A publication of the Marine Corps Association & Foundation

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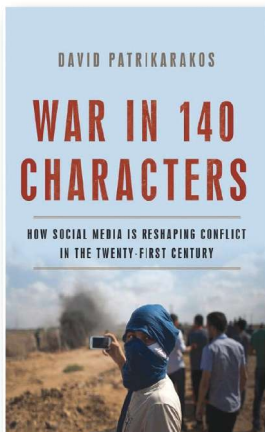MODE SELECT ▽   MARINES ARE WHO WE ARE./.SPECIAL OPERATIONS IS WHAT WE DO.

IDEAS AND ISSUES

DEPARTMENTS

MARINE CORPS Gazette
Professional Journal of U.S. Marines

JULY 2020

Editorial: Focus on MAGTF Warfighting Exercise 1-20

As we press on into the fourth month of pandemic response, July's edition of the Corps' professional journal is unique in that much of the content is dedicated to 2d Marine Division and observations from their recent exercise MWX 1-20. Regular *Gazette* readers will recall the article "Winning Tomorrow's Battles Today" by MajGen David J. Furness, the Commanding General of 2d MARDIV published in November 2019 on the *Gazette* website at mca-marines.org/editorial-links. Writing about the initiatives his Division has undertaken to inculcate the maneuver warfare approach to warfighting, MajGen Furness observed, "The use of a thinking, trained, and dedicated adversary force allows our units to train against a higher level of opposition" and pointed to the opportunity presented by MWX 1-20, a Division-sized force-on-force free play exercise, to prepare the division for combat against a peer adversary.

This month we present a series of fourteen articles that "report back" on observations from that exercise. Beginning on page 8 with the letter titled "MWX 1-20 Summary from CG, 2d MARDIV" by MajGen Furness, these articles cover lessons from the MWX across multiple warfighting functions. Noteworthy essays include "Seeing Purple" by LtCol Paul L. Croom II on page 13, a look at the value of Joint intelligence surveillance and reconnaissance in the peer-on-peer fight. In "Fighting a Peer Adversary" by LtCol Chris Niedziocha on page 45, the Commanding Officer of 1st Battalion, 6th Marines—a key tactical commander of the exercise force—assesses training in the challenging environment created by an independent-thinking adversary force that included Marines and British Royal Marine Commandos. Note that this is part one of a two-part series, and part two is available on the *Gazette* website.

Also featured on our cover is the winner of the 2019 Hogaboom Leadership essay contest, "In the Arena" by Maj Lauren Serrano, on page 49. This essay presents the lessons about leadership, politics, military culture, and the media that then-Capt Serrano gained after winning the 2013 Chase Essay Contest for her work "Why Women Do Not Belong in the U.S. Infantry," originally published in the September 2014 *Gazette*. For nearly six years that original essay remains the most searched for article in the *Gazette* archives, and readers may access it on our website.

This month we continue the ongoing discourse on the Corps warfighting philosophy and our maneuver warfare doctrine on page 62 with "Reinvigorating Maneuver Warfare" by MajGen William F. Mullen III and on page 67 with "Maneuver Warfare" GySgt Neil D. McCoy, et al.—a team of four 0369 Infantry Small Unit Leaders.

Finally, I must commend two more essays this month: first, "Enduring Presence, Engaging Mission" by Col Timothy G. Burton, et al., an overview of the origin and lasting relevance of the Marine Corps mission in the Republic of Korea and our unique relationship with the ROK Marine Corps. Lastly on page 78 in "Commandant's Professional Reading List," Capt Olivia Garard, recommends comprehensive changes to the Professional Reading Program to best support the direction and initiatives in the CPG.

As always, these essays present the ideas of individual Marines on issues and challenges facing the Corps and not some form of Marine Corps "party line." Informed debate and constructive criticism are the hallmarks of our Corps' intellectual life. I encourage you all to read, reflect, and keep writing!

Christopher Woodbridge

LtGen Lewis A. Craparotta

LtGen Steven R. Rudder

MajGen Dennis A. Crall

MajGen Karsten S. Heckl

MajGen David A. Ottignon

MajGen Mark R. Wise

BGen Austin E. Renforth

Reunions

Org: TBS Class B-2-68,
Bravo Company Reunion
Dates: 30 September–3 October 2020
Place: Quantico, VA
POC: Col Michael Cathey, USMC(Ret)
703-868-2198
colmcathey@gmail.com
http://www.tbs2-68usmc.com

Org: USS Canberra Reunion
Dates: 30 September–4 October 2020
Place: Pittsburg, PA
POC: Ken Minick
740-423-8976
usscanberra@gmail.com

General Officer Announcements

In May, Secretary of Defense Dr. Mark T. Esper announced that President Donald J. Trump made the following nominations:

LtGen Lewis A. Craparotta, for appointment to the rank of lieutenant general and assignment as CG, Training and Education Command. Gen Craparotta is currently serving as the Commander, U.S. Marine Corps Forces Pacific; and CG, FMF Pacific, Camp Smith, HI.

LtGen Steven R. Rudder, for appointment to the rank of lieutenant general and assignment as Commander, U.S. Marine Corps Forces Pacific; and CG, FMF Pacific. Gen Rudder is currently serving as the Deputy Commandant for Aviation.

MajGen Dennis A. Crall, for appointment to the rank of lieutenant general and assignment as Director for Command, Control, Communications, and Computers (C4)/Cyber; and Chief Information Officer, J-6, Joint Staff. Gen Crall is currently serving as the Senior Military Advisor for Cyber to the Under Secretary of Defense for Policy, Washington, DC.

MajGen Karsten S. Heckl, for appointment to the rank of lieutenant general and assignment as CG, I MEF. Gen Heckl is currently serving as the CG, 2d MAW, Cherry Point, NC.

MajGen David A. Ottignon, for appointment to the rank of lieutenant general and assignment as Deputy Commandant for Manpower and Reserve Affairs. Gen Ottignon is currently serving as the Director, Manpower Management Division, HQMC, Quantico, VA.

MajGen Mark R. Wise, for appointment to the rank of lieutenant general and assignment as Deputy Commandant for Aviation. Gen Wise is currently serving as the Deputy Commanding General, MCCDC; and Assistant Deputy Commandant for Combat Development and Integration, Quantico, VA.

BGen Austin E. Renforth for appointment to the rank of major general. Renforth is currently serving as the Director, Joint Capabilities Integration and Development, HQMC, Washington, DC.

Col Adam L. Chalkley for appointment to the rank of brigadier general. Col Chalkley is currently serving as the Chief of Staff, 2d Marine Logistics Group, Camp Lejeune, NC.

Col Kyle B. Ellison for appointment to the rank of brigadier general. Col Ellison is currently serving as the Director, Expeditionary Warfare School, MCB Quantico. VA.

Col Phillip N. Frietze for appointment to the rank of brigadier general. Col Frietze is currently serving as the Deputy Director, Capabilities Development Directorate, Department of Combat Development and Integration, MCB Quantico.

Col Peter D. Huntley for appointment to the rank of brigadier general. Col Huntley is currently serving as the Deputy Commander, U.S. Marine Corps Forces Special Operations Command, Camp Lejeune, NC.

Col Julie L. Nethercot for appointment to the rank of brigadier general. Col Nethercot is currently serving as the Director, Commander's Action Group, U.S. Northern Command, Colorado Springs, CO.

Col Forrest C. Poole III for appointment to the rank of brigadier general. Col Poole is currently serving as the Executive Assistant to the Deputy Commandant, Installations and Logistics, HQMC, Washington, DC.

Col Ryan S. Rideout for appointment to the rank of brigadier general. Col Rideout is currently serving as the Chief of Staff, U.S. Marine Corps Forces Command, Norfolk, VA.

Col George B. Rowell IV for appointment to the rank of brigadier general. Col Rowell is currently serving as the head, Aviation Weapons Requirement Branch, Tactical Air Support, Department of Aviation, HQMC, Washington, DC.

Col Farrell J. Sullivan for appointment to the rank of brigadier general. Sullivan is currently serving as the chief of staff, 2dMarDiv, Camp Lejeune, NC.

Correction

In the table of contents for the June issue, MajGen William F. Mullen's rank was incorrect. He is a Major General. The *Gazette* regrets this error.

Maneuver Warfare

📄 "I was delighted when I read the article "Maneuver Warfare: The Way Forward" (GySgt Neil D. McCoy, et al., *MCG,* May20 web) for several reasons. First, because the authors wrote in a clear, logical, and grammatically correct manner. It is unfortunate that we do not often see such quality writing from Marine Corps leaders—officers or NCOs—these days. Second, because the authors, in my view, correctly identify a very real problem: that Marines too often fail in practice to live up to the Corps' fundamental doctrine. Importantly, they acknowledge that maneuver warfare doctrine applies to all Marines regardless of MOS or assignment. Third, because the authors focus on solutions that will require the Corps to change in three critical area—personnel management, training, and professional education.

I was privileged to be at Quantico in the 1980s and 1990s when the post-Vietnam War intellectual revolution was at its height. In those years there was an unmistakable sense of energy and excitement in the many official and after-hours discussions about warfighting and the way ahead. The products of those many stimulating intellectual engagements and proof-of-concept wargames and exercises found their way into *Fleet Marine Force Manual 1, Warfighting* and its successor *Marine Corps Doctorial Publication 1.* That the Corps has not fully embraced that doctrine and its implications attests to the difficulty of making lasting institutional change, and also sadly reflects a lack of institutional commitment over the past two and a half decades.

In my judgment, the Marine Corps is again in need of an "intellectual gunfight" to uncover what Marines should believe about warfare as they prepare for the future. Much of the earlier gunfights occurred on the pages of the *Gazette*. My hope at 82 is to witness such an engagement again in the coming months.

U.S. Marine

ANW2 Expanded

📄 Bottom line up front: while ANW2 provides the data rates and adaptability critical to enabling rapid fire support beyond-line-of-sight, its constant UHF emissions are far too easy to direction find. The Marine Corps must find solutions that provide ANW2's advantages without the deadly risk to force protection.

Surprisingly, Maj Adrian E. Ybarra, et al.'s ode to adaptive networking wide-band waveform (ANW2) never mentions the risk ANW2 creates (*MCG,* Apr20). ANW2's great advantage, that the network is able to self-heal by "[updating] its routing path [i.e., transmitting] every 30 seconds," is—against a peer—its greatest weakness.

2dMarDiv completely removed ANW2 from its communications plan during MAGTF Warfighting Exercise 1-20 because of the ease with which an adversary can use the ANW2 signal to determine a unit's location. The Division relented for 10th Marine Regiment, whose combat operations center was then (notionally) destroyed by the adversary force.

Because they rely on rapid, reliable data communications, artillery units present the greatest challenge for communications planners in the Marine Corps. This communications problem will worsen as we move from the M777 to systems with greater range. However, to present ANW2 as a key solution without acknowledging the risk is dangerously misleading. There are simple technical solutions to mitigate the risk presented by ANW2, like reducing how often radios transmit or using directional antennas which are harder to pinpoint. ANW2's successors may be better suited for communicating without being found. Finally, the Marine Corps' new satellite communications-based Multiple User Objective System allows data transmissions off a PRC-117G like ANW2, with less risk to the force.

ANW2 is not a communications solution for fire support that today or tomorrow's Marine Corps demands. Without a better solution, our artillery units will end up in the dark—or dead.

Capt Z.J. Blanchard

The Road To Irrelevance: The Marine Combat Engineer Regiment

📄 I recently received my May 2020 copy of the *Gazette* and was quickly drawn to LtCol Walt Carr's article extolling the virtues of consolidating engineers. He mentions this is not a new concept, and the reason is easy to understand: consolidation leads to irrelevance. As a retired Combat Engineer and Logistician, serving in every element of the MAGTF to include the Supporting Establishment, I can tell you I lived through many of my peers continually going down this same road. It will not happen for several reasons:

Engineers are unique on the battlefield because we bring combat support and are a combat multiplier in every element of the MAGTF—capabilities that every major subordinate element commander (i.e., MarDiv, MAW, MLG) wants and will not give up. As a combat logistics regimental commander in the MLG, I wanted my engineer company from the engineer support battalion training with me whenever possible and ideally being part of the regiment!

With this strength comes the leverage to shape the battlefield and apply that combat support to the fight on which the commander is focused. With this strength comes the ability as an engineer to educate and insure engineers are used and task organized properly for combat. Numerous times as a combat engineer company commander I had the commander and S-3's ear and used my expertise as an engineer to shape their decision making.

Having structure come from the Supporting Establishment to create this regiment is flawed from the start. There is not enough operations and maintenance (O&M) funding to cover training and maintenance activities, let alone an increase in civilian force structure. Yes, civilians are paid with O&M—the same O&M that pays for training, supplies, and maintenance. The O&M hose runs dry before it gets to the Supporting Establishment. No operational force commander will forfeit O&M to cover increased civilian force structure.

Letters of professional interest on any topic are welcomed by the *Gazette*. They should not exceed 300 words and should be DOUBLE SPACED. Letters may be e-mailed to gazette@mca-marines.org. Written letters are generally published 3 months after the article appeared.

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

I end with a quote from Gen James N. Mattis, "the speed of relevance." Consolidating engineers and adding layers of unneeded command in order to think they will be employed properly will not allow for this speed.

Col Yori R. Escalante, USMC(Ret)

C2

📄 Maj Brian Kerg proposes in "More Command, Less Control" (*MCG*, Apr 20) that S-6 officers be employed as command and control (C2) officers and not as communications officers. While this merits consideration, there is an alternative model.

The alternative is to build on the legacy of success built on air C2 Marines by creating an occupational field of MAGTF C2 experts. Marine aviation's C2 Marines are in the 72XX and 59XX occupational fields. These Marines are competent in C2 tactics, techniques, and procedures, including the dissemination and formatting of messages, common operational picture management, tactical data links, emissions control, and integration of the ACE in to the broader MAGTF and joint schemes of maneuver. They are also competent users of various C2 systems, like Theater Battle Management Core System, Advanced Field Artillery Tactical Data Systems, and similar systems. They are experts in C2 as a warfighting function as it applies to air combat while relying on critical communications expertise provided by the outstanding 06XX communications Marines in aviation C2 units.

MAGTF C2 Marines likewise would be experts in MAGTF combat operations center operations and proficient in the use of the full array of MAGTF C2 systems, orders development and transition, and operations of MAGTF current operations sections. It may make sense to employ these C2 experts in the GCEs' and LCEs' combat operations centers, too.

Such an arrangement would free communications Marines to focus on constructing and fighting the communications architecture on which the C2 warfighting function relies. This is not a simple task considering today's competitive operating environment and adversary capabilities. It surely demands the absolute best of our existing communications Marines. We need both highly proficient C2 Marines, and communications Marines. This alternative proposal allows for both.

LtCol Nate Lauterbach

MWX 1-20 Summary from CG, 2d MARDIV

When I took command of 2d Marine Division in August of 2018, one of my priorities was to conduct a Division(+) force-on-force exercise against a peer adversary in order to create an environment that would allow me, my subordinate commanders, and the entire Division to test its capabilities in a cauldron that replicated the extreme stress and friction of combat. Working closely with the Commanding General of the Marine Air-Ground Task Force-Training Center at Twentynine Palms, we embarked on preparation and execution of what became MAGTF Warfighting Exercise (MWX) 1-20. The Corps' preeminent venue for a large force-on-force exercise is in the high desert environment of California and was the only base in the Marine Corps large enough to host such an ambitious exercise. My intent was to test the Division in a force-on-force exercise with its current capabilities against a peer threat in a domain disadvantaged environment: a ''fight tonight'' exercise. From the beginning, my focus was to train and educate the commanders, staffs, and individual Marines and Sailors on how we would fight TODAY against current adversaries. Our focus began developing capabilities and procedures for surviving and winning in a domain disadvantaged environment where we no longer enjoyed air superiority and were challenged across the visible, thermal, IR, and electromagnetic spectrum. This was particularly challenging as we struggled to understand our electromagnetic signature as well as that of our adversary and to develop the tactics, techniques, and procedures required to maneuver, survive, and thrive within these challenged spectrums. Another focus area was to develop smaller, distributed, mobile, and survivable C2 nodes that were rapidly deployable and mobile so that we could move inside the enemy's D3A cycle and continue to command and control despite the adversary's advantage in front line intelligence, surveillance, and reconnaissance and long-range precision fires capability. In addition, I wanted to stress the Division's organic and direct support logistical capability by deploying a 12,000 personnel force with its associated equipment from eastern North Carolina directly into the fight, sustaining that force, and redeploying it while maintaining a 85 percent materiel readiness rate to ensure we were capable of reacting to any potential real world tasking throughout the entirety of the exercise. Supporting this distributed force in the field while trying to avoid an adversary's sensors and fires as well as simultaneously keeping units combat ready, dealing with significant numbers of casualties with slimmed down forward medical capabilities, and fixing and removing damaged equipment from the battle space all proved challenging. In the end, I wanted to place myself, my subordinate commanders, and staff in a fight where the results of our decisions, in the face of a thinking enemy, were real and not based off of any computer simulation.

