vehicle and it associated trailers, as well as certain variants of the medium tactical vehicle replacement (MTVR) and the Light Armored Vehicle.

Current MEU operations tend to rely on CH–53s for the external transport of cargo and fuel while relying on surface connectors for most vehicle transport. The CH–53K will provide MEB and MEU commanders with the capability and flexibility to respond with air or surface options based on mission requirements. This represents a critical development for ship-to-shore movement, particularly in light of the fact that the *America*-class LHA 6 and LHA 7, designed without well decks, will be entirely dependent upon the aviation combat element for tactical offload.

The CH–53K is not just a new chapter to heavy lift, but the start of the next volume. The CH–53K will combine raw power improvement with the asymmetric advantages of a knowledge-based digital network. Guessing what is on which aircraft and where the MAGTF commander needs combat power and logistics will be eliminated. Precision and tempo will be the norm. This aircraft epitomizes the essence of *MCDP 1*: fighting smart.[6]

Notes

1. These represent anecdotal yet typical loads flown by HMH–361 during OEF 10–2 and 12–2.

2. Department of Aviation, Headquarters Marine Corps, *Operational Requirements Document for the USMC CH–53K Program*, Washington, DC, p. 6.

3. CH–53E fuel burn estimate based on typical burn rates experienced in Afghanistan while performing similar missions.

4. CH–53K fuel burn estimates provided by PMA–261 CH–53K engineers.

5. "Assault Support Lift Analysis," brief data, prepared by Mission Area Analysis Branch, Operations Analysis Division, Combat Development and Integration, Marine Corps Base Quantico, 20 May 2010. "Vertical BLT" based on 2024 baseline MEB and MEU.

6. Headquarters Marine Corps, *Marine Corps Doctrinal Publication 1, Warfighting*, Washington, DC, 1997.

The Marine Air Command and Control System

Exploiting the operational advantage of Marine aviation

by Aviation Expeditionary Enablers Branch (APX)

"I am convinced that there is no smarter, handier, or more adaptable body of troops in the world than the United States Marine Corps."

—Sir Winston Churchill

The Marine air command and control system (MACCS) has successfully enabled MAGTF operations for over 70 years, including the past decade-plus of continuous combat operations. The MACCS is emerging from the latest chapter in its combat legacy and finds itself—like the rest of the Marine Corps—at a crossroads marked by fiscal austerity and evolving missions. But as the Commandant reorients the Corps' emphasis to forward presence and crisis response, unprecedented capabilities are emerging in the aviation combat element (ACE) and its MACCS.

The speed, range, and operational flexibility of the MV–22 Osprey and the firepower and electromagnetic spectrum dominance of the F–35B Lightning II are two examples of new platforms that the MACCS, via its own advanced capabilities, must fully exploit for the MAGTF commander. The highly mobile AN/TPS–80 Ground/Air Task Oriented Radar (G/ATOR) and the common set of hardware and software found within the common aviation command and control system (CAC^2S) are essential systems for this task. The MACCS will adapt to meet these demands and will be a force tailored to support operations through the entire spectrum of conflict. Future operations will require balance, flexibility, and the synthesis of technology and tactics. Today's MACCS and its current operations provide a preview of changes to come.

Today's MACCS

The MACCS provides the ACE commander with the tactical agencies to exercise command and control of aviation and air defense assets supporting MAGTF, naval, joint, and combined operations. These agencies provide the ACE commander with the ability to execute the six functions of Marine aviation. Since the beginning of operations in Afghanistan and Iraq, elements of the MACCS have been forward deployed, providing continuous, expeditionary air command and control, enabling MAGTF freedom of action and effective combined arms.

The last decade of conflict provided a preview of an evolving MACCS. For tactical control agencies, operations in Iraq and Afghanistan demanded flex-

The future MAGTF radar, the AN/TPS–80, supporting Weapons and Tactics Instructor Course.
(Photo by Mr. John Lee, GBAD-G/ATOR Contract and Support.)

ibility and demonstrated that many of the skill sets and functions traditionally exclusive to either the direct air support center (DASC) or tactical air operations center (TAOC) are converging. For example, the airspace clearance requirements for extended range munitions dictated the TAOC's knowledge of the tactical ground situation and MAGTF fires integration. Additionally, the proliferation and persistent presence of unmanned aircraft systems (UASs) and civilian aircraft throughout the area of operations highlighted the DASC's need for a near real-time air picture. Integration with special operations forces and the increased capabilities of new MAGTF platforms (MV–22) also blurred the lines between the functions of these two agencies. Flexibility was demonstrated as Marine air traffic control (ATC) detachments, normally focused on terminal airspace requirements at forward operating bases, became increasingly involved in the clearance of fires and the safe integration of new platforms and unmanned systems into military airspace. The flexibility of the low altitude air defense (LAAD) battalions also emerged during the last decade of conflict as ground defense of forward operating bases became an enduring mission.

It is a fair argument that today's MACCS Marines are the premier command and control professionals in the joint force and have greater operational experience than at any other time in history. The MACCS will harness this institutional experience to fulfill the Commandant's guidance to return to our maritime roots, providing a highly expeditionary MACCS to support the future force while balancing modernization and sustainment.

Tomorrow's MACCS

Understanding the Service mandate to forward deploy globally dispersed forces centered on crisis response (but ready to aggregate for major combat operations), the MACCS must be optimally aligned to support these missions. Leadership must remain committed to the investment in major programs of record while addressing mobility and interoperability issues and command and control relationships. The MACCS must be ready to conduct multiple, varied missions simultaneously. It is incumbent upon the MACCS to build an expeditionary, scalable command and control framework to enable the ACE to support distributed forces across the range of military operations.

Part of bringing this vision to reality is the fielding of key programs of record. Institutional commitment to these post–Milestone C investments is a must; these are MAGTF systems.

- The CAC^{2}S will fuse sensor and weapons data into a single integrated display.
- AN/TPS–80 G/ATOR is a 3D, medium-range, active, electronically scanned array radar that gives the MAGTF commander unparalleled low-observable/low-radar cross-section detection within the area of operations, while providing fire control quality data supporting the integrated fire control concept.
- The composite tracking network (CTN) is an adaptation of the U.S. Navy's cooperative engagement capability—a radar network providing sensor-quality data to weapons systems, modified to meet Marine Corps requirements. Coupling CTN with the TPS–80, the network will maximize naval surface fires for the MAGTF ashore.

Because of the unique position as the integrator between the ACE and ground combat element, the MACCS must also ensure the ability to bridge divergent communications efforts within the Marine Corps and larger joint force by providing beyond-line-of-sight tactical data links, data forwarding, radio relay, and tactical gateways.

The ability to command and control our airspace equates to MAGTF freedom of action.

New Employment Options

The MACCS will continue to employ its traditional agencies as the baseline for future organization; however, future MAGTFs will require varying degrees of air command and direction, air support, air control, and air defense/surveillance. Aviation command and control must provide as much functionality as possible, with the smallest sustainable footprint. Evolving agencies will provide tailored aviation command and control forces that can deploy rapidly to support the MAGTF. As the ACE transforms, command and control is but one battlespace function that must evolve. Consideration must also be given to *intelligence*, *fires*, *maneuver*, *logistics*, and *force protection*.

The fundamental shift that enables command and control flexibility is the technical capability, deployability, and mobile design of both CAC^{2}S and AN/TPS–80. Replacing the large and mobility-restricted legacy MACCS, CAC^{2}S is a HMMWV-based system that can be task-organized to deploy with any size MAGTF. Similarly, the AN/TPS–80 is a trailer-mounted advanced sensor with a setup time of less than 30 minutes. While their combined technical capabilities have already been termed "game changers" by the Operating Forces, their shipboard, KC–130, and CH–53E deployability provide multiple options for the MAGTF commander. Technology brings advanced aviation command and control systems to new levels of deployability. Combined with the right organizational adjustments to MACCS agencies, the MAGTF will soon have the capability to expand its freedom of action and command and control to all operational levels.

A new employment option for the ACE commander will be the task-organized multifunctional air operations centers (MAOCs). The MAOC is part of the aviation command and control family of systems concept. Each MAOC will be capable of providing mission-dependent MACCS capabilities. These agencies will be more scalable, mobile, and capable of expansion based on evolving requirements.

The AN/TPS–80 showing its mobility and flexibility by displacing during Weapons and Tactics Instructor Course. *(Photo by Mr. John Lee, GBAD-G/ATOR Contract and Support.)*

The baseline for the MAOC is the merging of DASC and TAOC functionality into a single agency to achieve savings in logistical footprint and increasing mobility without sacrificing capability. Each MAW commander will have an on-call MAOC with organic CAC²S, CTN, and AN/TPS–80 radars. On-call MAOCs will be prepared to deploy on short notice to support crisis response around the globe, capable of operating in a distributed manner to control the entirety of the airspace in the MAGTF's area of operations.

Just as command and control of a transformational ACE will change, so will its increasing force protection demands. Consider the role and capability of the LAAD battalions. Challenged by an evolving threat and sheer capacity, the LAAD battalions must evolve to focus on the point defense of high-value ACE assets, such as the MV–22 and F–35B, while sustaining the ability to operate in direct support of maneuver elements when directed. The necessity of defense expands beyond the air and UAS threat to include the ground defense of vital assets. Understanding the capacity challenges, the LAAD battalions will form the command and control framework for ground defense forces with the ability to be augmented by any provisional force. Much like other MACCS elements, the risk in capacity must be mitigated by technology. Revolutionary developments in air defense weapons systems, such as directed energy, are quickly becoming reality. The investment and commitment of the Office of Naval Research have been fundamental to this developmental effort. While this revolutionary change in air defense will not occur overnight, the institution must remain committed to the only viable means to counter an increasingly complex UAS and missile threat.

These described employment options are not intended to be prescriptive, but offer insight into how the MACCS may best evolve to support an exponentially more capable ACE. Further, with new employment options comes an increased capability to support the MAGTF afloat.

Refocus on Amphibious Operations

There is a potential command and control divide afloat, promoted by legacy doctrine and lack of blue-green integration; MACCS professionals must focus on the command and control aspects of naval integration to posture the MAGTF for success. The MAGTF commander must be provided a full range of MACCS capabilities from the sea during ship-to-objective maneuver operations. Further, the Navy tactical air control center must fully integrate with operations in the landing force operations center and supporting arms coordination center. Amidst the need for increased naval integration, Marine air control group (MACG) support to the MEUs has largely remained consistent for the past 2 decades; change is needed. While the MACG detachments form the nucleus of the initial MAOC construct, they must have the inherent flexibility to support the full range of MAGTF operations. Each MEU ACE currently deploys with an air support element, Marine ATC mobile team, LAAD section, and small headquarters detachment. Over the past 3 years, some ACEs supplemented a Marine Wing Communications Squadron detachment to provide communications support to the ACE command operations center. While this demonstrates an evolutionary change to MACCS support of MEU operations, other more revolutionary changes are required to enable the MEU commander's ability to command and control the operational reach of the MV–22 and F–35B. In short, the span of the MEU commander's influence is almost exponentially changing not only in range, but also in other warfighting domains. To meet these demands, it will likely be necessary to expand the presence of air command and control Marines into shipboard agencies, such as the tactical air control squadron, to best support full naval integration. Although these changes may raise concerns about Service lines of functionality afloat, they are largely a commensurate expansion of Marine air command and control afloat to support expanding aviation capability. The right mixture of MACCS Marines and equipment afloat will ultimately increase the MAGTF commander's ability to command, control, and integrate forces in support of distributed and increasingly diverse mission sets, and fully exploit the operational advantages of Marine aviation.

Training

Historically the MACCS has trained in narrow specialties requiring Marines to operate and maintain unique systems developed to carry out precise MACCS functions. The Marine Corps has taken

specific steps to consolidate equipment within these aviation-enabling organizations. The MAOC concept, combined with advances in technology, has led to a new concept: the common controller.

The common controller will be an MACCS Marine capable of conducting both positive and procedural control skill sets in an air defense, air support, or multifunctional agency. These Marines will have broader skill sets and exploit the full capabilities of organic command and control systems, serve as experts in planning and controlling MAGTF airspace, integrate organic Marine and joint fires, plan and employ tactical data links and radio communications, and plan and coordinate with MACCS agencies in a joint and coalition environment.

The first step to produce such experts is training; the Marine Corps has taken this step with the recent standup of the air control training squadron at Marine Corps Communication-Electronics School in Twentynine Palms, CA. The air control training squadron has combined three of the four MACCS entry-level curriculums. This new entry-level training paradigm will create MACCS operators who better understand all facets of MACCS employment. MACCS officers must train to becoming agency directors and planners earlier in their training pipeline. To enable this, enlisted MACCS Marines will retain agency-specific skill sets early in their careers, then transition to becoming common air controllers and finally MACCS specialists.

In addition to learning primary MOSs in air defense, air support, ground-based air defense, or ATC, all MACCS officers should receive instruction in civil/military airspace, fires integration, digital interoperability, planning and employment of the MACCS agencies, and instruction in joint and coalition operations. This will shift the emphasis of company grade officer training away from initial controller qualifications and toward skills as agency directors and planners. It will empower MACCS officers to operate independently in a distributed operations environment and support future agency concepts such as the MAOC.

Future MACCS success lies in its ability to adapt to all potential missions through mobility. ***(Photo by Northrop Grumman Corporation.)***

As part of the retooling of MACCS training, the Marine Corps will add robust simulation capabilities. This is key to the community's ability to control MAGTF aviation missions: Simulation for MACCS, like simulation for aviators, provides the most cost-effective means of building and maintaining crew proficiency and readiness. Simulation will provide commanders the ability to link into their local Marine aviation training system site facility and participate more readily in relevant, integrated training as part of the larger aviation training system. Current exercises do not provide the number of aircraft or dynamic environments necessary to truly stress a MACCS agency. Simulation can generate sufficient events and sorties to push each agency to its limit as it trains for a wide range of missions.

All MACGs will be interoperable with the local Marine aviation training system site facility. This interoperability will provide a more realistic training environment in which aviation simulators generate tracks that populate MACCS simulators. The MACG must be able to plan for and fully integrate into wing-level simulated exercises that tie together the MACCS, wing battle staff, and MAG training simulations during a single, integrated training simulation. The MACCS will also create and maintain a repository of MACCS simulation events, decreasing redundancy from unit to unit and further stressing MACCS Marines in the virtual environment.

Conclusion

Building upon over a decade of combat success, the MACCS is now postured to evolve its systems, organization, and training to fully exploit the capability of Marine aviation. Common data supporting shared awareness and distributed collaborative planning will enable the future MACCS to link warriors, weapons platforms, and targets to bring the correct mix and overall massing of effects.

The future MACCS will be manned by tactically and technically proficient command and control Marines, well positioned to support the ACE and MAGTF in the execution of missions across the range of military operations. Common controllers will route and control aircraft using the latest in technology. Marrying technology, training, and organizational flexibility, the MACCS will continue to enable the ACE and fully exploit the operational advantages of Marine aviation, thereby maximizing the strengths of the MAGTF.

USMC

The F–35B Enterprise at VMFAT–501

Operations at the Marine Corps' F–35B Fleet Replacement Squadron

by Maj Adam Levine

Following the squadron's first local flight in May 2012, Marine Fighter Attack Training Squadron 501 (VMFAT–501) has completed more than 2,200 sorties and over 2,800 flight hours. These values represent over 50 percent of the total hours accumulated in the F–35B program. As of this article's publication, the squadron is poised to produce its 40th transition/conversion (T/C) pilot. The intent of this article is to deepen the readership's understanding of the F–35B as viewed through the prism of the fleet replacement squadron.

>Maj Levine is Executive Officer, VMFAT–501.

History and Organizational Construct

The Warlords of VMFA–451 were reactivated at Naval Air Station Pensacola in April 2010 and subsequently redesignated "VMFAT–501" aboard Eglin Air Force Base (Eglin AFB). The first F–35B was delivered in January 2012 and the squadron presently operates 14 aircraft. In a unique reporting construct, VMFAT–501 is under limited tactical control to the 33d Operations Group, 33d Fighter Wing, at the Joint Strike Fighter Integrated Training Center, Eglin AFB. The squadron maintains normal administrative and operational control to MAG–31 and 2d MAW. Presently only fleet-experienced pilots from the AV–8B and F/A–18 communities are eligible to apply for the HQMC-directed T/C board.

F–35B Basics

The F–35B aircraft is a single-engine, short takeoff/vertical landing (STOVL) platform incorporating advanced stealth technology with a suite of sensors and data links. In its conventional takeoff or landing (CTOL) mode, aircraft performance characteristics in terms of runway takeoff and landing distance are nearly identical to the other F–35 variants in the Joint Strike Fighter program. In STOVL mode, the engine exhaust nozzle rotates via a three-bearing swivel module while an engine-driven lift fan acts in concert to provide nearly 40,000 pounds of thrust for short takeoff (STO) and vertical landing (VL) operations. Depending on aircraft weight and speed, the pilot, with a push of a button, can transition the airplane from CTOL to STOVL or back.

The cockpit is clean and devoid of switches, with utmost attention devoted to the pilot-to-vehicle interface (PVI) experience. Hands on throttle and stick functionality enables the pilot to direct most aircraft actions. Voice recognition further alleviates workload by allowing voice commands to change communication and navigation information. The helmet-mounted display (HMD) is form fitted and uniquely matched to each pilot, and accurately displays a binocular image of flight- and mission-related information on the visor. The heads-up display common to legacy fighter platforms has been replaced by an HMD-generated image. One 8-inch by 20-inch touch screen panoramic cockpit display can be further

F–35Bs marshalling awaiting surge launch. *(Photo provided by author.)*

subdivided into a myriad tactical and administrative information portals and windows. After several exposure events, pilots quickly adopt personalized display setups that focus PVI to enhance situational awareness in all phases of flight.

Missions systems include active electronically scanned array (AESA) radar that can track multiple air targets while providing a near–picture quality ground mapping capability. The Electrooptical Targeting System (EOTS) and Distributed Aperture System (DAS) work in tandem as infrared sensors to detect, search, and track air-based and ground-based targets. An electronic warfare suite of sensors fuses incoming radio frequency emissions and provides the pilot with threat information in a simple and logical display format. Link 16 data link is supplemented by an F–35-only network known as Multifunction Advanced Data Link (MADL) to enhance situational awareness.

Internal weapons bays will be configured to carry 1,000-pound variants of the joint direct attack munition (GBU–32 JDAM), 500-pound laser-guided bombs (GBU–12 LGBs), and advanced medium range air-to-air missiles (AIM–120s). Six external weapons stations and a centerline gun pod will be incorporated in later aircraft blocks. An integrated countermeasures system will provide active defense against a host of infrared and radio frequency threats.

LRIP and Block Construct

The F–35B is currently delivered in low-rate initial production (LRIP) sequels with incrementally improving block capability. Aircraft block and subblock designations derive mission system and aerodynamic capability sets. LRIP II aircraft were delivered with B1A software that provided basic navigational capability. LRIP III aircraft were delivered with B1B software that provided introductory tactical training capability, to include air-to-air and air-to-ground weapons simulation and basic system fusion. LRIP IV and V are being delivered with B2A software that provides enhanced training capability, including data link and advanced senor fusion. Squadron-level software and hardware updates have brought all LRIP II aircraft to the B1B standard. VMFAT–501 now operates LRIP II in addition to LRIP III and V aircraft with a combination of B1B and B2A software.

The F–35B is in low-rate initial production. *(Photo provided by author.)*

Aircraft Maintenance

For the duration of VMFAT–501's stay at Eglin AFB, the squadron has utilized a hybrid organizational maintenance construct whereby Marine maintainers work hand-in-hand with contract logistic support led by Lockheed Martin and Pratt & Whitney. In a unique collaboration with the Joint Strike Fighter enterprise, Warlord maintenance has been heavily engaged in an effort to validate and verify over 2,100 individual aircraft maintenance actions in support of completing the set of program-level joint technical data. As an example, the squadron's first engine removal and replacement took over 2 months to complete and adjudicate, while the last one was completed in a matter of days.

Maintainer training is accomplished at the Academic Training Center at Eglin AFB. Both experienced and initial accession maintainers have completed courses and matriculated to the squadron for aircraft hands-on training in a concerted effort to bridge the gap between emerging academic courseware and practical experience. Our Marines have in turn provided valuable feedback to the training system in an effort to improve academic rigor and relevancy.

Two unique aspects within the maintenance department stand out as departures from legacy Marine Corps tactical aviation platforms. The first is low-observable restoration that falls under the traditional airframes work center. Low-observable restoration applies various treatments to surfaces to repair and reseal panels, seams, and fasteners to ensure the aircraft maintains its stealth characteristics. The second is a new work center manned by Aviation Logistics Information Management and Support Marines. They're tasked with managing the squadron's Autonomic Logistics Information System (ALIS) infrastructure. ALIS integrates a variety of operational, supply, maintenance, prognostic, and technical data platforms that have previously been maintained in different applications and work centers.

Safety Department

The squadron safety department is responsible for managing and supervising various aircraft-related safety and procedural publications in its role as the platform model manager. The F–35B version of the Naval Aviation Training and Operations Standardization (NATOPS) publications set is known

as flight series data (FSD), which lives as a paperless application within ALIS. FSD is in a constant state of revision as new capabilities and systems emerge, limitations are rescinded, and airborne discovery results in new procedures being written. The squadron's FSD officer spends countless hours on a weekly basis collaborating with various enterprise stakeholders to promulgate emerging FSD procedures. As an example of the rapid pace of change regarding operating limitations and systems knowledge, squadron pilots have received 6 iterations of new pocket checklists and over 12 interim changes while authoring over 100 procedural change requests in 2 years of flight operations.

UK Integration

VMFAT–501 is unique in that the squadron has fully integrated United Kingdom (UK) personnel and aircraft into every facet of the organization. Under a common pooling agreement, UK pilots and maintainers report to the squadron commanding officer, while three UK F–35Bs are flown and maintained like their U.S. Marine Corps counterparts. The pilots, two from the Royal Air Force and one from the Royal Navy, participate in every aspect of instruction while maintaining key support billets in the operations and safety departments. They bring a depth of operational experience from the Jaguar, Harrier/Sea Harrier, and Typhoon platforms. The maintainers or engineers, as they are referred to, are fully integrated into the maintenance department and have been instrumental in assisting their Marine Corps counterparts in developing and maturing maintenance procedures and protocols.

Flight Operations

The squadron's first local sortie, completed in May 2012, represented the first time an F–35B was launched and recovered under the reporting custodian cognizance of a Marine Corps command. In the aircraft's interim flight clearance, Naval Air Systems Command directed dissimilar chase aircraft to support local flight operations imposing a unique resourcing burden for the squadron. Throughout the spring and summer of 2012, VMFAT–501 pilots conducted dissimilar chase operations with F/A–18s and EA–6Bs from 2d MAW and 4th MAW. The next milestone occurred in July 2012 when the first T/C student completed the basic familiarization flight in the F–35B. In quick succession, the squadron built up its maintenance and operational battle rhythm in which 1- and 2-sortie days evolved into 4, 6, and 8, resulting in the rapid designation of the initial instructor pilot (IP) cadre by September 2012. Corporate systems knowledge, troubleshooting prowess, and improved block software stability rapidly increased sortie completion rates. The dissimilar chase aircraft requirement was dropped in August 2012, which greatly increased operational flexibility. Fixed-wing aerial refueling qualifications started in the fall of 2012, and normalized hot pit refueling operations were adopted in early 2013. Each of these incremental capabilities was quickly rolled into local operations in order to maximize the utilization rate of available aircraft.

Presently the daily flight schedule consists of 12 to 16 sorties executed utilizing a combination of hot pits and normal aircraft maintenance turnaround cycles. This sustainable construct enables the completion of all assigned monthly and quarterly flying goals. Cross-country operations to both local divert fields and distant bases have been conducted to validate and normalize aircraft recovery procedures. Periodically the squadron conducts surge operations to validate specific maintenance and operational goals. The most recent occurred in December 2013, in which the squadron launched 10 aircraft and completed over 30 sorties in a 5-hour period.

Culture and Standardization

In a ready room with 17 IPs, there are 16 Weapons and Tactics Instructors (WTIs) and Strike Fighter Tactics Instructors (SFTIs) with diverse careers, including the F/A–18 Hornet and Super Hornet, AV–8B Harrier, F–22 Raptor, F–16 Fighting Falcon, FGR4 Typhoon, GR–3/A Jaguar, GR–7/A Harrier, FA–2 Sea Harrier, and F–5 Tiger II. The practice of instruction has taken a new measure at the Warlords, as the diversity of experience and collaborative standardization process promote a sound objectivity with regard to teaching and learning. Although IP total flight time in the F–35B may be relatively low, all can leverage years, thousands of flight hours, and numerous operational experiences flying

Over the next year, all F–35B pilots will receive their STOVL qualifications. *(Photo provided by author.)*

legacy tactical aviation platforms. Discussion and standardization protocols regarding basic administrative aspects of flight have taken hours and days to deliberate to ensure the most effective techniques and procedures are adapted. This emerging culture is most evident in the confines of weekly IP meetings in which all aspects of flight operations are discussed and analyzed in a permissive forum that aggregates and distills the collective teaching and learning environment.

Syllabus Development

Like other FRSs, VMFAT–501 T/C pilots complete a series of Training and Education Command–sanctioned 1000-level training and readiness–coded events with specific academic, simulator, and flight requirements prior to gaining their NATOPS qualification. The current process takes approximately 50 training days.

The instructional system design method is utilized to ensure all required learning objectives are appropriately covered and reinforced via instructor-led and computer-based training classes. Desktop computer stick-and-throttle simulators known as pilot training aides are used to reinforce academic knowledge while introducing the student to PVI mechanics. Students progress into high-fidelity, full-mission simulator to complete over 15 normal and emergency procedural simulators prior to beginning the flight phase.

The squadron has developed several unique events to bridge the gap between simulator and aircraft in the single-seat training system. The first consists of a taxi familiarization event where the student in an F–35B is "chased" by an IP via radio and a squadron vehicle. This event reinforces simulator-based procedures while providing a stand-alone event focused entirely on aircraft ground operations. The second function of this event resides in validating the alignment and accuracy of the student's HMD prior to a flight event.

The second unique event centers on the first flight and, more specifically, the rehearsal event preceding the flight. During this simulator event, the IP designated as the student's first chase pilot will lead the event from brief to debrief, battery on to engine shutdown, while operating the full-mission simulator control console station. This allows the IP and student to form and refine all the crew resource–managed idiosyncrasies that would otherwise be manifested in a traditional two-seat training aircraft.

The syllabus has evolved over the last 2 years as aircraft systems have matured and operating limitations have become more permissive. Cadre IP classes consisted of basic familiarization, instrument, and formation flying events in B1A aircraft that culminated in a NATOPS qualification. In late 2012 the B1B training system came online to support external pilot training requirements. The new course introduced basic tactical systems and concepts including basic air surface and tactical intercept events. While the foundational events in aircraft familiarization, instrument, and formation flying remained, students now progress to tactical system and concept introduction. Basic air-to-surface flights introduce radar mapping and EOTS utilization culminating in simulated employment of GBU–12 and GBU–32. Tactical intercept events introduce air-to-air concepts with a focus on beyond-visual-range employment of simulated AIM–120.

The squadron training department is continuously evaluating emerging aircraft capabilities. . . .

In coordination with developmental test and VMFA–121 at Marine Corps Air Station Yuma, squadron IPs have completed validating the fleet replacement squadron STOVL training module. The syllabus consists of approximately 10 hours of academics, followed by 6 simulator events in which over 60 STOs, slow landings, and VLs are accomplished. The flight segment consists of two flights under the ground control of STOVL IP in which five STOs, five slow landings, and four VLs are executed. Over the next year, all designated F–35B pilots will complete the training module and receive their STOVL qualifications.