When we returned to Camp Lejeune, we began a very deliberate and thorough after-action review (AAR) process. The AAR resulted in refinements to the Division Tactical Standing Operating Procedures and were incorporated into the Division's long-range training plan. Finally, all participants were asked to write articles for the *Marine Corps Gazette* and *Leatherneck* magazine in order to share their experiences with a wider audience in a professional forum. The articles in this month's *Gazette* are the result of this effort. These articles are not perfect; however, it is clear to me that one of the major factors contributing to the success of the Navy and Marine Corps in World War II was the rigor, honesty, and frankness with which they conducted the inter-war Fleet Exercises. The Navy and Marine Corps of 1930 established aggressive free-play exercises and a meticulous AAR process in order to develop, refine, and perfect the operational concepts that led to victory in the war in the Pacific. These articles endeavor to stimulate intellectual discourse as a means to improving the tactical and operational performance of the Service's Ground Combat Element. The Division's execution during MWX 1-20 was far from perfect, but I cannot imagine a better way to truly test a unit. The results far exceeded my expectations and I and the Division are indebted to MAGTF-TC, TTECG, MCLOG, and MCTOG and everyone who supported us and made this invaluable training possible.

D.J. Furness
Commanding General,
2d Marine Division

Cover and Concealment Revisited

Sustain and refine techniques
by Capt Michael A. Bianca

Cover and concealment is not a new concept, and the difference between the two is often drilled into entry-level students early in their careers. The recent shift toward peer and near-peer competition has raised the need to review how communities perform the art of cover and concealment. During 2dMarDiv's recent MAGTF Warfighting Exercise 1-20, 2d AA Battalion tested multiple concepts designed to mask our physical signature. The battalion reviewed *FMFRP 12-96-I, German Experiences in Desert Warfare During World War II* to focus our testing on relevant lessons learned. As with many lessons, history proved to be a useful place to start.

Battalion representatives tested two forms of concealment, the classic "garage-style" netting, as taught in entry-level crewman courses, and the "shaggy hog." Initial attempts to create a shaggy hog—camouflage netting that is cut and draped over vehicles—proved unreliable at Camp Lejeune because of its propensity to snag on the local vegetation while on the move. While in the desert of Twentynine Palms, however, this proved to be more reliable at breaking up the hard lines of the vehicles, even while the vehicle was stationary. A better option would be ensuring that all vehicles and equipment are outfitted with enough camouflage netting to both shaggy hog the vehicle as well as construct the classic garage-style netting. The garage-style netting must be tied to terrain, and crews must be given the

>*Capt Bianca is a Company Commander with 2d Assault Amphibian Battalion. He deployed as the 24th MEU's Assault Amphibian Platoon Commander between 2014-2015.*

flexibility to adjust vehicle locations to best tie into the terrain.

Fighting and command post positions that tied into the veins of mountains proved nearly impossible to spot from the air and provided the best defense against tube artillery when at long ranges. Despite significant effort, vehicles in the open proved to be relatively easy to identify from both high ground and the air—even when integrated with the large bushes and vegetation. If integrating heavy equipment to dig vehicles in, the spoil of the dig should be covered—if possible—by the netting. Rehearsals like all warfighting skills greatly improved the time required to construct garage-style netting. The average crew at the beginning of MWX clocked at twelve minutes to erect their netting, reducing that time to just five minutes by the end of the exercise. The initial assumption by the battalion was that the green netting already found on the vehicle would suffice within a desert environment, but it became clear that dedicated desert netting proved far superior—even after the green netting became shaded with dirt and sand.

Command and control nodes require a clear plan to remain concealed. Vehicle dismount points should be 300-400 meters away from the nodes in order to avoid vehicle "parking lots" forming in too close a vicinity to the node. Supplemental equipment (i.e., trailers, generators, etc.) must have its own camouflage netting and be concealed in the same manner as vehicles. Air defense batteries should be placed far enough away from nodes to avoid inadvertently giving away the location of a high-payoff target when engaging targets. Enemy forces know these are low-density assets and are likely placed in defense of key targets.

Moving at night should be viewed as a requirement, and night terrain training must not be restricted to flat topography. Commanders must be willing to accept risk and force Marines to operate their vehicles over broken and rocky terrain in order to improve their driving and judgment skills. While moving in the broken terrain of the veins of mountains or dried riverbeds, dismounting rear crewmembers and having them proof routes has proven to be a reliable technique.

As with all skills, the lessons learned from reviewing history enabled quick and focused learning. Leaders must not stop at merely reading history; they must continue to give Marines the opportunity to employ their learning in a stressful, physical environment. The continued imperative now is to document in detail, sustain, and further refine those realized techniques.

USMC

JBC-P

A legacy program we can't do without
by 1stLt Tim Coulter

With enemy aircraft buzzing overhead, a young radio operator in 3d Battalion, 8th Marines sat with his eyes glued to a dim screen mounted on the dashboard of a joint light tactical vehicle. His vehicle was one of four parked in a U-formation and nestled under some camouflage netting against the side of a hill—the entirety of the battalion's sleek and mobile command operations center (COC). He was on watch, monitoring the traffic on the Joint Battle Command–Platform (JBC-P, commonly referred to as the BFT or Blue Force Tracker). The sense of urgency in the command started to build. Distance and terrain already made VHF communications with the regiment impossible. Now with the sun going down, HF data transmissions, which were reliable throughout the day, were beginning to fail. The other radio operators furiously worked to reestablish the HF link, but on the JBC-P critical intelligence updates from the regiment continued to flow. After receiving each update and quickly consulting with the intelligence chief, the operations officer examined the common operational picture map board. From here, with his eyes fixed on the map, he picked up the handset for battalion TAC 1 and directed the battle.

In November's MAGTF Warfighting Exercise (MWX), 2dMarDiv was given an unprecedented challenge: a peer enemy with air dominance. Understanding the implications of this air-contested environment, battalion staffs across the Division experimented with low signature, mobile COCs like the one just described. Joint light tactical vehicles, man-portable generators, mobile HF, and MAGTF common handhelds were just a few of the new or non-standard pieces of equipment

>1stLt Coulter is the Communications Officer, 3d Battalion, 8th Marines.

that teams integrated into their command and control (C2) nodes. While many Operations IRAQI FREEDOM/ENDURING FREEDOM-era capabilities such as the COC capabilities set, Tactical Elevated Antenna Mast Systems, or Advanced Networking Wideband Waveform networks were left out in order to increase speed and maneuverability as well as decrease physical and electromagnetic signature, the JBC-P proved to be an indispensable legacy system. In fact, the division as a whole would not have been able to effectively conduct C2 in a peer-to-peer environment without it. The JBC-P allowed commanders to maintain combat lethality and situational awareness while

The other radio operators furiously worked to reestablish the HF link, but on the JBC-P critical intelligence updates from the regiment continued to flow.

keeping a low electromagnetic signature. Unfortunately, as of 31 December 2019, the Marine Corps cut all funding toward the system, and the authorized acquisition objective for all units is zero. In short, the program has been eliminated. This is a serious mistake. The JBC-P is scalable and low-profile, and it allows commanders to be flexible, interoperable, and maintain over-the-horizon communications; it is critical to battalion C2 capabilities and must be maintained as we look toward a future of peer or near-peer conflict.

MWX was the first opportunity for many units to exercise the scalable nature of the JBC-P. The system was primarily developed so that commanders could track distributed units throughout the battlespace using position location information (PLI), but it also provides a chat function that allows users to send messages between terminals. When utilizing the system to its full capabilities, the PLI function requires each transceiver to almost constantly ping the satellite—effectively lighting up the electromagnetic (EM) map with a signature that can be targeted and killed. When operating in permissive environments, the benefits of PLI information far outweigh the risks of being targeted; however, in a highly contested environment, where the enemy is capable of monitoring the EM sphere, signature management is a critical aspect of force protection. Across the Marine Corps, units are developing emissions control procedures in order to ensure that their electronic emissions do not get them killed. Generally, this has led units to rely more heavily on HF chat, which emits almost undetectable transmissions. Notably, however, the PLI function on JBC-P can be temporarily disabled, allowing users to operate the chat function only. Similar to HF tactical chat, the JBC-P chat signature is minute, utilizing a microburst transmission that can be seen for only a split second; however, it is resilient even when HF is not. HF systems, especially

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when attempting to execute an over-the-horizon shot, are sensitive to solar and atmospheric conditions. Therefore, they are unreliable during periods of light transition—when our forces are most vulnerable. JBC-P, however, remains effective during these transitions and allows commanders to seamlessly maintain C2. In essence, JBC-P is a more resilient and critical C2 asset that can be tailored to an ever-evolving battlespace and utilized across the full spectrum of military operations. HF tactical chat is not the preeminent solution to communicating in contested environments; JBC-P is. This was made abundantly clear at MWX as units across the Division scaled back the capabilities of the JBC-P to chat only. Regardless of time or location, they maintained constant and effective communication as well as a low signature that kept them out of the enemy's crosshairs.

In addition to being low signature, the JBC-P provides beyond-line-of-sight, expedient communication on the move that no other system in the Marine Corps can replicate. This allows commanders to conduct distributed operations with flexibility, knowing that his units can talk no matter where they are. Marines have always been expected to conduct distributed operations in the roughest mountains, thickest jungles, and overall worst environmental conditions known to man. Simply put, this makes establishing reliable communications a nightmare. VHF and UHF systems at the infantry battalion may provide communications on the move, but they require line-of-sight, inhibiting the commander's ability to maneuver with speed and focus in any clime or place. JBC-P, on the other hand, has beyond-line-of-sight capabilities and allows the commander to distribute his units without concern for communications, expanding his warfighting capabilities. While HF and satellite communications systems do provide beyond-line-of-sight capabilities, they require the unit to pause and establish satellite terminals or large field expedient antennas that not only slow operational tempo but also increase the physical signature that can lead to a unit being targeted and killed. The JBC-P's vehicle mounted, vehicle

powered system with a roof-mounted transceiver that automatically tracks the satellite and gives the commander speed in both time and space, allowing the commander to seize initiative and exploit gaps. The JBC-P system is the best of both worlds: on-the-move and beyond-line-of-sight communications that give a combination of speed and focus indispensable to the battalion command.

The JBC-P is not a broken program.

Finally, JBC-P is interoperable with the joint forces. The Army, a Service we work with frequently, relies heavily on JBC-P, and its system is completely compatible with the Marine Corps'. The compatibility is unique; even single channel radio systems, the most fundamental and widely used means of communications in the Marine Corps, suffer from compatibility issues with the Army. Different versions of firmware on the radio, different crypto, and different frequency hopping features are all significant obstacles when conducting joint operations. In fact, units from both Services often spend days troubleshooting communications issues during joint operations. With JBC-P systems, however, terminals are interoperable, and updates are pushed from a centralized source. Crypto keys are the same for both Services, and host names are standardized so that units can easily find and communicate with adjacent units—regardless of Service and without prior coordination. In essence, JBC-P empowers commanders to easily coordinate across the joint team, making them more flexible, more adaptable, and more lethal.

While the Army has increased spending on the JBC-P, and as the Navy is replacing one of its main ship-to-shore transmission systems with the JBC-P, the Marine Corps is no longer investing in access to the satellite. The system has been rendered obsolete, considered as a legacy system of a bygone counterinsurgency era, and will be out of the

communications shops across the Marine Corps within the next year. This is a major mistake. There are many Operation Iraqi Freedom/Enduring Freedom-era programs that are outdated and have no place in a peer-to-peer conflict, but this is not one of them. With no other system in our inventory that can replicate the capabilities of the JBC-P and with no scheduled replacement until fiscal year 2025, there will be a noticeable gap in C2 capabilities at the commanders' disposal. The beyond-line-of-sight, on-the-move capabilities provide commanders with both speed and the ability to focus efforts from distributed units. The joint interoperability aspect provides commanders with the flexibility to coordinate with adjacent units, regardless of Service.

The low-signature nature of JBC-P data transmissions make it invaluable in an environment where managing EM signature is essential to force protection. JBC-P is not obsolete; it is a tailorable, scalable asset that provides options to commanders. It can be utilized to its full extent in a permissive environment or it can be used in a more limited, low-signature capacity in highly contested ones.

The global threat environment is evolving, and our military is evolving with it. However, it is important that we do not waste valuable time and resources on fixing programs that are not actually broken. The JBC-P is not a broken program; it is a valuable asset for the future near-peer fight. The Marine Corps should continue to train with and invest in JBC-P because it will enhance combat lethality in any clime, any place, and against any enemy.

USMC

Seeing Purple

Joint ISR integration takeaways from the MAGTF Warfighting Exercise
by LtCol Paul L. Croom II

From October through November 2019, 2d Marine Division (2dMarDiv) participated as the exercise force (ExFor) in Marine Air-Ground Task Force Warfighting Exercise 1-20 (MWX 1-20) at Marine Air-Ground Combat Center Twentynine Palms, CA. MWX was a live, force-on-force evolution that enabled the 2dMarDiv Commanding General, his staff, and several major subordinate elements and external enablers to exercise high-end warfare decision making across distributed and physically dislocated command and control (C2) nodes in a challenging multi-domain environment against a living, thinking, and capable peer adversary. The adversary force (AdFor) comprised 7th Marine Regiment (7thMar) representing a mechanized infantry corps, augmented with tilt-rotor, fixed- and rotary-wing attack and assault support, armor, long-range cannon and rocket artillery, mobile air defense systems, unconventional warfare enablers, various small unmanned aerial systems (sUAS), electronic warfare capabilities, and information related capabilities for operations in the information environment.

The multi-day force-on-force evolution began with the ExFor in the defense and the AdFor attacking under air superiority. After a brief suspension of battlefield effects and training pause, the exercise landscape was reset, and the ExFor assumed the offense. The ExFor itself numbered roughly 12,000 personnel. When adjusted for numerous post-destruction regenerations, as curated by the MAGTF Training Command (MAGTFTC) exercise control cadre in order to maintain exercise tempo, the AdFor approximated a corps-strength unit in excess of 20,000 combatants.

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Intelligence Operations in the Distributed Fight

Both the defensive and offensive phases of the exercises provided the Division G-2 interesting challenges to effectively reducing the Commanding General's uncertainty and aiding his decision making. The ExFor executed C2 from dispersed main, forward, and alternate distributed C2 nodes, and across numerous subordinate elements facing diverse and difficult individual weather, terrain, and adversary problem sets. In particular, the Commanding General's mandate during the defense was survivability: to be sensed was to be targeted. In the offense, the G-2's challenge was locating and positively identifying adversary formations in order to facilitate decisive action.