The squadron training department is continuously evaluating emerging aircraft capabilities and limitations in an effort to expand the scope and scale of the syllabus. Squadron IP and aircraft have participated in close air support training evolutions with Army Special Forces personnel in support of their predeployment training. Deep air support training missions with imbedded fixed-wing aerial refueling have been conducted to validate the integrated sensor suite nested in the aircraft. Antiair warfare (events including defensive and offensive counterair) missions have been conducted in multiplane scenarios. Integrated training missions with Marine Corps and Air Force tactical aviation platforms have been conducted to validate specific syllabus learning objectives.

The overwhelming consensus among squadron IPs is that the aircraft represents a seminal departure from legacy tactical aviation platforms. The aircraft is responsive and easy to handle in both CTOL and STOVL flight regimes. The unique PVI construct provides the pilot with a high-fidelity level of situational awareness that allows the pilot to focus on mission execution and tactic employment.

Future Plans

In the summer of 2014, VMFAT–501 will relocate to Marine Corps Air Station Beaufort. Training of initial accession pilots will begin in the summer of 2015 in support of the Marine Corps' F–35B initial operating capability.

USMC

Read more about the F–35 at www.mca-marines.org/gazette/f35.

Counter-IED

DoD capability and posture and future threats

by Maj David S. Pummell, USMC(Ret)

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Robots are capable of placing charges to blow up IEDs. *(Photo by LCpl Shaltiel Dominguez.)*

What are the requirements to mitigate the counter–improvised explosive device (CIED) threats of the near future? According to the National Counterterrorism Center (NCTC), internationally, not including Afghanistan and Iraq, there are approximately 119 IED incidents a month. While current doctrine is based on Operation ENDURING FREEDOM (OEF) and Operation IRAQI FREEDOM (OIF), the Department of Defense (DoD) must now focus on what future operations will require of U.S. naval amphibious operations and, more specifically, U.S. Marine Corps land operations, and how the operational lessons learned will apply to scalable land operations. The complexity of projecting power ashore via amphibious operations presents a constrained environment due to limitations of transportation, embarkation, and communications. Once the issues of amphibious and subsequent land operations are addressed, the lessons can be applied across the DoD and supporting agencies.

Commands paid limited attention to the IED threat prior to 11 September 2001. IED threats and CIED skill sets remained stovepiped within law enforcement and counter/antiterrorism mission scopes resulting in confusion of missions and even confused definitions regarding IEDs, weapons of mass destruction, booby traps, and unexploded ordnance. The effect of differing doctrines produced cross-agency friction that affected tactics, strategy, and diplomacy, thus reducing mobility of maneuver forces by increasing the "fog of war" in regard to IED-related matters.

Special operations forces and force reconnaissance (force recon) communities incorporate CIED training and explosive ordnance disposal (EOD) operations into techniques, tactics, and procedures for direct action and special reconnaissance. EOD elements are attached to assault forces and IED events are incorporated into training scenarios. By incorporating IED events and appropriately trained team members into the table of organization, IED events rarely interfered with missions or timelines. Contrasted by early IED events in OIF and OEF, tactical elements were easily overwhelmed and required deviation of missions to resolve the tactical dilemma and resolve mass casualty evacuation. These early IED events created tactical dilemmas that exposed all elements of the operation to secondary IED threats from an asymmetric enemy moving unidentified among the local population.

All units representing the warfighting functions must train to complete their mission in a CIED environment. Lessons learned have shown that logistical and support elements are particularly vulnerable to the IED. The IED threat is also relevant to aviation units often postured in a static location in what is described as a "secure" area. Aviation combat elements and aviation ground support must have an appreciation of explosive hazards and their impact on their missions, specifically base recovery

after attack and rapid runway repair. Air combat units' organic engineer and EOD elements require collective training with the organic and supported unit that focuses on immediate actions in the postattack phase to fully maintain aviation capability. Historically, due to fiscal and manpower constraints further burdened with limited training venues, CIED collective training to neutralize explosive devices was not developed into the unit-level training plan. Regardless of best efforts and intentions, IED tasks were marginalized and often became *notional* training objectives.

CIED training opportunities for all types of units are lost along with training for interagency support such as CIED exploitation cells (Combined Explosive Exploitation Cell, Afghanistan Captured Material Exploitation, Exploitation Analysis Center, Defense Intelligence Agency, Forensic Intelligence Office) and how to leverage other all-source intelligence assets. Realistic IED scenarios require mastery of combined skills and methods to defeat enemy IEDs. Collective training events associated with scripted exercises better define enemy operational structures, the intent of each enemy TTP, and subsequent defeat measures. Commands and staffs will then be able to conduct a better CIED threat assessments focusing on "left of boom" (that is, analysis of the IED threat prior to the IED event or explosion). This focus will facilitate training to gain an offensive operational mindset regardless of the IED threat by focusing on the constant enemy preparation activities. Not pursuing the offensive mindset will force units into reactionary, postevent responses, resulting in minimal force protection goals and defensive operation posture sometimes described as the "Whac-a-Mole" situation.

Lack of collective CIED training forced an extraordinarily steep learning curve for command and operational units in OIF/OEF, learning lessons with spilled blood. Servicemembers' lives and limbs and life effects such as traumatic brain injury and posttraumatic stress disorder are the result of notional training trends and can barely be quantified. However, compared to the costs of integrated training that facilitates mission accomplishment (such as attack the network (AtN), defeat the device (DtD), and train the force (TtF)), costs can then be quantified in training costs, not in lost lives or casualties.

Will our Nation's future enemies continue to be nonstate-sponsored asymmetric networks? Or will they be an opponent organized and supported by a hostile government? The evidence of our recent history indicates future threats such as nongovernment umbrella groups like al-Qaeda or rogue states such as Iran, and even legitimate nations operating through proxy groups and state-sponsored terrorist organizations, will continue to use IEDs as an effective means of warfare. The DoD must question how the potential IED threat will be defined so fighting forces can create mission essential tasks in which to frame their training.

Assessment of mission essential tasks is vital to realistically analyze and determine an effective CIED capability. Analysis of CIED training becomes even more critical when fiscal restraints and training time begin to compete, each placing finite boundaries on the training objectives that translate into completion of the mission essential tasks. Lack of training analysis subsequently results in a "default training model" and training for the last war. Proactive analysis requires definition of the perceived fiscal and training restraints while insuring CIED stakeholders and advocates address doctrine, organizational, training, materiel, leadership, personnel, and facilities (DOTMLPF) to sustain and implement lessons learned from OEF and OIF.

The CIED doctrine matured into the latest DoD joint publication, *Joint Publication 3–15.1*, *Counter-Improvised Explosive Device Operations* (Chairman, Joint Chiefs of Staff, Washington, DC, 9 January 2012). *Joint Publication 3–15.1* provides a starting point for the Services to identify and develop their CIED capabilities. The critical elements defined in *Joint Publication 3–15.1* are essential tasks organized by community and descriptions of how tasks are synchronized to effectively counter and eliminate enemy IED capabilities.

The goal of traditional intelligence preparation of the battlefield (IPB) and environment supports maneuver and does not completely reflect the IED threat. Great improvements have been made over the last decade to better support the negotiation of obstacles by a maneuver force. Only recent efforts toward AtN provide a complete picture of IED threats and move the IED threat analysis to left of boom. The goal is to deny the insurgent freedom of movement so that he cannot emplace that obstacle.

The goal of traditional intelligence preparation of the battlefield (IPB) and environment supports maneuver and does not completely reflect the IED threat.

A current left-of-boom chart starts with group formation/cause, initial information collection/target selection, surveillance/planning, deployment/rehearsal, execution/attack, escape, and exploitation. AtN seeks to exploit intelligence in all the phases leading to and prior to the attack (left of boom on a linear chart) and assigning that information to every level of command from patrol to command staff. The AtN information becomes critical to the offensive mindset in an IED environment and subsequently facilitates maneuver, a key principle of our modern doctrine. AtN not only exploits events leading to an IED attack but provides "right-of-boom" analyst tools to predict timing, location, and perpetrators. Once this information is combined with forensics intelligence from the various exploitation laboratories, evidence can be collected to not only kill but even capture and prosecute the terrorist. AtN provides intelligence and a wide parameter of

options to deal with the terrorist, from warfare to domestic law enforcement. Identification, capture, and prosecution permits a variety of exploitation options from targeted killings and capital punishment to plea bargains to collect information or turn a captured terrorist into an asset or agent.

Precise definition of the IED threat permits missions to be built with appropriate CIED tasks, better planned mutual support, and contingency plans to permit more flexibility as the fight matures. Training will need to reflect the CIED tasks associated with maneuver, force protection and security, identity dominance, and exploitation cell involvement. Training to CIED tasks subsequently facilitates appropriate tasks being considered in every operation order. Conventional and special operations missions can include the CIED element considerations as part of advanced force operations or special reconnaissance. CIED assessments prepared and included in METT-TSL (mission, enemy, terrain and weather, troops and support available, time available, space, and logistics) considerations by subject matter experts will identify potential threats, networks, and organizations before the enemy has an opportunity to weaponize IED components (left-of-boom analysis), and be prepared for exploitation after events (right of boom). Training and exercises with full mission profiles and value scenarios develop appreciation for the needed METT-TSL requirements.

CIED tasks refined during exercises and training can then be synchronized to mission requirements without being tempted to resolve tasks with notional solutions. Mission friction and solutions appropriately identified and planned for will involve tasking of external support elements such as combat engineers and EOD. It then becomes crucial that lessons-learned document shortfalls with appropriate support unit tasks that identify occupational fields thus develop habitual unit attachments (i.e., combat engineer units habitually accompany infantry units conducting breaching operations, and EOD units habitually accompany force recon units conducting precision raid operations). Combat engineers attached to facilitate foot mobile or mechanized units in an IED or explosive hazard area can positively identify, neutralize, and exploit intelligence and gain strategic value.

The use of the IED by asymmetric threats remains unpredictable, even when the intent is telegraphed by group leaders or other intelligence. Future use and threat postures discussed in relation to recent events in Benghazi, Libya, in September 2012, and the events leading to the assassination of Ambassador J. Christopher Stevens provide the following questions for IED threat analysis:

- Who was responsible for IED threat assessments in the Benghazi area of responsibility? Did the threat analysis accurately define the IED threat?
- What CIED capabilities were available to the security forces tasked with protecting the Ambassador? Did the actual capability provide a full spectrum of support (left of boom and right of boom), i.e., DtD, AtN, and TtF?
- What CIED operational elements supported the military force on standby assigned to reinforce and secure the Embassy?
- Who was tasked to conduct postblast (right of boom) weapons intelligence exploitation, fragmentation analysis, and forensics and biometric analysis in a nonpermissive environment?

The aforementioned questions identify the often neglected need for lateral communication between the DoD, Department of Justice, and Department of State in regard to intelligence-related CIED efforts. Cross-departmental communication efforts can only mature through habitual and cooperative relationships. The Joint Improvised Explosive Device Defeat Organization (JIEDDO) provides a venue for national synchronization of efforts and a significant function in relational communication across agencies and commands. JIEDDO has eliminated duplicity, facilitating and integrating support across the same agencies and commands while addressing joint Service issues from operations to nonintegrated program budgets.

Joint CIED capabilities exercises (CAPExs) are one way to provide understanding of joint CIED capabilities in joint Service and multiagency environments. A CAPEx conducted once a year for elected officials and senior leaders in DoD, Department of Justice, and Department of State agencies in alternate locations can illustrate responsibilities across joint CIED lines of operations (LOOs) (DtD, AtN, and TtF).

Properly evaluating potential IED contingencies provides viable solutions and will require a wider aperture in regard to what is considered common knowledge among those who create policy and procure funds. Policy leaders can then draft CIED doctrine that better supports operations at the combatant command levels. Combat leaders will be required to develop mission statements by identifying common operational threads, regional peculiarities, and specific Service capabilities, and compare the capabilities to threats. Once CIED operations capabilities are identified, commanders will have a bet-

Lessons learned provide Marine forces with possible solutions and wider understanding of IED/CIED contingencies. *(Photo by LCpl Shaltiel Dominguez.)*

ter understanding when applying those capabilities to the actual threat and be better able to apply focused staff actions to find CIED solutions. Commanders will then have better tools to articulate operational support and logistics required in an IED environment.

Joint CIED issues require coordination through multiple levels and multiple Services and agencies. Expert knowledge held in the National Ground Intelligence Center, the Naval Explosive Ordnance Disposal Technology Division, the Defense Threat Reduction Agency, and JIEDDO must be leveraged by commanders when addressing future or potential threats and when conducting initial planning conferences or mission analysis. Wargaming and red cell operations are a critical part of this analysis (e.g., Nigeria has suffered a loss of up to 30 percent of its oil resources due to piracy). It is merely a matter of time before the loss of this resource becomes critical and financial loss unsustainable, eventually leading to some type of national military action. The littoral environment, unique and nonpermissive industrial areas, and maritime forces will shape a very unique CIED operational environment, and must be developed regarding lessons learned and the uniqueness of METT-TSL requirements.

Nigerian scenarios require full spectrum IED analysis prior to the conduct of seabased options. To support full-spectrum IED analysis, IPB requires weapons intelligence capability such as an embarked exploitation analysis cell (EAC) and ordnance order of battle that can assist AtN tasks such as biometric collection and identity dominance. A deployable node requires IED subject matter experts in all-source intelligence and operations. EOD and engineers become force multipliers on the intelligence staff rather than liabilities in regard to demanding requests for information. The deployable amphibious scenario then provides a template that can be applicable to many other expeditionary mission templates (i.e., terrorism, piracy, maritime interdiction operations, and gulf oil platforms missions). Other land-based missions like embassy reinforcement, noncombatant evacuation operations, and security and stability operations will be enhanced with organic CIED intelligence, surveillance, and recon capabilities that provide the technology to tag, track, and locate targets of interest. The technology advances will further complement the existing identity dominance capabilities forming a synchronized operational effort that provides a higher level of clarity on both the topographic and human terrain.

The Services' occupational communities must then answer the following hard questions for future CIED assessments and analysis, some of which have been lingering for years:

- Who will manage electronic countermeasures in the maneuver elements?
- What are the criteria for vehicle protection, and will the large, cumbersome MRAP family of vehicles become standard, thus affecting maneuver itself?
- What will be the impact of the current MRAP vehicle fleet on sea and air embarkation?
- Who will the lead DoD efforts for monitoring and reporting IED threats and trends?
- What is the support relationship for Services utilizing CIED attachments and detachments?

Time is the critical element in all of the aspects discussed in this article. The concepts highlighted provide discussion baselines for command and staff groups and subsequent after-action working groups to define what the enduring CIED requirements should be as we transition from theater to theater (e.g., U.S. Central Command, Pacific Command, and European Command). The discussion can set CIED capabilities within the operational and logistical parameters to support the multi-Service needs within the combat environment of a specific theater of operation. DOTMLPF training priorities break down the CIED element requirements and help establish the necessary programs for each Service and the programs' applicable missions. It is equally important to maintain specific CIED operational and logistical capabilities through training and equipment maintenance so as to not lose the currently unused capability in another theater of war (e.g., conventional ordnance mitigation expertise being lost due to expanded CIED roles of EOD and engineers).

USMC

2dLt Smith's Dilemma

Intellect that matches tenacity

by Capt Christopher D. Barber

The following short fiction story is not intended to portray any particular place, time, or series of real events. It is a literary tool to bring forth issues the author views as critical to the Marine Corps' operational future. The possible developments in this piece are meant to be starting points for real debate amongst leaders in order to decide how to best prepare "2dLt Smiths" for an uncertain future.

2dLt Smith felt tired, yet his weariness was comfortable—surprisingly so since, as a boot platoon leader, he had only played at war up to this point. In all his examination of the subject, it was incontrovertible that war drained a man. Many times his father, now an old man, claimed as much when he told stories of his service in Iraq. Still, the ease with which he settled into his weariness troubled him. He was unsure of the modifications (mods) he had recently been given. The battalion surgeon passed them out as soon as the battalion landing team learned its assigned evacuation operation had been changed to a denied entry operation. The new pills and shots felt strange and had drastic effects.[1] Smith did not remember much from the brief he received about them, the 15th such brief in a marathon session of PowerPoint 20XX slides his platoon digested on their e-tablets during a range break. But Smith did recall the mods could make short-term genetic change possible and blunt many negative physical effects. Smith thought their implementation might have been a bit rushed, likely as a way to offer hope in their present dire situation. Yet for all the strange "tired energy" he felt, worse was the feeling Smith had when he took full stock of his situation—he might be leading one of the first Marine units to surrender to an enemy force in a century.

Smith quickly got out of his bivy and hoped his mods would squeeze out every bit of ability he had. He would not face his men, surrender, or whatever else came without knowing he gave every measure of devotion. His Marines joked about their aging ships and gear during training, but now Smith had limited communication to higher headquarters and his dire logistical and tactical situation held no humor for him. His platoon sergeant had created a messenger system to get in contact with the company's command operations center (COC), making his communications more akin to Hoplites than 21st-century warriors. Worse, the company COC that cost a billion dollars and promised the same capabilities a regiment would have possessed a decade earlier went dead right after first contact with the enemy. Smith's communications would likely not get higher than his higher headquarters' blacked-out COC.

As useful as the powerless COC was Smith's predeployment training. While Smith appreciated the lessons of his forebears, he felt much of the prescriptive training, based on the Corps' last wars, held little value for the situation he faced. Upon the change in mission, Smith quickly had to recall what he knew about high-end kinetic operations. The lessons he best recalled were the tactical decision games based on Fallujah or Sangin, though now the enemy he faced was much better resourced and capable than the insurgents his forbears were up against. Smith prepped for his morning briefing. He found it funny to have to hold down a button to speak when getting reports from his squad leaders over the old VHF radio—it seemed as anachronistic as cable television. The process of verbal situation reports seemed to be a hard transition for most Marines, who were innately more comfortable with the digital messaging they had communicated with from childhood. Not that Smith blamed them; his whole life he had learned by, with, and through purely digital means. Most field grade officers, let alone junior leaders, did not have to bother with "traditional orders" using terrain models and good public speaking since The Basic School or Infantry Officer Course. The Corps was slow in figuring out how to train the "digital generation." While technology had increased the speed and scope of

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what units could do, commanders and doctrine lacked the inherent focus on autonomy and trust that was needed to realize those capabilities. Smith was glad one of the last long war vets was his MEU commander. He seemed to be one of the few leaders who really knew from experience how to infuse intent into a subordinate and let him run.

Smith wished that his bosses further up the chain held the same philosophy. He did not understand how leaders who had been raised on the lessons of insurgency early in the century could be so ham-fisted while fighting a war that many traditionalists wanted: kinetic and target rich. Smith believed that the years of declining budgets and eagerness of leaders to cut the "boring"—training, readiness, manpower—in order to favor politically charged acquisitions projects underpinned the linear thinking most senior leaders relied on.[2] The good leaders Smith encountered all seemed endowed with flexible ways of thinking, which made sense as they all had taken advantage of the new professional military education system developed due to budget dilemmas. The Marine Corps had revitalized its education system. Instead of the old system of retention bonuses, subsidized civilian education was allowed to stand in for professional military education, a system created during fiscal duress that now showed some positive third-order effects. If not for those select leaders with mental flexibility, the MEU would not have gotten past its initial insertion. In spite of those small victories, Smith did not know if their abilities would be enough to keep him and the rest of the MEU from an increasing possibility of destruction.

Smith finished taking increasingly bleak reports over the radio from his squad leaders. He wished he had the tactical digital networks that seemed as necessary as oxygen during the work up. Smith had to face the immediate problem of how to supply his men, as their combat loads were almost gone and resupply was impossible after the destruction of several of the amphibious ready group's ships. It seemed stunning to face the loss of just one ship, and even more inconceivable to hear reports that declared none of the ships were destroyed via traditional kinetic means. Smith conceived that whatever had sunk them had to be related to the fact that all of them had been new and highly touted "networked ships" with smaller crews.[3] Smith remembered during one of the briefings he received that the ships had many autonomous control systems which freed up the crew "to focus on the enemy." When Smith was aboard, it seemed like someone forgot to focus on basic security; none of the sailors went through mandatory social media audits like his troops did.[4] Smith could only wonder how the ships had been so lax in their digital security posture.

Hearing the casualty reports relayed across the company grapevine proved how effective the enemy was. Smith and his Marines were trying to rapidly adapt. In their isolation from command, they had seized some initiative. Such meager successes would not matter though if their logistical sustainment was only going to hold for the next few days. Smith had concocted a plan to "go partisan" with some locals if his platoon was not resupplied soon, the thought of which only reinforced how bleak the situation was. His plan was outlandish and far from doctrine, but what else could Smith do in a situation that presented the worst of bad choices? The only hopeful rumor Smith heard was from his possible local comrades, who stated that some merchant shipping was now pushing the Marines' supplies ashore.[5]

Smith never imagined he would have been in such a fight. His slightly older peers told him everyone would be lucky if the battalion landing team evacuated an embassy and they took a few old rocket propelled grenade shots. While the previous wars reintroduced the utility of deadly low-tech, adaptive weapons, massive leaps in industrial technology meant that the enemy now had access to advanced technologies. Soon after landing, Smith watched numerous helos go down even after they survived the initial air defense artillery and surface-to-air missile fire during insertion. When captured three-dimensional printers and modified weapons were found, it was apparent to see how quickly systems thought of as secure could be overcome by the enemy.

No planning options really considered that U.S. forces would not be under skies controlled by their own aircraft. While the MAW and Air Force were not out of the picture, Smith knew why his position had to be camouflaged as well as it was. The drone threat was easily mitigated, but the advanced manned enemy fighters overhead had not been considered during planning.[6] [7] More disturbing was the hyper misinforma-

Regardless of technological advances, Marines must still locate and close with the enemy. ***(Photo by LCpl Stephen D. Himes.)***

tion Smith faced. Smith grew up never being more than a touchpad swipe away from seeing his family on a video call. E-mail was a right enshrined in law. How could Smith have not heard from anyone since he left port? Smith knew it was not self-censorship, because during the float over so many troops received communications from their families speaking of horrible messages they received. After talking to his friend in the S–2 (intelligence) Smith found out that thousands of Marine families had been digitally targeted by what had to be an army of hackers. Hysteria-causing messages, viruses, and complete power blackouts spread rapidly on the home front, and had been accomplished all without ever firing a physical shot.[8] It was eerily similar to the policy Smith read on strategic bombing from World War II about targeting the industrial base of nations. Now industry was based on the digital networks that powered everyday life. Why would an enemy not target such things, and especially the small population that made up the families of an all-volunteer force? It was a canny move, as Smith now dealt with his own Marines' worries about e-mails from their loved ones stating that their bank accounts were gutted. All those concerns piled up and formed like a ball in Smith's stomach as he went through final preparations to defend and withdraw.

Smith knew war by its nature was Janus-faced and would never be the same. Certain principles may be inviolate, but they would always need reinterpretation. If Smith lived he would go back and examine his Corps' recent history—which changes had it ignored and which had it embraced too much? Smith knew past peacetime battles had been inevitable, budgeting being the most important to the situation he presently found himself in. New technologies meant new economies that required new thinking on spending. Unfortunately, old thinking had dominated the crucial discussions on what would be important in future wars. If Smith got out of this, he would make it his life's work to prevent shortsighted leaders from forcing future Marines to suffer choices made by mortgaging their present for past generations' problems. The most important issue Smith thought back to was his training as a leader. He joined the Marine Corps because of the intangibles, the largest being its focus on the human dimension of war. Smith thought the Corps' best investment after the last wars had been in the Marines themselves. His only chance at survival, which seemed to mean victory more each day, was built on leadership. His superiors were doing more with less and holding back military disaster because when they were younger the Corps had given them an intellect that matched their tenacity. Smith did not know what history would write about his small part of what was sure to become a famous military episode, but he knew that the outcome had been written years before he took the field.

Don't mortgage their future with bad decisions today. *(Photo by Sgt Keonaona C. Paulo.)*

Notes

1. Gayle, Damien, "Army of the future: Soldiers will be able to run at Olympic speed and won't need food or sleep with gene technology," *Daily Mail*, London, 12 August 2012, available at www.dailymail.co.uk.

2. Cannon, Maj Christopher J., "F–35B Needs a Plan B," *Marine Corps Gazette*, September 2011.

3. The U.S. Navy currently has its smallest amphibious fleet in history, and its numbers are projected to decrease further. (See "USS *Freedom*—US Navy's new ship failed 14 of 28 tests," 11 May 2012, accessed at maritime-connector.com.)

4. While social media targeting has not been seen on a large scale, with adequate resources it would be possible. (See Mark Drapeau and Linton Wells II, "Social Software and National Security: An Initial Net Assessment," National Defense University Center for Technology and National Security Policy, Washington, DC, 2009, accessed at www.dtic.mil.)

5. The loss of amphibious ships is likely to lead to the use of secondary and tertiary force flow solutions—U.S. capacity to surge shipping is drastically decreasing. (See Dan Wallach, "Beaumont's Mothball Fleet is Growing," *Beaumont Enterprise*, Beaumont, TX, 2012, accessed at www.beaumontenterprise.com.)

6. Stadaert, Michael, "China unveils new drones aimed at buyers in developing countries," *Global Post*, Boston, MA, 2012, accessed at www.globalpost.com.

7. U.S. forces have not suffered ground casualties from enemy aircraft since the Korean War.

8. The laws of cyber war are a work in progress. (See Scott James Shackelford, "From Nuclear War to Net War: Analogizing Cyber Attacks in International Law," ExpressO, Cambridge, MA, 2008, p. 14, accessed at works.bepress.com.)

Marines of the North American AOR

In every clime and place: Marine Forces Northern Command

by Maj John Berdusis

It is 21 September 2017. The first wave of AAVs splash into the Atlantic from the USS Kearsarge (LHD 3), headed for shore. Time is of the essence; they must close the gap quickly between themselves and the shore. The only thing they know is that the hurricane had ravaged the coast, flooded the city, and more people would die if no rescue efforts came in time. LCACs scream by heading for shore, loaded with MTVRs, bulldozers, route clearance equipment, and pumps to remove the trillions of gallons of floodwater. Who would have thought the MEU would be providing relief while parked in New York Harbor? Does this sound eerily familiar?

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U.S. Northern Command (NorthCom) was established in 2002 in response to North America's increased security posture after the 11 September 2001 terrorist attacks. Marine Forces North (MarForNorth) is the Service component to NorthCom, and operates within the geographical combatant commander's area of responsibility (AOR) that encompasses North America, to include Canada, Mexico, and the Caribbean. MarForNorth conducts operations along three main lines of effort: civil support, security cooperation, and homeland defense. The Marine Corps has always provided support to civil authorities in the United States in times of need, and this vignette (especially in the wake of 2012's Hurricane Sandy) provides a likely example of our periodic return to operations within the North American AOR in order to defend the United States and its interests and relieve the suffering of our fellow citizens in times of catastrophe. With a distinguished Marine Corps lineage of conventional and irregular warfare, these efforts may not easily resonate with the Marine Corps at large, yet they are crucial factors in securing and defending the United States and its interests.