Airborne sensing platforms organic to the Division included RQ-11B Raven, RQ-12A Wasp, RQ-20B Puma, and quadcopters, all Group 1 or Group 2 sUASs. Additionally, the Reconnaissance Battalion provided a credible terrestrial surveillance and target-acquisition capability, able to reconnoiter the division deep battlespace. II MEF's Information Group also provided the
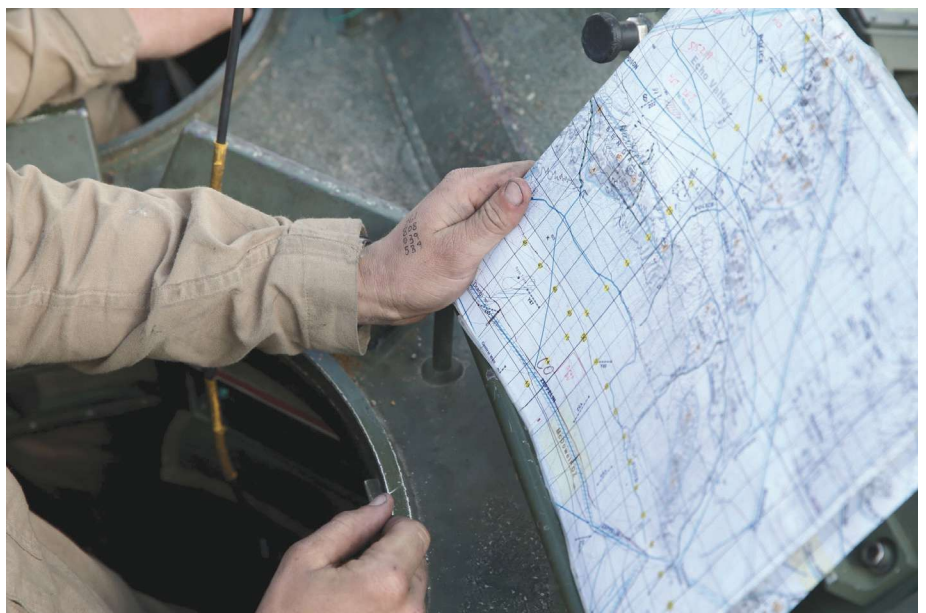
Our efforts focused on reducing uncertainty. (Photo by Cpl Elijah Abernathy.)

Division with signals intelligence and radio reconnaissance teams, unattended ground sensor teams, and a counter-intelligence/human intelligence team attached to the Division for employment in accordance with planned schemes of maneuver.

The preceding sensing capabilities are proscribed by doctrine and what GCEs have deployed with and come to expect over the last two decades. That these assets are organic or easily and regularly attached provides considerable responsiveness and flexibility in employment. However, organic unmanned airborne intelligence, surveillance, and reconnaissance (ISR), in particular, is significantly limited in range, endurance and capability. Accordingly, for MWX, the Division G-2 sought to augment the intelligence collection effort with both unmanned and manned airborne joint ISR. The ExFor was supported by the following joint platforms:
• Four RQ-7B Shadows of 3rd Squadron 6th Cavalry Regiment, Combat Aviation Brigade, 1st Infantry Division from Fort Bliss, TX. Electro-optical (EO) and infrared (IR) capable. Nine hours endurance.
• One MQ-1C Grey Eagle from Company B, 229th Aviation Regiment from Fort Irwin, CA. EO, (IR), synthetic aperture radar (SAR), laser designation/illumination. AGM-114 Hellfire capable. Twelve hours endurance.
• One MQ-9 Reaper from the Operational Support Squadron (OSS), 163rd Attack Wing, operating out of March Air Reserve Base, CA. EO, IR, laser designation/illumination. Twenty hours endurance.
• One E-8C Joint Surveillance Target Attack Radar System (JSTARS) from the OSS, 116th Air Control Wing at Robins Air Force Base, GA. Ground Moving Target Indicator (GMTI) and SAR. Nine hours endurance.

Employment of each asset was directly tied to friendly scheme of maneuver and was consistent with priority tasks in each phase.

Joint ISR in the Defense

The RQ-7Bs (Group 3) were maintained in general support of the Division for the duration of the ExFor's occupation of the defense. With four airframes and two ground control stations (GCSs), the Division enjoyed a 24-hour aloft presence of this Group 3 asset. Initially, the collection effort was split across two competing priorities. MAGTFTC had stipulated that no ExFor units or assets were authorized to move east past the 87 Easting until either 24 hours after the start of the exercise or unless the ExFor could positively identify or was engaged by AdFor forces west of the 97 Easting. In accordance with these constraints and restraints, Shadow was tasked to surveil for AdFor activity as far east beyond the 97 Easting as able while still maintaining adequate standoff from AdFor air-defense assets. Simultaneously, the AdFor exploited its air superiority with regular aerial reconnaissance and strike coordination and reconnaissance sorties through the Division battlespace, while AdFor SOF and unconventional warfare forces attempted to conduct reconnaissance and disruption activity in the Division rear area. Against these threats, Shadow was employed in a force-protection role, using both EO and IR still imagery and full motion video (FMV) of friendly positions to assist ExFor units in optimizing their physical- and thermal-signature management.

In the defense, the singular MQ-1C (Group 4) was employed similarly to the RQ-7B, in both identification of enemy activity and force-protection roles. MAGTFTC restricted MQ-1C sensor use to only EO and IR, effectively nullifying the Division's ability to see well beyond the 87 Easting that the Grey Eagle's SAR capability would have provided.

Joint ISR in the Offense

Once the ExFor attained air superiority and transitioned to the offense, both the RQ-7Bs and the MQ-1C were leveraged principally against three tasks: confirm or deny enemy activity at designated named areas of interest, maintain positive identification of located AdFor elements, and provide fires observation and battle damage assessment in support of ExFor engagements and the attack guidance matrix. Both the Shadow and Grey Eagle also provided limited strike coordination and reconnaissance support for fixed- and rotary-wing attacks against identified AdFor targets. As the MQ-1C is a multi-role asset, it flew several of its sorties notionally armed with two AGM-114 Hellfire missiles and did successfully self-prosecute several targets. The MQ-9 (Group 5) was employed in a hunter-killer role during its six-hour on-station time, while the E-8C orbited outside the northwestern corner of the ExFor's area of operations. Orbiting at above 30,000 feet, JSTARS could not be ranged by any of the AdFor's air-defense assets and was in optimal positioning to employ its GMTI and SAR capabilities.

Observations and Challenges

Equally though, employment of these assets during MWX was often complicated and labor intensive, required significant concessions by some sections in order to properly utilize them, and sometimes did not provide the advantages expected. Because of the distributed nature of the ExFor's concepts of operations and scheme of maneuver, viable communications architecture across time and space was a critical requirement across the Division, and no less so for collections operations management (COM). This architecture manifested as a conglomeration of radios, antennas, computers, and personnel located at key points of convergence to enable successful management of these airborne assets. Broadly, takeaways in creating and employing non-organic airborne ISR fell into three categories: COM; collections requirements management (CRM); and processing, exploitation, and dissemination (PED).

In this instance, division defined COM for non-organic airborne ISR as the personnel, materiel, and processes required to maneuver and employ the airframes and their collection payloads against tasked requirements. CRM was the management and deconfliction of collection tasking between and among requesting units, as well as among collection assets. PED included both the in-person viewing and review of FMV feeds; realtime analysis of FMV feeds

by trained 0241 Imagery Analysts; and the transfer, conversion, analysis, interpretation, annotation, production, and dissemination of imagery intelligence products from still photographic captures.

RQ-7B

The RQ-7Bs required two separate and distinct ground control stations (GCSs), separated by at least one mile, to operate two airframes simultaneously. These GCSs were outside of direct wiring range of the Division G-2 rear location, the *ad hoc* locus for non-organic ISR operations.

At the Division G-2 rear, 0231s and 0202s/0203s maintained overall cognizance of COM, primarily across Transverse: a chat application on the Secure Internet Protocol Router Network (SIPRNET). SIPRNET connectivity was reasonably stable and reliable from the division to regiment levels and allowed real-time input to repositioning of airframes and sensors, and feedback on collection tasks. The ExFor placed 0231s with SIPR laptops and transverse at both RQ-7B GCSs, and those Marines relayed information and tasking from the Transverse chat windows to the Shadow operators with whom they were collocated. The ExFor placed a One System Remote Video Terminal (OSRVT) at the main, forward Regimental Combat Team 2 and at the Division G-2 rear in order to ensure each major C2 node and the ISR hub possessed the ability to view Shadow FMV in real time.

MQ-1C

The MQ-1C GCS was also out of direct wiring range of the Division G-2 rear location. Unable to establish a remoted SIPR presence in the MQ-1C GCS, the ExFor requested the Grey Eagle squadron place a representative, AN/PRC-117 radio, and OE-254 antenna in the Division G-2 rear. This Soldier initially served as the information and tasking conduit between the Grey Eagle GCS and the Division G-2 rear ISR node. Once the Division G-2 rear Marines became sufficiently familiar with the radio functionality and procedures, they assumed the Soldier's role

The MQ-9 was used in general support of the Division. (Photo by LCpl Colton Brownlee.)

and responsibilities. This eliminated the "middleman" in MQ-1C tasking and employment. MQ-1C FMV was also accessible through the OSRVTs at the C2 nodes and Division G-2 rear.

In particular, while the ExFor was in the defense, RQ-7B and MQ-1C were used extensively in support of force protection by way of informing friendly force physical- and thermal-signature management. The Shadows and the Grey Eagle were provided general grid areas for ExFor positions and tasked to reconnoiter those areas in an attempt to locate and identify the positions. During these sorties, the payload operators created still photographs from the EO and IR FMV feeds. Unfortunately, those still images could not be transmitted in real time. As well, the OSRVTs could not be connected to any of the ExFor's tactical data networks and are not equipped to connect to, or transmit, via WiFi. These constraints meant the Shadow and Grey Eagle operators had to physically move the data from OSRVT or GCS, via thumb drive, to a computer that could either burn the images to CD or DVD, or transfer large files over email or file transfer protocol. Once the Division G-2 rear received the still images, the 0241 analyzed and annotated the imagery, and disseminated the finished intelligence product to end users throughout the ExFor. While

nominally effective, this PED process resulted in significant latency from time of collection to time of utilization.

MQ-9

Because of its integral sensor-shooter capability, the ExFor intended to employ the MQ-9 in general support of the Division against identified high-value or time-sensitive targets during its single sortie in the offense. The MQ-9's GCS was almost 100 miles away in Moreno Valley, CA, which obligated a dedicated communications pathway between its operators and the supported ExFor at MCAGCC. Consequently, the 2dMarDiv relocated a joint terminal attack controller to the Division G-2 rear to exercise both COM and CRM for the duration of the Predator's sortie. Unlike the Group 3/4 UAS, the OSRVT is not compatible with the MQ-9. As such, the Division G-2 rear used the online FMV hosting client ISRNET and its integrated chat function to pull the Predator FMV feed and manage airframe and sensor operations. ISRNET runs over the Non-secure Internet Protocol Router Network (NIPRNET). All NIPRNET services requiring Internet access were suspended during the MQ-9's on-station time to ensure sufficient bandwidth was present to support the ISR feed on three NIPRNET workstations inside the Division G-2

rear. The Division G-2 rear was the only location where the MQ-9 FMV feed could be viewed and COM/CRM could be performed, as the NIPRNET service produced insufficient bandwidth for ISRNET at the main, forward, and alternate C2 nodes. In this construct, the JTAC had two computer terminals in front of him employed simultaneously: SIPRNET with Transverse over SIPRNET to receive tasking for the Predator from the main or forward as well as to communicate target positive identification and target positive identification, battle damage assessment, and other data to them; and NIPRNET with ISRNET for communication with the MQ-9 operators.

JSTARS

Although JSTARS is a manned asset, the ExFor still required an interlocutor for COM and CRM. The 116 Air Control Wing provided their assistant director of operations, a major, as a liaison officer (LNO) to be placed where he could best optimize the E-8C's support. JSTARS also required a purpose-allocated voice or data link between the aloft operators and the Division on the ground. The payload operators airborne in the E-8C pushed GMTI tracks and SAR imagery through a SIPRNET-hosted application called MOVINT Client that is resident on the common intelligence workstation's standard software load. The ExFor initially planned to place the LNO at the Division main to more seamlessly support the current operations fight. Ultimately, considerations of limited SIPRNET bandwidth and frequent displacement requirements at the main and forward drove the ExFor to locate the JSTARS LNO in the Division G-2 rear.

Universal Considerations

Although many personnel within 2dMarDiv had worked with joint ISR platforms in various operational theaters over the past two decades, few had experience incorporating Group 3/4/5 UAS and JSTARS into tactical-level planning and execution against a peer adversary. Facing an adversary possessing viable air-to-air, surface-to-air, and long-range precision surface-to-surface

fires forced numerous hard conversations—and even harder decisions—at the Commanding General and regimental commander levels on where to allocate these joint ISR assets and where to accept risk. In the distributed C2 construct the ExFor adopted for MWX these considerations were only amplified.

From an administration and logistics standpoint, the Division G-2 had to reach out early, regularly, and often across the MWX exercise life-cycle to identify and coordinate participation by appropriate Army and Air Force units with adequate white space in their training and exercise employment plans. Preparation immediately ahead of the beginning of the exercise required some flexibility by the Division and supporting ISR units alike. For the Grey Eagle squadron, MWX was the first opportunity to self-transport their personnel and equipment. Because the unit was accustomed to either supporting training events at home station or falling in on equipment in operational theaters, the transportation of things and people from Fort Irwin to MCAGCC presented a unique but welcomed challenge. Equally, because no MQ-1C had ever launched or recovered from the expeditionary airfield at Camp Wilson, a lengthy runway certification process limited the Grey Eagle's availability prior to the beginning of the exercise.

As low-density theater assets, both JSTARS and MQ-9 availability were tenuous throughout exercise planning. Through no fault of their own, initial plans for multiple sorties from each platform became single sorties aligned to critical points in the ExFor scheme of maneuver. Special recognition is due to Air Force Maj Wendell "NEMO" Noble, Jr, the JSTARS LNO who supported the exercise at the Division G-2 rear. When the original plan for JSTARS support out of Nellis AFB fell through, his tireless efforts and drive to succeed motivated his unit to fly its sortie as an "Iron Man" mission: Atlanta to Twentynine Palms, six hours on-station providing GMTI, SAR coverage and combat cueing, and then back to Atlanta, non-stop—an almost 30-hour sortie. This anecdote is but one of many

that underscored the criticality of the human factor in 2dMarDiv's successful integration of joint ISR into MWX. To the man and woman, it was the Soldiers, Airmen, and Marines who enabled the RQ-7B, MQ-1C, MQ-9, and E-8C to play such a significant and successful role at MWX.

Lastly, the ExFor had intended for the Division main, as the primary C2 node, to be the locus of joint ISR management. Even before the beginning of the exercise, though, it quickly became clear that the unpredictability of communications statuses, necessity of periodic emissions control, and requirement for frequent displacement of the Division main would render joint ISR management from the main untenable. Because Camp Wilson was "out of play" for MWX, it provided a static location, largely stable communications without significant emission control requirements, and proximity to Group 3/4 UAS launch-and-recovery sites and GCSs. Accordingly, the Division G-2 rear at Camp Wilson assumed the joint ISR management role. Originally designed as an intelligence production site, the Division G-2 rear was only manned to support a 24-hour 0231 Intelligence Specialist presence in the Division G-2 rear production tent and on the Division rear watch floor, with a Geospatial Intelligence Support Team (one 0241 Imagery Analyst and one 0261 Geographic Intelligence Specialist) working a swing shift. COM for each joint ISR asset required dedicated Marines assigned uniquely to that requirement. CRM also demanded both time and sufficient rank to serve as the final arbiter on contentious competing demands among supported units for a single asset.

ExFor-Level Recommendations

The inclusion of Group 3/4/5 UAS and theater-level airborne GMTI at MWX 1-20 was an unmitigated success from a learning perspective. For the Division G-2, it was clear that the benefits gained through integrating non-organic collection capabilities into the GCE's concept of operations and scheme of maneuver will only compound as the Division refines planning

Recon Marines conduct a safety check before participating in a high altitude air insertion during MWX 1-20. (Photo by LCpl Juan Magadan.)

and employment tactics, techniques, and procedures through future similar interactions. At the MAGTF level, implementation of several recommendations would streamline the Marine Corps' progress toward lasting joint ISR interoperability.

First, the divisions and MEFs should identify and program into their training and exercise employment plans two to three exercises per year in which to incorporate joint ISR assets. This would provide commanders, staffs, and personnel at all levels multiple and recurring opportunities to become familiar with the capabilities, limitations, and practical employment of non-organic ISR—from planning through execution.

Units planning to exercise with non-organic ISR should also register the communications requirements for successful joint ISR integration early in the exercise life cycle and should test these pathways and constructs prior to exercise execution when practicable. Establishing enduring relationships between MAGTF intelligence sections and key points of contact at joint ISR-owning units would help raise collective awareness of these requirements and mitigate institutional knowledge bleed across all-too-frequent personnel turnover.

Finally, units should ensure their ISR CRM and COM apparatuses are staffed and weighted appropriately to the number and type of non-organic ISR being incorporated. The physical site of the ISR management hub should also be deliberately placed at the location most advantageous to support dynamic employment of layered ISR. Though seemingly counterintuitive, this location may not necessarily be with or near the most senior-level commander or current operations C2 node for the fight. Planners should capture and codify these organizational constructs in unit-level combat standard operation procedures.

Recommended Service Solutions

For the Carolina MAGTF, 2dMarDiv can and should drive the development and adoption of courses of action to implement the recommendations above. However, two of the joint ISR integration deficiencies identified during MWX require institution-level remedies.

The exercise unquestionably validated the utility of Group 3/4 multirole UAS operating at the division and regiment levels. A similar capability, but organic to the Division, would drastically increase survivability, lethality, and operational autonomy—especially in a peer fight. Accordingly, the Marine Corps should accelerate doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy analysis for acquisition, and addition of Groups 3 and 4 multirole UAS at the regimental and division levels respectfully.

Execution of MWX also proved that dissimilar UAS video downlink and communications architecture exponentially increases the personnel and man-hour taxes required for a unit to effectively integrate joint ISR. Given the likelihood that any peer conflict in the future may well be fought by the joint force, the Marine Corps should vigorously advocate for the rapid development and fielding of a UAS video and data downlink communications architecture for all current and future Group 1-5 UAS that will be 100 percent common across the entire DOD.

Conclusion

During the last two decades of American military worldwide activities/engagement, worldwide, airborne ISR has proven a credible, capable, and often indispensable force multiplier in the operational space across the range of military operations. In the kinetic realm, low-intensity operations, such as those in Iraq and Afghanistan, have hardly stressed the seams and friction points inherent in employing joint assets in combat. As the Marine Corps retrains its reticle onto the peer and pacing adversaries of today and tomorrow; however, its ability to effectively integrate and leverage the depth and breadth of the United States' ISR arsenal, and at the place and time of its choosing, will increasingly become a de facto measure of readiness. To be sure, ISR is not a panacea for modern and future warfare. Nonetheless, in a multi-domain and/or denied "new normal," survivability and lethality are two sides of the same coin. In this, 2dMarDiv's lessons in joint ISR integration, as gleaned from MWX, are both prescient and timeless: to be sensed is to be targeted.

USMC

Support of Division Command and Control

Modernization of task organization and employment in major combat operations

by Capt Stephen Dally

The 2dMarDiv has recently pivoted from outmoded models of command and control (C2) that were effective during counterinsurgency operations to new methods of C2 that meet the requirements of fighting a near-peer threat. MAGTF Warfighting Exercise 1-20 (MWX 1-20) provided a platform for the Division to test our revised methods of C2 against a thinking enemy at the scale of an infantry division. Truck Company, Headquarters Battalion, provided the framework with which the division moved the preponderance of three C2 nodes throughout

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the battlespace. This model is contrary to Truck Company's original assigned mission, concept of employment, and structure. In order to meet the demands of major combat operations (MCO) in a near-peer fight, HQMC should consider adjusting the table of organization

(T/O) and table of equipment (T/E) to right-size the units that enable the Division's C2 in a communications denied and degraded environment.

The mission assigned to truck company by HQMC is "to provide medium tactical vehicle support to the Marine division in order to support ground combat operations."[1] While admittedly vague, the crux of truck company's mission is more clearly defined in its concept of employment:

> capable of transporting the assault elements of two infantry battalions simultaneously. *Truck platoons will normally be attached to or in direct support of infantry regiments* and are capable of sustained operations on a 24-hour basis.[2]

As currently configured, truck company has four motor transport platoons: three from the truck company organic T/O, and one from Headquarters Company, Headquarters Battalion motor transportation platoon. In typical garrison and training operations, this model meets the expectations of 2dMarDiv. However, to support C2 against a thinking and highly capable enemy, Truck Company significantly reorganized for MWX. Specifically, Truck Company provided leadership, vehicles, and operators to provide lift for the Division forward, main, and rear command posts—which included logistics trains that operated in a general support role for the Division. Meanwhile, one Truck Company platoon participated in Integrated Training Exercise 1-20 and

Marines being briefed before convoy operations during a training exercise. (Cpl Anthony Quintanilla.)

Understanding the role of Truck Company is required to successfully transport division assets during training or combat. (Photo by Cpl Anthony Quintanilla.)

was distributed among three elements subordinate to Regimental Combat Team 2. The last motor transport platoon remained aboard Camp Lejeune to support local operations.

Reorganizing Truck Company for MCO, as experienced through MWX, creates substantial training and leadership challenges to operate at scale. On the one hand, Truck Company is organized and equipped for its T/O mission: supporting infantry regiments with the means to move troops as requirements dictate and not as the primary means to facilitate the transportation of C2

with distributed leadership to support division command posts. The ability to properly transition to new requirements, however, requires a thorough evaluation of T/O, T/E, allocation of personnel and equipment, and training methodologies.

Specifically, creating vehicle commander suites with long-range communications abilities was a significant shortfall, as those capabilities are not organic to Truck Company. Additionally, resident knowledge within motor transport operations is best kept within the motor transport officer MOS. Re-

platoon commander for a year or less before moving on to other logistics officer billets. As such, T/O and T/E changes to the current Truck Company model would positively affect the company's ability to facilitate division command posts.

As the operating environment and appetite for MCO increases, it would be advantageous to officially task organize motor transportation elements to support division command posts if similar models might be used in MCO against near-peer competitors—as opposed to the current construct. In typical garrison and training environments, task organizing motor transportation platoons to meet the requirements of the division, and training to that standard, assumes less risk than the inverse. With the added capacities of long-range communications and motor transportation officers, coupled with regularly planned large-scale events, Truck Company can increase its proficiency in supporting division command posts. To best facilitate this approach, HQMC should consider how future exercises, such as the recently concluded MWX, present new challenges and test current doctrine, and then liberally apply the change needed to meet new demands.

Notes

1. Headquarters Marine Corps, *MCTP 3-40F, Transportation Operations*, (Washington, DC: 2016).

2. Ibid.

> **…*T/O and T/E changes to the current truck company model would positively affect the company's ability to facilitate division command posts.***

nodes. That stated, platoon leadership is concentrated in the platoon itself, and there is significant focus on training that enables that mission prior to any change in operational posture to support those units. On the other hand, Truck Company was operating at MWX in a manner divorced from its stated concept of employment and traditional role by creating *ad hoc* motor transport units

invigorating this subject matter expert would alleviate the burden on logistics officers for one subset of logistics while increasing proficiency with motor transport operators for convoy operations. Skillsets such as land navigation, specific communications requirements, security, among many others, are difficult to perfect in a young logistics officer who, with turnover, can expect to be a

Infantry Battalion Fire Support Assets

Increasing lethality

by 1stLt Miller M. Dial

The counterbattery assets of our near-peer threats have put modern day fire support agencies in a dilemma: Do we opt for more firepower and control with a more centralized force? or, do we choose survivability and speed with a more decentralized concept? This dilemma has forced fire support elements in the modern era to increase lethality and flexibility. Problems like these require an outside of the box solution, which 1st Battalion, 6th Marines (1/6) implemented at the 2dMarDiv's large-scale free play exercise called MAGTF Warfighting Exercise 1-20 (MWX 1-20). 1/6 stressed the importance of the survivability and maneuverability of their internal fire support element, the 81mm mortar platoon. As the battalion's area of operations was established during the planning process, the battalion leadership realized having only two sections of 81mm mortars would not provide the support needed for three maneuver companies and that the enemy we faced possessed the ability to affect our area of operations with long-range counterbattery fire. To counter our enemies, it is essential to re-establish the task organization of the 81mm mortar platoon into three sections in order to increase survivability, maneuverability, and range to support three maneuver companies.

The first advantage to the three-section mortar platoon is the increase in survivability. As we entered MWX, survivability of our platoon was at the top of our mind. As stated in *Tactical Employment of Mortars*,

> To support a commander's intent for mortar fires, a mortar unit must survive an enemy's efforts to eliminate

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We need to reorganize our 81mm mortars in order to provide more effective support to our maneuvering elements. (Photo by LCpl Dangelo Yanez.)

it. Survival requires mortars to avoid detection as long as possible, confuse an enemy as to their true location, and to defend themselves against enemy attacks.[1]

As a mortar platoon, there are three major threats to our survivability: enemy counterfire, enemy air attacks or reconnaissance, and enemy ground attacks. Counterfire is a realistic capability our near-peer threats, Russia and China, possess. The Russian Aistenok radar system and the Chinese SLC-2 radar system have the ability to accurately locate the point of origin and point of impact of

an 81mm mortar round. This ability enables near-peer threats to compute targeting data for friendly mortar firing positions and prosecute that data utilizing their artillery assets. Additionally, friendly indirect fire assets are a major threat to our enemies and thus are highly targeted by them. To counter our enemy's priorities, we should reduce our mortar firing position to two-gun positions because of their unwillingness to unmask their systems to target and destroy a smaller unit. Utilizing a two-gun section concept during MWX proved essential. Finding smaller posi-

tions that offered more defilade, thereby creating dead space for the enemy's low angle indirect fire assets, increased survivability. Additionally, smaller mortar firing positions allow leaders to emplace in areas that the enemy would not template or it would force the enemy to dedicate reconnaissance assets to more atypical areas. For example, at MWX, we received intelligence that the enemy created a named area of interest on ideal mortar firing positions within our area of operations. To combat this, we occupied smaller mortar firing positions the enemy neither expected us to occupy nor dedicated reconnaissance assets to observing. With the two-gun concept, we were able to occupy less space and in areas that the enemy did not expect us to go.

Next, a two-gun section reduces visual signature from aerial reconnaissance and attack assets:

> Camouflage is critical to prevent the identification of mortar positions by the enemy, especially those that use unmanned aerial system in conjunction with ground reconnaissance. Camouflaging is an important technique to survivability of a mortar platoon.[2]

A two-gun section can blend in more easily with terrain and requires fewer vehicles, equipment, and personnel, limiting visibility from the air. Because of our experiences in MWX and ITX, a two-gun mortar section only needs three vehicles compared to a four-gun mortar section that would need six. This decrease in vehicles reduces visual signature and reduces the chances of becoming a target by fixed-wing aircraft. Additionally, with the use of camouflaging netting, mortar units can defeat enemy radar, infrared assets, ground scan radar of attack helicopters, and aerial observation from UAS assets. The mortar sections employed the hide-shoot method, which consisted of our Marines and cannons staying concealed under the camouflage netting until a fire mission was received. The ground defense plan of a mortar platoon is a major priority to a mortar unit leader to prevent enemy ground spoiling attacks. With four Marines on each gun instead of six, an over watch team can be created with the additional personnel. The over watch team would consist of a forward observer, a small UAS pilot, three M203 gunners, and a M240B machine gun team. The team can provide early warning to displace, spoil enemy ground attacks, and establish final protective fires as well as prosecute targets of opportunity.

The maneuverability of three sections in the offense and defense can provide momentum for the maneuver elements by providing constant indirect fires down range. The mortar platoon must be able to provide responsive fires to the battalion, even when the battalion is spread throughout a large area of operations. During MWX, 1/6 occupied a defensive location in three separate positions over a twenty kilometer area. With the three-

"The measure of a country's greatness is its ability to retain compassion in times of crisis."
- Thurgood Marshall

DoD Photo/Lance Cpl. Andrew Cortez
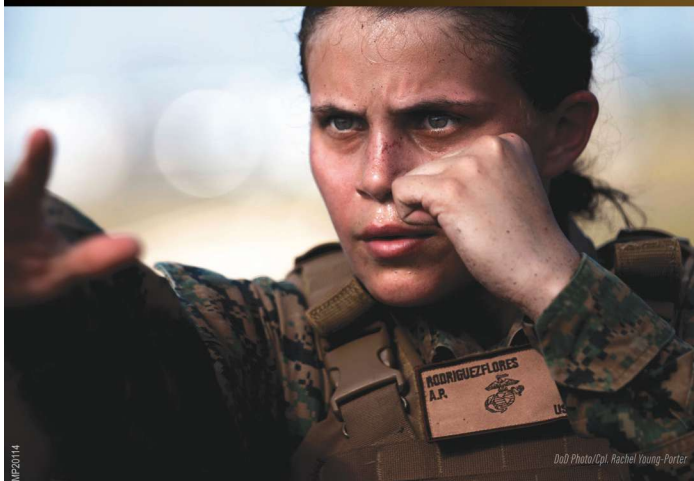
THROUGH ALL THIS ...

You've reinvented yourself.
You've discovered your strength.
You've cared for others and shown compassion.
You are here because you are resilient.
You lead because you are a Marine.

DoD Photo/Cpl. Rachel Young-Porter

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section concept, each rifle company is provided a section of 81mm mortars. During a movement to contact, bounding over watch with three sections provides the most fluid and continuous indirect fire support. Bounding over watch allows the mortar platoon to cover more area as one section is stationary while the other two are moving to their next firing positions. This allows the unit to have constant fire support both forward and around their main body. In defensive operations, a three-section mortar platoon can accomplish more depth in the battalion's area of operations than a platoon with only two sections. In the defense, the first section can support the forward engagement area. Another section can support the main engagement area, and the third can be used to shoot either the final protective fires or isolate a vulnerable flank. It is important to assign different missions to each of these firing agencies in order to allow the firing agency to displace immediately after fire to increase their survivability. This concept allows for flexibility to re-task a section to serve a unique requirement for their area of operations.

During the planning process of MWX, 1/6 identified that having only two sections of 81mm mortars would not provide enough range for three dispersed rifle companies. Each company had an extensive area of responsibility. To solve this problem, battalion leaders found that range and survivability were the highest of priorities for organic indirect fire support. As the battalion set into the defense, one section supported the forward engagement area with the anti-armor and heavy machine gun platoons, another section supported one rifle company's main engagement area, and the third section supported a supporting effort rifle company located in the mountains of Morgan's Well in a dismounted capacity. During these defensive operations, the battalion was able to establish mortar firing positions in key defilade positions which enabled us to remain hidden from enemy UAS assets and prevented us from receiving enemy counterbattery fire.

As the 81mm mortar platoon splits into three sections, there are a handful of concerns that commanders may

have. The depth and width of the sheaf is logically smaller, the ability to mass fires are limited, and some units may not have the personnel to support this concept. How many personnel would it take to re-task organize an 81mm mortar platoon? A proficient 81mm section of two guns can provide the same depth as a moderate four- or three-gun section. The depth can be extended by laying the guns into a staggered position. The width and depth can also be increased by conducting traverse or search procedures on the gun line. While at ITX, our mortar sections were able to allocate one gun to one target in a timeline with three separate targets. Each gun would fire four rounds per volley, with a small turn on the traversing bar. This allowed each round to fall in a parallel sheaf. Ultimately, increasing rounds per volley and utilizing traverse and search procedures on one gun can provide the depth and width of a four-gun section. Massing fire is also achievable with a three-gun section. Through the fire support coordination center, three 81mm mortar sections can mass in the battalion area of operations through the establishment of time on targets. Similar to the manner artillery mass into a series timeline, multiple 81mm mortar sections can do the same.