Challenging Operational Environment

Each combatant command has a unique set of challenges specific to its operational environment, and the NorthCom AOR is no different. Expertise and finesse are required when operating within the continental United States and its territories. Operations require strict adherence to Federal, state, and local laws when employing all active and Reserve Marines. Marines must navigate a web of legislation such as the Stafford Act and the Posse Comitatus Act of 1878 (which is an often misquoted and frequently misunderstood law) when providing support to civil authorities. Fiscal responsibility is paramount when using appropriate funding mandated by Congress for specific activities within the AOR. Marines are likely more comfortable operating elsewhere around the globe than they are within the United States, yet it is important that we remain flexible and adaptable to ensure success in support of NorthCom operations.

Department of Defense support to US civil authorities for domestic emergencies, and for designated law enforcement and other activities. Also called civil support (CS). Also referred to as Defense Support to Civil Authorities (DSCA).[1]

Civil Support

During times of crisis, local, state, and federal authorities may be overwhelmed by natural or manmade disasters and require the capabilities and resources of the Department of Defense (DoD). Regardless of where and when DoD lends support, it will always be in support of civil authorities (never the lead), rendering assistance only after a request from civil authorities has been made, and only until DoD support is no longer required. The Marine Corps can apply existing capabilities (chemical, biological, radiological, nuclear, and high-yield explosive response, helicopter lift, truck transportation, engineer capabilities, etc.) to help civil authorities mitigate the effects of disasters, prevent loss of life, and reduce suffering among fellow citizens.

It may surprise most Marines that the Corps has provided support to civil authorities on numerous occasions. Some recent examples of civil support are:

- Hurricane response:
  - Sandy, November 2012.
  - Katrina, September 2005.
  - Ike, September 2008.
- Wildland firefighting.
- Support to law enforcement:
  - Los Angeles riots, 1992.
- Immediate response:
  - Indiana floods, 2008.
  - Missouri floods, 2008.

MarForNorth provides a needed and relevant capability to the combatant commander by making available an additional headquarters for deliberately planned support to civil authority events. MarForNorth is a component-level conduit for Marine Corps forces operating in support of civil authorities in the NorthCom AOR, and represents Service interests when providing potential assistance to state or federal authorities. Different from previous Marine Corps support, MarForNorth offers a component-level headquarters capable of commanding and controlling forces in support of civil support operations. In August 2012, a first in Marine Corps history, MarForNorth acted as the higher headquarters for a joint task force in support of civil authorities: Joint Task Force–Republican National Convention.

Security Cooperation

The Marine Corps is familiar with security cooperation (also called "theater security cooperation") through its many efforts around the globe in an effort to enhance partner nations' military capabilities, develop strong military relationships, and improve the security of the United States and its interests. The *National Military Strategy* and the *Defense Military Strategy* identified security cooperation activities as vital Phase 0 operations shaping each theater by addressing potential security concerns through partner-nation military efforts in an attempt to decrease direct U.S. involvement.[3] The Marine Corps' institutional knowledge and proficiency in small unit leadership, small wars, and asymmetric threats are valuable commodities that the Commander, MarForNorth, leverages against NorthCom's security cooperation requirements. The Marine Corps, through MarForNorth, has partnered with the Mexican Marine Corps, Royal Bahamian Defense Force, and the Canadian military. By strengthening the North American security cooperative, we can enable our allies to defeat transnational criminal organizations and violent extremist organizations.

Security Cooperation—All Department of Defense interactions with foreign defense establishments to build defense relationships that promote specific US security interests, develop allied and friendly military capabilities for self-defense and multinational operations, and provide US forces with peacetime and contingency access to a host nation. Also called SC.[2]

Deployed forces promote specific national security interests, as well as develop professional contacts with host-nation leaders. *(Photo by Cpl Timothy Childers.)*

Homeland Defense—The protection of United States sovereignty,

territory, domestic population, and critical defense infrastructure against external threats and aggression or other threats as directed by the President. Also called HD.[4]

Marines provide support to civilian authorities and communities through disaster relief efforts. *(Photo by SSgt Nate Hauser.)*

Homeland Defense

Defense of the homeland is a "defense in depth," with the last line of defense starting with individual Marines, their families, critical infrastructure, and installations—efforts focused on protecting the critical resources and capabilities against attack. This defense in depth extends from those bases and stations out to our borders, into the approaches, and around the world. This is an integrated effort coordinating military and civilian activities across the United States, all projected toward deterring and defeating attacks here at home. Defending these critical capabilities and resources at home allows the Marine Corps to train and deploy forces forward into the fight.

The Marine Corps has always conducted homeland defense activities and operations, yet Marine Corps history and institutional memory have always focused on operations abroad, or rather, at the first line of the defense in depth. MarForNorth focuses on the "close-in fight" in the defense in depth, or rather the last line, strengthening the defense at home, and coordinating those force protection responsibilities within the AOR for the Marine Corps. In the event of an attack on the homeland, MarForNorth would coordinate the Marine Corps' portion of the response in support to NorthCom's efforts.

In Every Clime and Place . . .

Marines have had periodic flirtations with North American operations before and should prepare for further demand in the future. With each new decade, Marines have found themselves in every clime and place across the world, protecting and defending the United States, its citizens, and its interests. The nature of war has not changed, but the character has, and Marines who customarily find themselves countering threats at the first line of the defense in depth abroad now find themselves relevant and applicable at the last line of defense—the homeland. NorthCom was created as a result of a changing threat environment, and in support, the Marine Corps provides its share to the contribution through MarForNorth. A versatile force, the Marine Corps can leverage its resources to aid and assist civil authorities in mitigating the effects of natural or manmade disasters, providing relief to fellow Americans during times of greatest need. As an amphibious force, the Marine Corps is uniquely relevant for civil support by operating within the littoral environment; approximately 50 percent of all Americans live within 50 miles of the more than 5,000 miles of coastline of the 48 contiguous states. MarForNorth also enables access to unique Marine Corps capabilities for the combatant commander as another crucial tool for defending the homeland, supporting civil authorities, and developing the North American security cooperative. The Marine Corps has always been a constant in American defense strategy and always adapted itself to the needs of the Nation at that point in time. As new threats and needs emerge, a renewed focus in the North American AOR creates a demand signal for Marine Corps flexibility, capability, and capacity.

The Marine Corps has always conducted homeland defense activities and operations. . . .

Notes

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3. Department of Defense, *National Military Strategy of the United States*, Washington, DC, 8 February 2011. See also Department of Defense, *National Defense Strategy*, Washington, DC, 2008.

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Innovation as Leadership

The need to adapt when institutions are threatened

by Col Morgan Mann, USMCR

The Marine Corps' present-day challenges are well known and frequently discussed. Faced with shrinking budgets and a smaller force, the Corps confronts an operating environment in which diffuse irregular threats and regional state adversaries continue to threaten the Nation's interests. Conservatism, conventionality, and institutionalism are obstacles to the Corps' future. However, it is just these types of traits that arise during periods of uncertainty and when an organization's existence is threatened. Leaders must overcome these natural instincts in times of uncertainty and push our Corps to innovate. Only through innovation as a leadership activity will the Corps flourish in the next chapter of its service to the Nation.

Relevancy to the Nation, in political terms, is measured in *future value* as a warfighting organization. How we position the Corps to be what the Nation needs in the future is more important than the successes of the past. Like after World War II, our successes in Al Anbar, Iraq, and Helmand Province, Afghanistan, are table stakes for being a part of the Nation's future. The Corps has fought for relevancy in the past and it can do so again.

Ironically, success on the battlefield does not necessarily mean the Marine Corps remains relevant or necessary to the Nation. Immediately after World War II the Marine Corps fought for its existence in political battles in Washington, DC. LtGen Victor "Brute" Krulak fondly remembered a conversation between Gen Holland Smith and Secretary of the Navy James Forrestal wherein, as both men watched Marines landing on Iwo Jima, the Secretary couldn't help

We must maintain our value as a warfighting organization *(Photo from photo gallery @ marines.com.)*

but think the Marine Corps' future was all but secured. Gen Smith, however, poignantly stated, "When the war is over and money is short they will be after the Marines again, and a dozen Iwo Jimas would make no difference."[1] Gen Smith's observation was prescient. In the years following the war, the Marine Corps fought for its survival until its existence was codified in the National Security Act of 1948.

Creative Destruction

Economist Joseph Schumpeter worked in the first half of the 20th century and is most well known for popularizing the term "creative destruction." He explains the process by which economic structures (firms, organizations, societies) revolutionize from within, "incessantly destroying the old one, incessantly creating a new one."[2] Of the top 25 industrial corporations in the United States in 1900, only 2 remained on that list at the start of the 1960s. And of the top 25 Fortune 500 companies in 1961, only 6 remain there today.[3] The general reasons for their demise include irrelevance, competitive forces, and failure to adapt to market transitions.

We can see Schumpeter's theories at work in the Marine Corps of the early 1900s. By 1900 the United States had become a world power, with territories in the Caribbean Sea and Pacific Ocean. The Navy, previously focused on the western hemisphere, became concerned

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with protecting sea lanes and coaling stations in the Philippines, Guam, and Hawaii. The Navy needed an offensive capability to seize and defend advanced naval bases in support of the Nation's growing global footprint. It did not want to rely on a fickle and overextended Army, thus it looked to the Marine Corps as an advanced base force. Many senior Marine Corps leaders were averse to diminishing the traditional role of Marines being ships' detachments. Some thought becoming an advanced force would make the Corps redundant to the Army and unused by the Navy, therefore being at risk of elimination. It took the General Board of the Navy over 4 years of bureaucratic maneuvering until senior Marine leadership cooperated more fully with organizing, manning, and training an advanced force. In support of the General Board, up-and-coming officers such as John Lejeune, George Barnett, and A.A. Cunningham wrote and advocated for the advanced force concept.[4]

The innovation of the advanced force was the most pivotal point in Marine Corps history. From the advanced force experiments came a larger, more capable organization that was able to fight as a land power in World War I. A.A. Cunningham's efforts started the incorporation of air power into the Marine Corps' tactical toolkit. The advanced force concept was also the genesis of the Corps' amphibious experiments of the 1930s. From an original unmet need of securing advanced bases came a half-century of incremental innovations that eventually gave birth to the modern-day MAGTF.

Through this process the Marine Corps creatively destroyed its former self to become a modern-day combined arms fighting force. At the turn of the century more than half of the Marine Corps served as ship detachments. At the end of World War I less than 2 percent of Marines were assigned to sea duty.[5] If the Marine Corps had not adapted to the changing operating environment and requirements of the Navy and Nation, it would likely have suffered a similar fate of the 23 large companies thriving in 1900 that are no longer here today.

The Marine Corps continues to adapt to the changing operating environment. *(Photo by LCpl Derrick K. Irions.)*

Why Is Innovation Important?

Today the Marine Corps does an excellent job innovating tactics, techniques, and procedures to meet new threats. After-action reviews are a standing operating procedure. The Marine Corps Center for Lessons Learned collects and distributes information to ensure that a broad audience can learn from the few. Strong informal social networks keep Marines abreast of best practices in the field. Marine Corps Combat Development Command sources new equipment and experiments with new operating concepts. All of these activities provide a solid foundation of systematic learning and adaptation that leads to innovation.

Today, however, the critical intersection of innovation, leadership, and the future of the Marine Corps rests at the operational and strategic levels of war. We must answer the preeminent questions of our times: What purpose does the Marine Corps serve the Nation? Why does the Nation need a Marine Corps? Why must the Nation continue to invest in a third air force, second land army, and amphibious shipping? How can the Marine Corps effectively fight across a range of military operations—or should it? Battalion after-action reviews will not answer these questions, yet they require the same innovative leadership we find on the battlefield. Innovation driven by leadership at all levels is required to navigate towards the Corps' future and ensure its relevancy to the Nation. Our efforts must evolve beyond tactical improvements, new weapons, or gear. Innovation must be focused on how we intend to organize and fight in the new century in an era of persistent conflict and fiscal austerity.

Today, however, the critical intersection of innovation, leadership, and the future of the Marine Corps rests at the operational and strategic levels of war.

"These sunbursts of creativity in operational techniques and material development are the manifestation of the intellectual efforts of a long line of Marine Corps dreamers—corporals, captains, and generals. They were sometimes misunderstood, but they were men who, as Eric Hoffer said, tried to 'think beyond the moment; live beyond the day.' They were the Innovators."

—Victor Krulak [6]

The Way Ahead

Innovation is more than creativity and great ideas—it is a purposeful and structured endeavor, competently led and fully supported, in which the outputs of the process are effectively captured by the organization. For benefits to accrue, the ideas that are generated during the innovation process that are valuable to the organization must be cultivated and protected by leaders.

The Marine Corps should approach its innovation efforts using a basic framework from which to prioritize and classify innovation projects. The first critical step must be alignment with the Marine Corps' strategy formulation process. The Commandant's Planning Guidance, Service Campaign Plan, Quadrennial Defense Review, budgeting, and annual program and concepts must all be taken into account when prioritizing efforts. Innovation efforts can then be classified into three basic categories: disruptive, sustaining, and efficiency (see Figure 1).

Disruptive innovations fundamentally change the nature of a market or operating environment. The iPad was a disruptive innovation in the personal computer space, and the improvised explosive device disrupted the American military, causing it to spend billions of dollars on MRAPs and counter–improvised explosive device technology. By their nature, innovations are the most profound but also the most difficult to achieve from within an organization and in the operating environment itself.[7] In many cases disruption doesn't require new technology, but rather the use of existing technologies implemented in a different way. Disruptive innovations are difficult to adapt to or defeat; this is particularly true for the company or military that is already the market leader or world power. Disruption strikes at the very heart of the already-successful organization, thus the resistance to respond or adapt to disruptive ideas is high.

Sustaining innovations improve upon the status quo and are often the most important work efforts. Sustaining innovations are what drives incremental product, process, and tactical improvements. The Marine Corps' incremental improvement of the tracked landing vehicle during World War II is an excellent example of sustaining innovation. Five generations of tracked landing vehicles saw service in the Pacific, each providing better armament, protection, and speed than the previous version. More recently, the incremental shrinking and proliferation of GPS devices has facilitated a significant improvement of battlefield situational awareness.

Efficiency innovations seek to reduce waste, unnecessary process, and overhead. These efforts are often the incremental money savers that can add up to a large sum for an organization.

Each of these categories benefit the organization in different ways, and all must be considered. If all efforts are focused on improving or sustaining what is already in place, this is a clear indicator of undue conservatism or retrenchment. If all efforts are focused on disruptive innovations, it is likely there is not enough attention being placed on operational concerns that will bridge the Marine Corps from today to tomorrow's opportunities and challenges.

The structure does beg a question: If one uses existing strategic frameworks, how can the organization break through to a new strategic concept? Wouldn't the current Commandant's Planning Guidance or Service Campaign Plan bring us back to the same outputs? This is where creation of "red teams" can be of significant value. Red teams are designed to challenge the status quo and provide a less conventional approach to a particular problem set. A senior red team can approach current Service-level guidance from a different perspec-

Disruptive	Sustaining/Improving	Efficiency
Special operations forces/Special Operations Command integration with Marine Corps Operating Forces. New MAGTF concept.	Distributed operations maturation. Cyber integration in operations. MAGTF–crisis response. Global Command and Control System–Marine Corps.	Headquarters eliminations. Program reductions. Alternative energy.

Figure 1.

tive and assess how different concepts could be alternatives to what is currently planned.

Innovation requires clear guidance and an end state tied to an organization's strategic and operational objectives. Once priorities and objectives are identified, innovation efforts must be measured for success and governed on a regular basis. Incubation of innovation can occur around the Marine Corps. It need not be cloistered within the Combat Development Command. Idea generation, debate, and peer review of the critical issues of the day should be distributed and collaborative activities. For most innovation processes, nondisclosure and secrecy should be the exception and not the rule. In addition to the proper staff process, informal networks, social networking, and venues such as the *Marine Corps Gazette* offer excellent forums for ideas to be socialized and tested. Operational advisory groups and executive off-sites provide appropriate venues to measure and govern the progress of innovation efforts.

Leaders must foster an environment in which there is a willingness to challenge assumptions and test paradigms that have been the foundation of an organization's success. Latitude for heresy must be accepted by the institution. Skeptics are always ready to rule out an idea, and they serve a useful purpose to ensure resources are not wasted on unnecessary endeavors. However, skepticism and conservatism must not so oppress new thought that people are unwilling to take risks.

Oftentimes uncomfortable consequences to the status quo can offer a sustainable differentiated advantage to an organization competing in the marketplace or within the national security domain. "Differentiation" and "sustainable advantage" may sound like business speak, but if the Corps is thought of as a second land army, or its capabilities are highly unlikely to be used, the Service as we know it will be in jeopardy.

We as an institution understand the value of innovation, and the concept is a part of our ethos, as demonstrated time and again throughout the Corps' history. Amphibious assaults, close air support, vertical envelopment, and U.S. counterinsurgency doctrine were all developed because of the leadership of the Marine Corps. The challenge for senior leaders is to imbue a sense of entrepreneurship and innovation not just with tactics, techniques, and procedures, but to tackle the hardest questions of the day regarding the Corps' future role and mission. To abandon this leadership principle and rely on parochial institutionalism to guide us toward a future will not serve the Corps well in the decades ahead. The Corps has shown continuously that its Marines can rise to the occasion and navigate the battlefield and the beltway to ensure mission success. This time should be no different.

Notes

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3. IBM research advertised in *The Wall Street Journal*, 16 June 2011.

4. Millett, Allan, *Semper Fidelis*, The Free Press, New York, 1991, p. 277. See also John Lejeune, "The Mobile Defense of Advance Bases By the Marine Corps," *Marine Corps Gazette*, March 1916.

5. Roe, Thomas, Ernest Giusti, and John Jonstone, *A History of Marine Corps Roles and Missions, 1775–1962*, Marine Corps Historical Reference Series, Marine Corps Base Quantico, 1962, p. 10.

6. Krulak, p. 69.

7. For an excellent primer on disruptive innovation and the challenge of change from within, I recommend two books: *The Innovator's Dilemma* by Clayton M. Christensen (Harper Business, 2000) and *The Structure of Scientific Revolutions* by Thomas Kuhn (University of Chicago Press, Chicago, 1996.)

The Re(al)awakening

Thoughts on the direction of the postwar Marine Corps

by Capt Daniel A. O'Hara

"The first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish . . . the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into something that is alien to its nature."

—Carl von Clausewitz,
On War

Our Commandant and his generals are right: We have a behavioral problem within the Corps.[1] The Marine Corps badly needs an awakening—perhaps just not the one our generals envision. The Corps needs to enforce its standards, but appears to be neglecting its most advantageous and most decisive one: its warfighting philosophy.

Our Corps must fully and consistently institutionalize our warfighting philosophy as our 29th Commandant, Gen Alfred M. Gray, envisioned it to be when he handwrote the following into the first copy of *FMFM 1* (the predecessor to *MCDP 1*):

> The thoughts contained here represent not just guidance for actions in combat, but a way of thinking in general. This manual thus describes a philosophy for action, which in war *and in peace*, in the field *and in the rear*, dictates our approach to duty.[2] (emphasis added)

This statement was then added into the final printed version. The sooner the Corps actually abides by the above statement, the more prepared it will be to face the post–Operation ENDURING FREEDOM (post-OEF) threats to our Nation *and* the more swiftly and decisively it will overcome the disciplinary problems its senior leaders currently wish to address (if there truly are any systemic disciplinary problems at all). This is because decentralization is best for decision-to-action in *any* form of conflict, including the so-called "battle for the barracks." The "reawakening" threatens to sacrifice the tenets of our philosophical warfighting standard for the sake of the old "culture of order," which is to the detriment of both its disciplinary *and* warfighting effectiveness goals.

According to the Commandant's briefing at the General Officer Symposium, the Corps' behavioral problem is much narrower in scope than what I have mentioned above. He cites lack of personal and unit discipline as the primary culprit, stating the following:

> We see evidence of [the behavioral problem] in non-compliance and enforcement of established institutional standards, incidences of sexual assault, hazing, [driving under the influence], fraternization, failure to maintain personal appearance standards, and other areas that indicate an overall lack of leadership and discipline. . . . Where we are faltering, where we need immediate attention, is in preparing our force for the post-OEF decades that are upon us.[3]

The Clausewitz quote at the beginning of this article helps demonstrate how I believe the Marine Corps has failed to appropriately frame its true current problem, which all but guarantees defeat. A flawed strategy in any kind of conflict will most likely lead to failure, no matter how many operational or tactical victories are achieved along the way. The current strategy championed to reawaken the force and prepare for the post-OEF environment appears to be to attack the symptoms of a potential disciplinary dilemma while ignoring the underlying (and more important) philosophical—and dare I say, spiritual—dilemma of our seemingly ever-stronger distancing from the tenets of maneuver warfare. Yes, strong discipline and ethical conduct are absolutely vital for the force, but they should come as a byproduct of the culture created by true adherence to our warfighting philosophy (a theory based on *trust* in our *professionals* to achieve results by high-initiative, decentralized thinking guided by intent, not at the expense of it.

A recent *Marine Corps Times* exclusive on the reawakening quotes a number of generals and their thoughts on the Corps' way ahead after 12 years of war.[4] The consensus among them seems to be that the force has a serious disciplinary problem and that the way to fix it is to reinstate or reinforce "daily routine" practices that were more commonplace before the long war, thus preparing the force for post-OEF (read: peacetime) challenges. How this first determination (that the Corps has a serious behavioral problem at all) is reached

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is not readily apparent, but seems to be accepted as fact. I will not go to great lengths to challenge the validity of that claim here, as that would take an entire article itself, but will simply echo the Latin proverb, "Quod gratis asseritur, gratis negatur," which means, "What is asserted without evidence may be dismissed without it."[5] To quickly summarize, it is not immediately clear whether the Marine Corps is any less disciplined now than it was 12, 23, or 37 years ago in terms of alcohol-related traffic infractions, sexual assault, hazing incidences, uniform standard adherence, or barracks cleanliness. So perhaps the identified behavioral problems in the force are starkly overestimated. Getting back to the point, even if we take for granted that the disciplinary problems are in fact worse than before the recent 12-year conflict and need immediate addressing, are the proposed solutions such as the Service uniform for duty-standers, a revamped basic daily routine, or more officers and SNCOs in the barracks between 2000 and 0400 going to actually do anything to solve those problems? Additionally, do these solutions prepare the force for what lies beyond Afghanistan?

Our commanders do not owe us explanations for their decisions. Commanders can tell the force what they want done and that is enough, then it is our duty to obey; however, in this case, our commanders have offered explanations that do not seem to resonate with the tenets of maneuver warfare. According to the previously mentioned article, the underlying theme with respect to the proposed solutions can be summarized as follows: *This is what we used to do*, with this nostalgia equated to "what we do and who we are" as Marines, and with imposed centralized regulations disguised as empowerment. I do not believe this approach will actually achieve the stated goals of improving discipline. Rather, the approach misses the deeper issue and guides the entire organization in the wrong direction by inherently disobeying the Marine Corps' standard of maneuver warfare as defined in *FMFM 1*.

The practice of maneuver warfare depends on a *culture* instilled throughout the entire Service, a culture that demands initiative instead of the old blind obedience that typified antiquated attacks online and static set-piece defense. Since adopting maneuver warfare in 1989, the Marine Corps has worked to build in itself our new culture for modern battle. We created a culture that is sustained by *self*-discipline and can therefore function with decentralized leadership in place of the "parade field," top-down command and control that typified 19th-century and early 20th-century war. On the modern battlefield, a culture adapted to widely dispersed operations is essential for victory. High-initiative, decentralized decisionmaking is now crucial. It is counterproductive to have one culture for battle and another for garrison. In fact, it is difficult to see how two such diverse cultures could coexist in a single organization.

Are we less disciplined now than we were 20 years ago? *(Photo by Cpl Timothy Lenzo.)*

Marines, after all, look sharp because they want to. They are proud of the Corps and to claim the title "Marine," and if they are not, then that is the true leadership failure. Leaders in whom Marines truly believe do more to instill pride and discipline than a thousand inspections or spot corrections ever could. We walk upright with heads held high because we still remember the pride we felt when we marched by the reviewing stand upon graduation from boot camp or Officer Candidates School. It's ingrained. That same high-initiative mentality must pertain in the face of any untoward conduct such as sexual assault, hazing, alcohol-related traffic infractions, or fraternization. The currently proposed solutions appear to be more about form, appearance, and familiarity than about creative assessment, end result, and trust.

Gen Charles C. Krulak, the 31th Commandant, said, "Our Corps does two things for America: We make Marines and we win our Nation's battles."[6] This nicely sums up who we are and what we do, and will allow us to reach the intersection of preparing for post-OEF threats and solving disciplinary issues. Let us deal with the latter part of Gen Krulak's statement first. Fighting and winning in war is what we do, and it should follow then that our primary focus is to get better at that calling. Now, maneuver warfare is the Marine Corps' standard for achieving that objective—it is not the scattered thoughts of a few outliers. Maneuver warfare is the stated command culture of the organization. The demand for outstanding personal appearance and clean living spaces must support our philosophy of warfighting, not fly in the face of it.

The greatest concern of the Marine Corps' founders' maneuver warfare philosophy was that the Corps might revert

A Proposed Mission-Type Order the Commandant Could Issue

General Situation:
Marines, as we return from 12 years of war, I remain obsessively focused on winning in combat. Anything can happen, and, as Marines, we will be ready to respond. Discipline, ethical conduct, and exemplary character are essential for us to be able to live out our warfighting philosophy at every level. We have lapsed recently in some of those areas. This situation needs to be fixed.

Mission:
Train, educate, and shape our Corps for maximum combat readiness, while keeping the confidence of the American people that Marines exemplify all that is respectable in our civilization. This is to win our wars and keep our honor intact.

Commander's Intent:
My intent is to fix discipline, conduct, and character issues while maintaining total readiness for renewed action by reemphasizing our culture of high initiative and capacity for decentralized action so essential for the maneuver battle. I expect organizational honesty and trust both up and down the chain of command.

Tasks:
(a) NCOs: You are the main effort. Effective immediately, your mission is to increase our disciplinary and ethical readiness as a Service and to foster self-discipline of mind, body, and spirit in order to preserve our honor in the mind of our Nation, to which we are sworn.
(b) Officers and SNCOs: You are Supporting Effort 1. Effective immediately, ferociously educate and train yourselves and your subordinate unit leaders in order to adequately prepare for our next mission and to allow the main effort to accomplish its.
(c) Commanders at all levels: Train and educate yourselves and your units in order to combat and defeat any and all foes that we may face in future battles. As the leaders placed in charge of the force, I am counting on you, and I trust you.

Coordinating Instructions:
To prepare for the post-OEF environment that is upon us, ready yourselves through training and education to win against any threat, from powerful conventional militaries to narcoterrorist gangs, and to preserve our Corps' honor in doing so, both at home and abroad. I am committed to providing any and all support required to carry out this mission. Keep higher headquarters appraised of your needs and your successes. Dedicate yourself to the study and practice of your profession and never stop updating and adapting. If you can't get the job done, I'll replace you with someone who can. Communicate with one another. Exchange ideas and keep me informed. Good luck!

back to being internally focused on a culture of order, rather than maintaining its focus outwardly on the enemy and on results.[7] The current Marine Corps drawdown from Afghanistan may not be the period of rest and refit that many believe it is. The peacetime warrior's principal task is to prepare effectively for the next war. The Nation could be involved in another significant conflict tomorrow and there is little if any evidence that a lack of televisions in duty huts and a fire watch on every floor of the barracks does anything to make the Marine Corps a smarter, deadlier, or more disciplined fighting force. In fact, these measures may simply weaken the Corps, as they send the psychological message that we do not trust our Marines as the professionals we claim they are because we refuse to adhere to our command philosophy in garrison. *We do not live it*. Jörg Muth, author of *Command Culture* (a book on the Commandant's Professional Reading List), talks about "Auftragstaktik," the command concept loosely defined by mission-type orders that was used to fantastic success during World War II by the German officer corps (arguably the finest in modern warfare history). Muth says, "Mission command [Auftragstaktik] cannot be ordered, it has to be taught and lived on all levels."[8] This sort of thing sounds much more like what we ought to be focusing on to prepare our force for the post-OEF world in terms of what we do as Marines.