Task organization is a key factor to the re-task organization of the 81mm mortar platoon. Based on the current table of organization and equipment in the infantry training and readiness manual, an 81mm mortar platoon consist of two sections and a platoon HQ element.[3] The platoon headquarters element of five Marines is as follows: a platoon commander, platoon sergeant, ammo technician, and two ammo men. Each section consists of a headquarters element, a fire direction center, and four gun squads. The section headquarters element includes three Marines: a section leader and two ammo men. Each fire direction center element includes five Marines: a plotter, plotter/recorder, plotter/ driver, and two forward observers. Each section consists of four 81mm mortar squads including: a squad leader, gunner, A-gunner, and three ammo men. So, what would the new table of organization look like? An

ideal 81mm mortar platoon would have three sections and a platoon headquarters element. The platoon headquarters element of three Marines would have: the platoon commander, platoon sergeant, and an ammo technician. Each section will consist of a headquarters element, a fire direction center, and two squads. The section headquarters element will include eight Marines: a section leader, a radio operator, a forward observer, a UAS pilot, a M240B team, and three M203 gunners. Each fire direction center would include three Marines: a plotter, plotter/recorder, and plotter/driver. Each section consists of two 81mm mortar squads including five Marines: a squad leader, gunner, A-gunner, and two ammo men. In total the 81mm mortar platoon would consist of 69 Marines, which is equal to the traditional platoon organization.

Having only two sections of 81mm mortars will not provide the support needed for a modern-day infantry battalion. The enemy is constantly adapting to take indirect fire off the battlefield. As a Service, we have to think critically about our force structure to ensure that we are giving ourselves a decisive advantage over a near-peer threat. To counter these AdFors, it is essential to re-establish the task organization of the 81mm mortar platoon into three sections to increase survivability, maneuverability, and to increase range to support three maneuver companies. As the operational environment changes, we must adapt to the enemy situations to fight and win in combat.

Notes

1. Department of the Army and Headquarters Marine Corps, *ATP 3-21.90/MCTP 3-01D, Tactical Employment of Mortars*, (Washington, DC: October 2019).

2. Ibid.

3. Headquarters Marine Corps, *NAVMC 3500.44C, Infantry Training and Readiness Manual*, (Washington, DC: November 2016).

Sniper Employment

1st Bn, 6th Marines at MWX
by 1stLt Brien Hard

Large-scale force-on-force exercises such as the MAGTF Warfighting Exercise (MWX) create an indispensable situation that stresses a unit's ability to adequately support, integrate, and execute critical reconnaissance and surveillance (R&S) objectives. Unless directly supported by a higher echelon, infantry battalions are left to accomplish these individual R&S objectives with personnel and equipment within their task organization. Aside from small unmanned aircraft systems, this burden is trusted to a small specialized unit: the scout sniper platoon. As a battalion's sole manned R&S capability, a peer versus peer conflict introduces restrictions, requirements, and critical outputs that are rarely experienced during a battalion's typical home station training regime.

Sniper Preparation

In 1st Battalion, 6th Marines' (1/6) workup for ITX 1-20, not including company-level internal events, the scout sniper platoon completed four battalion-level exercises. These included but were not limited to company force-on-force operations, regimental air assault operations, battalion-level assaults, and battalion-level defensive operations. Aside from training Marines to become scout snipers or to sustain current scout sniper skills, the scout sniper platoon took part in every company and battalion training exercise. Always facing an opposing force, scout sniper teams were regularly tasked to infiltrate, collect on, and report information regarding an enemy unit. Teams were employed early, prior to the completion of a final plan, and set conditions for a company level or higher-level command to execute a well-informed scheme of maneuver. In preparation for each event, the battalion followed a traditional and doctrinal

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approach to employing R&S assets. At the conclusion of initial problem framing, the scout sniper platoon received initial tasking from the battalion operations officer or intelligence officer. At this point the platoon commander, platoon sergeant, and chief scout sniper would identify inherent requirements and task scout sniper teams in detail. In this construct, the scout sniper platoon commander served as the scout sniper employment officer, supported by his platoon sergeant and the chief scout sniper, to the supported unit commander. Throughout this planning process, the tasked scout sniper team leaders were fully supported by platoon leadership up to the point of insertion. While this basic construct is not a complete representation of the complex and time-consuming process of a scout sniper team's planning of a successful mission, it successfully served as the basis for every event executed by the battalion.

This construct, in hindsight, did not survive the complex and time restricted operational tempo that ITX and MWX forced. For a plethora of reasons the above-mentioned construct is ideal in nature; however, in practice at MWX, it could not keep pace with operation requirements and therefore did not facilitate the required success of scout sniper teams that the battalion needed to win.

The ITX/MWX Lesson

Compared to a standard battalion training event, MWX forced a peer versus peer conflict environment that introduced rarely rehearsed situations for all parties involved. Geographic location on the battlefield, mission set, malleable and rapidly changing areas of operation (AO), and enemy capabilities are all examples of planning factors that restricted the ability of 1/6 to utilize external R&S capabilities retained at higher echelons of command. Air dominance, while simulated during the exercise, was contested deliberately during a pre-determined portion of MWX. Limited availability and constant maintenance issues on aerial intelligence, surveillance, and reconnaissance (ISR) platforms hindered employment across the battlefield at multiple echelons, and the adversary force (AdFor) ensured that ground movement throughout the contested AO was challenged.

Fighting a living, thinking enemy necessitated a high level of distributed operations. Across the AO, critical reconnaissance tasks were left for company level or smaller unit commanders to accomplish—with little supervision from the battalion in the command and control degraded environment. As a result, the battalion scheme of maneuver was a fluid, constantly adapting plan with rapidly emerging reconnaissance and sustainment requirements. Specific for units such as a scout sniper team, the re-distribution of forces at the platoon level could require a hastily developed R&S plan or in-stride tasking based on continuous enemy problem framing.

Adding to the complex situation, without support from a higher echelon R&S asset, infantry battalions quickly found themselves in an information and intelligence degraded environment. Information and intelligence that would drive final planning, critical decision points, and essential fire support tasks were left unanswered. Without the abil-

ity to dynamically task and maneuver scout sniper teams, this environment required a ground unit to gain and maintain contact with an enemy force in order to feed the battalion center of operations and allow primary staff officers to make informed decisions.

However, while fighting a peer threat in a degraded information, command and control environment, this employment of observers is futile—risking the lives of a maneuver unit and lending an advantage to the enemy. Knowing that the enemy parity in highly destructive direct and indirect fire assets, and with limited to no information on their location, this construct is inadvisable for an infantry battalion in a long-duration fight.

To adequately fight a peer threat, a friendly force requires knowledge of, reduction, or destruction of key enemy capabilities and equipment prior to committing a maneuver force. Without being fed this information from a higher echelon, an infantry battalion is left with one option: manned R&S.

Sniper Employment

Compared to home station training and previous exercises, 1/6 began employing manned R&S elements as a main effort during shaping and decisive phases of an operation. Information that drove final planning, decision points, essential fire support tasks, targeting data, and adaptations to the plan were to be completed by proficient and well supported scout sniper teams. By the completion of MWX, battalion level or higher operations subsequently became solely driven by scout sniper teams with observation on named areas of interest or planned objectives.

The effect a scout sniper team can provide from a well-planned and occupied observation post proved one of the most important and calculated considerations in the planning process. Chief among these effects was their ability to identify and refine targeting data. Instead of committing a maneuver force based on previously assessed intelligence, the battalion's final plan would remain un-finalized until a scout sniper team achieved physical ground ISR of their assigned objective. From

Scout sniper skills require constant refreshing. (Photo by LCpl Samantha Sanchez.)

their observation post, a scout sniper team proved themselves capable of refining and providing a complete targeting array for the battalion.

Compared to gathering information and intelligence from higher echelon R&S capabilities, the employment of manned R&S teams add an additional complexity to the scheme of maneuver and force a dependency on a small scout sniper team. During a typical battalion training event, the planning and employment of a manned R&S element requires an un-proportionately large amount of coordination, support, and supervision compared to their small unit size. When employed prior to the committal of a maneuver force, one small scout sniper team requires transportation, security, full combat operations center manning, indirect fires planning, established fires capability, and an assigned quick reaction force.

Challenges Within the Platoon

With scout sniper teams at the forefront of a battalion's planning cycle, and their overall chance of success and survival, scout sniper platoon leadership were forced to comprehend, plan, and employ multiple scout sniper teams across a large AO contested by a peer adversary. Attempting to fulfill these intelligence requirements using the planning and execution construct identified

at the beginning of this article proved to be impossible and unsustainable over a long period. Distributed operations and multiple enemy courses of action created an environment in which scout sniper platoon leadership was unable to cycle multiple planning processes at an acceptable level. Regardless of time available, the platoon commander, sergeant, and chief scout sniper were unable to plan and finalize multiple schemes of maneuver as well as essential fire support tasks that included regimental tasks, insertions, quick reaction forces, named areas of interest, missions, and requirements to name a few.

Development of New Scout Sniper Platoon Tactics, Techniques, and Procedures

With the success of the battalion's mission in balance, the scout sniper platoon was required to quickly adapt its planning and employment construct. In order to keep up with a highly complex and fluid conflict, and to satisfy the requirement of the battalion, the scout sniper platoon was forced to push planning, coordination, and execution responsibility to lower-level leadership. Scout sniper team leaders were forced to become the sniper employment officer to the supported unit commander, typically company commanders, contrary to the traditional task organization used

during the training workup. Platoon leadership correspondingly shifted into a supervision and support role for their scout sniper team leader. Because of the complex and rapidly changing planning process, scout sniper team leaders along with platoon leadership were incorporated into the initial problem framing meetings alongside primary staff officers. Upon completion of the initial problem framing, scout sniper team leaders were responsible for advising, planning, briefing, and execution under the supported unit commander. This meant that a corporal or sergeant team leader worked directly with the battalion commander, battalion operations officer, or battalion intelligence officer. During battalion or regimental rehearsal of concept briefs, scout sniper team leaders briefed their plans as their own. These tactics, techniques, and procedures were made possible by the high-level individual proficiency and maturity of the scout sniper platoon team leaders.

Pushing these requirements down to the scout sniper team leader level paid dividends for platoon leadership and the battalion planning process. Instead of high level and complex information being fed through one or two individuals, primary staff officers received constant and accurate information from the team leaders themselves. As a result, rapidly changing battalion plans were met with equally rapidly but executable manned R&S missions. This relative speed had tangible affects in execution. This new construct enabled platoon leadership to adequately complete their own requirements while conducting the crucial coordination with adjacent units. The platoon commander and platoon sergeant facilitated the efficient operation of the surveillance and reconnaissance coordination center. They also assisted all the tasked teams, ensuring the battalion staff and adjacent units were prepared to provide all required support for a scout sniper team mission.

In addition to pushing planning requirements to scout sniper team leaders, the battalion was also forced to split supervision and planning requirements among platoon leadership and primary staff officers. Again, distributed operations created a situation in which platoon leadership was already manning two surveillance and reconnaissance coordination centers in two separate battalion combat operations centers. As a result, scout sniper team leaders were often tasked or directed to coordinate with key battalion leaders who had the most situational awareness on their upcoming mission—independent of platoon leadership. While the surveillance and reconnaissance coordination center continued to be the central node of scout sniper team information flow, the battalion operations officer or battalion intelligence officer were regularly required to conduct coordination with scout sniper teams directly.

Scout Snipers Relevance in the Peer Conflict Environment

Skeptics frequently believe a scout sniper is nothing more than a well-trained infantryman with limited ability to support or execute critical battalion tasks on the modern battlefield. Not all infantry battalions value a scout sniper's capabilities, incorporating their skillset into every training event and forcing leadership at all levels within the platoon to be proficient, knowledgeable, and able to accomplish the mission no matter the risk or complexity. Some infantry battalions seldom utilize scout snipers to their full potential, instead preferring to pursue aerial ISR platforms given the challenging peer adversary environment. A typical argument of skeptics conveys that unmanned R&S capabilities, specifically the use of drones and other ISR platforms, will be the main collection assets against a future near-peer or peer conflict. They also argue that units such as Marine reconnaissance platoons and special operations teams are better trained, organized, and suited for important R&S missions.

At first glance, these skeptics are not totally wrong. As technology continues to improve, and the Marine Corps continues to invest in unmanned ISR systems, these capabilities will undoubtedly be a force multiplier and great asset to collect information. These capabilities also offer a reduced signature, do not risk the lives of Marines on the ground, and offer a significantly reduced planning impact on ground forces in order to employ them properly. Specialized units such as division reconnaissance are typically better equipped, trained, and are experienced in the art of reconnaissance and surveillance. Aside from gear itself, specialized units identified above hold critical force multipliers such as trained joint terminal attack controllers.

Internally to the battalion, some planners display clear unwillingness to trust lower-level enlisted Marines, specifically at the scout sniper team leader level. When confronted with a complex situation against a peer threat that will inevitably lead to the survival or death of maneuver forces, there is often a tendency to entrust critical events or execution to company-level leadership. In a concise statement, those who argue against the value of scout sniper teams internal to an infantry battalion believe that technology will fill the information gap against a peer threat, that scout snipers are unable to adequately perform critical tasks in support of the battalion, and that a higher echelon of command will support their unit with capabilities in order to gain information on an enemy unit.

Internal to a scout sniper platoon, developing Marines capable of executing complex battalion or higher-level tasks is not an easy feat. In order to task organize a team capable of fighting a peer threat, a scout sniper team requires a high level of training and advanced schooling. A scout sniper team must at a minimum hold two trained scout snipers, one advanced trained scout sniper, and one joint fires observer trained scout. Additional force multiplying capabilities include urban sniper, mountain sniper, joint terminal attack controllers trained, and combat hunter course. During a demanding infantry battalion workup, it is extremely difficult for a scout sniper platoon to achieve these benchmarks across a three-team task organization. Scout sniper schools typically boast a 50 percent pass rate at best.

Investment Is Worth the Cost

If an infantry battalion prioritizes scout sniper production and proficiency

Scout snipers have the ability to influence enemy responses to our operations. (Photo by LCpl Aaron Harshaw.)

in preparation for a conflict with a peer threat, that battalion develops a task organized capability to conduct its own R&S and win its battles without added intelligence support from a higher echelon. While fighting a peer threat such as Russia or China, air superiority will be contested. Unmanned and aerial ISR capabilities will be disseminated across a large geographic area. Units like division reconnaissance will be retained to collect on higher-level operations. A scout sniper platoon fills this critical gap in infantry battalion collections.

ITX 1-20 provided a rehearsal of concept, and MWX provided a proof-of-concept. At events such as the Regimental Assault Course or Maneuver Assault Course scout snipers were placed in positions that enabled complete surveillance of a maneuver corridor or planned objective. This allowed each team to report accurate, timely, and critical information on a painted enemy force. This included the refinement and addition to targeting data that was tied to multiple decision points for the supported unit commander. Scout sniper positions were so beneficial in fact that regimental firing agencies began using battalion-level R&S assets in order to support regimental schemes of maneuver. Each team held its own joint fires observer and were accompanied by joint

terminal attack controllers and often signals intelligence personnel. During both events, critical enemy capabilities were eliminated in a precise, planned, and accurate manner. Maneuver forces had accurate intelligence on enemy positions and composition while primary staff officers were capable of making well-informed decisions throughout execution.

During MWX, scout snipers proved to be the battalion's only unit capable of providing early warning, securing flanks of friendly positions, and eliminating enemy forces with indirect and air delivered ordinance. Highly trained in long-range communication, the battalion combat operations center received a report on average every five minutes throughout execution of the exercise. Despite constant enemy ISR, fly overs by enemy rotary-wing platforms, and an advancing enemy from multiple avenues of approach, the scout sniper teams remained unseen and combat effective.

For seven days two scout sniper teams set conditions for the battalion to fight, adapt, and win against a much larger enemy force. They successfully targeted and eliminated multiple tank platoons, two enemy combat operations centers, two enemy artillery positions, and allowed the battalion up to 45 minutes of

early warning for approaching assaults. It proved self-evident that without an internal battalion-level R&S unit capable of producing devastating effects on target and supplying a combat operations center with a wealth of information, 1/6's critical defense of the Blacktop Strong Point would not have been the resounding success it was in execution.

Conclusion

Successful infantry battalions are ones that put an emphasis on scout sniper development and employment. When provided with adequate support and driven to succeed, scout sniper teams are capable of turning a complex situation against an enemy threat into a simple battle drill. They are capable of driving entire company and battalion schemes of maneuver, accomplishing complex essential fire support tasks, and ensuring a battalion's bid for success is achieved.