Let us now turn to the discussion of who we are. Col Michael D. Wyly, USMC(Ret), sums up professionalism and its ties to "who we are and what we do" nicely when he says the following:

> Lawyers would not need to go to law school and pass the bar exam if they could act in courtrooms on command of some superior lawyer who controlled them. The lawyer need turn to no one in the chaos of a fast moving court case, as he serves the cause of justice. As professionals, current in law, they can act on their own in unpredictable circumstances. So it is with the professional soldier. The profession of arms, more than any of the others, must deal with the unknown. Insurgency

Marines have to deal with the unknown. *(Photo by Cpl Bryan Nygaard.)*

> in Vietnam, terrorism in Beirut, and forms of warfare never before known, are still our responsibility.[9]

Col Wyly then adds the following:

> Professionalism is not, in my view, the exclusive province of commissioned officers. It may have been at one time; however, this is no longer. Education, after all, is not something meted out exclusively at universities, culminating in academic degrees. Education comes through study and in our case it is the study of war such as hardly any university I know of offers. Our non-commissioned officers need it as badly as do our commissioned officers for the unique demands of modern war.[10]

Calls for empowerment coupled with stiff top-down regulations are empty rhetoric. Marines are generally clever and can see through that. If we truly count ourselves as professionals, does it not follow that we should provide our NCO corps the freedom and trust expected of the position? Should we not focus on their education and allow them to solve the disciplinary problem, maybe each unit in its own way, with an eye toward end state? And let it not be done with a "zero-defect" mentality. From *FMFM 1*:

> Abolishing "zero defects" means that we do not stifle boldness or initiative through the threat of punishment. It does not mean that commanders do not counsel subordinates on mistakes; constructive criticism is an important element in learning. Nor does is give subordinates free license to act stupidly or recklessly.[11]

There will be mistakes, but the trust built and judgment instilled will pay many times over in reducing our problems long term, both on the top deck of the barracks and on the battlefields of our next conflict.

The Commandant said, "I'm turning to my leaders at all levels to refocus Marines on what we do and who we are."[12] This statement should mean that leaders are obsessively focused on making the force smarter, deadlier, and more prepared to deal with the full range of threats, from near-peer states to the nonstate actors we have been battling for over a decade. This means focusing outwardly on the enemy, whoever he may be, and pursuing the education and progressive command culture that will allow us to out-cycle those enemies. Leaders should be fostering the development of their professionals and treating them as such, having enough confidence in them to allow them to do in garrison what they will be asked to do on the future battlefield: solve problems independently and win, guided by intent (see the sidebar on p. 49). The framework for becoming the most effective force-in-readiness the Corps can be for our Nation is already there. We just have to live it—and never stop learning or improving upon it.

Notes

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10. Ibid.

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12. Amos

Observations of Command(ers)

Making the most of talent

by Col Peter J. Dillon

Command is a defining moment. *(Photo by Sgt Melissa Wenger.)*

Most Marine officers crave the opportunity to command. For most, command is the defining purpose of officership, with the highlight centered squarely on leading Marines. However, for nearly all, most thought on "leading Marines" is focused on their personal interactions with enlisted Marines. Few officers spend much time thinking about leading other officers. In many ways there is an unexpressed expectation that officers should not require leadership—that we should "get it" and that we do not require additional attention. Expectations are inferred. Performance is expected.

We as an officer corps are missing opportunities to positively affect our institution and posture our future leaders for organizational success. We are missing opportunities for greater achievement by failing to address our inattention to "leading leaders." I assert that the best way to lead officers is through the application of a positive role model in command—show them how to command. For the purpose of this discussion, the role model I am describing is not characterized by the overt signs of emulatory personal behavior (proper dress, proper etiquette, etc.). The role model I allude to is the individual who has the ability to shepherd an organization's officers to success through the establishment of a positive command climate, a command climate that is rooted in approachability and inclusiveness. Unfortunately, these officers, specifically these commanders, are rare.

A command is nearly always a reflection of the commander. The tone and attitude of the top permeates through to the bottom. It is logical to believe that a positive atmosphere, one that spawns a shared vision, pervasively influences a unit to achieve organizational advances. And so it is incumbent upon the commander to create a proper command climate. This is especially important for the unit's officers who shape and translate the commander's vision into action. The best manner to motivate this action is to make your officers part of the process. It is a responsibility that is frequently left unfulfilled because most officers, when they are given the opportunity to command, simply follow the examples they have witnessed over the course of their careers.

In many ways we are a product of what we have grown to respect. Many of us have grown up in an institution that openly lauds the hardnosed commander who is tough on his officers but benevolently takes care of his Marines. The two groups do not need to be exclusive. Motivation and a desire to serve, while simultaneously meeting the commander's expectations, are both more easily achieved when your Marines genuinely don't want to let you down. This emotion—the desire to not fail the boss—should be driven by a feeling of inclusiveness and not from fear of reprisal. There is not a single Marine officer who is not concerned about failure professionally and organizationally, thus intimidation is logically an adverse motivator. Conversely, an atmosphere where officers have "buy-in" and know they are supported by a

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commander who genuinely does not want to see them fail encourages positive results. Fundamentally, accessibility to the commander leads to inclusiveness and therefore motivates subordinates to move the organization to achieve a shared vision.

Do not misunderstand: This article is not making the case for lenient expectations, less demanding standards, or lowered performance. It is not advocating for a touchy-feely, Google-type management style that deposes the chain of command. It is not suggesting that a commander should act a part and stray from his inherent personality. This article *is*, however, making the case that a positive command climate, created by an individual who seeks inclusiveness and promotes accessibility, will better serve the unit in the short term and the organization in the long term. Fundamentally, it advances the simple premise that you capitalize on the potential of your officers by seeking their membership. There are far too many units that lose opportunity because of caustic command environments where the officer team feels uninvolved or unappreciated. It is a simple thing to do, but hard enough that most commanders miss the precious moment when it is given to them. And if done right, it is a leadership skill that can be modeled by junior officers when they are given their opportunity to command.

This is not about mentorship. "Mentor" has become a ubiquitous term that flows all too easily from those who feel the challenge of developing officers has been solved by forcing a mentor on a subordinate. Most would admit that a true mentor is not assigned, but is sought out by the junior. The mentor is specifically chosen in most cases because of his initiative to get involved at the personal level. Some may call this involved leadership. The concept I am proposing expands to a broader audience. Mentorships frequently are one-to-one relationships. A positive command climate encompasses the whole, and for my purposes, I have centered my thoughts on generating true cohesiveness from a command's officers through the climate created by the attitude from the top.

Commanders need to spend time discussing goals with their Marines. *(Photo by GySgt Matthew O. Holly.)*

There are many who would disagree with my assertions. There are many who see the current model as effective. I would ask how many have touted the "open door policy" and then actually expected junior officers to routinely seek access to them while they simply sat in their office and waited. The positive climate must be established! Many who espouse the open door policy place the watchkeeper executive officer outside, or employ a defense-in-depth array of "screeners" who prevent subordinates from bothering the boss with anything that may not warrant his attention. In fact, many subordinates hesitate to bring anything to their commanding officer because they have self-determined that they shouldn't disturb the old man with something that may be trivial. This is a lost opportunity to build inclusiveness, understand the potential of subordinates, or develop a broad view of opinions that enable informed decisions. Additionally, it is a lost opportunity to demonstrate to junior officers a constructive example on how a positive command climate benefits the organization. Many officers, especially junior officers, can spend an entire tour in a unit and only directly talk to their battalion or regimental commander once. This inaccessibility can be counterproductive, and for some, it is the beginning of their demise as a senior officer—a sense of entitlement and a loss of humility.

We have adopted and endorsed a monarchy or head-of-state model where the head accepts appointments to listen to subordinates, instead of a more productive methodology where the commander walks around the command, visits his staff, seeks to understand, and engages on wide and varying levels of topics. The head-of-state model serves as our only point of reference, and therefore is rarely departed from. For example, when I attended the Commanders Program Course prior to assuming command in 2009, there was no discussion on best methods for using your staff. For most, this was the first opportunity in their roles as commanding officers that they would have a traditional staff (S–1 (personnel) to S–6 (communications)) at their disposal. For some it was likely that they would logically operate in a manner in which they were most comfortable, seeking out and providing accessibility to those members of the staff they naturally gravitated to due to their own expertise (traditionally the S–3 (operations)) instead of building an opportunity to solve problems as a staff.

The remnants of the staff, all of whom possess the potential to provide valuable input, are then relegated to scheduling time to brief the boss on their specific issues. An opportunity to build a synergistic team is lost.

One technique for building a command climate that promotes inclusiveness could be referred to as "cross-disciplinary leadership." Traditionally officers will limit their contributions to their "lane." This is especially the case during the always-anticipated staff meeting where each "union" (communications, logistics, operations) briefs the commander on current and future endeavors. Pity the officer who vocalizes an "unstaffed" comment to the boss. The staff meeting is a perfect opportunity to generate open and potentially thought-provoking conversation on issues that confront the command. It is the commander's chance—a chance that occurs all too infrequently due to hectic schedules—to assemble his primary advisors and seek their opinions. The end result is a more informed decision instead of one formed on the feedback from only a select few. Cross-disciplinary leadership bridges the broad scope of staff disciplines and harnesses the potential of varied thought. As we grow in our careers, we broaden into MAGTF officers who understand the complexities of the whole organization. In this environment, one that seizes on cross-disciplinary leadership, it is entirely possible for the S–4 (logistics) to have an opinion on an operational matter that could lead the command in the best direction.

In closing, a few additional thoughts: Little things make a difference in a productive and positive command climate, such as answering your e-mail when it comes from a subordinate, even if it is a simple acknowledgment. Actively seek to understand the career aspirations of your junior officers, and then seek ways to encourage them, if they have the potential. For most, an entire career can pass with not a single commander spending a half hour discussing individual personal and professional goals. Officer calls are a lost art. In the past, the command's officers discussed professional topics, exchanging opinions in an open atmosphere before building camaraderie. It also offered the chance to see the boss in a social atmosphere where the barriers were removed.

Get out, go visit your officers, and seek their opinions. Inform your decisions. More and more we are beginning to understand that one or two people do not solve the most difficult problems—those problems are solved in openly collaborative efforts. This technique will not dissolve good order and discipline and will not weaken your image as a commander—it will have the opposite effect. If we get this right now, we are educating our next generation of battalion, regimental, and general officers on a productive method to make the most of the talents of Marine officers.

USMC

Crowdsourcing the Threat

Rethinking ECOA development

by Maj Ryan E. Christ

>Maj Christ is an intelligence officer. He has deployed in support of Operations Iraqi Freedom and Enduring Freedom with both 3d MAW and 2d Battalion, 1st Marines. Maj Christ is currently assigned to the Department of State as part of the Junior Officer Strategic Intelligence Program.

The phrase "creative synthesis supported by analysis" describes the art of conceptual planning in the Marine Corps Planning Process (MCPP), yet the collaborative synthesizing of staff ideas seen in course of action (COA) development does not exist in developing enemy COAs (ECOAs).[1] In practice, unfortunately, stovepiping of responsibilities typically leads to two unimaginative ECOAs solely from the mind of the intelligence officer (S–2).

This article calls for a radical change in how S–2s generate ECOAs. Studies in psychology and business management over the last few decades have identified several techniques—crowdsourcing being one—that could significantly improve forecasting the enemy's strategy in MCPP. This truly democratic method may at first seem out of place or impossible in a military organization; however, modern technology and psychology now make it easy to employ and difficult to ignore. Intelligence officers should adopt crowdsourcing and related planning tools for truly collaborative and creative ECOA development in order to provide the commanding officer (CO) with the best assessment of what the enemy will do next.

Who Knows the ECOA Better Than the S–2?

Who knows what the enemy will do in a specific situation better than the intelligence officer? The correct answer is, "the entire staff." No, not every staff officer individually, but collectively. Condorcet's jury theorem, a key idea supporting crowd wisdom, indicates that the more one combines educated or wise opinions, the more accurate the forecast or decision.[2] Two benefits to crowd wisdom work in conjunction with a surprising negative fact about "experts" to lead to this premise.

The divergent benefit to crowdsourcing the ECOA is analogous to buying raffle tickets. The more people you ask, the greater the chance you'll get the correct answer, and the less chance you'll be surprised. This is especially true when the adversary does something "they've never done before" (S–2s extrapolating) or does something that "no smart adversary commander would do" (combat arms officers mirror-imaging).

For the sake of time, it makes sense for the staff to plan against only one or two ECOAs, but in order to minimize

His input can be important. *(Photo from www.marines.mil.)*

surprise, the S–2 should always present the CO with as many feasible, acceptable, and distinguishable ECOAs as are generated by the staff and approved by the S–2. The number of ECOAs presented indicates the specificity of the intelligence and the S–2's confidence in his prediction of the enemy's future actions. Too often intelligence officers simply provide only what is traditionally required by the process—the most likely COA and the most dangerous COA—and not every option the CO need consider. Crowdsourcing the ECOAs assists and forces the S–2 to generate a more complete set of enemy actions for the command.

The second benefit to crowd wisdom is convergence brought about by the law of large numbers. This law is responsible for consolidating the mass of ECOAs into a manageable few. Statisticians and scientists know that the larger the number of trials or questionnaires, the more accurate the result. This is also the reason why "ask the audience" is historically so accurate on the popular game show, "Who Wants to Be a Millionaire."[3] Phone a friend and she might know. Ask a table of people, and the best answer or two will begin to surface. Poll the entire crowd, and you're going to start seeing consensus around the correct answer. Sure, it works when the answer is known, but what about predicting the unknown? It turns out that collecting and averaging individual forecasts works just as well.[4] Dozens of Fortune 500 companies, political forecasters, and even the U.S. intelligence community (IC) have successfully aggregated individual predictions for years.[5] These organizations support their group forecasts with the findings of dozens of psychological studies that show the superiority of averaging individual predictions over the individual predictions themselves.[6] These two phenomena alone provide the S–2 with a number of ECOAs he may never have considered, as well as some consensus as to which one(s) may be the most likely.

Why not just listen to the S–2, who arguably knows the most about the enemy? The problems with expert forecasts are that they're not as good as you'd expect and they don't always agree with each other. According to J. Scott Armstrong, who has studied forecasting for decades at the University of Pennsylvania's Wharton School, experts of all types are better at telling you about the past and the present situation than telling you about the future.[7] Most good intelligence officers are able to discuss the enemy's tables of organization and equipment, weapons and communications systems specifications, leadership biographies, doctrine, and previous operations and tactics with a high degree of certainty. With a collections plan and stable of assets, a good intelligence officer should be able to assess with moderate certainty the location of the enemy, certain weapons systems, obstacle belts, and logistical stores; where they are moving; and some idea of enemy morale and supply levels. When it comes to enemy intentions and COAs, however, unless the S–2 has reliable special intelligence, the intelligence officer is likely no better than any other staff officer or commander (*with similar situational awareness*) in forecasting the future.

. . . different intelligence officers could conceivably provide different ECOAs for the same situation.

Additionally, different intelligence officers could conceivably provide different ECOAs for the same situation. Which one do you choose? Crowd wisdom provides the answer. Like all staff officers, S–2s are biased by their past experiences, and not all intelligence officers are necessarily intelligent all the time. In short, S–2s can overlook things and make mistakes like everybody else. Placing the ECOA solely in their hands without some idea-sparking, specialized input from the staff is unnecessarily dangerous. Again, crowd wisdom provides the solution.

In COA development it is understood that combat arms officers do not have a monopoly on creative and effective solutions to a mission's objectives. All officers are expected to share their ideas based on their past experiences, professional military education, and military occupational specialty area of expertise. So why is this not the case with ECOA development? If framing the threat and current situation is the first and most important phase of MCPP, surely some input from the staff to improve the enemy's probable situational template and COAs is warranted.[8]

The job of the S–2 in the framing phase of MCPP should be to make the staff and commanders as smart on the enemy's past and present situation as possible, and then aggregate all staff ECOA graphics and narratives with his own to formulate several viable options. The idea is not necessarily to pick the best submission, but to look for areas and ideas of consensus and also compile the best parts of all the submissions (Delphi Method).[9] It is prudent to give extra weight to Marines in their areas of expertise, but they and the S–2 should comment on the viability of the other unique submissions. For example, the air defense control officer's enemy combat air patrol (CAP) areas should carry more weight than the communication officer's, but the air officer may also have identified some interesting ideas or locations regarding potential enemy CAPs. The S–2 must always have the last say on which ECOAs are viable and most likely, and which ones should be presented to the CO at least as possibilities, but the intelligence officer who thinks he can't learn about artillery or obstacle emplacement or a likely mechanized axis of advance from his fellow staff officers proceeds with unnecessary risk and overconfidence.

Crowdsourcing Outside the Staff

Crowdsourcing ECOAs should not only pull from the knowledge of the staff. Several agencies within the IC follow foreign leadership, militaries, terrorist groups, and rebel factions. Each of these organizations has at least one

analyst focused—sometimes for decades—on the region. By reaching out to these analysts, a proactive S–2 could poll and combine the ECOA opinions of several subject matter experts.[10] Most S–2s pride themselves on being voracious readers, but no amount of speed reading matches the experience that the IC analysts for country X collectively possess.

Polling of local nationals or host-nation and neighboring allies who may have decades of experience observing or combating the adversary force is a method most intelligence officers already employ when able. This article advocates aggregating as large a number as possible of their ideas on enemy actions. Aggregation mitigates outliers based on biases, false information, and lack of knowledge. Crowdsourcing foreign nationals and the IC provides strategic and local perspectives of the enemy, and both add information to and identify mirror-imaging in the staff ECOAs.

Counterarguments

Anything new and democratic is likely to draw fire from critics and defenders of the traditional way of determining the ECOAs, as they might claim this premise undermines the intelligence officer or is time consuming, unnecessary, or faulty.

It is true that poor individual inputs lead to equally poor group forecasts, and there is a danger of the entire staff mirror-imaging the enemy's actions. This is why it is so important to precede the "gathering of the ECOAs" with the S–2's intelligence preparation of the battlespace (IPB) brief. This article does not challenge the expertise of the S–2, just our extra special ability to predict the future and to know as much about each functional area as our fellow staff members. The intelligence officer can even offer his ECOAs as part of a normal IPB presentation, depending on how much influencing/anchoring the command wants the S–2 to have on the staff. The Marine Corps is not a democracy; however, MCPP is meant to be a collaborative process, mixing the ideas of military professionals with subject matter expertise. The S–2 is the action officer on the enemy, but it's the entire staff's job to provide the CO with the best collective estimates of the friendly *and* enemy COAs.

Skeptics might deride the sheer volume of opinions or the collection of the ideas of the most junior Marines, but some of our enemies are planning with the same operational knowledge as an Expeditionary Warfare School captain and the same tactical wisdom as a lance corporal. Of course this exercise will generate dozens more wrong answers than right ones, but it increases the chance of somebody saying, "The Japanese will defend inland and not the beaches," or, "The North will conduct a massive, multipronged attack on Tet." If you want a *better chance* of identifying the correct ECOA, ask more staff officers to draw an ECOA graphic than just the S–2. If you want the *best chance* of finding the true ECOA, ask as many Marines as possible. For the sake of time and simplicity, keeping the submissions to the staff, special staff, and commanders should produce an adequate improvement over simply asking the S–2 alone.

Some critics might suggest this process will take too much time, but this is not necessarily the case. Several computer-aided techniques allow a group of individuals to quickly overcome the social and cognitive pitfalls of group decisionmaking by aggregating individual graphics and forecasts.[11] Computer programs rapidly record, share, and coalesce responses. ECOAs can be drawn as shape files or on acetate overlays and then overlaid on one another quickly and easily. Intelink Central has a survey function on the classified networks, and the Delphi Method can be done via e-mail. Finally, staff officers have assistants and chiefs ready for delegation, and most planning schedules are not so tight as to hinge on the minimal time these techniques might add.

Staffs have always collaborated in MCPP, perhaps less so in determining ECOAs, but the level of sharing was more personality dependent than facilitated by any tools or techniques. It is time to combine normative decisionmaking techniques and crowd wisdom with the ubiquitous computer and brain power available to a MAGTF to provide the very best ECOAs to the commander.

Notes

1. Headquarters Marine Corps, *Marine Corps Warfighting Publication 5–1, The Marine Corps Planning Process*, Washington, DC, 24 August 2010, p. 1–2.

2. Marquis de Condorcet, "Essay on the Application of Mathematics to the Theory of Decision-Making," in *Condorcet, Selected Writings*, edited by Keith Michael Baker, Bobbs-Merrill, Indianapolis, IN, 1976. Note that instead of saying "educated or wise," the proof actually says, "individuals with greater than a 50% chance of making the correct forecast or decision."

3. Surowiecki, James, *The Wisdom of the Crowds*, Anchor Books, New York, 2005, pp. 3–5.

4. Silver, Nate, *The Signal and the Noise: Why so Many Predictions Fail—But Some Don't*, The Penguin Press, New York, 2012, pp. 335–37.

5. Arrow, Kenneth J., et al., "The Promise of Prediction Markets," *Science 320*, 16 May 2008, p. 877.

6. Sunstein, Cass R., *Infotopia: How Many Minds Produce Knowledge*, Oxford University Press, New York, 2006, pp. 23–25.

7. Armstrong, J. Scott, "The Seer-Sucker Theory: The Value of Experts in Forecasting," *Technology Review*, Cambridge, MA, June/July 1980, pp. 16–24.

8. *Marine Corps Warfighting Publication 5–1*, p. 1–5.

9. Heuer, Richards J., and Randolph H. Pherson, *Structured Analytic Techniques: For Intelligence Analysis*, CQ Press, Washington, DC, 2011, pp. 245–50.

10. Armstrong's recommendation: The best way to make use of expert forecasts is to combine as large a number as possible to reduce random error (outliers). This practice is employed from Olympic judges to Angie's List to stock market indicators. See the final page of the "Seer-Sucker" paper, available at cogprints.org/5200.

11. The referenced material written by Surowiecki, Silver, Sunstein, and Heuer provide additional normative decisionmaking techniques to the ones explained here.

More Than Just Biometrics

Why Marine Corps identity operations are critical to MAGTF mission success

by Maj Mark Schaefer & Maj Anthony Smith, USMC(Ret)

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As America's expeditionary force-in-readiness, the future Marine Corps will accomplish assigned missions in complex, dynamic, and unpredictable operating environments. These environments contain anonymous individuals capable of posing tactical, operational, or even strategic threats.[1] Marine Corps identity operations (IdOps)—properly institutionalized at the Service level and effectively integrated into tactical operations—are a critical mission enabler for the MAGTF.[2] IdOps goes well beyond biometrics by mitigating threats to the MAGTF posed by adversarial anonymity.

In Iraq and Afghanistan, adversaries avoided MAGTF fires and maneuver by blending into the populace. They recognized and then exploited the U.S. military's inability to comprehend the complex human terrain. Adversaries hidden within diverse populations are able to set conditions and disrupt MAGTF operations throughout the battlespace. Therefore, Marine Corps ground units, with their proximity to the population, will play a critical role in identifying the unseen enemy and their influence on the battlespace.

Future Operating Environments: Removing Anonymity

Joint Operational Access Concept 2012 highlights the growing challenges of projecting U.S. military force into future operating environments in the face of armed opposition.[3] While not all U.S. adversaries have the capability to employ a defense in depth to challenge U.S. access, the past decade of U.S. warfare provided adversaries a roadmap for denying U.S. military freedom of action on the ground. Adversaries will adopt an area denial strategy and deliberately shift to hybrid or irregular warfare as their most favorable course of action.[4] The enemy's strategy will include the use of anonymity in the operational environment. To succeed in this environment, the MAGTF must understand and operate within the human terrain to deny adversarial anonymity—or risk being out-maneuvered.

Removing adversarial anonimity. *(Photo by authors.)*

The MAGTF must collect, exploit, and analyze the human terrain well in advance of operations in order to reduce threat anonymity. Deployed Marine forces must understand this environment and the threats posed by anonymous adversaries. Identifying individuals and networks (e.g., criminal networks and insider threats) that seek to disrupt MAGTF missions—theater security cooperation, humanitarian assistance/disaster recovery, and crisis response—is essential to operational success.[5] Across the phases and range of military operations (ROMO), removing anonymity will be an essential component of mission success.

In January 2012, Department of Defense (DoD) policy established biometrics as a core function and directed combatant commands to integrate biometrics into mission planning. Accordingly, combatant commanders, the military Services, and combat support agencies (e.g., Defense Intelligence Agency) have the authority to collect, store, and share biometric information from non-U.S. persons across the full ROMO, unless

prohibited by applicable law or agreement.[6]

The MAGTF IdOps Framework

USMC IdOps Strategy 2020 provides the Marine Corps' holistic vision and approach for the development of IdOps. Given this strategic context, the operational success of a future IdOps capability depends greatly on HQMC, Marine Corps Combat Development Command, and Marine Corps System Command's current efforts to develop, synchronize, and sustain three interdependent enabling pillars (see Figure 1):

- Collection.
- Technical and forensic exploitation.
- Intelligence analysis.

Collection takes many forms, from focused biometric collections to site exploitation. The resultant biometric signatures and captured material enable IdOps. Technical and forensic exploitation extracts valuable information in order to validate linkages between people, locations, and events. The intelligence analysis pillar takes the form of identity intelligence—the "so what" behind the collection and exploitation. Once fully implemented and appropriately balanced across joint capability areas, IdOps offer the MAGTF the ability to determine identities in operating environments across the ROMO.

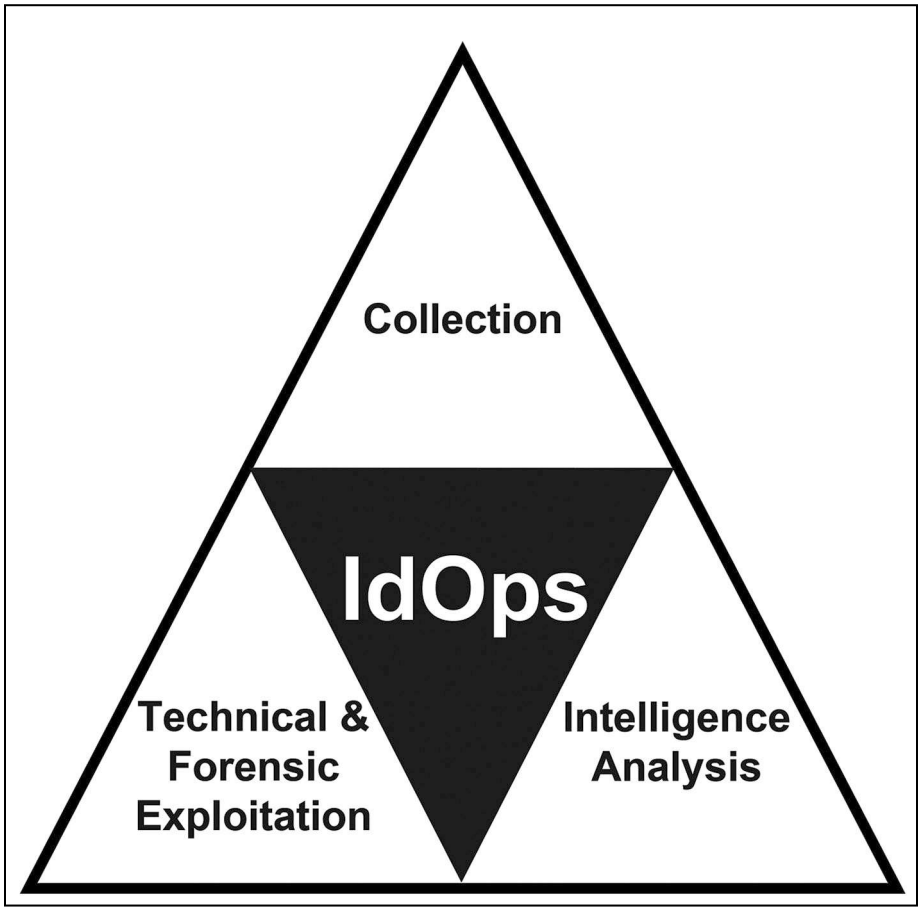

Figure 1. Identity operations enabling pillars. *(Figure provided by authors.)*

The New Order of Battle: Identity Intelligence Preparation of the Battlespace

Irregular conflicts in Iraq and Afghanistan presented complex challenges to the pre–11 September 2001 Marine Corps intelligence community. Intelligence training focused almost exclusively on the threat characteristics of a conventional foe fighting as organized units and formations. Conversely, the past decade of conflict took the form of irregular warfare where the adversary was loosely organized or simply an association of individuals or groups. Individuals performed a variety of functions within these threat networks, from leaders to facilitators and fighters.

Adaptive adversaries forced Marines to quickly understand and adjust tactics, techniques, and procedures. Intelligence, surveillance, and reconnaissance (ISR) sensors, optimized for collection against a conventional force, reoriented against an adversary who maintained tactical and operational effectiveness by seeking anonymity among the population. Commanders demanded precise information, not just general locations of enemy activity or an organizational chart depicting the adversary, as they needed specific, in-depth knowledge of individuals and networks. This level of precision required a full-spectrum intelligence effort to reveal the threat.

Counterinsurgency operations in Iraq and Afghanistan necessitated extensive use of biometric and forensic collection. Biometric and forensic information, combined with existing ISR sensors, provided a critical data source for Marines to understand the environment and remove adversary anonymity. Intelligence analysts were in essence performing a function that would later be defined as identity intelligence, which is:

> The collection, analysis, protection, exploitation and management of identity attributes and associated technologies and processes in order to locate, track, and maintain continuity on identities across multiple or disparate instances/incidents, or across space and time.[7]

Synchronized with collection and exploitation activities, the MAGTF was already conducting IdOps.

Intelligence Marines conducted identity intelligence as a critical component of all-source analysis. New to terms like "biometric-enabled intelligence" and "forensic-enabled intelligence," intelligence Marines leveraged the National Ground Intelligence Center (NGIC) for identity intelligence resources. NGIC augmented deployed units with analysts trained to fuse identity attributes and intelligence reporting at the tactical level. Identity intelligence training was available for units but not standardized or funded within the Marine Corps predeployment training program, lead-

ing to inconsistent identity intelligence capabilities among intelligence Marines and units.

Efforts to institutionalize identity intelligence within the Marine Corps are underway and call for an approach grounded in training. Contained within all-source intelligence analysis, identity intelligence tradecraft will influence kinetic and nonkinetic targeting, collections, and planning. Intelligence Marines must integrate identity intelligence into all-source analysis to support the Marine Corps Planning Process. All intelligence Marines will understand how identity intelligence influences their specific discipline. Complementary to a MAGTF intelligence analyst trained in identity intelligence tradecraft is a reachback function resident within the Marine Corps ISR enterprise at the Marine Corps Intelligence Activity (MCIA). The intelligence community (IC) plays an integral role in IdOps by storing critical data to produce identity intelligence analysis.[8] MCIA's unique placement within the IC allows analysts to expose, analyze, and fuse IdOps collection with biometric, forensic, and other databases. Without MCIA supporting IdOps, austere operating environments combined with resource availability (e.g., bandwidth and database access) will limit the MAGTF's ability to fully leverage the IC and its links with other identity intelligence–supporting agencies.

"Modern threats challenge us to think carefully about our future missions. Complex operating areas, especially in the urban littorals, demand the ability to understand the human terrain. Increasingly, our enemies will use anonymity as cover; while widespread coverage of military operations will demand minimization of collateral effects from our operations. Both of these can limit MAGTF freedom of action. While identity operations will never remove the fog of war entirely, they give the Marine Corps the tools necessary to operate with greater precision . . . in engagement, maneuver, and fires."

—BGen(sel) Michael S. Groen, Director of Intelligence, HQMC

Strategic Planning to Tactical IdOps Employment

Marine Corps Order 5530.17, Marine Corps Identity Operations (Headquarters Marine Corps, Washington, DC, 2012), codifies the need to establish a robust and versatile Service-level IdOps capability. The interdependency of the enabling pillars (collection, technical and forensic exploitation, and intelligence analysis) requires deliberate implementation. Planning efforts should seek to assign proportional IdOps responsibilities to appropriate functional stakeholders. In turn, stakeholders must possess core competencies to accomplish tasks required of each IdOps enabling pillar. In addition to executing the IdOps strategy and subsequent Marine Corps implementation order, IdOps must align with appropriate Service-level documents to reinforce Marine Corps doctrine, philosophies, and principles.

Operationally, the Marine Corps should continue to prioritize and support IdOps by sustaining existing programs (e.g., biometric collection equipment, site exploitation training, and Combat Hunter).[9] Transitioning current IdOps capabilities (such as the Expeditionary Analysis Center-Lite, which provides the MAGTF with organic technical and forensic exploitation capability) from overseas contingency operations fund-

"During my tenure focused on this threat [IEDs], commanders in the field have acknowledged two tactical 'game changers': constant surveillance from advances in manned and unmanned aircraft, and the application of law-enforcement forensic and biometric techniques on the battlefield. These capabilities remove violent extremists' greatest defense—anonymity—and make them vulnerable to attribution and enable action."

—LtGen Michael D. Barbero, "The unending war against IEDs," The Washington Post, 19 May 2013

ing to a sustained program is required. Developing and sustaining the proposed identity intelligence concept, focused on training and reachback capability, is essential to collection and exploitation activities.

Tactically, IdOps collection capabilities should be part of ground unit tables of equipment post–Operation Enduring Freedom and is a shared responsibility primarily between operations and intelligence. The infantry played a significant role in collections over the past decade. From countless biometric enrollments to site exploitation, the infantry was a primary collector to support IdOps.[10] Current infantry plans do not include biometric collection as a core task, nor are there plans for biometric equipment on future infantry unit tables of equipment. Instead law enforcement battalions will maintain the majority of biometric equipment, employ biometrics, and train the MAGTF only when required for specific missions. This disproportional assignment of collection equipment and tasks poses a significant challenge to the MAGTF's ability to conduct effective IdOps.

Successful IdOps require biometric enrollments. A lack of biometric equipment within the infantry battalion risks IdOps capability as a whole. Opportunities to collect biometric signatures crucial to identity intelligence analysis will go unmet. Also at risk is the loss of hard-won biometric tactics, techniques, and procedures from Iraq and Afghanistan. The infantry will likely have the greatest access and interaction with a population, placing them in the best position to collect biometrics at every given opportunity.

Law enforcement battalions will remain primacy for technical and forensic exploitation for IdOps. Aside from biometric collection equipment, law enforcement battalions bring significant capability to the MAGTF through the Expeditionary Analysis Center-Lite. This equipment set and associated personnel provide a responsive capability to support the IdOps-enabling pillar of technical and forensic exploitation.

". . . the past decade of U.S. warfare provided adversaries a roadmap for denying U.S. military freedom of action once ashore."

Completing the IdOps capability are intelligence Marines who provide the all-source picture necessary to remove adversary anonymity. Identity intelligence tradecraft combined with leveraging MCIA reachback for access to the IC is a force multiplier for IdOps, positioning the MAGTF commander to identify threats to operations in a timely manner. Executed in combination with persistent ISR, IdOps provides the MAGTF commander the precise information needed to conduct effective MAGTF fires and maneuver.[11]

Tactically, IdOps collection capabilities should be part of ground unit tables of equipment. . . .

Integration to Achieve Required Precision: "Train as you Fight"

Proficiency in training today yields capability in future operating environments. Uncertain and complex operating environments of the future necessitate persistent ISR operations to understand the battlespace. Like all capabilities, the MAGTF must train to integrate the enabling IdOps pillars. Successful integration builds confidence in the application of IdOps in a variety of missions. Activities associated with IdOps must become second nature to Marines. Training offers a prime environment to exercise proficiency of individuals and units. Furthermore, evaluating IdOps in a training environment should permeate unit predeployment training programs, particularly the MEU.

IdOps offers a relevant and appropriate capability that both operations and intelligence must exercise to attain the requisite precision necessary for future mission success. Precision operations require not only a detailed understanding of the complex human environment, but also close synchronization of operations and intelligence. Operational success depends greatly on the volume and veracity of the information that is collected—collection operations are a vital means of gathering the data necessary to gain understanding of the operating environment.[12] The G/S–2 (intelligence) and G/S–3 (operations) must closely work together to perform collections at every opportunity to satisfy the commander's critical information requirements. Furthermore, the synergy between operations and intelligence cannot be attained in an ad hoc manner; consistent rehearsal and exercise enables operational efficiency and effectiveness. Initiatives like the company-level intelligence cell and company-level operations cell have reinforced the symbiotic relationship between operations and intelligence. Successful IdOps activities provide the requisite knowledge to enable precision operations within a commander's assigned battlespace.

"Marine Corps ground units, with their proximity to the population, will play a critical role in identifying the unseen enemy and their influence on the battlespace."

Understanding the Global Operating Environment

Today IdOps capabilities within the

Marine Corps and the DoD at large are developing to support the operating environments of tomorrow. Outside of Central Command, other combatant commanders recognize the growing importance of IdOps capabilities. Worldwide, an average of 7,000 biometric profiles are collected daily and submitted to the authoritative DoD biometric database.[13] That biometric collection is critical for effective DoD and U.S. Government IdOps, which includes supporting the IC. This collection allows intelligence analysts to submit a daily average of 63 known personalities associated with derogatory reporting or activity to the DoD Biometrically Enabled Watchlist, effectively stripping their anonymity, as future biometric encounters will reveal their true identities.[14] Due to its proven effectiveness, combatant commanders continue to request IdOps capabilities from the Services. Additionally, while sensitive to the political environment and host-nation agreements, combatant commanders have initiated partnerships and leveraged relationships with partnered nations to support IdOps. U.S.-provided training, equipment, and support allows similar IdOps capabilities for host nations to identify threat individuals and networks while promoting mutual interests.

Conclusion

Marine Corps Vision and Strategy 2025 identifies challenges anticipated in future operating environments. Capabilities must be developed that provide persistent ISR over an extended but complex operating environment. Collectively the three enabling pillars of IdOps facilitate persistent ISR of the operating environment through collection, exploitation, and analysis activities. Information derived from IdOps collection and subsequent exploitation enables Marine intelligence to provide the necessary understanding to facilitate MAGTF commander decisionmaking. Finally, MAGTF IdOps have operational and strategic implications. Collected, exploited, and analyzed information will populate national counterterrorism databases for use in a layered defense of the U.S. homeland and allies. Without this critical data, adversaries will retain the anonymity they seek—both on distant battlefields abroad and within U.S. borders.

Notes

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3. Joint Staff, *Joint Operational Access Concept Version 1.0*, Washington, DC, 17 January 2012. This concept states:

> The essential problem for future joint forces is to be able to project military force into an operational area and sustain it in the face of armed opposition when three trends apply: (1) Antiaccess and area-denial weapons and technologies are dramatically improving and proliferating; (2) U.S. overseas defense posture is changing; (3) Space and cyberspace are becoming increasingly important and contested domains. Meeting that challenge increasingly will require defeating integrated antiaccess/area-denial systems of growing lethality and sophistication.

4. Ibid. *Joint Operational Access Concept Version 1.0* defines area denial as "those capabilities, usually of shorter range, designed not to keep the enemy out but to limit his freedom of action within the operational area."

5. Department of the Army, *Capstone Concept of Operation for DoD Biometrics in Support of Identity Superiority*, Washington, DC, November 2006.

6. Deputy Secretary of Defense, *Authority to Collect, Store, and Share Biometric Information of Non-U.S. Persons with U.S. Government (USG) Entities and Partner Nations*, memorandum, Washington, DC, 13 January 2012.

7. Office of the Director of National Intelligence, *Identity Intelligence Concept of Operations*, Washington, DC, 23 December 2009.

8. As defined by the Office of the Director of National Intelligence (available at www.intelligence.gov), "the U.S. Intelligence Community is a coalition of 17 agencies and organizations within the executive branch that work both independently and collaboratively to gather the intelligence necessary to conduct foreign relations and national security activities."

9. Headquarters Marine Corps, *Marine Corps Interim Publication 3–11.01*, *Combat Hunter*, Washington, DC, 4 February 2011. This publication defines Combat Hunter as:

> The creation of a mindset through the integration of enhanced observation, combat profiling, and combat tracking. This integration will produce a more tactically-cunning and lethal Marine, who is better prepared to succeed across the range of military operations.

10. *USMC Identity Operations Strategy 2020 Implementation Plan* defines an enrollment as:

> The process of collecting a biometric sample from a biometric subject, converting it into a biometric reference, and storing it in a biometric system's database for later comparison.

11. Combat Development and Integration, *Information Systems Initial Capabilities Document for Persistent Intelligence Surveillance & Reconnaissance*, Marine Corps Base Quantico, 29 March 2013. This document defines persistent ISR as:

> The strategy that synchronizes organic MAGTF ISR collection assets, with support from joint resources and combat support agencies as necessary, to provide the supported commander with relevant and continuous battlespace awareness over specified named areas of interest for required periods of time.

12. CNA Analysis & Solutions, *The United States Marine Corps and Irregular Warfare After Afghanistan*, Alexandria, VA, 13 February 2013.

13. E-mail correspondence between authors and Marine Corps Liaison to Defense Forensics and Biometrics Agency dated 16 April 2013.

14. E-mail correspondence between authors, NGIC, and Marine Corps Liaison to Defense Forensics and Biometrics Agency dated 12 April 2013.

The Falklands War

A model for the use of merchant vessels to augment sealift capability

by Capt Josef Wiese

>Capt Wiese is an infantry officer who previously served as an instructor at The Basic School and deployed twice to Iraq with 1st Light Armored Reconnaissance Battalion. He wrote this article when he was a student at Expeditionary Warfare School, academic year 2012–13. Capt Wiese is currently assigned as a company commander with 1st Battalion, 2d Marines.

In a 2012 report to Congress, Gen James F. Amos, Commandant of the Marine Corps, outlined a requirement for two simultaneously employed MEB-sized units as the assault force for a forcible entry mission from a seabase. The Commandant went on to state that each MEB required a minimum of 17 amphibious ships to achieve this core capability.[1] The Navy's amphibious fleet currently has only 30 ships capable of meeting this requirement.[2] The Marine Corps continues to lobby Congress and the Navy to address this gap, but a solution must be found in the interim. In 1982 Great Britain faced a similar shortfall in amphibious shipping when it mounted an expedition to restore control of the Falkland Islands.

In order to move 8,000 miles over the sea with the combat power necessary to reclaim these islands, the British levied the bulk of their naval power and called upon merchant vessels to augment shortages of troop transports and supply ships. They were able to quickly requisition the necessary transports and adapt them for military service, allowing them to marshal a sizable landing force and reclaim the Falkland Islands. The use of merchant vessels allowed them to overcome shortfalls similar to those facing the United States today, and demonstrated a flexibility to meet operational requirements in an environment of constrained resources. The U.S. Navy and Marine Corps can embrace this same creativity by following the example of Great Britain and expanding the use of merchant vessels for amphibious operations. Resources should be dedicated toward the development of techniques and methods to enable these merchant platforms to mimic the capabilities lost by a shrinking amphibious fleet. This expansion is a proven means to augment amphibious capability and can be quickly implemented for service in times of national emergency.

The Navy currently relies upon an active amphibious fleet in addition to the Military Sealift Command (MSC) to deploy, employ, sustain, and redeploy U.S. forces on a global basis.[3] The merchant vessels of the MSC fleet are operated by civilian, contracted crews and have become integral to maintaining force readiness across the globe. MSC also contracts the maritime prepositioning force ships that support rapid buildup of combat power once a presence is established ashore. These existing capabilities are augmented by a ready reserve force of ships that can be activated in anywhere from 4 to 20 days and provide additional sealift for war materiels and supplies.[4] A forcible entry scenario already calls for the use of these assets to support the buildup and expansion of a seabase for subsequent amphibious operations. Requisitioning ships outside of the MSC and maritime prepositioning force is required to expand the Navy and Marine Corps' capability to overcome anticipated shortfalls.

To meet the shipping requirements during the Falklands War, the British utilized a program known as "STUFT," which stood for "ships taken up from trade":

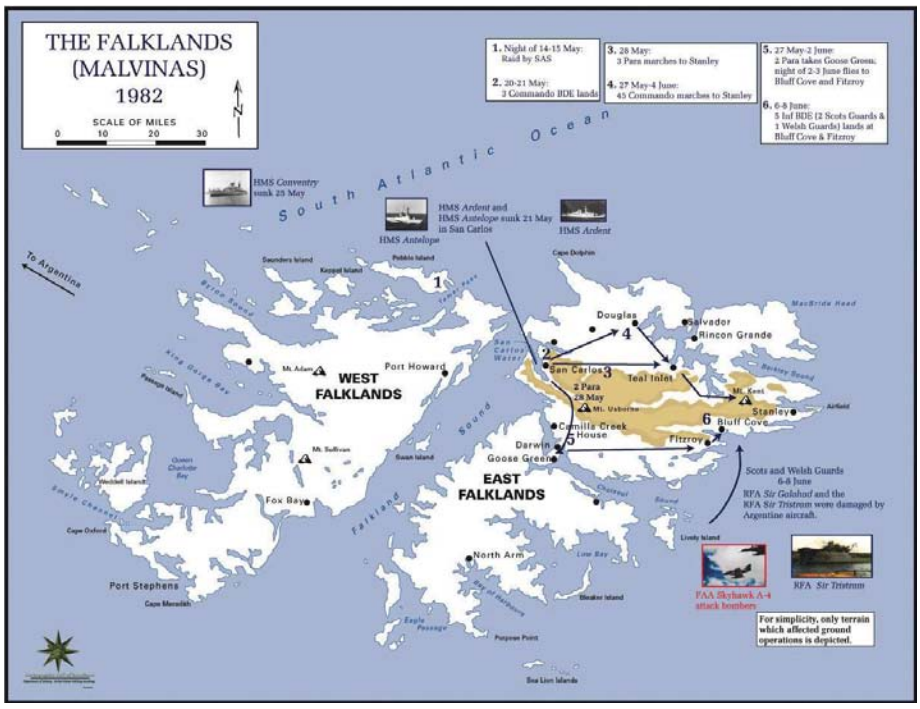
> These ships . . . were refitted for a variety of uses in miraculously quick time. *Canberra*, for instance, had just returned from a 96-day world cruise. Within sixty hours after fare-paying passengers disembarked, workers had completed substantial modifications to suit military needs so that *Canberra* could sail with 2,000 members of 3 Commando Brigade. The requisition conversion time of STUFT became one of the most impressive achievements of the war, the average time to convert merchants being 72 hours for 95% of the work required.[5]

To transport troops the long distances between a likely remote and austere seabase, the United States could requisition cruise liners much the way the SS *Canberra* was utilized by the British. A principle problem with this model is that there is currently only one U.S.-flagged cruise ship.[6] This does not represent a significant operational capability, but the United States also maintains effective control over the merchant ships operating under Liberian, Panamanian, Honduran, Bahamanian, and Marshall Islands registries, where U.S. citizens and corporations maintain majority ownership.[7] This significantly expands the potential operational capability. Ships leased from these registries represent a compulsory option when allied nations' amphibious shipping is unavailable for lease or cannot be procurred in a timely manner. Once requisitioned into service, ships can be quickly refitted with helicopter pads, military communications equipment, and defensive weapons. Each ves-

sel would require temporary leasing and appropriate compensation for their wear and tear while in service, but this represents a minimal expenditure relative to building and maintaining a larger fleet of amphibious ships.

The next hurdle is where to find crews for these ships. The British successfully crewed their STUFT by activating their naval reserve and stripping personnel from the active fleet, as well as accepting voluntary service from some merchant crews.[8] A U.S. model can be equally implemented with the help of the Merchant Marine Act of 1936 that created provisions for U.S.-flagged merchant vessels and merchant marine crews to act as another uniformed Service during times of national emergency.[9] This would settle the issue of finding crews, as military necessity would allow for the designation of military status to existing crews. If such crews were foreign or unable to meet requirements, the Navy could activate Reserve personnel or source crews from the active force to replace or partner where necessary. This places strain on an unprepared manpower system unless proactive measures are taken before a national emergency requires implementation. Plans can be drafted and crews can be identified in advance with liasons established at respective vessels to ensure appropriate readiness levels for swift execution.

The British STUFT represented a flexible and creative response to shipping shortfalls, but they were also vulnerable. The British lost several ships during their campaign, leaving a lasting perception that merchant ships were not suited for a military role against modern threats. Antiaccess/area denial (A2/AD) capablities, such as mines, fast attack boats, and long-range precision munitions, have only proliferated and become more advanced since 1982.[10] Firefighting capability for damage control, inexperienced composite crews, and lack of prior planning in embarkation all contributed to British loses. This has led to development of amphibious doctrine that calls for over-the-horizon capabilities. Merchant vessels transporting personnel and equipment would remain outside the bubble of enemy A2/AD threats within a seabase and conduct at-sea movement to assault ships or other modular configured merchant vessels that enable assault support aircraft.



The Falklands. *(Photo courtesy of mappery.com.)*

Any merchant vessels would have to oververcome a shortfall in connectors in order to move men and materiel from ship to objective or between ships within a seabase. Merchant vessels currently lack the unique capability that the amphibious fleet brings to bare, notably aviation platforms and well decks. British STUFT ships were required to travel in proximity of the landing beaches and were poorly configured to allow for swift offload. Adding a well deck to merchant ships is not possible, but modifying them for roll-on and roll-off operations at sea can be. The U.S. Navy is presently building a mobile landing platform ship, with two additional mobile landing platforms planned. These ships will act as a pier at sea and enable roll-on and roll-off ships to offload onto the platform where landing craft can then transport the materiel ashore from over the horizon.[11]

Aviation is another means to connect cargo within the seabase and project it ashore. To bring this capacity to merchant vessels, modular landing and carrier deck platforms could be fabricated and prestaged at ship yards to accomodate a swift conversion of a requisitioned vessel. The Marine Corps already maintains a capability to build hasty airfields, so why not a system to convert a basic cargo container ship into a provisional helicopter assault platform? In 1982 Naval Air Systems Command developed such a system for the Army that could be fitted to a standard container ship within 24 hours for a cost of $20 million a kit. This program, known as the Army Pre-positioned Sustainment Maintenance Facility program (referred to as "ARAPAHO"), enabled conversion for use with helicopters or vertical short takeoff and landing aircraft, complete with a flight deck, crew quarters, hangar, and fuel storage.[12] The British utilized a similar system during the Falklands War with the conversion of several vessels such as the *Atlantic Conveyor,* to aircraft ferries.[13]

Innovations like vessel conversion could be developed, staged, and trained with to enable merchant vessels to mimic the lost capabilities from reduced amphibious ships. Four of these kits could be built and maintained at a fraction of the cost of the new *San Antonio*–class LPD (which has an average cost of $1.6 billion).[14] Issues witnessed and experienced in initial tests and during

the British Falklands campaign do not mean that such a project is unfeasible. Applying the brain trust of the Marine Corps to these issues now will facilitate implementation and mitigate any shortcomings that are identified. Platforms like these will overcome the issue of connectors for ship-to-shore movement and enable merchant ships to operate outside of the enemy threat range.

Amphibious operations and forward presence are hallmarks of the Marine Corps. Marines need to maintain the doctrine and proficiency in these trades to continue to be relevant. The current argument for amphibious shipping needs to continue, but, in light of real shortfalls and an inability to meet these requests, the Marine Corps must act to fill this gap. Creative solutions and increased partnership with the merchant fleet is the solution that allows the Marine Corps and Navy to maintain this capability. With proper funding these programs and initiatives can be expanded and the Marine Corps will be able to demonstrate the flexibility displayed by the British in the Falkands War.

Use of civilian shipping is not a new concept, and it remains a strategic capability that can be called upon in times of national crisis to enhance functionality and cover shortfalls. In order to keep forcible entry from the sea as a strategic option, the United States must continue to maintain provisions that will allow for a swift expansion of the amphibious fleet when necessary. The relevance of the amphibious assault as a technique is at stake. Focus for the future should be on working with the preexisting platforms provided by merchant vessels. Such frugality and innovation is a trademark of Marine Corps operations.

Notes

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Leading Reserve Marines

A dichotomy of liabilities

by Maj Chuck Larson, USMCR

Two hundred and thirty Reserve and active duty Marines and sailors from 35 different home training centers (HTCs) and active duty commands assembled at Camp Pendleton on 12 October 2011 to create from scratch General Support Motor Transport Company (GSMT Co.), 1st Maintenance Battalion(Minus)(Reinforced) (1st Maint. Bn.(-)(Rein)), 1st Marine Logistics Group(Forward) (1st MLG(Fwd)), for deployment in support of Operation ENDURING FREEDOM (OEF) 12.1. This group of Reserve Marines constituted approximately 20 percent of all Marine Forces Reserve (MarForRes) personnel deployed to Afghanistan at that time.[1]

Somehow, as a Reserve artillery officer but civilian attorney affiliated with Marine Wing Support Squadron 471 (MWSS 471), I stumbled into command of this collective beast and lumbered headfirst into our predeployment training plan (PTP). Thirteen months later, GSMT Co. completed its mission and returned home. Here are lessons learned from the most challenging assignment of my career: leading Reserve Marines.[2]

>Maj Larson is an artillery officer with deployments in support of Operation IRAQI FREEDOM 2 and 5 and Operation ENDURING FREEDOM 12. After ending active service in 2007, he became an employment law attorney practicing in Des Moines, IA, but remained affiliated in the SMCR with 2d Battalion, 24th Marines, and MWSS 471. After mobilizing in 2012, then-Capt Larson left his law practice to affiliate with the Active Reserve Program and is currently the Executive Officer, Headquarters and Support Battalion, School of Infantry (West).

A Dichotomy of Liabilities

Deserving or not, there is a stigma associated with MarForRes that likely originated from the "weekend warrior" mindset of the 1980s. Higher headquarters (HHq) and adjacent units will view Reserve Marines as a liability, applying different standards, maintaining different expectations, enforcing different regulations, and reigning in independent command and control under the guise of supervision. At mobilization, this was my immediate concern and became my most frustrating after-action. Some will deny this stigma, but I harbored these same reservations while watching Reservists train at Las Pulgas in 2005 and while serving alongside Reservists in Regimental Combat Team 5 (RCT–5) in 2006. This stigma is also well known within many MarForRes units, at least at the company level, and, as a staff, GSMT Co. embraced this stigma and used it as a continuous motivational tool throughout our PTP and deployment.