Several inherent requirements remain. First, battalion primary staff officers must trust scout sniper platoon personnel down to the team leader level. Without this trust, scout sniper teams will never be employed to their full potential. Secondly, scout sniper development and training must be at the forefront of a battalion's pre-deployment training. Making scout snipers is a long and challenging process with a low success rate. Training those scout snipers' proficiency up to the required level necessitates battalion-level input and support, but the return on investment is unmatched. Lastly, battalions must plan to operate in an information-degraded environment when facing a peer threat. Scout snipers must be at the leading edge of operations in this domain. If a battalion resources, trains, trusts, and employs the scout sniper platoon correctly, every subordinate unit within the battalion will benefit.

USMC

Collection in a Peer Fight

The ability of the infantry
by Capt Robert Holmes

>Capt Holmes is the Intelligence Officer, 1st Battalion, 6th Marines.

Transitions from the defense to the offense are fraught with both vulnerabilities and opportunities for an infantry battalion. These opportunities span the spectrum of warfighting function. Chief among these is the opportunity (read: requirement) for the intelligence section to collect information on an unknown situation, analyze what it means, project what happens next, and quickly disseminate to the end user—the battalion's maneuver elements. The author recently found himself in such a situation with this requirement. During MAGTF Warfighting Exercise 1-20 (MWX 1-20), located at the forward line of troops with 1st Battalion, 6th Marines' (1/6) forward combat operations center (COC) configuration, the intelligence officer was presented with the task of making sense of a situation that was at best opaque.

The enemy had destroyed the main COC in a BM-30 salvo. Together with the remnants of his section, the author made assessments of remaining enemy, established effects of terrain, and developed an enemy course of action. Collection operations were executed to confirm this assessment. The battalion had the normal allotment of organic collection assets, mainly a scout sniper platoon consisting of two teams and one RQ-20B Puma small unmanned aerial system (sUAS). The first sniper team, having just occupied a concealed observation post for the seventh continuous day, was currently reporting nothing of significance. Before a sensor tasking could be sent to the second sniper team, the battalion received notification that they were passively compromised and evading their position. Attempting

to fill this ever-widening information gap, the intelligence Marines flew three separate flights with their sUAS from a position offset of the forward COC's position. The first flight lost link with the ground control station less than five kilometers from the launch site. The second did not make it this far. The third, while extending farther, again failed to range the closest named area of interest. Moreover, the propeller broke upon landing, and the system was useless for the remainder of the operation. Thus, the intelligence section provided no value in this most crucial moment, and a company commander was forced to take a mechanized task force on a night movement to contact with no confirmation of an unknown enemy situation. The battalion's only collection asset would be contact received by his lead trace.

Issue Statement

The above experience, gained during the most recent MWX, brings to light a glaring shortfall the Marine Corps is facing at the infantry battalion level. Simply put, infantry battalions are not properly equipped to conduct organic aerial intelligence, surveillance, and reconnaissance operations. This shortfall is expressed in terms of both quantity and quality of systems currently fielded. It is also magnified many times over when facing a peer adversary over an extended time period in a multi-domain

contested environment, conditions MWX simulated. Answers that were adequate in Al Anbar or Helmand will not be so in Riga or Pyongyang. In environments where a battalion commander can be affected by enemy weapons ranging up to and over 100 kilometers, he should be sourced with a capability that allows him to account for this distance. This is especially true when considering the amount of regimental- or division-level support a battalion can expect to receive when all units are decisively engaged, which appears minimal based on MWX. Infantry battalion tables of equipment should be modified to include (at a minimum) a Group-3 UAS capability, responsive to immediate tasking by the battalion commander. Moreover, training accessibility and deconfliction measures must improve markedly. Adding this capability now will greatly enhance a battalion's survivability in the peer-level fights that are sure to come.

Capability Gap

The UAS options available throughout the intelligence community can be thought of as a spectrum. The ends of this spectrum are well defined. On one end, there is a squad leader leading a security patrol from his company defense that is tied into a battalion and higher defensive position. He has with him a PD-100 Black Hornet, designed in part by Prox Dynamics and FLIR Inc. This system provides the squad leader with 25 minutes of either electro optical or infrared technology in the literal palm of his hand.[1] He can tell what is around the corner of a building, over a nearby hilltop, or at his objective rally point with minimal risk to his Marines. On

the other end of the spectrum is a U.S. Air Force remotely piloted aircraft pilot located at Nellis Air Force Base, Las Vegas. He has at his controls an RQ-4 Global Hawk, which provides him the ability to execute persistent aerial ISR operations for 32 hours (not considering refueling), up to 60,000 feet, and across more than 12,000 nautical miles.[2] He can loiter in any given position long enough to establish a limited baseline then observe anomalies. If he has more than one collection requirement to fill, he can send his system elsewhere on the same flight and provide this same level of fidelity. Again, the ends of the UAS spectrum are both well-defined and viable options.

But what of the middle ground? Logic would imply that an infantry battalion would fall somewhere in the

unacceptable, especially when it is these listed capabilities that units may use to plan their aerial collection operations. These stats drive a myriad of decisions, ranging from the location of the launch site, the times flights are executed, and the location of the COC and maneuver elements for dissemination and utilization. It is worth noting that the operators in question had maximized every sUAS training opportunity on Camp Lejeune and were adjudicated some of the most trained pilots in the division. When a piece of equipment does not perform as expected, the ramifications are numerous and far reaching. The introduction is but one example of how adverse employment of a product negatively affected a maneuver unit. This is not merely an equipment centered quantitative problem but one focused

to a typical infantry battalion, from a fires perspective, let alone a collections perspective, is stark. If an RQ-20 is going to tell a battalion commander anything about what lies before him, he will most likely have to enter the threat ring of an indirect fire asset that could destroy him and a considerable portion of his force. This could be in the form of a Russian 2S1 (15.7km),[7] 2S19 (24.9km minimum),[8] a DPRK M1977 (15.3km),[9] or a Chinese PLZ-07 (18km).[10] These are all baseline examples of adversary indirect fire capabilities, and do not remotely breach the surface of enhanced capabilities such as extended range base bleed rounds, rocket assisted projectile rounds, or the numerous multiple launch rocket systems we will assuredly face. Nor does this example include anything found in adversary orders of battle above the regimental level. Obviously, distribution of forces will vary with regard to the above mentioned systems and the units employing them, but the overall point still stands: even if current battalion-level collection assets function as advertised, they do not provide the commander with the information needed for decision making in a multi-domain contested environment. We are trying to solve a Group-3 problem with a Group-1 solution and are surprised when there is much to be desired.

> *The threat weapons overmatch compared to a typical infantry battalion, from a fires perspective let alone a collections perspective, is stark.*

middle of this spectrum, but this assumption is incorrect. Aerovironment, arguably the leading manufacturer of tactical sUAS (to include nearly every fixed-wing system the Marine Corps is fielding), advertises a range of 20 kilometers for their RQ-20B Puma.[3] They further boast of a three hour operating endurance when equipped with the "long endurance" battery.[4] There are problems with these capabilities as listed. The first is that, in the case of range, there is no specification as to the effects of terrain or weather. It should appear obvious that terrain or weather, which are unconducive for aviation operations, would have an adverse effect on range. With this said, the ground truth of this capability, as experienced by the author, shows that these numbers are rarely (in fact, never have been) achieved in environments that could only be described as favorable. The longest flight ever observed reached eleven kilometers, with the majority reaching less than five. A 75 percent disparity in advertised and actual effectiveness is

on our processes as well. In short, the right equipment is not getting to the people who need it. The middle ground of the UAS spectrum is not performing as advertised.

Problem Framing

The disparity between advertised capabilities and actual performance is not the only way to examine this issue. The reader may view the above section and think that as long as the system can be improved to maintain the advertised numbers, then this problem will be solved. But are we even solving the right problems as an institution? The adversary at MWX roughly modeled a Russian motorized rifle brigade, fielding two infantry battalions (for the sake of the example, battalion tactical groups or "BTGs") instead of the normal four along with a tank battalion and various indirect fire attachments.[5] This is a plausible model of what a regimental- or division-sized element will face as a "contact" or "blunt" layer.[6] The threat weapons overmatch compared

Keeping Up with the Pace of Battle

The above point has only been applied to a static battlefield, and the shortfalls of this are glaringly obvious. The lack of aerial collections capability at the battalion level is amplified countless times over the moment maneuver units actually start maneuvering. The ability to dynamically re-task an aerial intelligence, surveillance, and reconnaissance asset is crucial if a commander is to keep pace with an ever-evolving situation. The DOD has acknowledged this, stating:

> It is widely recognized that improved real-time dynamic re-tasking of airborne Intelligence Surveillance Reconnaissance sensors is needed to enable rapid information gathering in support of tactical battlefield operations.[11]

The pace of battle does not allow for an endurance totaling between two and three hours, with each flight followed by a retrieval operation, battery change, and relaunch. Moreover, current re-tasking at the battalion level will almost assuredly require a relocation of the sUAS operator and an associated unmasking in both the physical and electromagnetic spaces. A battalion ISR system that can provide endurance up to and in excess of eight hours will allow retasking through a simple order to the operator, potentially collocated with the commander and core operational planning team in the COC. While the author agrees with counterpoints regarding the potential pitfalls of dynamic retasking,[12] the benefits provided by this flexibility should appear obvious. In short, a battalion-level Group-3 UAS capability will allow persistent intelligence, surveillance, and reconnaissance that enables commanders to modify their collections plans and fulfill their information requirements, all at the pace that modern day battles require.

Counterpoint

A main counterpoint for the argument of this article comes from the aviation community and concerns deconfliction requirements. The restrictions when operating sUAS in any training environment are fairly standard: routing and altitudes are limited to avoid potential safety mishaps with manned aircraft. The reasoning behind this is obvious and accepted. Pilots have valid concerns about lost training time because of required deconfliction (best case) and safety mishaps because of an errant sUAS (obviously worst case). This argument is not meant in the least to disparage their concerns, but there appears to be an institutional norm developing, one which further hampers the battalion's ability to collect for itself. We do not force ourselves to deconflict in a three-dimensional battlespace because the gain to mission is not deemed worth the risk to force. This is similar in some ways to accounts of high risk training that is attempted with attachments that have never worked with each other.[13] If deconfliction is pursued only when

Group-3 and above collection capabilities are absolutely necessary, then the procedures may not work. Moreover, if they somehow do, the time taken to establish these procedures and disseminate them to all involved may show this overall effort overcome by events. SOPs must be codified across the force well in advance of execution. This deconfliction is nothing more than another hard skill that needs to be integrated into a battalion's training cycle and practiced numerous times over with manned aircraft. Battalion air officers need to be completely integrated into the collection planning process in order to balance what the S-2 wants to see with what is supportable from an aviation perspective. As the supportability of aviation often constrains courses of action from a maneuver perspective, this integration will permeate to the rest of the core operational planning team, which is an absolute positive.

> ### ... a battalion-level Group-3 UAS capability will allow persistent ISR ...

Conclusion

The overall point of this article in line with the Commandant's

> willingness to continually adapt to and initiate changes in the operating environment to affect the behavior of real-world pacing threats.[14]

The difference between the battles of the 2000s and 2010s compared to future battles requires this adaptation. We must cease trying to solve today's and tomorrow's problems with yesterday's solutions. The status quo must be questioned and, in this case, overhauled. Sourcing infantry battalions with Group-3 UAS capabilities and providing avenues of deconfliction to maximize their employment throughout a three-dimensional battlespace will make them more self-sufficient, survivable, and lethal in said battlespace.

John Boyd put it well when he said, "People first, then ideas, then technology."[15] The Marine Corps has the right people in place; it's the ideas that need examination. Once the need is refined, the people will make the technology happen, and positive change will result.

Notes

1. Information on the "Black Hornet PRS," FLIR Inc., available at https://www.flir.com.

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MCISRE in the GCE

Equipping the capability

by Maj Timothy D. Kucala

>Maj Kucala is currently the Intelligence Officer at 2d Marine Regiment. He has served in a variety of capacities in the GCE at 1st Bn, 9th Marines; 2d Bn, 3d Marines; and 3d Marine Regiment. Maj Kucala has deployed to Helmand Province, Afghanistan, and East Asia. In between fleet assignments, he served as an Intelligence Fellow in the National Capital Region.

A near-peer fight looms. Russia is challenging norms across Eurasia; China is advancing its naval capability, which includes expanding its amphibious force; and both North Korea and Iran continue provocative and destabilizing behaviors in their regional spheres. Meanwhile, the Marine Corps' recent counterinsurgency experience has not optimized command and control (C2) configurations for a peer fight. In Iraq and Afghanistan, the threat environment allowed for—and in some cases necessitated—substantial increases in forward echelon enablers. Unconstrained expansion of combat operations centers acclimated commanders and their staffs to substantially more connectivity, technology, and space, leading to large, high signature C2 nodes. While nearly every added capability and enabler provides value, their requisite forward presence may warrant reconsideration; this is because of the fact America's next adversary may have the ability to sense and shoot tens to hundreds of kilometers. The Service must look intelligently at how it might deliver necessary intelligence capabilities forward in the next fight while simultaneously minimizing or altogether masking their accompanying physical and electromagnetic signatures.

Regimental Combat Team 2 (RCT-2) examined this problem during its recent experience at MAGTF Warfighting Exercise 1-20 (MWX 1-20), a division-level, force-on-force exercise in Twentynine Palms. This article catalogues the intelligence section's experience and advocates for the procurement of a Marine Corps Intelligence, Surveillance, and Reconnaissance Enterprise (MCISRE) fusion vehicle (MFV). *The GCE needs an embarkable, ruggedized, purpose-built intelligence platform that brings to bear the power of MCISRE for our forward-most warfighters executing C2 in a denied or degraded environment.* With this standardized fusion platform, regiments could more efficiently integrate attachments, share situational awareness with higher, adjacent, and subordinate units, and ultimately deliver full-spectrum intelligence support to infantry commanders at the front. Importantly, existing elements of the regiment's table of organization and equipment remain critical as they form the basis for a reachback and liaison network that supports the MFV. Extensive outsourcing of this reachback and liaison network is not advisable, as these functions are inherently more effective when owned by the supported unit.

Old Equipment, New Requirements: Organizing for the Fight

For MWX 1-20, the regimental intelligence section deployed fourteen Marines, initially gathering in a tactical assembly area (outside adversary threat rings). The intelligence team assembled around a traditional intelligence operations center inside a BaseEx 305 tent


RCT-2 intelligence section with ground sensor platoon attachments in Johnson Valley, CA. (Photo by Cpl Jacob R. Daugherty.)

that housed workspaces for analysts and attachments. Printers, laminators, maps, and communications equipment lined the tent walls and provided the necessary resources for detailed planning, product refinement, and briefings to commanders and subordinate intelligence sections. This two-week reception, staging, onward movement, and integration period also provided the time necessary to receive intelligence enablers.

Measurement and signals intelligence (MASINT), signals intelligence (SIGINT), human intelligence, and ground reconnaissance collectors arrived and integrated, growing the intelligence team to more than 50. At every opportunity, analysts and collectors gathered to dissect the regiment's decision support template in order to increase understanding of the details, purpose, and desired end state of the operation. Increased situational awareness early meant synchronization and implicit understanding later when distance would separate the team and communications fall intermittent. While integrating enablers, the intelligence section also task organized to match the regiment's C2 scheme. Principally, RCT-2 fought with Alpha and Bravo command nodes that aimed to increase C2 mobility and survivability. The lettered commands are small, adaptable, mission-specific teams that closely resemble the traditional forward C2 configuration. These nodes operated from the backs of vehicles adjoined by a small tent, all further concealed with camouflage netting.