Our HHq, 1st Maint. Bn.(-)(Rein), was task-organized for deployment with 5 companies comprised from within the battalion or from adjacent battalions in 1st MLG. Surgical, supply, maintenance, and headquarters and service companies were mainly comprised of active duty Marines, while GSMT Co. was mainly comprised of Reserve Marines.[3] Comparing these companies throughout the PTP and the deployment, certain liabilities were validated while others were not.

There should be no stigma attached to MarForRes. *(Photo by author.)*

They had a reason to celebrate. *(Photo by author.)*

This article compares and contrasts the real liabilities associated with MarForRes, specifically administrative and training liabilities, with the artificial liabilities associated with MarForRes, namely leadership and operational liabilities. The real liabilities are inherent to the structure of MarForRes while the artificial liabilities are in fact artificial because of the men and women who comprise MarForRes. Much has changed during the past decade of mobilizing and deploying Reserve Marines. Reserve Marines definitely spend less cumulative days in uniform, in training, or operating in a field environment, have significantly less experience with theater-specific equipment and procedures, and are generally unfamiliar with the policies and battle rhythm of their assigned active duty HHq.[4] But, in comparison, Reserve Marines are arguably more well-rounded, contain a wealth of outside education and life experiences, and are generally more excited for the opportunity to volunteer in support of contingency operations.[5]

MarForRes is an administrative liability. The most real liability is administrative. It was extremely difficult to navigate the administrative requirements associated with mobilizing and deploying a MarForRes unit, especially at the company level. Administration encompassed a majority of our efforts during the PTP and lasted well beyond our redeployment. These challenges spanned from accurate orders to pay, and from travel claims to premobilization and postmobilization benefits, and were rooted in the massive process of actually mobilizing a Reserve Marine, detaching that Marine from his Reserve unit, attaching that Marine to an active unit, and sending that Marine forward. Of the 211 Reserve Marines and sailors assigned to GSMT Co., not one escaped mobilization unscathed by the administrative process.

The litany of MarForRes subordinate commands and individual HTCs that fielded Marines for our specific mobilization exacerbated this liability.

The litany of MarForRes subordinate commands and individual HTCs that fielded Marines for our specific mobilization exacerbated this liability.[6] From the receiving end, it appeared as if each HTC—even HTCs from within a single subordinate command—managed administration differently. For instance, GSMT Co. experienced significant problems related to the initial mobilization orders. Differences ranged from accounting codes to receipt dates and locations to lodging, meals, and rental funding. These issues were then compounded when Reserve Marines attempted to submit and resubmit travel claims for each 30-day period. Because the HTCs spanned the continental United States, GSMT Co. and our battalion individually contacted numerous HTCs to correct problems for individual Marines. Early into our mobilization, our company clerk and first sergeant tracked more than 90 individual discrepancies, and, in total, GSMT Co. corrected initial orders and claims for at least the first 3 months of mobilization.

While not as significant, but certainly as time consuming, GSMT Co. continuously rectified minor administrative tasks such as outstanding awards, missing records and training scores, and fitness report date gaps that should have been identified and solved prior to mobilization. GSMT Co. confronted these issues during the PTP because Reserve Marines simply had more time to identify and correct administrative errors when mobilized vice during drill weekend. Moreover, several Reserve Marines had very significant administrative issues pertaining to erroneous or delayed promotions and previous mobilizations but were nevertheless mobilized along with their issues.

Many of the administrative issues inherent to mobilization stemmed from Reserve Marines operating within an active duty HHq that was unfamiliar with MarForRes administration. It was a learning process with a steep bell curve. One major method 1st Maintenance. Bn.(-)(Rein) used to mitigate this administrative liability was to send its adjutant directly to a MarForRes conference to make liaison with MarForRes representatives, learn MarForRes processes, and gain access to specific MarForRes systems. The adjutant was then able to tackle many of these requirements from her desk, and, when

confronted by a problem, knew who to contact in New Orleans. However, because administration equals pay and pay affects mental resiliency, our PTP was arguably not as effective as possible.

MarForRes is a training liability. A second legitimate liability is training. A part-time Marine does not function at the same level of proficiency as a full-time Marine. Part-time versus full-time is most obvious in training, where Reserve Marines train far less than their active duty counterparts.

A Reserve Marine spends approximately 38 days in uniform per year: 24 days drilling at an HTC or nearby military facility and 14 days conducting annual training (AT). While 24 and 14 days seem like reasonable blocks of time, those 24 days are divided among 11 months, with monthly drill periods ranging from 1 to 4 days. Several of those months are automatically allocated to AT requirements such as back-in-the-saddle training, physical and combat fitness tests, rifle and pistol ranges, the Marine Corps Birthday Ball, and pre- and post-AT preparation and maintenance.[7] This leaves only 3 to 4 months for MOS or field training. Those 3 to 4 months are then further limited by the rate of Selected Marine Corps Reserve (SMCR) compensation, as each drill day equals 8 work hours. The bottom line is that SMCR units have only a finite amount of time to allocate to MOS or field training. From my experience in Co. E, 2d Battalion, 24th Marines, and Airfield Operations Co., MWSS 471, each company spent 3 to 4 drill periods and 1 AT period (20 to 25 days total) per year training to their missions.[8]

There are also significant variables among MarForRes units. As an example, it seemed far easier to train an infantry company than an aviation ground support (AGS) company. AGS simply required more operational and logistical coordination and posttraining maintenance. Additionally, location and weather either limits or facilitates training.[9] At Co. E, it was very easy to draw weapons and travel to Camp Dodge because the base was close, and patrolling, military operations on urban terrain, or small arms ranges did not require heavy logistical support or intense planning. In comparison, it was extremely difficult to coordinate AGS with a flying squadron, travel to Camp Ripley, and conduct the maintenance associated with AGS equipment in a 2- or 3-day drill period.

GSMT is formed. *(Photo by author.)*

Finally, MarForRes units are limited in training by access to equipment. When GSMT Co. mobilized, it had no MRAP licenses, which was the system it would primarily use overseas. These vehicles were not available to our MarForRes units, and SMCR schedules did not permit significant time for licensing. GSMT Co. then began Enhanced MOJAVE VIPER (EMV) a few weeks after mobilization, and while the company focused on licensing at the start of mobilization, it did not receive a full slate of licenses before EMV. Because GSMT Co. did not possess a full set of licenses at EMV, it could not train to each standard. Besides the actual licensing course, a solid majority of Marines did not operate their assigned vehicles until arriving in Afghanistan, causing initial operational and maintenance difficulties.[10]

Lack of training is most evident at initial mobilization. GSMT Co. was ineffective when it mobilized. However, GSMT Co. did deploy, and 13 months later it redeployed, having accomplished its mission and outperformed similarly situated active duty motor transport (MT) companies in theater. While training liabilities exist at mobiliza-

tion, the PTP mitigates those liabilities. The takeaway therefore rests with expectations. A receiving HHq must recognize the MarForRes baseline and plan its PTP to a desired end state with large-scale certifying exercises near the conclusion of the PTP. The following artificial liabilities also mitigate the real MarForRes training liability.

MarForRes is not a leadership liability. MarForRes Marines and SNCOs overcome the training liability with leadership. As alluded to, the junior Marines who comprise MarForRes are phenomenal. MarForRes privates first class and lance corporals are generally more mature and responsible than their active duty counterparts because outside of drill weekend they are completely self-sufficient and must maintain households, studies, or full-time employment. Their service is voluntary and typically not motivated by compensation.[11] These junior Marines also contain other skills that benefit their unit; for example, a MarForRes MT operator could be a union carpenter or electrician in the civilian world, or be studying toward a bachelor's or advanced degree.

Most MarForRes SNCOs are likewise phenomenal.[12] Because MarForRes has been mobilizing and supporting contingencies since the beginning of the long war, many MarForRes SNCOs have multiple deployments and combat experiences from which to draw. In GSMT Co., we had SNCOs with Persian Gulf War, Operation Iraqi Freedom (OIF) 1 through OIF 9, and OEF and other contingency experiences.[13] These multiple deployments occurred with multiple commands from all three MEFs. Many SNCOs also had active duty experience before SMCR service. The wealth of knowledge and experience of our SNCOs was deep and mitigated our training liability as these experienced SNCOs trained and mentored our mature and responsible junior Marines.

MarForRes is not an operational liability. Reviewing the deployment, the training liabilities did not transpire into operational liabilities. GSMT Co. performed well above other MT companies at EMV and in Afghanistan, having had no significant accidents, injuries, or operational failures. And while GSMT Co. was not engaged in fierce combat, MarForRes has a deep history of excellent combat performance whether during the Second World War, the Persian Gulf War, or the long war. Then–Secretary of Defense Dick Cheney was often quoted recalling the story of Company B, 4th Tank Battalion, outnumbered during the Persian Gulf War but destroying a significant unit of Iraqi tanks with their Abrams—a tank the Reserve Marines had not seen or used until Kuwait.[14] I had a similar experience when assigned to RCT–5 in 2006. Then–RCT–5 Commander, Col Larry Nicholson, assigned the city of Fallujah, Iraq, to 1st Battalion, 25th Marines, a Reserve unit from Boston. This was arguably a difficult and dangerous sector of battlespace and the focal point of stability operations after Operation New Dawn in 2004.

GSMT Co. provided excellent tactical logistics support in Afghanistan to the companies and battalions inkblotted throughout Helmand Province and the Upper Sangin River Valley. The company sought out assignments and never denied a transportation movement request to provide MT or heavy equipment support around Camps Leatherneck and Bastion. In total, GSMT Co. completed 18 long-haul combat logistics patrols, 40 embedded missions, and 1,588 transportation movement requests. Those missions distributed or retrograded more than 31 million pounds of equipment and supplies and supported more than 35 different combat units, combat service support units, and civilian agencies aboard Camps Leatherneck and Bastion and 12 patrol bases or forward operating bases. GSMT Co. also completely retrograded and transferred its 4-acre motor pool before redeployment. Despite our liabilities, we performed well.

Thoughts Going Forward

The purpose of this article is not to recommend a complete overhaul of MarForRes. Its structure—as validated by its history—completes the MarForRes mission to:

> . . . augment and reinforce active Marine units in time of war, national emergency or contingency operations, provide personnel and operational tempo relief for the active forces in peacetime, and provide service to the community.[15]

Examining these liabilities, however, does highlight several areas MarForRes can consider to mitigate its real liabilities while simultaneously solidifying its artificial liabilities.

First, each HTC should selectively screen the Marines it mobilizes to ensure only the most capable and ready Reserve Marines deploy. Many mobilizations during the latter part of the long war were voluntary, with a battalion or squadron receiving a small and select mobilization order with numerous volunteers to fill those line numbers. MWSS 471 had more than 200 Marines volunteer for its 66 billets and used the Reserve qualification summary (a résumé-type document) to select the Marines it would mobilize, seeking out Marines with critical skills. Unfortunately, MWSS 471 did not dissect administrative, medical, and training readiness information that could have mitigated administrative and training liabilities. Other units paid very little attention to which Marines mobilized, and several Marines arrived with significant issues that required intense attention that lead to demobilization before deployment.

Second, MarForRes is prime to consider how it augments and reinforces the active duty Marine Corps and should reconsider which size unit is mobilized. Individual augments, squads, and platoons need to be replaced by complete MarForRes companies or battalions. This was done at the onset of the long war but slowly deteriorated as the needs of Iraq and Afghanistan changed. Company autonomy exists within MarForRes, and administrative and training liabilities should decrease if an entire MarForRes company is mobilized in lieu of individuals and platoon-sized units from throughout MarForRes and across the continental United States. Moreover, Reserve battalions and squadrons exist and contain the important battalion staff that could have further mitigated our liabilities.

Third, with the conclusion of the long war and with manpower at the

Training liabilities didn't transpire into operational liabilities. *(Photo by author.)*

front of political discussions, MarForRes is situated to reexamine its overall structure. As it currently stands, MarForRes is a mini–Marine Corps, mirroring the components of an active duty MEF with MarDiv, MAW, MAG, and Force Headquarters Group elements. Because it is difficult to train certain logistic- and maintenance-intense units, and if those units have not been used per task during the long war, MarForRes has an opportunity to reconsider what units it requires based upon which units have been used. For instance, MWSS 471 did not mobilize in whole for either OEF or OIF, while 2d Battalion, 24th Marines, mobilized in whole and deployed twice to OIF. Restructuring MarForRes to maximize which units it can train based upon which units are used can further minimize these liabilities.

Finally, the Marine Corps in general should reinforce and refine the inspector-instructor (I&I) system that supports MarForRes. MWSS 471 had the value of an Active Reserve (AR) program major to support the unit as its I&I and site commander. This AR major knew the procedures of mobilization, had previously mobilized an SMCR unit, and had the direct contacts within MarForRes to facilitate our mobilization. Other HTCs had active duty I&I staffs that did not possess the knowledge and network to fully execute their assigned roles. The value of the AR program and a strong I&I are paramount to the success of mobilizing Reserve Marines, but this strong support system does not exist across MarForRes. As discussed in his *Gazette* article, Maj Michael Long recommends additional training, screening, and selection for I&I duty, and our experiences in GSMT Co. absolutely support his hypothesis.[16]

Conclusion

Looking back and a year removed from the mobilization, the most challenging assignment of my career became my most rewarding and prompted my affiliation with the AR program. Reserve Marines are unique and special and MarForRes satisfies a much needed segment of the total force. The artificial liabilities of MarForRes are what make it special. These junior Marines and SNCOs constantly and positively advertise the greater Marine Corps in their local community and make significant personal sacrifices when they choose to deploy. The real liabilities, unfortunately, are inherent to the overall structure of MarForRes, but upon conclusion of the long war, that structure is poised to change in order to meet and more efficiently complete MarForRes' mission to augment and reinforce.

Notes

1. Headquarters Marine Corps Forces Reserve, "Reserve Forces Around the World," *Continental Marines*, New Orleans, LA, January to March 2012, p. 9. The article states, "880 Marine Reservists are currently deployed in support of Operation Enduring Freedom."

2. For a more thorough after-action report of the mobilization, see Capt Charles C. Larson III, "Lessons Learned from Mobilizing General Support Motor Transport Company in Support of Operation Enduring Freedom," on file with the Marine Corps Center for Lessons Learned at www.mccll.usmc.mil, or available from the author via email at charles.larson@usmc.mil.

3. Each company, GSMT Co. included, contained a segment of the opposite population. GSMT Co., for instance, had 19 active duty Marines and sailors, including several key leaders, such as the company first sergeant and company executive officer. Supply and maintenance companies also included a small percentage of Reserve Marines in specific billets to complete their tables of organization.

4. For instance, a typical Reserve Marine will spend only 38 days in uniform per year—24 days in a drilling status and 14 days conducting AT.

5. This is obviously a subjective reflection. Because service in the SMCR is part-time, most Reserve Marines, junior Marines included, manage their own household, maintain full-time employment or studies at a university, and are completely responsible for their livelihood outside drill weekend. As an example, GSMT Co. had a lance corporal who was a county sheriff in Louisiana, a lance corporal who was in his third year of studying aerospace engineering at Iowa State University, a Navy hospitalman second class who had deferred enrollment at a tier-one medical school for deployment, and several lance corporal and corporal small business owners and independent contractors.

6. GSMT Co. received Marines and sailors from mainly the following MarForRes subordinate commands: 6th Motor Transportation Battalion, MWSS 471, 4th Maintenance Battalion, 4th Landing Support Battalion, 4th Engineer Support Battalion, 4th Medical Battalion, and 6th Communications Battalion. These battalions came from three different MarForRes main subordinate commands: 4th MAW, 4th MLG, and Force Headquarters Group.

7. Before 2010, SMCR Marines also allocated an entire month to support the Toys for Tots program. While beneficial to the local community, this requirement decreased available drill periods each year. Then–MarForRes Commanding General, J.F. Kelly, precluded SMCR

units from supporting Toys for Tots with drills, freeing an additional month for training. See MarForRes Force Policy Letter 09–10 of 15 October 2010.

8. MWSS 471 used the following drill schedule, which was similar to Co. E:

- October: Four drills—uniform inspections, combat fitness test.
- November: Two drills—Birthday Ball.
- December: Four drills—maintenance stand-down.
- January: Four drills—AT.
- February: Four drills—swim qualification, MOS-specific classes.
- March: Five drills—field training.
- April: Four drills—field training.
- May: Seven drills—rifle range.
- June: Four drills—pre-AT preparation.
- July: AT.
- August: Four drills—post-AT maintenance, PFT, family day.
- September: Six drills—field training.

This amounts to 48 drills total, with 2 drills equal to 1 day.

9. Co. E, 2d Battalion, 24th Marines, is conveniently located within 20 miles of Camp Dodge Joint Maneuver Training Center in Johnston, IA. Co. E could conduct almost all infantry training and readiness requirements at Camp Dodge. Airfield Operations Co., MWSS 471, is located more than 100 miles from Camp Ripley Training Center in Little Falls, MN. It took significant effort to use Camp Ripley to train to AGS given the distance, lack of flying squadrons in the area, and equipment maintenance cycles. It was also far easier to schedule and train infantry skills than AGS skills based upon the logistical requirements of those two missions (i.e., foot movements and rifles compared to fueling operations and convoys). Both units also scheduled field training around winter, where Midwestern snow limited the ability to conduct effective field training.

10. Similarly, GSMT Co. faced significant training difficulties with communications equipment and medium and heavy machineguns. Many of the radios GSMT Co. used in theater were different than the systems used during drill training, and SMCR access to medium and heavy machinegun ranges is sporadic at best.

11. A private first class earns approximately $226 for a 4-drill period, or $14.12 an hour. A lance corporal earns approximately $253 per drill weekend, or $15.80 per hour. See Defense Finance and Accounting Service, "Military Pay Table 2013," accessed at www.dfas.mil.

12. I intentionally omitted junior NCOs and officers because, in my opinion, junior NCOs and officers are a critical vulnerability for MarForRes. As mentioned when describing the amount of time a Reserve Marine spends in uniform, many of our corporals and sergeants did not have enough time in uniform or any previous mobilization to make them effective NCOs. Likewise, junior officers had several initial difficulties when paired with senior and experienced SNCOs. These discussions will be left for a different *Gazette* submission.

13. Two senior SNCOs had deployments in support of the Persian Gulf War, ended active service, and then affiliated with the SMCR. Similarly, our SNCOs and officers had cumulative deployments in support of OIF 1, 2, 6, 8, and 9, OEF 10, and other contingency operations around the world, the Horn of Africa and Bahrain included.

14. 4th Marine Division Historical Detachment, *History of the 4th Marine Division, 1943–2000*, second edition, New Orleans, LA, 2000, p. 96, states, "In the 100 hour conflict, Bravo Company breached two minefields, seized an battalion sized fortified position, crushed two regimental counterattacks, and destroyed 119 enemy vehicles, 90 of which were armored." See also David Evans, "Weekend Warriors Prove Their Mettle," *Chicago Tribune*, Chicago, IL, 16 December 1991, accessed at articles.chicagotribune.com.

15. See www.marforres.marines.mil for more information.

16. Long, Maj Michael G., "I&I Duty: Not as special," *Marine Corps Gazette*, January 2013, pp. 62–63.

Developing Ethics

Taking advantage of contact with community leaders and community service

by 1stSgt Norman D. Fistler

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Many of us remember the epic Toys for Tots commercial that aired when many of us were in grade school where a little boy asks a Marine, "Excuse me, are you Santa Claus? I thought you might be him. If you are him, here's my list."[1] In the commercial the Marine on guard duty does not respond to the boy, instead discreetly opening his hand at the position of attention to receive the Christmas list.

Commercials like that one provided us an inspirational sneak peek into our futures as privileged leaders in the world's most prestigious, legendary fighting force—the United States Marine Corps. As young men and women, we upheld the Marines in the commercials as the premier *standards* of military discipline and prowess. As we viewed those commercials, before we realized what was happening, a *fire* was kindled within our hearts. As young men and women in front of our television sets, we received our first lessons in Marine Corps ethics. We began to dream of one day being like the Marines in the commercials.

This article will briefly examine the topic of personal ethics and how they are best developed within a Marine through a discussion of two imperatives: *a standard of expected behavior and service to the community.*

First, Marine leaders must present young Marines with a *standard* that has achieved the objective of Marine Corps leadership, which is "to develop the leadership qualities of Marines to enable them to assume progressively greater responsibilities to the Marine Corps *and society*" (emphasis added).[2] Scholars tell us that "ethics" is defined as what "ought to be." As such, ethics must have an example, an external standard, for the individual to emulate.[3] Due to the stated end objective of Marine Corps leadership, it is not sufficient to simply stand up an active duty Marine as the standard to which young Marines must emulate. Rather, Marine leaders must demonstrate to young Marines how they can "assume progressively greater responsibilities . . . *in society*" (emphasis added) through upholding outstanding *civilian and retired* Marines as the standard of ethical conduct.[4]

> ***First, Marine leaders must present young Marines with a* standard. . . .**

Leaders at the company level and below should engage their communities to identify civilian and retired Marines whose lives, *after separation from the Corps*, best exemplify those values of honor, courage, and commitment. Rather than relying solely upon discussing ethics with young Marines, leaders at these levels could schedule meetings with these civilian and retired Marines in the local community in order to provide young Marines with a real picture of what it means to live the core values. As young Marines are introduced to these civilian Marines who have achieved the above-stated end objective of Marine Corps leadership, they will begin to set goals for themselves. After talking with the civilian Marines who are serving successfully as policemen, firefighters, businessmen, and in other service professions, the young Marine will develop a real picture of what it means to live by the core values of honor, courage, and commitment. The young Marine will see himself as one day *being* the chief of police or a successful businessman, and will then begin to structure his life to achieve that end. As a result of this focus, because he has a specific goal in mind, the young Marine will become less inclined to engage in unethical behavior—*to be* like a certain community leader. He will live to that standard and will begin to reject everything that could hinder him.

Second, Marine leaders must encourage Marines to serve *now* in the local community in order to facilitate their future leadership roles in civilian society. It must be understood that personal ethics are not developed in the classroom.[5] Rather than sitting in a classroom telling a Marine not to drink alcohol, Marine leaders should inspire the young Marine with a vision of what his future ought to look like if he lives by the Marine Corps' core values. Personal ethics are not developed in a static environment as the student sits passively listening to philosophical ideas about "right" and "wrong." On the contrary, personal ethics are learned as

Marines should become involved with charitable organizations. *(Photo by LCpl Jose A. Mendez.)*

the individual is confronted with real world issues and forced into moral dilemmas. As the individual is forced to make tough decisions, he develops his own personal ethics. By engaging young Marines with local community service while in garrison, Marine leaders provide for them a *practical* classroom through which they are able to see themselves as leaders in the local community. Marine Corps leadership at the company level and below should focus on creating dynamic environments in which young Marines are capable of developing personal ethics. Rather than discussing honor, courage, and commitment in a static environment, leaders at the company level and below should use civilian community service as a means to develop personal ethics in young Marines.

As leaders at the company level and below, officers, SNCOs, and NCOs are tasked with helping our Marines to reclaim that fire for what ought to be. Marines *ought to be* the leaders in society—the very litmus test of what it means to be American. They should demonstrate honor, courage, and commitment by personal example as they are encouraged to volunteer in the local community. Marine leaders should give young Marines points of contact in the community and make phone calls as necessary to help in pursuing volunteer service. Young Marines should be encouraged to be involved with charitable and service organizations like Toys for Tots, Big Brothers Big Sisters, United Way, local churches, hospitals, and homeless shelters. Marine leaders should figure out what young Marines plan to do when they separate, and put them on the right path to assuming greater responsibilities in civilian society. A class or two at a local community college or a ride-along in a police cruiser may be a good start.

This is ethics. This is how we do right by the young Marine and best honor the Corps and civilian society. This is the keystone to improving the Corps ethically, both inside and out. A leadership emphasis focusing on these two points will have a lasting effect on the Corps and will facilitate the transition of Marines into the civilian work sector. Do not just give young Marines a seat in another classroom—give them the world!

Notes

1. See www.youtube.com.

2. The end objective of Marine Corps leadership is not to produce a Marine leader, but rather a *civilian* Marine leader. As a result of this end, it is most prudent to engage local civilian Marines—those who have achieved the total objective of Marine Corps leadership—in order to set the right ethical *standard* for junior Marines. (See Headquarters Marine Corps, *Marine Corps Manual* w/ch 2, Washington, DC, 1984, para 1100.1.a.)

3. From an ethical standpoint, the terms "honor," "courage," and "commitment" are all up for scholarly debate, unless there is a standard that demonstrates exactly what these core values mean. The use of a standard provides the person with demonstration of what it means to be "honorable," "courageous," and "committed." Although one could argue that the Uniformed Code of Military Justice (UCMJ) provides an adequate standard for ethical conduct, this argument would fail to account for what makes Marines different than other servicemen who are also under the UCMJ. For this reason, the personal ethics of the Marine must have a standard to appeal to that is outside the UCMJ. The young Marine must be shown civilian Marines who best exemplify the Marine Corps' core values of honor, courage, and commitment.

4. Using civilian and retired Marines as the standard of ethical conduct is logical. All Marines will separate from the Corps, and the majority of the Marines who are targeted by ethical training will end their active service after their first contract; therefore, an appeal to a successful *civilian* Marine as the standard of Marine Corps leadership is universally applicable to all Marines, and immediately applicable to most.

5. Historically, ethical systems have not been developed through classroom instruction, but rather through personal engagement of practical circumstances. Scholarly theories on ethics were developed as individuals grappled with life issues that challenged their worldviews. Some of these theories include absolutism, relativism, utilitarianism, behaviorism, egoism, situationism, generalism, and antinominism. For this reason, it is illogical to assume that classroom instruction alone will result in the development of enduring personal ethical systems capable of withstanding the challenges posed by life.

USMC

Keeping the Right People

Tougher screening and training is required

by Maj Carl Forsling

What is the ideal picture of a United States Marine? Is it a clean-cut, ramrod-straight Marine in his Service uniform, ready for the cameras? Or is it the tired, bedraggled Marine standing to face the enemy yet again after days of continuous combat? As we turn the Corps away from Afghanistan and the global war on terror toward an indefinite future, our answer to this question forms the center of how we shape the Marine Corps in a time of austerity.

Today the Marine Corps has something that most militaries throughout history would envy: a large number of combat-tested, blooded troops—men and women who have "seen the elephant," troops who have seen shots fired in anger and who have not flinched.

We are currently engaged in a program to systematically eliminate those Marines.

Even as we expel thousands of combat-tested veterans from the Corps, we continue to bring in over 30,000 new Marines every year with no assurances that they are any better than the ones they replace. Simple reasoning tells us they are worse. We are kicking out combat-experienced experts and replacing them with brand-new 18-year-olds. How does that make sense?

Who Do We Want as New Marines?

The Marine Corps likes to think of itself as an elite organization, but it is only elite by comparison to the general American population. In comparison to the average American, Marines are better by leaps and bounds. In comparison to many military units, though, the Corps is only the best of the average. Boot camp's attrition rate is less than 10 percent for all causes.[1] Officer Candidates School attrits only about 25 percent of candidates.[2] By the standards of the world's elite military units, the Marine Corps has very little attrition. Anyone meeting fairly modest baseline standards and who is willing to deal with a certain amount of harassment for a few weeks can become a Marine. This isn't new. As much as some would like to harken back to some mythical "good old days," initial accessions, both officer and enlisted, have been this way for some time.

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By comparison, our brothers in Great Britain take a much more aggressive approach in screening and training new Marines. Before Royal Marine recruits are even accepted for entry, they must pass the rigorous 3-day Potential Royal Marines Course. Their entry-level training is also significantly more difficult than ours. From the beginning, they must pass extensive tactical training. The graduation standards are much more rigorous. For example, among other requirements, to graduate the Commando Course, would-be Royal Marines must complete a 9-mile speed march in full gear within 90 minutes. They have to pass a 6-mile cross-country endurance course in 72 minutes and a 30-mile hump in under 8 hours.[3] Up to 40 percent do not pass initial training.[4]

Our senior leadership wonders why Marines dishonor their Corps. Perhaps part of the reason is that we've made it too easy to earn the title. Our measures to improve conduct and ethical

We should adopt a tougher screening and training approach because of personnel and funding cuts. *(Photo by LCpl Henry Antenor.)*

standards consist of more lectures and regulations, not in making Marines better from day one. Real discipline comes from within, not from without. Barracks security cameras, stricter standards of conduct, and new expectations of intrusive leadership at all levels only make Marines behave in the sense that convicts in a well-run prison behave—they do it because they have to. Our current system of low attrition in initial training, followed by a nanny state in the fleet, often fosters cases where America gives us 18-year-old men and women and is given 22-year-old boys and girls in return.

A Marine who knows he has done something few others are capable of will maintain high standards because he wants to. We must make recruit training and Officer Candidates School longer and more difficult. The Royal Marine Commando Course may not form the basis of our training schedules, as their mission is different, but the demands they put on their new recruits are of the same type and difficulty level we should give ours. Give tests that will weed out those who don't want the title badly enough. Stretch each and every one to the breaking point. Allow instructors to ruthlessly weed out those not making the standard. A certain degree of attrition should be designed into the process, not something where the goal is zero, driven by concern for dollars wasted. Tougher training and higher standards at the start will eliminate those who cannot make it early on vice later via courts-martial and administrative separations.

Under a reformed, harder system, new Marines may not be combat veterans, but they will know that they have passed tests that few others could. They will know that they truly are better and tougher than those who did not face those challenges. They will be loath to lose or discredit a title they earned as so many of their fellow recruits and candidates passed by the wayside. Just as importantly, instead of being just another "boot drop" arriving at a fleet unit, this new, harder breed will force current Marines to up their games to keep up with tough-as-nails studs coming out of initial officer and enlisted training.

Maintaining high standards is understood. *(Photo by LCpl Andrew Kuppers.)*

Who Should Stay?

Even as we reduce the inflow, we still have to address the quantity and, yes, the quality of those remaining, which is currently done with a hodgepodge of increasingly arbitrary and somewhat capricious methods. Officers who twice fail to be promoted to lieutenant colonel now face expulsion from the Corps. Sergeants who have not made staff sergeant in 10 years are forced out. At more junior levels, enlisted Marines cannot reenlist with even minor blemishes on their records. These trends are worst in combat arms MOSs, with their notoriously high cutting scores and more pyramidal structures.

> ***A certain degree of attrition should be designed into the process, not something where the goal is zero . . .***

Our screening process for long-term retention is not based on demonstrated ability in one's current job, but largely by success in promotion—a best guess as to whether that person will succeed in a different, higher job. The Marines we most need to retain do not care about rank—they care about shooting, moving, and communicating. They are force multipliers in small unit combat, the kind of war the Corps has fought for the majority of its existence and which will continue to define us in the future. Yet we retain a paradigm where every enlisted Marine is supposed to be a future sergeant major and every officer is supposed to be a future battalion or squadron commanding officer.

Why can't a good squad leader be a sergeant for 5 or more years? Why shouldn't a capable company commander remain in that billet for multiple tours instead of moving on to a school or B-billet? Why can't a top flight lead continue to serve as a squadron pilot?

We put capable tactical operators in the same box as future large-unit leaders. "Up or out" benefits no one. Marines who want nothing more than to shoot, move, and communicate are forced to take tours recruiting or instructing. Marines who would be senior leaders move into those roles without the amount of experience they could have. Everyone must make the same promotion gates or face possible dismissal regardless of who they are or where their aptitudes lie.

In our up-or-out system, a Marine either advances or leaves. Every Marine is supposed to move up until he reaches the limits of the Peter Principle—"people tend to rise to their level of incompetence." Why not plan to keep people in their level of competence instead?

The solution is to slow the train. Promotion should not be the wicket Marines

need to worry about. Being a Marine is indeed a privilege, and we should be vigilant in eliminating those who shouldn't bear the title. Those with major failings in conduct, discipline, physical conditioning, and, most importantly, MOS expertise, cannot be allowed to continue in the Corps. At the same time, we have to stop expelling those who excel at their current jobs just because they are not suited for higher ones.

We drive combat-experienced experts out of our Corps because they lack what it takes to be senior leaders. Being a good Marine, or even a good Marine officer, is not the same as being a potential good sergeant major or commanding officer. Lengthening promotion gates would allow Marines with proven track records to continue doing the jobs that they have proven themselves to be capable in.

Other Marines—those with the potential to hold greater responsibility—would have the time to acquire the wide-ranging expertise they need when they become commanders and senior enlisted leaders. Today a commander may actually only have a couple of tours in the Operating Forces, perhaps with a staff tour in the five-sided puzzle palace and some professional military education to broaden his perspective. With a legitimate "fleet-track" freed from pretending to want B-billets and taking more rotations in the Operating Forces, "command-track" Marines would be able to broaden their experiences further. Given that time, prospective commanders and senior enlisted could gain the variety of experiences they need in a world that demands a leader to be a diplomat, scholar, and warrior.

In this model, retention boards—not promotion boards—would become the gatekeepers for whether one has what it takes to remain a Marine. Retention boards would be charged with retaining a balance between numbers of MOS experts with those showing success in broader endeavors. The Corps can direct its precepts to select percentages of Marines to continue as MOS experts, staying in the Operating Forces to provide experienced combat leadership and expertise. A percentage could also be designated to continue on senior leadership tracks, directed toward professional military education and staff tours in preparation for higher-echelon responsibilities. With appropriate regulatory changes, retention boards could apply to enlisted careerists after 10 years of service vice their current use mainly in the officer force. We could retain warriors who want to stay on the front lines of their fields, while eliminating those who are coasting.

Promotion boards would then primarily look for those senior leaders, both officer and enlisted, with broad experiences who would be responsible for the stewardship of large units, divorced from their current dual and conflicting roles of determining both promotion and, by extension, retention.

Some may see this as an excuse program for those who cannot make rank. On the contrary, retention boards can be as selective as we want or need them to be. We can make the requirements demanding and centered on the skills and experience necessary in the conflicts of the future. Most importantly, it would abandon one-size-fits-all career paths and steer Marines to where they are best suited.

The Costs

There are costs associated with these measures. If we toughen entry-level training, with accompanying attrition, there are some dollar costs associated in the form of recruiting, processing, and the like. The training costs can be minimized. If we dispense with gold-plated training facilities and stay true to our much ballyhooed expeditionary roots, physical training and humps don't cost much.

The numbers we need to recruit actually need not markedly change—part of the objective is to reduce the numbers reaching the Operating Forces. Every attrited recruit is a potential experienced combat veteran remaining in the force. Either way, the Corps would win; we either get a tough-as-nails new Marine or we retain the combat experience gained from more than a decade of war. We are currently getting neither.

Increasing enlisted attrition would mean that the factory taking recruits from the recruiter through recruit training through MOS school to the fleet could no longer rely on a nearly 100 percent graduation rate, which could complicate the training pipeline. However, over time, a predictable attrition rate would stabilize and allow a new baseline to be established. Additionally, more rigorous initial training would shake out most of the marginal performers that form the majority of costly first-term attrition later on, particularly

We can minimize training costs and continue to maintain high standards. *(Photo by LCpl Andrew Kuppers.)*

physical fitness test/combat fitness test and body composition program failures, but also likely many discipline and motivation problems.

For officers, a longer, more difficult screening and evaluation process would lead the Corps away from the Naval Academy, Naval Reserve Officer Training Corps, and Platoon Leaders Class accessions toward Officer Candidate Course and enlisted accessions. That would not be a bad thing. The Naval Academy and Naval Reserve Officer Training Corps are the most expensive officer programs. More Officer Candidate Course and enlisted accessions would allow the Corps to recruit known quantities, not young people barely out of high school.

Much of the financial cost of this proposal rests in the aging of the force that would come with it. Slowing advancement would mean senior personnel stay around longer, personnel that get paid more and have more associated expenses such as dependents and retirements. However, much of this would be offset by the fact that fewer Marines would be promoted under this system. We would be able to reevaluate the tables of organization and recalibrate them for lower ranks. If the projected time in grade of a major became 8 to 10 years instead of 6 to 7, for example, there are many assignments currently slated for lieutenant colonels that do not need that rank, only that level of experience. Sliding billets down the rank structure would counteract much of the cost associated with aging the force. The Marine Corps would become collectively older in age, but more junior in rank.

Will those interested in meteoric careers shun the Marine Corps in favor of other Services or opportunities? Perhaps. But the Marines we need most are the ones who want to be on the ground or in the air conducting operations in the four corners of the globe, and not those primarily concerned with making rank. When those from other militaries look at a Marine sergeant or captain, they should know that he is not just some guy with a given pay grade, but a force to be reckoned with.

People, Not Equipment

Some will counter with a standard Marine Corps birthday speech about how great the Corps is, and in that they are right. The Corps has done amazing things over the past 2 centuries, but it has also changed over time along with the needs of the Nation. The Corps' leadership has already stated that many Marines are not meeting the standard. Tougher training and screening will fix our problems. New rules will not. The Corps is shrinking, no matter what we do. We can choose to be small and mediocre or we can be small and elite, starting with the quality of each individual Marine. The qualities we need in those Marines are combat experience and toughness. Right now we are retaining neither, even though those are far more valuable than any gun, plane, or ship. Change the process and we will change our Marines and our Corps for the better.

Notes

1. Quester, Aline O., "Marine Corps Recruits: A Historical Look at Accessions and Bootcamp Performance," *Center for Naval Analysis*, Washington, DC, September 2010.

2. McNeil, Jr., Donald B., "An Analysis of Factors Predicting Graduation at United States Marine Corps Officer Candidates School," Naval Postgraduate School, Monterey, CA, September 2012.

3. "Royal Marines: Your Career Guide," accessed at royalmarines.mod.uk on 14 November 2013.

4. Hollingshead, Iain, "Am I man enough for the Marines?" *The Telegraph*, London, 12 May 2010.

USMC

Enduring Waterfront Presence

The Fleet and Force Marine Officers

by Col Scott D. Aiken

"Marine planners must understand Fleet operations and the challenges of maintaining the readiness of capital ships—and how our preparation for and conduct of expeditionary missions are affected as a result. Navy staffs, especially those who employ our amphibious capabilities, will have to understand and practice employment of Marine capabilities across the range of military operations."

—ADM Jonathan W. Greenert and Gen James F. Amos, "A New Naval Era"[1]

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The purpose of this short article is to provide a basic insight into the role of the Fleet Marine Officer at the Navy's fleet headquarters and the Force Marine Officer at the Navy's type commands. Typically filled by a lieutenant colonel or colonel, these Navy staff billets are an instrumental link in keeping Navy and Marine Corps activities aligned on the waterfront; these are the officers who can facilitate the understanding as stated in the quote above. Fleet Marine Officers (called FMOs) are stationed at U.S. Fleet Forces Command; U.S. Pacific Fleet (USPacFlt); and Third, Fifth, Sixth, and Seventh Fleets. (At present, there isn't an FMO assigned to the Fourth or Tenth Fleets.) Force Marine Officers (also called FMOs) are on staff with the Navy's two surface type commands (Commander, Naval Surface Force, Pacific; and Commander, Naval Surface Force, Atlantic) and its two air type commands (Commander, Naval Air Forces, Pacific; and Commander, Naval Air Force, Atlantic).

Of note, the current U.S. Navy numbered fleet commands are as follows:

- Third Fleet, aligned to Pacific Command.
- Fourth Fleet, aligned to Southern Command.
- Fifth Fleet, aligned to Central Command.
- Sixth Fleet, aligned to European and Africa Commands.
- Seventh Fleet, aligned to Pacific Command.
- Tenth Fleet, the Navy's Cyber Fleet, aligned to Cyber Command.

Fleet and Force Marine Officers are not liaison officers, but functional members of the fleet and type command staffs. In some fleets, for example, the Fleet Marine Officer is given the additional duty of a directorate head such as the N–5 (plans officer). Another example is Commander, Naval Surface Force, Pacific, where the Force Marine Officer is also the senior USPacFlt combat cargo officer.

A typical list of duties for the Fleet/Force Marine Officer includes:

- Serve as the fleet/type command staff's chief Marine Corps advisor with respect to Marine Corps matters.
- Advise the commander and staff on Marine Corps plans, policies, programs, operational concepts, doctrine, projects, and problems that may be of interest to the fleet or type commands.
- Facilitate coordination between their Navy staff and appropriate Marine Corps commands and organizations.
- Serve as the senior Marine officer on the staff; provide administrative oversight and support for all Marines on the Navy staffs and assigned aircraft and ships.

Figure 1 shows the organization of the type commands within the U.S. Navy; all ships are organized into categories by type. Aircraft carriers and squadrons fall under the administrative control (AdCon) of the appropriate Commander, Naval Air Forces. Submarines similarly fall under the Commander, Submarine Force. All other U.S. Navy ships (to include amphibious ships) fall under Commander, Naval Surface Force. The type com-

mand controls the ship during its primary and intermediate training cycles before it moves under the operational control (OpCon) of a fleet commander, specifically a strike group commander (expeditionary or carrier).[2]

Type commands are responsible for the Title 10 function to man, train, and equip all aircraft, submarines, and surface ships assigned to respective coast AdCon under USFCC or USPacFlt, while the numbered fleets exercise OpCon while deployed.

Marine billets located on the air and surface type command staffs provide a more platform-specific expertise to their commanders and Navy counterparts. From Marine aircraft integration onto naval platforms to communications upgrades on amphibious ships, the Marines on the type command staffs provide resident expertise from a Marine Corps perspective.

The Fleet/Force Marine Officers are the Marine Corps' eyes, ears, mind, and voice within the Navy's fleet and type command staffs. As one of my fellow FMOs stated, "We are the hyphen in 'blue-green team.'" Early inclusion of the Fleet Marine Officer in a planning initiative can facilitate greater awareness and cooperation between the two Services. These officers provide continuous coordination and assistance to the Navy planners to provide the synergy needed between the Navy and Marine Corps to face the challenges in this "new naval era."

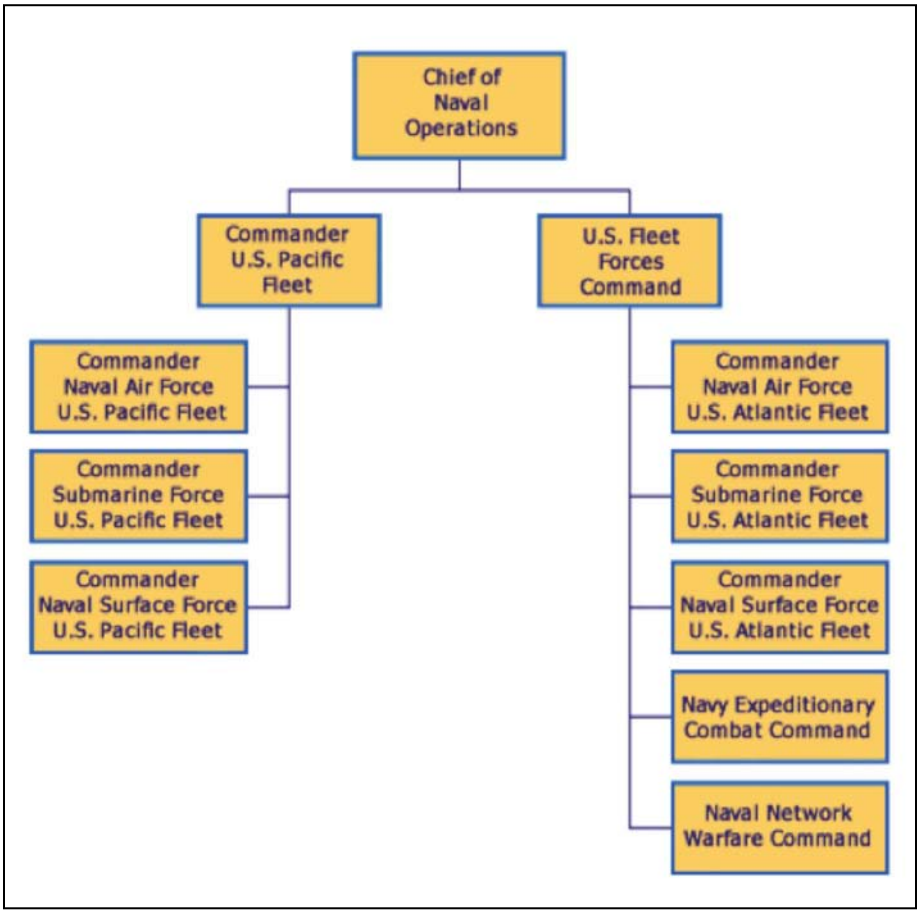


Figure 1. U.S. Navy organization, type commands.[3]

Marine billets located on the air and surface type command staffs provide a more platform-specific expertise to their commanders and Navy counterparts.

Notes

1. Greenert, ADM Jonathan W., and Gen James F. Amos, "A New Naval Era," *Proceedings*, Naval Institute Press, Annapolis, MD, June 2013, p. 19.

2. "AdCon" is the direction or exercise of authority over subordinate or other organizations in respect to administration and support. "OpCon" is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. See Joint Staff, *Joint Publication 1, Doctrine for the Armed Forces of the United States*, Washington, DC, 25 March 2013.

3. U.S. Navy website, www.navy.mil, accessed 10 June 2013.

Is *FM 3–24* a Blueprint for COIN?

The debate on counterinsurgency

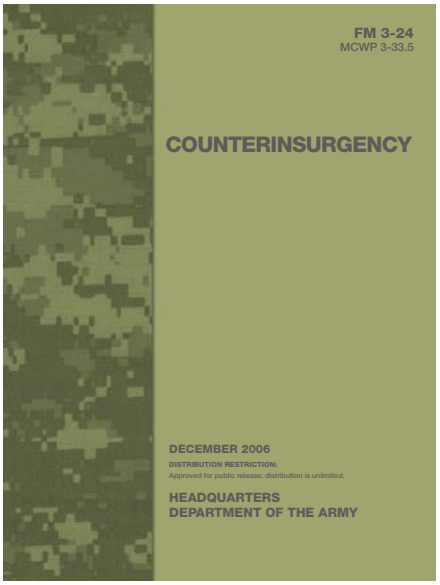
by Capt Edwin G. Corr, USMCR(Ret) & LTC John T. Fishel, USA(Ret)

The national security community and military officers are divided in debate over how America should prepare and train for future wars. This discussion derives initially from the publication of *Field Manual 3–24/Marine Corps Warfighting Publication 3–33.5, Counterinsurgency* (referred to as *FM 3–24*) (Headquarters, Department of the Army/Headquarters Marine Corps, Washington, DC, December 2006), by Army GEN David H. Petraeus and Marine Corps LtGen James F. Amos. Rivaling the Marine Corps' *Small Wars Manual*, *FM 3–24* is one of the most publicized field manuals (FMs) ever adopted and was lauded as the "blueprint for American wars" in the 21st century. GEN Petreaus' application of the FM in Iraq during the "Surge" of 2007–08 allowed the U.S. Armed Forces to depart Iraq with at least a modicum of dignity. Scholars and practitioners differ over whether the Surge achieved much more. Controversy continues over whether and how the United States should conduct counterinsurgency (COIN). Rivalries among the Services and among the various branches within the Services, heightened by pending budget cuts, have spurred debate on the structure of the U.S. Armed Forces. Threats from states and nonstate actors intensify discussion about COIN, other kinds of warfare, and how the United States should prepare to fight future wars.

Discussion of this debate is presented through brief reviews of *FM 3–24* by Fred Kaplan in *The Insurgents: David Petreaus and the Plot to Change the American Way of War*; Richard H. Shultz, Jr., in *The Marines Take Anbar: The Four Year Fight Against Al Qaeda*; and COL Gian Gentile, USA, in *Wrong Turn: America's Deadly Embrace of Counterinsurgency*.[1] The leading spokesman for the Petreaus/Amos *FM 3–24* school is retired LTC John Nagl, while the opponents' principal spokesman is COL Gentile. Shultz provides a thorough account of the successful COIN campaigns of I and II MEFs in Anbar Province, Iraq, led by generals such as James N. Mattis, John Allen, and Richard Zilmer. These books and comparison of *FM 3–24* with the Small Wars Operations Research Directorate (SWORD)/Manwaring model literature from 1986 to the present provide insights into the current debates.

>Capt Corr, a retired career foreign service officer, was U.S. Ambassador to Peru, Bolivia, and El Salvador. He was a professor and administrator at the University of Oklahoma.

>>LTC Fishel is a professor at the University of Oklahoma, a retired National Defense University professor, and the former Chief of Research and Assessments, Small Wars Operations Research Directorate, U.S. Southern Command, where he also served as Chief of Policy and Strategy from 1986 to 1990.



FM 3–24, Counterinsurgency. ***(Cover from www.army.mil.)***

When Do We Fight?

COL Max G. Manwaring, USA(Ret), often cites Carl von Clausewitz, who wrote in *On War* (Princeton University Press, Princeton, NJ, 1976) that:

> The first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish . . . the kind of war on which they are embarking; neither mistaking it for, nor turning it into something that is alien to its nature.

An even more important primary decision for statesmen and commanders preceding the determination of what kind of war they will fight is determining whether the war is worth fighting; whether vital U.S. interests truly are at stake. Only when the answer is "yes" should how we fight become relevant.

The Kaplan Book, *FM 3–24*, and Future COIN

Kaplan's account, although adding much to the story, is both incomplete

GEN David H. Petraeus. *(Official CentCom photo.)*

Gen James N. Mattis. *(Official CentCom photo.)*

Gen James F. Amos. *(Official USMC photo.)*

and, in several assertions, inaccurate. He doesn't seem to understand that COIN is a synonym for many words used to describe what British Col C.E. Callwell dubbed "small wars" in 1896 in *Small Wars Their Principles and Practise*, and terminology the U.S. Marine Corps adopted for its *Small Wars Manual* of 1940.[2] William J. Olson, former Defense Department Director of Low-Intensity Conflict, listed "the 100 names of LIC [low-intensity conflict]" (or COIN) that are interchangeable. There are military operations, such as raids, rescues, and disaster missions, that fall logically under the rubric of military operations other than war—one of the terms once applied to COIN. U.S. Marine Corps history as the Nation's expeditionary force is replete with such operations, starting with Lt Presley O'Bannon's ouster of the Pasha of Tripoli in 1805.

In a typology of kinds of COIN, *FM 3–24* falls into "imperial policing," and is unavoidable when the United States becomes a de facto or de jure occupying power. The typology also includes Banana Wars (from which the Marine Corps' *Small Wars Manual* evolved) and partisan warfare. The typology distinguishes between unconventional warfare, which supports insurgents, and is differentiated from foreign internal defense, which assists government forces.[3] Not included in the typology, but in keeping with Sun Tzu's admonition that "to subdue the enemy without fighting is the acme of skill," is the provision of security assistance to governments of strategic countries. In *Gray Area Phenomena*, Manwaring suggests that helping governments extend their presence and the rule of law to "gray areas" of their territory to prevent transnational insurgencies (e.g., al-Qaeda) and criminal organizations from sprouting is a form of COIN.[4]

Kaplan mentions the classic theorists Clausewitz and Sun Tzu, but fails to address their real impact on COIN. He is aware of Clausewitz's concept that war is an extension of politics and policy with the addition of other means, but he ignores Clausewitzs' other ideas relevant to COIN. His only mention of Sun Tzu is connected with the publication in 1982 of *FM 100–5, Operations* (Headquarters, Department of the Army, Washington, DC), on *AirLand Battle*.

FM 3–24 *theorists draw largely on the semiclassicists, especially Galula, giving scant attention to other modern literature.*

COIN literature falls into three periods: classic, semiclassic, and modern. The semiclassics on COIN include Callwell, T.E. Lawrence (of Arabia), the *Small Wars Manual*, Mao Tse-tung, Sir Frank Kitson, Sir Robert Thompson, David Galula, Roger Trinquier, Edward Lansdale, Rufus Phillips, and Russell Volckmann, among others. Kaplan's treatment of Mao Tse-tung ignores how Mao's theories influenced COIN among subsequent thinkers such as Galula. Kaplan does cite a 1962 RAND Corporation report in which Kitson, Galula, Lansdale, Phillips, and others participated, but primarily singles out Galula in the thinking of *FM 3–24* drafters.

"Modern" COIN theorists fall into three subgroups: those involved in *FM 3–24*; theorists providing models for 21st-century socialists to triumph through insurgencies; and writers and practitioners who created and apply the SWORD model in their conduct and analysis of COIN.

The *FM 3–24* overseers were GEN Petraeus and Gens Mattis and Amos.[5] For Kaplan, the lead theorists seem to be LTC Nagl and Conrad Crane, followed by Kalev Sepp; LTC Jan Horvath, USA; LtCol Frank Hoffman, USMCR(Ret); David Kilcullen; and COL H.R. McMaster, USA. Marines are little mentioned. *FM 3–24* theorists draw largely on the semiclassicists, especially Galula, giving scant attention to other modern literature. Kaplan's single reference to Manwaring on pp. 157–58 identified him as a "special forces of-

ficer" instead of an intelligence officer, and his comment on Manwaring's definition of legitimacy as being only in Western terms suggests he had not carefully read Manwaring.

Ignored in *FM 3–24* and by Kaplan are 21st-century socialist, revolutionary writers such as Jorge Verstrynge Rojas, who was championed by Venezuelan dictator Hugo Chavez in the implementation of irregular fourth-generation war and superinsurgency, and who writes on asymmetric warfare.[6] Also unmentioned are Chinese Cols Qiao Liang and Wang Xiansui on unrestricted warfare. The main theme of these thinkers is the use of all available networks to dominate the human terrain to confront a stronger opponent.[7]

Kaplan points out U.S. Army officers who adopted COIN tactics prior to the Surge. He begins with Petraeus in Mosul, Iraq, in 2003–04; LTG Peter Chiarelli in Baghdad in 2004; GEN George Casey's COIN plan and 5-day academy for all new troops in 2004–05; and COL H.R. McMaster's campaign in Tal Afar, Iraq, in 2005. On when COIN began in Iraq, GEN Stanley McChrystal, USA, opined it was under GEN Casey.[8] Kaplan does recognize the Marine Corps' history in COIN, Gen Charles C. Krulak's "three block warfare" training, and gives a nod to Gens Mattis, Zilmer, and Allen in Anbar, but focuses on Army COL Sean MacFarland's success there in Ramadi.

The Marines Take Anbar

Shultz superbly describes the complexity and harshness of warfare and the successful pre–*FM 3–24* COIN campaign by Marines in Anbar. He highlights leadership and actions of the Marines, but recognizes and describes the essential roles of U.S. Army brigades (especially MacFarland's), U.S. interagency players, and allies. Shultz critiques "all the wrong moves" in deciding to enter the war, the coalition authority's bad decisions on governance, and a lack of stabilization planning.[9] The emphasis on knowing the culture, language, and history is superb (exemplified by Gen Allen), as are the book's concluding "lessons from Anbar" about COIN.

Then–Vice President Richard M. Nixon and GEN Sir Gerald Templer meet during the Vice President's visit to Malaya, October 1953. *(Photo from nixonmalaya1953.com.)*

Shultz points to Marines' "small wars" history, tradition, Gen Krulak's 1990's focus on training for three block warfare, adaptability, and effective COIN strategies combined with kinetic operations in the success of I and II MEFs. Between 2004–07 they secured Anbar via population-centric warfare and switched Sunni tribes' loyalties from al-Qaeda to the United States. The Marines' campaign preceded the Surge, and, Shultz argues, the Marines at Anbar were the "tipping point" in the war, not the later Surge.