To plug into these configurations, the intelligence section fitted high back Humvees with map boards, Secret Internet Protocol Router (SIPR) computers, a table, communications equipment, and unmanned aerial systems (UAS) downlink capabilities. The reconnaissance operations center operated from the truck and at various times ground sensors and SIGINT enablers also integrated. The organic intelligence staff in the Alpha and Bravo nodes each included four Marines—an intelligence officer, collections manager, and two intelligence specialists who served as analysts, drivers, and UAS operators. From the vehicles, the intelligence sec-
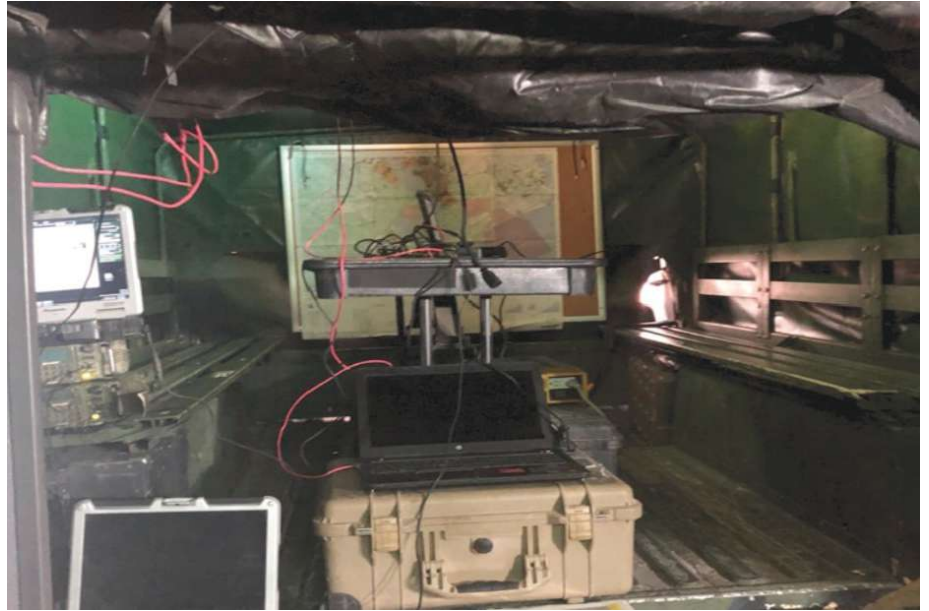
View into the back of an improvised fusion vehicle. (Photo by Cpl Jacob R. Daugherty.)

tion configured equipment and workstations that allowed analysts and attachments to ingest data from the multidiscipline collection teams in the field. Computer screens dangled from the vehicle's ceiling, cables and wires crisscrossed over a makeshift table, and antennas protruded through the camouflaged covering. Durability and optimization notwithstanding, wherever this vehicle traveled on the battlefield, the commander could have full-spectrum intelligence support.

Supporting the improvised fusion vehicle from a distance, the assistant intelligence officer and chief oversaw a team of liaisons, Group III UAS tactical controllers, and an analytic reachback cell that collocated in the division rear. These Marines operated outside the threat arc and enjoyed garrison-like connectivity. The task of the rear element was simple: garner as much intelligence support as possible for RCT-2 and communicate up, down, and laterally when the Alpha and Bravo nodes could not. Throughout the operation, the reachback cell received short, straightforward messages from forward elements and turned these transmissions into intelligence summaries, assessments, and action.

Other RCT-2 intelligence analysts at a nearby airfield served as liaisons to the supporting Army RQ-7 Shadow detach-

ment. The regiment's Marines knew the friendly operation and understood the information needs of the commander. While sitting next to RQ-7 operators, these Marines provided context, guidance, and insights that are otherwise impossible to convey via radio or on a collections' worksheet. When intelligence communications in the Alpha and Bravo nodes temporarily failed, the liaisons independently directed Shadow sorties for entire seven-hour periods, guided by an implicit understanding of what the regiment needed during that phase of the operation. There was never a wasted sortie, and after any connectivity interruptions, the Alpha and Bravo nodes received extensive tactical updates.

During MWX, the fusion vehicle served as a miniaturized intelligence operations center that received, processed, and disseminated intelligence. Ground reconnaissance, UAS, and SIGINT control elements all worked together in the truck to pull data from their collectors in the field and fuse this information for presentation to the commander. Space was tight, connectivity limited, and the setup and tear down process preceding and following movement almost certainly occurred slower than a peer adversary's targeting cycle. This initial improvised attempt at a MCISRE fusion vehicle, however, resulted in an adequate
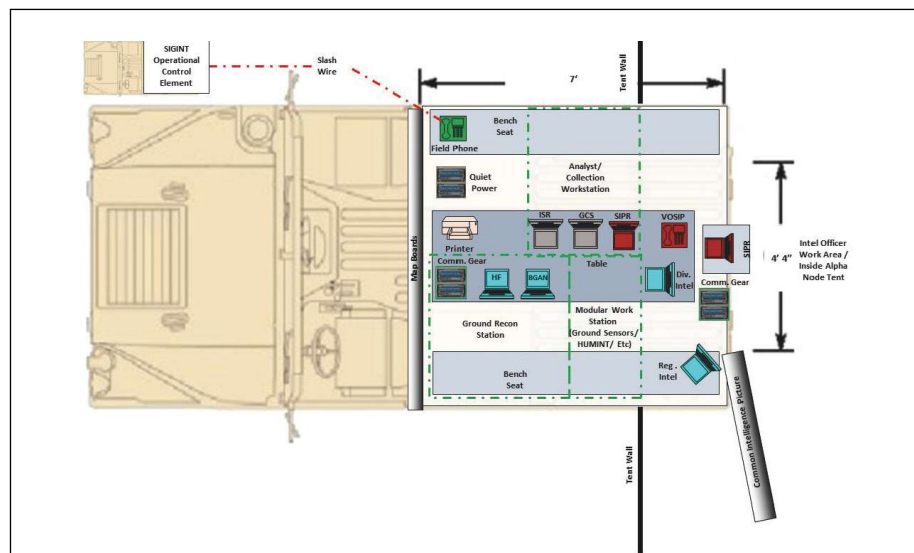
Diagram of improvised intelligence fusion vehicle used during MWX by RCT-2.

arrangement that should continue to be improved upon. In the near term, the intelligence section of 2d Marines intends to continue to employ similar C2 configurations while also broadening the reachback architecture and network of liaisons. As these experimental efforts continue, the improvised employment of equipment on hand is certainly a step in the right direction but insufficient to solve many of the most challenging and technical issues.

An Institutional Solution

The aim of MCISRE is to synchronize

> USMC intelligence programs, units, and personnel at every echelon across the operating forces and supporting establishment, [with the ultimate goal of] enhance[ing] decision-making at the point of execution.[1]

The development of MAGTF intelligence centers and electronic warfare support teams are recent and notable additions to the enterprise. As these capabilities further mature, they undoubtedly will contribute to MCISRE synchronization. The key linkage, however, has thus far received little attention. If MCISRE collects and analyzes intelligence perfectly but fails to disseminate it to the individual Marine then it is all for naught. GCE intelligence officers—MCISRE's closest linkage to riflemen in contact with the enemy—are still equipped with intel-

ligence workstations, servers, and other non-ruggedized electronics equipment designed for fixed-site, indoor use. This gear alone is inadequate at a time when GCE commanders at all echelons are opting for smaller, more mobile, and survivable C2 nodes. Rather than leave each regimental intelligence section to improvise and advocate for a solution within their assigned commands, the MCISRE could lead the way by providing the institution with an intelligence fusion vehicle. The MFV would scale and integrate critical MEF Information Group capabilities into a mobile platform at the regimental level, all while efficiently managing the associated physical and electromagnetic signature.

As the MCISRE orients on this problem and equips the force for the next fight, every effort should continue to be made to sustain the level of intelligence support provided to regimental leaders in Iraq and Afghanistan. A potential solution exists in following the artillery community's development of the AN/TSQ-17 Mobile Targeting Shelter, a modified U.S. Army-procured shelter mounted on a Humvee. The Mobile Targeting Shelter consolidates and scales workspace for fires personnel and their tools and communications devices in order to ensure efficient and standardized execution of tasks in support of regimental C2 nodes.[2] The fire support capability delivered to the attached infantry unit is modular and

able to plug directly into any regimental C2 configuration—main, forward, or Alpha/Bravo nodes. By following this model, the MCISRE could field an intelligence-specific variant that optimizes integration with attachments, communications, and support to decision making regardless of C2 configuration. At a minimum, the vehicle should include the following capabilities:

Planning, direction, processing, analysis, and production. Two SIPR and one Joint Worldwide Intelligence Communications System workstations, all ruggedized and affixed in the vehicle, for the intelligence officer and analysts. When connected, these workstations allow for analytic production, monitoring of chat rooms, and communications across the MCISRE. Systems also provide attachments a means to complete their own production or communications requirements.

Communications/dissemination. A capability similar to a GATR 1.2m antenna system that provides high-bandwidth communications for secure and non-secure data, voice, and video transmissions.[3] In a peer fight where to be sensed is to be seen, is to be targeted, communications should be configured with a governor that facilitates continuous passive reception of data. Transmission, however, needs to be a deliberate decision by the commander and, depending on the threat, would likely only occur minutes before displacing. A 2651 Marine, ISR Systems Engineer, should be sourced at the regimental level to operate this gear. As a backup to the GATR 1.2m, the vehicle should be configured to allow the communications section to provide backup or redundant SIPR connectivity through the networking-on-the-move C2 system.

Communications/dissemination. In the event a GATR system is not feasible, a mounted intelligence broadcast receiver would ensure that regiments have constant, direct access to critical, nationally derived, time-sensitive tactical intelligence data.[4] This is a significant step down from the GATR but would be an improvement upon the status quo.

Communications/dissemination. Two HF radio suites with mounted antennas. The ability to use HF data and voice to talk to subordinate units and higher headquarters is critical, as the regiment is often the echelon of command that needs to convert high bandwidth, secure data communications to low bandwidth or even voice for conveyance battalions.

Collection. A ground reconnaissance station that includes amplified power and mounted antennas to support HF tactical chat and Broadband Global Access Network capabilities. The reconnaissance operations center typically requires approximately 1600 watts of power to support its communications gear and battery charges.

Collection. An ISR downlink mechanism such as the Army's One System Remove Video Terminal. This allows for realtime ISR feeds while simultaneously recording and archiving data from other assets for exploitation later. The key is that one system is capable of ingesting and storing feeds from Group I to V assets.[5]

Collection. Vehicle mounted omni-directional antennas to support Raven, Puma, and Stalker ground control station integration.
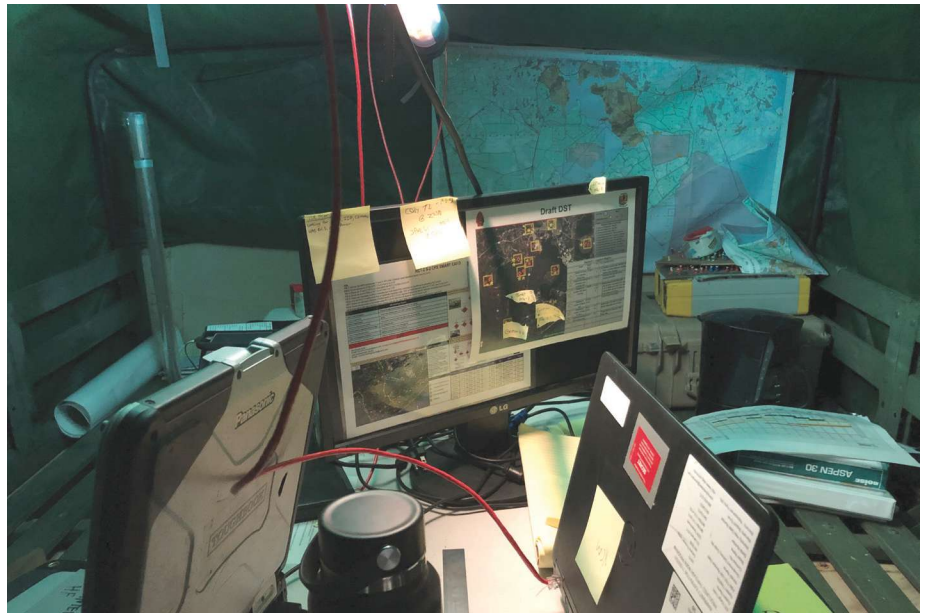
Another look inside the improvised fusion vehicle. (Photo by Cpl Jacob R. Daugherty.)

electronic and physical signatures remain balanced against the threat. This reality demands that Marines adapt and reduce the MCISRE's forward footprint while also sustaining its contribution and value to decision makers working from smaller, more mobile C2 nodes. As the Corps grapples with this challenge, it runs the risk of inadvertently

sions that will guide the next rifleman in contact with the enemy—deserve as much.

> ## Multi-source intelligence fusion must occur and is most effective when conducted close to the fight and within the context of actions on the ground.

Collection. Modular station for use by ground sensor platoon or other attached enablers.

Before 1stMarDiv marched on Baghdad, then-Gen James N. Mattis urged his men to engage their minds before their weapons—an order only possible when the force is well informed by sound, relevant, and current intelligence. Nearly twenty years later, the complexity of the battlefield and the tools available to understand it have grown exponentially. While all these tools and capabilities are desirable, the prospect of conflict with a peer adversary requires their judicious adoption and implementation in order to ensure

eliminating, or altogether failing to adopt, the right forward intelligence capabilities, especially if these decisions are not deliberate. Intelligence Marines and leaders should weigh in and ensure that MCISRE's support for the ground commander and his decision advantage lies at the forefront of all it does. Multi-source intelligence fusion must occur and is most effective when conducted close to the fight and within the context of actions on the ground. The MFV provides an institutional solution to optimize and standardize the provision of intelligence at the regimental level for tomorrow's fight. Our infantry commanders—those who make the deci-

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USMC

Decentralize the Kill Chain

We need to approve fire missions faster

by 1stLt Jacob T. Nelson

I returned to our small platoon combat operations center after walking the lines to wake the platoon for stand to. We were located on the reverse slope of a steep, rocky ridge at the Blacktop Strongpoint during MAGTF Warfighting Exercise 1-20 (MWX 1-20). As the sun began to break the horizon, thick dust trails became clearly visible behind a ridge near the Bronx Strongpoint thirteen kilometers to the east of our position. I radioed the sighting to higher headquarters and kept monitoring. Steadily, twelve vehicles came into view, many of them tracked, and began heading west down MSR Ennis directly toward our position. Before long, I was able to positively identify that at least ten of the vehicles were tanks. I was confident we would make quick work of them as we had clear line of sight for

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the entirety of their ten kilometer approach. I spoke with the fire support team (FiST) leader, recommending we suppress the column with artillery fire while the anti-armor platoon assumed firing positions to destroy the armored column with TOW missiles and javelins. After a few minutes, the tank column was still barreling toward our position. With a greater sense of urgency, I again radioed the FiST leader who assured me he was working on it. As the FiST unsuccessfully

attempted to reach the fire support coordination center (FSCC) to approve the fire mission, the armored column continued to close on our position at a high rate of march. I watched as the lead two tanks pulled on opposite sides of the road, dropped their plows, and rammed through our breach site: the last line of defense before our position. No fire missions were ever approved, and within seconds, they were within striking range and began engaging our position—inflicting heavy casualties.

How is it possible that with an advantageous position, clear line of sight, and plenty of time we were unable to approve a fire mission? The answer lies in examining the friction present in the fires approval process and the communications architecture used during the exercise. 1st Battalion, 6th Marines (1/6), as well as many other battalions, use an active approval process as their SOP for approving fire missions.[1] This is a well-known, effective, and commonly used doctrinal tactic, technique, and procedure.[2] Another well known, doctrinal, but less used approval tactic, technique, and procedure is the passive method.[3] The experience described above and other instances from MWX have shown that a passive approval process leads to more responsive fires than an active approval process and should be the default configuration going forward against a peer enemy. In addition, operating in a degraded communications environment against a peer enemy increases the requirements for communications equipment fielded to battalions to reinforce redundancy and increase range in order to ensure all units are capable of communicating across a widely dispersed battlefield.[4]

The FSCC has to approve the fire mission. (Photo by LCpl Colton Brownlee.)

Redundant communications are required in a degraded communications environment. (Photo by LCpl Cedar Barnes.)