The Sunni switch did not decrease Sunni rivalry and "civil war" with the majority Shia population and the Shia-dominated central government. The Surge did allow the U.S. Government to establish a temporary alliance between the Anbar Sunni and the Shia, and a temporary stalemate with al-Qaeda in Iraq.

Wrong Turn?

COL Gentile summarizes in *Wrong Turn* arguments he made earlier in articles accusing *FM 3–24* of having "prevented a better way of American war, which has primarily been one of improvisation and practicality," and asserting that the COIN of *FM 3–24* is "armed nation building" and "a recipe for perpetual war."[10] He says the mythical success of COIN is based on a "false narrative" of the Malaya, Vietnam, and Iraq conflicts, and that in each of these wars a "savior general" seized, or almost seized, victory from the jaws of defeat by switching from enemy-centric warfare to people-centric COIN.

The false narrative of British victory in Malaya (1948–60) was when GEN Sir Gerald Templer changed from his predecessor, LTG Harold Briggs', enemy-centric warfare to people-centric COIN. Gentile alleges that historical research shows Briggs started people-centric strategies (COIN) and that they were merely expanded upon by Templer. The false narrative continues in Vietnam, says Gentile, with GEN William Westmoreland supposedly playing the role of Briggs (being enemy-centric), and GEN Creighton Abrams that of Templer, but in which the Armed Forces failed because of rejection of the war by the American populace (and because, Gentile says, it was an unwinnable war). In Iraq, the false narrative casts Petraeus, with the Surge, in the role of Templer. Gentile warns the narrative is being repeated in Afghanistan, where initially the United States successfully pursued a narrow policy goal of defeating al-Qaeda, and then tragically changed to a "maximalist" COIN approach that could only succeed, he says, in 70 to 90 years!

Is Gentile's claim of a "false narrative" false? A strawman? Gentile's intellectual adversary, LTC Nagl, in *Learning to Eat Soup with a Knife*, recognized that, in Malaya, Templer expanded on what Briggs had done and his COIN, but attributed victory to Templer's improvements.[11] There was also continuity in Vietnam between Westmoreland and Abrams, but Abrams accomplished things Westmoreland was unwilling to do. Gentile's false narrative thesis is too simple! Gentile himself, though giving little attention to the Marine Corps, suggests that the back of the insurgency in Iraq was broken in Anbar before the Surge, and he attributes that campaign's success to the adoption of a COIN population-centric approach. This undercuts his anti-COIN thesis.

Gentile mostly reflects the enemy-centric side of Kilcullen's "Two Schools of Counterinsurgency." The enemy-centric school posits defeating the enemy forces first and that all else will follow, while the population-centric approach focuses on protecting the population. Galula and *FM 3–24* both insist on population-centric warfare with *FM 3–24* being less rigid. The SWORD/Manwaring model shows that in most cases population-centric theory is preferable unless it is early in the insurgency when the armed insurgents are the center of gravity. Gentile also tends toward Mark Moyer's "leader-centric" thesis, popular among many Marines, which states that the force with superior leaders tends to win.[12]

FM 3–24 and the Ignored SWORD/Manwaring Model

Because of insurgencies in the 1980s (especially in Latin America), in 1984, GEN Max Thurmond, Army Vice Chief of Staff, charged the Strategic Studies Institute of the Army War College to identify the correlates of success in COIN. The Army-Air Force Center for Low Intensity Conflict at Langley Air Force Base and SWORD in the U.S. Southern Command were formed in 1986 to focus on COIN doctrine. Manwaring led the study. The Doctrine Directorate at the Army Command and General Staff College at Fort Leavenworth was charged with developing a new version of *FM 100–20, Military Operations in Low Intensity Conflict*, in coordination with the Air Force. In 1987 the final draft was coordinated with both SWORD and the Army-Air Force Center for Low Intensity Conflict and released in 1990 as *FM 100–20/AFP 3–20*.[13] The Office of the Assistant Secretary of Defense for Special Operations/Low-Intensity Conflict and the Special Operations Command, both of which also focused on COIN, were created in 1986.

Manwaring and his associates at the Strategic Studies Institute and SWORD defined insurgency as an effort to overthrow a constitutional government. They began with 69 cases after 1945, but reduced that number to 43 in which a Western power had intervened. They identified 71 pertinent independent variables and reduced these variables to 7 factors: host-government legitimacy, unity of effort, host-government military and security actions, military actions of intervening power, support actions of intervening power, external support for insurgents, and actions versus subversion. The model was applied to case studies in Manwaring's *Uncomfortable Wars: Toward a New Paradigm of Low Intensity Conflict*, and the theoretical and methodological underpinning of the paradigm was published in "Insurgency and Counter-insurgency: Toward a New Analytical Approach."[14]

FM 3–24 *is the campaign/operational model for U.S. imperial policing and the similar Banana Wars counterinsurgencies.*

This set of COIN activities is mostly ignored by *FM 3–24* and Kaplan, except for mentioning Petraeus' 1986 stint at U.S. Southern Command and the crafting of GEN John R. Galvin's article, "Uncomfortable Wars: Toward a New Paradigm," in which Galvin asserted population was the new factor in warfare.[15] The Marine Corps' *Small Wars Manual*, Galula, Thompson, and others had earlier emphasized this.

About 20 books and 40 articles and book chapters have been published by academics using the SWORD model. Fishel and Manwaring brought together the previous research in their 2006 book, *Uncomfortable Wars Revisited*.[16] Statistically, the SWORD model has performed much better than other models. Throughout the various phases of attention to and names used for COIN, including in the latest doctrinal incarnation in *FM 3–24*, the doctrine writers have incorporated and retained the principles of SWORD.

The SWORD/Manwaring model/paradigm for COIN is not a manual, and is more abstract and strategic in its approach than *FM 3–24*; it is broader and applicable to all levels and forms of COIN, encompassing insurgencies in which the U.S. roles are restricted to training and advising, as well as to those when U.S. combat forces are employed.

Is *FM 3–24* the COIN of the Realm and Blueprint for Future Wars?

FM 3–24 is the campaign/operational model for U.S. imperial policing and the similar Banana Wars counterinsurgencies. It is clear that imperial policing COIN should be avoided unless our vital interests are truly threatened and there are no alternative options such as foreign internal defense support or limited and brief military conventional warfare such as DESERT STORM. Only if vital national security interests demand should the United States become an occupying power over an entrenched insurgency.

The cost of the Vietnam War—which at its height had over 500,000 U.S. troops in country and 58,000 military lives lost—to the United States Treasury was about $740 billion (constant fiscal year 2011 dollars). In Iraq, U.S. military numbers reached about 160,000, about 4,500 military lives were lost, and 32,000 servicemembers wounded at a cost to the United States

of about $800 billion. In Afghanistan, U.S. military personnel reached about 100,000 (with an additional 30,000 NATO troops), and, as of this writing, has cost more than $517 billion, with the loss of about 2,000 lives and 18,000 wounded.

Where the United States has supported friendly governments of strategic countries without committing U.S. combat units, such as Colombia, the Philippines, Bolivia, Peru, and El Salvador, the strategic success has been greater and the costs smaller. In El Salvador from 1981 to 1992, the U.S. Government provided $4 billion in aid (of which $800 million was military aid), limited the number of U.S. military advisers to 55, and lost only a few U.S. citizens. In Colombia, a large country with many similarities to Afghanistan in terms of advantages for insurgents, the U.S. Government, through Plan Colombia, helped the government turn the tide against the guerrillas from 1999 to 2010 at a cost of about $10 billion. The numbers of U.S. advisers was around 250, with minimal American casualties.

If experience is any guide, civilian and military leaders—prepared or not, sooner or later—will have to confront asymmetric, hybrid, decentralized, and networked enemies in uncomfortable wars. In all types of COIN, leaders will be expected to lead joint, interagency, intergovernmental, and multinational operations across the full spectrum of conflict. Failure to be prepared would be a grave error.

The U.S. Armed Forces' bureaucratic compulsion to commit large numbers of troops and test expensive and heavy equipment is very strong. Such commitments usually weaken the host-government's authority. If there are reliable, acceptable, local leaders who can be reinforced, support for them rather than committing American combat troops is preferable, as in El Salvador in 1981, where anarchy reigned and the government was without legitimacy, divided, and weak. The lesson is clear: Unless absolutely necessary, do not commit American combat troops. If it must be done, do so rapidly in strength and have a stabilization plan and an exit strategy.

Shultz says that "there is no COIN in a box," so *FM 3–24* will not be the sole blueprint by which our Armed Forces and civilian departments will prepare and train, but its influence will last for years. Our Armed Forces and civilian agencies must prepare and plan for wars with peer and rogue states and nonstate actors (e.g., al-Qaeda). We must keep our research and development advantages to lead in areas such as drones, cyber warfare, and space, as well as atomic, chemical, and nuclear warfare. The Marines, as an expeditionary force, must continue their dedication to leadership and excellence in all fields of military science. To be ready, Marine officers and NCOs must know how previous conflicts were fought in order to adapt, best engage, and fight current wars, thus continuing true to that longstanding mantra—improvise, adapt, and overcome. Semper Fi.

Notes

1. Kaplan, Fred, *The Insurgents: David Petreaus and the Plot to Change the American Way of War*, Simon and Schuster, New York, 2013; Richard H. Schultz, Jr., *The Marines Take Anbar: The Four Year Fight Against Al Qaeda*, Naval Institute Press, Annapolis, MD, 2013; and Gian Gentile, *Wrong Turn: America's Deadly Embrace of Counterinsurgency*, The New Press, New York, 2013.

2. Callwell, C.E., *Small Wars Their Principles and Practise*, University of Nebraska Press, Omaha, NE, 1996; and Headquarters Marine Corps, *Small Wars Manual*, Government Printing Office, Washington, DC, 1940.

3. Fishel, John T., and Edwin G. Corr, "Thinking and Writing About COIN," *Small Wars Journal*, July 2013.

4. Manwaring, Max G., *Gray Area Phenomena*, Westview Press, Boulder, CO, 1993.

5. Gen James N. Mattis was an initial collaborator with GEN David H. Petraeus on *FM 3–24*, but was replaced by Gen James F. Amos for the final editing of the manual. Kaplan mentions Mattis only once (p. 148).

6. Rojas, Jorge Verstrynge, *La Guerra periférica y el Islam revolucionaria*, El Viejo Topo, Madrid, Spain, 2005.

7. Liang, Qiao, and Wang Xiansui, *Unrestricted Warfare*, People's Liberation Army Literature and Arts Publishing House, Beijing, China, 1991.

8. Rose, Gideon, "Generation Kill: A Conversation with Stanley McChrystal," *Foreign Affairs*, March/April 2013.

9. It is noteworthy that, when it became clear that GEN Tommy Frank's Central Command was not planning for postwar occupation, I MEF Commander, LtGen Michael Hagee, conducted a Marine Corps planning exercise for occupation of a defeated Iraq. See Mark Moyer, *A Question of Command: Counterinsurgency from the Civil War to Iraq*, Yale University Press, New Haven, CT, 2009, p. 220.

10. See, for example, Gian Gentile, "Vietnam: Ending the Lost War," in Matthew Moten (editor), *Between War and Peace: How America Ends its Wars*, The Free Press, New York, 2011, and also "Learning to Eat Soup With a Spoon: Missing From the new COIN manual's pages is how to forget," *Armed Forces Journal*, Washington, DC, September 2007.

11. Nagl, John A., *Learning to Eat Soup with a Knife: Counterinsurgency in Malaya and Vietnam*, University of Chicago Press, Chicago, 2002.

12. Moyer, pp. 3–4.

13. Fishel was directly engaged from SWORD in the coordination.

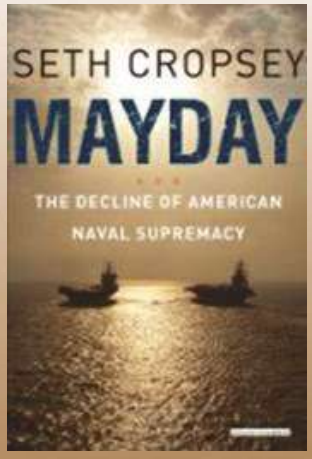
14. Manwaring, Max G., *Uncomfortable Wars: Toward a New Paradigm of Low Intensity Conflict*, Westview Press, Boulder, CO, 1991; and Max G. Manwaring and John T. Fishel, "Insurgency and Counter-insurgency: Toward a New Analytical Approach," *Small Wars and Insurgencies*, Frank Cass, London, 1992, pp. 272–310.

15. Galvin, GEN John R., USA, "Uncomfortable Wars: Toward a New Paradigm," *Parameters*, Fort Leavenworth, KS, December 1986.

16. Fishel, John T., and Max G. Manwaring, *Uncomfortable Wars Revisited*, University of Oklahoma Press, Norman, OK, 2006.

The Incredible Shrinking Navy

reviewed by Col J.M. Mutter, USMC(Ret)



MAYDAY: The Decline of American Naval Supremacy. By Seth Cropsey. Overlook TP, New York, 2014
ISBN 1468308289, 336 pp.
To order, go to: http://bit.ly/OQP2LW

Seth Cropsey, author of *Mayday* and a Navy Reserve officer who served as Deputy Under Secretary of the Navy under four Secretaries of the Navy and two Presidents, provides a comprehensive rendition of the extraordinary power that command of the seas bestows upon a nation, and the elements that lead to the demise of this power. He also gives major evidence of the far-reaching influence a nation possessing undeniable worldwide control of sea power has on national wealth and influence in most, if not all, aspects of overall world affairs, stability, and economics. Cropsey charges national lassitude and political blindness for the underfunding and erroneous planning that has severely undermined many navies' capabilities to retain dominant command of the seas. In the 1980s, the Secretary of the Navy insisted that a diversified 600-ship Navy was essential to protect the U.S. and world sea lanes of commerce; we now have about 260 vessels, close to the number held in 1920.

In deft order, Cropsey provides cogent reference to historical factors over 6 centuries that altered the tide of another nation's sea power dominance, while adroitly avoiding strategic and tactical details. He sketches the demise of once-held sea power from the Peloponnesian War through the ages to Britain's victory over the 10,000 Dutch merchant and naval ships by way of British diversification and ship construction for specific purpose, capability, and crew training. Further boldness led to the 1805 victory at Trafalgar, establishing Britain's then–universally recognized superior command of the seas. As we know, change happens. Cropsey goes on to show the relatively weakening British Navy's position due to vast naval investments by other nations from the late 1880s and forward. The initial incipient, then wide-ranging growth of the U.S. Navy from the late 1880s through the mid-1920s, followed by its exponential growth in World War II—and now its perhaps irreparably decreased capabilities—are covered in good order.

>Col Mutter retired in 1993 after more than 36 years of active duty and Reserve service. He served two tours in Vietnam.

There are no less expensive means of transferring vast quantities of goods, personnel, and equipment than across the world's waters. Cropsey also gives good evidence that past U.S. naval presence nearby has calmed bickering states and helped to settle or alleviate local and international tensions, but he also voices grave concerns relative to the 10 or so vital commercial, geographic waterway choke points of the world, and the bitterness, unrest, and dangerous capabilities of adjacent states. He lauds NATO nations' actions in overcoming disturbances in international trade (e.g., piracy associated with the Horn of Africa), compliments U.S. benevolence and the stability gratuitously provided throughout the world, and fears the vastly decreasing international support and U.S. capability for timely responses. Nevertheless, he ponders, as have others, their/our commitments when the chips are really down.

The above is but a flavor of the scope of Cropsey's *Mayday* research and warnings. He gives quick, well-referenced tutorial support to his concern regarding today's evident loss of U.S. influence and sea power. He also provides suggestions on how the Congress and U.S. Navy should proceed, and asks the following questions:

- What is the Navy's own current bent and how does that fit in juxtaposition to at least three other independent analyses?
- Is continued major capital spending on grandiose, expensively protected, and easily destroyed platforms justified in light of

currently held foreign medium range ballistic missiles?

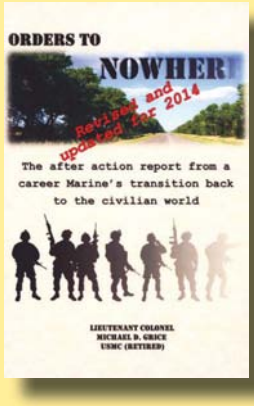
• Can a panoply of available alternatives of mobile; lethal; command, control, communications, and computers–capable; redundant but relatively transformable packages enhance if not ensure protection-in-depth for sea power survivability and command of the world's oceans?

Cropsey's research shows that command of the seas, once lost, can never be regained. He also revealed China's strong command of vast waters of its particular interest in the early 1400s. Will China be the first to accomplish that once-held limited role, or a much more expanded one in Asian/Pacific waters? Will Congress, to our peril, also kick this matter down the road? Cropsey bluntly and boldly deals with China's past and its growing, potentially harmful, hegemonic influence, in addition to Russia's progress and provocation.

I sincerely hope this brief review leads you to find, read, and discuss *Mayday*.

USMC

For Further Reading



ORDERS TO NOWHERE: The After Action Report From a Career Marine's Transition Back to the Civilian World. By LtCol Michael D. Grice, USMC(Ret). At some point we will all leave the Corps and head back into the civilian world. In this well-written and informative book, LtCol Mike Grice details the journey that all of us must make. Written in a conversational style, the book has at the end of each chapter an important checklist of the author's lessons learned. We will only transition out of the Corps once in a lifetime and having a well-written guidebook is essential. The author covers a multitude of topics. LtCol Grice helps to navigate the new world Marines enter shortly before and after discharge. He details navigating the maze of Veterans Affairs claims—the checklist at the end of this chapter is invaluable for those injured or wounded on active duty. Equally as valuable is his advice on networking and searching for a job. LtCol Grice's practical advice on and examples of résumés, business cards, and cover letters provides templates of how to do them right. Rarely do we interview for a job in the Corps, yet in the civilian world, they are the portal to employment. Once again the author provides sound advice on how to interview, from what to wear to what to say. This volume has been updated for 2014 and is a readable, relevant, and useful reference for anyone going ashore to the civilian world.
Create Space, Charleston, SC, 2014
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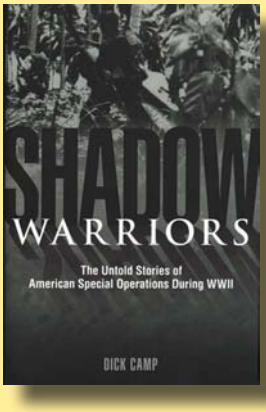

SHADOW WARRIORS: The Untold Story of American Special Operations During WWII. By Dick Camp. Special operations forces are in the forefront of today's news. The forefathers of today's special operators have a story that up to now has not been adequately told. Retired Marine colonel and military historian Dick Camp has told that story with an emphasis on the long history of especially Marines in covert and special operations. Divided into two parts, one detailing the Pacific and the other detailing the European theater, the author pulls back the curtain on the deeds of fascinating and brave men who, except for perhaps the Marine Raiders, have never received the attention they deserve. Lost in history is the fact that in Europe, Marines operated behind enemy lines in France to help the French Resistance. How many Marines today can identify the names Sgt Jack Risler or Maj Peter Ortiz, whose tales of bravery and ingenuity in outwitting the Germans should be legendary? An equally obscure Marine by the name of Col William A. Eddy was the Lawrence of Arabia of the Second World War. His development of Arab agents was of incalculable value in the landings in North Africa. This history is a must-read so that today's Marines can appreciate the fact that special operations are as much a part of their DNA as are amphibious operations.
Zenith Press, Minneapolis, MN, 2013
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THE DRAGON OF DESTINY & THE SAGA OF SHANGHAI POOLEY. By Maj Rick Spooner, USMC(Ret). The author is a living legend in today's Marine Corps. The proprietor of the Globe and Laurel restaurant, located a mile south of the National Museum of the Marine Corps, Maj Spooner is not merely a restaurateur and the proprietor of today's Tun Tavern, but a raconteur and storyteller of great ability. His two previous books, *The Spirit of Semper Fidelis* (Philips Publications, 2004) and *A Marine Anthology* (Phillips Publications, 2010), are now followed by a crackling good novel of the Old Corps. In this book an elderly Marine relays the tale of Sgt Paul "Shanghai" Pooley, one of the old breed of Asiatic hands, as told to him by the title character himself. Set against the backdrop of China and the world of the old China Marine, duty ashore and at sea, and finally on an island battlefield of World War II, fiction and some fact are woven together into a fascinating narrative of a time in the Corps when the old breed ruled the Corps and earned legendary status. The center of the book contains actual photographs of the Old Corps—a Corps in which privates had their own mess complete with native servants and corporals wore four hash marks. This thoroughly entertaining novel, intermingled with a historical vein, is a great window into a time when the Corps was populated by tough and adventurous "lifers."
Phillips Publications, Williamstown, NJ, 2014
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Bronze Star With Combat "V"

Bouma, Richard N.	SSgt	1st Mar Spec Ops Bn, MarForSOC
McDowell, Gregory G.	SSgt	2d Mar Spec Ops Bn, MarForSOC

Bronze Star

Deleal II, William E.	Maj	MEF, Hqtrs Grp, II MEF
Harlow, Mason E.	Maj	2d Mar Regt, 2d MarDiv
Hernandez, Eric C.	MSgt	2d Mar Spec Ops Bn, MarForSOC
Kenney, Jeffrey R.	LtCol	MEF, Hqtrs Grp, II MEF
Kretschmer, Edward C.	1stSgt	MEF, Hqtrs Grp, II MEF
Loney, Jonathan P.	LtCol	MEF, Hqtrs Grp, II MEF
Miller II, Charles E.	Capt	3/4, 1st MarDiv
Ozuna, Jr., Miguel A.	CWO3	1st Mar Spec Ops Bn, MarForSOC
Rendina, Quinton L.	GySgt	1st Mar Spec Ops Bn, MarForSOC
Savatt IV, Russell W.	Maj	1st Mar Spec Ops Bn, MarForSOC
Smith, Jonathan R.	Maj	2d Mar Spec Ops Bn, MarForSOC
Spriggs, Jeremy J.	Capt	3d Mar Spec Ops Bn, MarForSOC

Navy and Marine Corps Commendation With Combat "V"

Bullard, Andrew B.	Sgt	2d Mar Regt, 2d MarDiv
Burdett II, Troy R.	Sgt	2d Mar Spec Ops Bn, MarForSOC
Fialk, Ronald M.	Capt	MEF, Hqtrs Grp, II MEF
Fox, Michael A.	Capt	2/8, 2d MarDiv
Gore, Christopher T.	Sgt	3/4, 1st MarDiv
Guerra III, Felix	Capt	3/4, 1st MarDiv
Han, Prince	LCpl	2/8, 2d MarDiv
Harstine, Evan L.	SSgt	1st Mar Spec Ops Bn, MarForSOC
Kefalides, Nicholas G.	Sgt	2d Mar Spec Ops Bn, MarForSOC
Lingafelt, Kyle A.	1stLt	2/8, 2d MarDiv
McClellan, Jesse H.	SSgt	1st Mar Spec Ops Bn, MarForSOC
McMillin, James E.	SSgt	1st Mar Spec Ops Bn, MarForSOC
Morales, Andrew S.	SSgt	1st Mar Spec Ops Bn, MarForSOC
Noe, Gerald I.	Capt	2/4, 1st MarDiv
O'Connell, John D.	Capt	MEF, Hqtrs Grp, II MEF
Pennington, Rollie B.	SSgt	2/8, 2d MarDiv
Perry, Jared L.	1stLt	6th Mar Regt, 2d MarDiv
Reynolds, Timothy J.	Capt	MEF, Hqtrs Grp, II MEF
Rogers, Paul R.	SSgt	2d Mar Regt, 2d MarDiv
Salaguinto, Jr., Armenio G.	Capt	MEF, Hqtrs Grp, II MEF
Shumate, Jack L.	1stSgt	3/4, 1st MarDiv
Slaugenhoup, Nathaniel R.	SSgt	2d Mar Spec Ops Bn, MarForSOC
Tapio, Myron D.	GySgt	2d Tank Bn, 2d MarDiv
Thorpe, Matthew S.	GySgt	2/8, 2d MarDiv
Williams, Brian S.	Capt	2/8, 2d MarDiv
Williams, Ceasare R.	1stSgt	2d Mar Regt, 2d MarDiv

Navy and Marine Corps Achievement With Combat "V"

Adkinson, Robert P.	SSgt	2/8, 2d MarDiv
Baker, Robert J.	1stLt	2/8, 2d MarDiv
Bowling, Cameron A.	Sgt	CLR 2, 2d MLG

Brown, Charles J.	Cpl	2/8, 2d MarDiv
Collins, Jr., Jude M.	Cpl	2/8, 2d MarDiv
Conner, Brandon D.	LCpl	3/4, 1st MarDiv
Desmond, Stephen T.	Capt	2d Mar Regt, 2d MarDiv
Drakeford, Brodmon K.	HM3	2d Law Enforcement Bn, II MHG, II MEF
Hauff, Matthew A.	Sgt	1st Mar Spec Ops Bn, MarForSOC
Johnson, Branden G.	HM2	2/8, 2d MarDiv
Keel, Evan F.	1stLt	2/8, 2d MarDiv
Kurahashi, Adam H.	Sgt	1st Mar Spec Ops Bn, MarForSOC
Lehman, Casey P.	Cpl	2/8, 2d MarDiv
Leibrock, Sean M.	HM1	1st Mar Spec Ops Bn, MarForSOC
Meyers, Christopher E.	Sgt	1st Mar Spec Ops Bn, MarForSOC
Prosper, Ryan L.	Sgt	2/4, 1st MarDiv
Rickards, Christopher T.	Cpl	2/8, 2d MarDiv
Scott, Nathan R.	Cpl	2/8, 2d MarDiv
Sidler, Matthew R.	Sgt	MEF, Hqtrs Grp, II MEF
Stack, Michael P.	1stLt	2/7, 1st MarDiv
Tramel, Tanner M.	Cpl	2/8, 2d MarDiv
Turner, Derek L.	Sgt	2/8, 2d MarDiv
Walton, Michael D.	1stLt	2/8, 2d MarDiv
Williams, John W.	Sgt	2/8, 2d MarDiv

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Our basic policy is to fulfill the stated purpose of the *Marine Corps Gazette* by providing a forum for open discussion and a free exchange of ideas relating to the U.S. Marine Corps and military capabilities.

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

- **Commentary on Published Material:** Submit promptly. Comments normally appear as letters (see below) 3 months after published material. BE BRIEF.
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The best advice is to write the way you talk. Organize your thoughts. Cut out excess words. Short is better than long. Submissions may be sent via regular mail and should include one hard copy of the manuscript and a disk with the manuscript in Microsoft Word format. Photographs and illustrations must be in **TIFF, JPG, or EPS** format (**300dpi, 5x7 inches,** color preferred) and **must not be embedded in the article**. **Please attach photos and illustrations separately.** (You may indicate in the text of the article where the photos are to be placed.) Include the author's full name, mailing address, telephone number, and e-mail address. Mail to: *Marine Corps Gazette*, Box 1775, Quantico, VA 22134. Articles may also be submitted via e-mail to gazette@mca-marines.org. Please follow the same instructions for format, photographs, and contact information when submitting by e-mail. Any queries may be directed to the editorial staff by calling 800–336–0291, ext. 144.

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