Under an active approval process, all fire missions utilizing battalion and above level assets must be individually approved in realtime by the FSCC. This requires an increased number of radio transmissions to approve a fire mission, which correspondingly increase frequency signature and cost time. In the scenario described above, the platoon commander was requesting a fire mission from the FiST, who sought approval from the FSCC, who relayed the mission to the artillery battalion, and then back down the chain in reverse. The number of transmissions occurring between observers and firing agency, the time it takes to send them, and the friction from the degraded environment result in a kill chain that is not nearly fast enough to be effective for the modern battlefield. Under a passive approval process, the FSCC would monitor all conduct of fire nets, and all fire missions are assumed approved unless the FSCC steps in and halts the mission. Mission approval is assumed, so the number of transmissions between observer and firing agency are reduced and time is saved communicating up and down the kill chain. This method enables fire missions to be executed in a more timely and responsive manner. 3d Battalion, 2d Marines used a permissive fires approval process during the conduct of MWX by

pushing mission approval down to the lowest possible level—allowing frontline commanders more control of their battlespace and increased responsiveness from fire support agencies. As a result of utilizing responsive fire support, they were able to inflict heavy casualties on 3d Battalion, 7th Marines in the Delta T.[5] In addition, fewer radio transmissions reduce the overall electromagnetic signatures of FiST teams and FSCCs, ensuring their positions are more survivable.

> ## ... the FSCCs were made cherry pickers and taken out of the exercise.

vivable. During a portion of MWX, the battalion main was infiltrated by air assault and the FSCCs were made cherry pickers and taken out of the exercise. With no FSCC to actively approve fires, the passive approval process became the default and was used with overwhelming success. Alpha Company, 1/6, repelled multiple mechanized assaults using effective fires for two days with no enemy forces making passage through their lines, destroying almost two entire enemy companies.

The other major friction point which led to the decreased responsiveness of fires was the communications architecture. It is well known that in the communications degraded environment of a peer conflict, frequency signatures must be minimized lest they become the victim of jamming or targeting from indirect fire.[6] In the situation described above, the FSCC utilized HF as its primary means of communication and Blue Force Tracker as its secondary in order to maximize survivability. While this strategy undeniably minimized its frequency signature, it created inefficiencies which contributed to fire missions being less responsive. A trade-off exists between frequency signature masking and the timeliness of fires. Utilizing HF as the primary, observers must place a call to the FSCC to which both parties are dedicated. No other agencies seeking approval at that time will be able to communicate with the FSCC until the call has ended. This "single channel" effect makes it extremely difficult for the FSCC to monitor multiple fire missions or prioritize fire missions as they are prosecuted on a first come first serve basis. While this communications plan was doctrinally sound, in the peer-threat environment demonstrated at MWX, this plan proved unreliable. Communications issues with the FSCC were a major limiting factor in the approvals of missions, which significantly decreased the responsiveness of firing agencies. When HF was down for a significant period of time, the FSCC would roll to approving missions on the 81mm mortars VHF conduct of fire net. This was problematic as the approvals clogged the net, competing for bandwidth with observers and FiST teams, and slowed the 81mm mortar platoon's ability to respond and deliver timely fires. Regardless of which approval process is used, the communications architecture must support a redundancy plan that includes a dedicated VHF net for the FSCC. This will ensure that if HF becomes ineffective, an alternate net exists for the approval of fires but not at the expense of a firing agency. In addition, strategically placing mobile VHF retransmission sites would help forward line of troops commanders and

Fire missions must be approved quickly for fires to be effective. (Photo by LCpl Colton Brownlee.)

FiST teams communicate across the battlefield and overcome VHF range limitations.

One may raise the concern that utilizing a passive approval process would lead to a less controlled battlefield and increase the frequency and probability

> *... the FiST teams inherently clear the geometries of fire within their area of operations and the FSCC's independently duplicate their effort, thereby serving as a redundant safety backstop.*

of blue on blue attacks. However, the FiST teams inherently clear the geometries of fire within their area of operations and the FSCC's independently duplicate their effort, thereby serving as a redundant safety backstop. Both of these clearances would still be necessary using a passive approval method, but the FSCC would proactively clear geometries of fire by monitoring all traffic between observers and fire support agencies rather than messages being routed from observer to fire support agencies through the FSCC. This allows for a much faster and decentralized kill chain but requires a skilled and proactive FSCC. While the active approval process allows for the greatest guarantee of safe fires employment, it is not fast enough for the peer threat environment and will ultimately cost lives as illustrated in the case study described in this article. Defaulting to a passive approval process will reduce the number of middlemen involved in a fire mission and allow for a greater amount of decentralization across the battlespace. The best solution is a healthy middle ground that combines the best elements of the two methods that would effectively support the safe de-confliction of the active method and allow for the quick turnaround and decentralization of the passive method. Under this type of scheme, the default approval method would be passive, but mission criteria for active approval would be developed. For instance, fires within 700 meters of friendly units, bold adjustments in

excess of 400 meters, fire for effect missions, CAS missions, or fires exceeding or crossing unit boundaries would all require proactive approval by the FSCC.

Defaulting to a passive approval method instead of an active approval method is essential for fire missions in the peer threat environment and should be the primary method of fires approval given a peer adversary threat. Passive approvals reduce the amount of communications required, minimizing frequency signatures and allow firing agencies to deliver rounds on target in less time. Delays in approvals are eliminated creating a more decentralized and lethal battlespace. In addition, operating in a degraded communications environment requires effective redundancy plans and the ability to increase range across a vast area.

Notes

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![USMC logo]

Communicate in the Future Fight

Is the Marine Corps ready?

by Capts Christopher Ramirez & Hipolito Ozuna & Maj Angela Nelson

After decades of irregular warfare in the Middle East and Africa, the U.S. military is taking steps to reorient itself toward what is being called the "future fight" against near-peer nation states. While our current practices have worked well in counterinsurgency and counterterrorism operations, as well as nation building and security cooperation efforts, it has become abundantly clear that these same practices may not enable success in a potential future fight. As part of the U.S. military's planning for how to conduct operations against a near-peer competitor, the Navy and Marine Corps have begun developing frameworks to define how they will contribute to joint military operations through concepts such as distributed maritime operations, littoral operations in a contested environment, and expeditionary advanced base operations. As we continue discussing how to best gain local superiority of combat power, mass fires, and defeat advanced aviation, ballistic missile, and other anti-access/area denial capabilities, we must also ensure the Marine Corps develops and maintains the ability to communicate within this new paradigm. It can be argued that the Marine Corps is currently lagging in three key areas that will be required if we are to effectively enable command and control (C2) in the future fight: expeditionary and on-the-move (OTM) communications, joint interoperability, and cyber and electronic warfare resistant capabilities.

Whether in combat or in training, the Marine Corps generally relies on relatively heavy C2 nodes to support operations. For example, the establishment of a major division-level C2 node

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>>Capt Ozuna served as the Operations Officer, Communications Company, Headquarters Battalion, 2dMarDiv during the work up and execution of MWX 1-20. He has served as an enlisted Radio Operator, a Platoon Commander, and Company XO at 2dMarDiv Communications Company.

>>>Maj Nelson served as the Division Communications Company Commander during the work up and execution of MWX 1-20. She has served as a Battalion S-6, Communications Instructor, Squadron Operations Officer, and 2dMarDiv Deputy A/CS G-6.

will often entail the movement and establishment of a very small aperture terminal large, a secure mobile anti-jam reliable tactical terminal, or some other cumbersome piece of equipment that takes time to unhitch, deploy, level, acquire a satellite, and establish services. We have become comfortable with four to six hours as a viable timeframe in which to have a C2 node up and run-

> ### ... the Marine Corps is currently lagging in three key areas ...

ning. However, when looked at in the context of the expeditionary advanced base (EAB) operations concept, we run into an issue where this process of establishing long-haul, satellite-based data communications takes so long that by the time all planned communications capabilities have been established, the node or EAB must begin to displace in

order to avoid being targeted by enemy fires. These timeframes worked well in the past, but the future fight will entail an exceptionally high tempo and require units to displace often in order to avoid enemy fires. These are challenges that our current communications equipment is not built to contend with.

Ideally, the Marine Corps' tactical transmission and data communications capabilities would be built solely on an OTM platform. The networking on the move point of presence system is a good start but is limited in usefulness by the system's low bandwidth. Again, the system is excellent for supporting small C2 nodes, but an EAB is required to manage airspace, coordinate joint aviation, naval and artillery fires, act as advanced warning for enemy aviation and ballistic missiles, and a myriad of other tasks that will require a highly robust C2 infrastructure. As it stands, bandwidth requirements have steadily increased over recent years because of the proliferation of C2 applications and the demand to support ever-growing intelligence needs and information warfare activities. Meanwhile, bandwidth

availability for our tactical networks has remained stagnant over the last decade. Mobile user objective system (MUOS), a capability currently being fielded across the Army and Marine Corps, is another useful capability; however, it still does not offer the bandwidth to support the demands of a robust C2 node.

To meet the requirements of the future fight, the Marine Corps must be willing to allocate funding to develop a system that is as light and deployable as the VSAT Expeditionary, as jam-resistant as the secure mobile anti-jam reliable tactical terminal, is able to be mounted into a single, self-contained vehicle-based system with on-board network and server stacks, and has a high throughput. Such a system would have a small but robust server that can support the full array of virtualized servers that need to be hosted locally as well as an on-board network stack to remove the need to transport and set up switches, routers, and servers. Importantly, such a system would be set up and configured in a way that communications Marines, across the Marine Corps, could look at any one system and understand what they were seeing—streamlining the planning and strapping process. Because the system development and procurement process take so long, the Marine Corps often finds itself in a state of catch-up as we trail multiple years behind commercially available technologies. The ideal suite to meet the requirement for expeditionary communications would be modular and capable of accepting new versions of on-board hardware as technology progresses. Furthermore, the Marine Corps must invest in additional long-range single channel radio OTM technologies. Our ability to C2 will rely on our ability to utilize HF and satellite communications capabilities while mobile. We must see a proliferation of satellite communications and HF OTM systems including the standard "egg-beater" and "x-wing" antennas, as well as further investment in systems like the halo HF capability being fielded for the light armored vehicle.

Finally, the Marine Corps must develop a system that allows for vehi-cle-mounted battle tracking and chat throughout the battlespace in the wake of the Blue Force Tracker and Joint Battle Command Platform being phased out without a planned replacement. Recently, during a MAGTF-level exercise, MAGTF Warfighting Exercise 1-20 (MWX 1-20), 2dMarDiv was at times single-threaded through Joint Battle Command Platform. More often than not, this was the only system available to simultaneously provide OTM, long-range communications to convoys, remote C2 nodes, and dismounted troops. MUOS, again, is being touted as a potential option to meet this need; however, the requirement to use PRC-117Gs and MUOS-compatible

> *The ideal suite to meet the requirement for expeditionary communications would be modular and capable of accepting new versions of on-board hardware as technology progresses.*

antennas presents a significant equipment shortfall when considering the Marine Corps' current inventory. Even if the Marine Corps were to field the necessary equipment on a wide scale, we would still face the same problem: MUOS does not have a user-friendly location tracking capability like the Blue Force Tracker. The Marine Corps has relied heavily on this capability in combat and in training throughout the past fifteen years, and it can be argued that such a capability will become even more vital in a dynamic future fight. A failure to develop a solution to replace this capability may result in insufficient coordination and a higher potential for friendly fire incidents.

Gone are the days where the Army, Navy, Air Force, or the Marine Corps can plan and execute military operations within a battlespace independent of the other Services. Our joint-centric construct mandates that Marine Corps elements be able to effectively coordinate with functional component commanders, geographic combatant commanders, and adjacent ground forces and avia-tion assets. The Marine Corps' modus operandi is to develop communications capabilities, procedures, and policies separate from the rest of the DOD, which fails to consider joint interoperability. This tendency likely stems from our organizational mindset of "we do it better," which has made us an effective fighting force. Unfortunately for the Marine Corps, this same mindset can make us difficult to play with and does not lend itself well to tying into joint operations, especially when considering the level of coordination that it takes to C2 such operations. For example, Marine Corps users often have trouble tying into platforms, applications, and web-based services hosted by other Ser-vices, either the proper pathways have not been engineered, access has not been granted, or hardware and software are simply incompatible. In the days leading up to MWX 1-20, 2dMarDiv was tasked with receiving live feeds from the Joint Surveillance and Target Attack Radar System, a system owned by the Air Force. Because this requirement was issued to the Division moments before executing the exercise, the proper administrative and engineering work could not be completed in time to patch into this system before the exercise had concluded. The Marine Corps must strive to seamlessly link into the joint communications world in such a way that on-the-spot requests, like this, can be supported without delay.

If the Marine Corps and the DOD as a whole do not change its approach to interoperability, we will continue to miss out on training opportunities such as these. Additionally, in a high-tempo combat scenario against a near-peer adversary, forces in contact with the enemy will not have the time to jump through bureaucratic and technical hoops in or-

der to tie into joint capabilities. Such delays may lead to an unnecessary loss of life because we are unable to quickly tap into the wealth of intelligence produced by our sister Services. There are a multitude of factors that can affect whether or not two systems will be interoperable, including configuration of software and security policies on computer images, network configurations, firewalls, and compatibility of the hardware itself. If the Marine Corps is to maintain its relevance into the future, we must change our way of thinking about how we develop and administer our communications systems. We must begin to see ourselves as part of a team and develop C2 capabilities that will enable us to communicate with an Airman as seamlessly as we could communicate with another Marine. This will require close coordination between the Marine Corps and the DOD's premier communications and cyber organizations. When developing communications systems, Marine Corps Systems Command must coordinate closely with the DOD's other systems development organizations to ensure that interoperability is built into the design. When determining network security policies, the Marine Corps Cyber Operations Group must be closely tied into the DOD's other cyber defense entities to prevent mismatches in policy leading to incompatibility at the user level. Every action that affects how the Marine Corps communicates must be approached with the mindset that we are enabling our Marines to talk not just to other Marines but to the joint community as a whole.

Until now, the Marine Corps has been able to emit electromagnetic radiation without concern that a technologically advanced adversary will detect and target its forces. Additionally, our experience has been such that AdFors have not had the cyber capabilities to defeat our networks. In a hypothetical conflict against a nation such as China or Russia, we can expect that their forces will bring the full array of electronic warfare and cyber capabilities to bear, including direction finding, jamming, network intrusion, data exfiltration, and denial of service. We often talk about concepts such as "mission type orders"

and enabling subordinate commanders to make independent decisions in a C2 denied or degraded environment situation. While these C2 concepts are vitally important, we must ensure that we are able to communicate effectively in order to enable complex operations where naval, aviation, long-range ground-based fires agencies, and maneuver elements are able to mutually support each other. Combatting adversary electronic warfare and cyber capabilities will require a focused effort by the Marine Corps to ensure we are developing technologies and procedures to enable C2 in a battlespace that is contested through enemy electronic warfare and offensive cyber operations. We must train our forces to reduce the use of easily detectable capabilities such as VHF transmissions and adaptive network wideband waveform. Communicators must be trained in the use of directional HF antennas, which require more planning and coordination between units within the battlespace. Signal management practices, such as emitting at the lowest power levels necessary to communicate to our distant end, must become standard practice within our ranks. The Marine Corps must invest in more transmission capabilities that are resistant to jamming and direction finding, such as high-power beamforming technologies.

Regarding the cyber world, the Marine Corps must find its place. As it currently stands, we make sweeping changes to our cyber community once every few years, with the most recent example being the creation of the 17XX occupational field and removal of the 0689 from the 06XX community. If we are to create an effective cyber workforce, the Marine Corps must focus on enabling the 06XX community to secure and defend its networks from adversary activity, which will require allocating the proper expertise and personnel to that community. Either the 0689 capability must be returned to the 06XX community or 17XXs must be attached to communications units as local auditors and subject matter experts. If this capability is not distributed back down to the communications unit level, as it was before the recent force modernization, then the Marine Corps

must ensure that the MEF Information Group cyber protection teams are a part of the network engineering process from the initial planning stage through setup and maintenance. This guarantees the design of the network will be built on a strong base of network security fundamentals from the beginning. Finally, continuing the discussion of interoperability, we must ensure that such capabilities are developed in concert with the rest of the DOD to ensure that we are not defeating our own ability to C2 the joint force.

If the Marine Corps is to operate effectively in the future fight, we must begin to put serious thought and effort into the development of communications systems and establishment of practices and procedures enabling us to be more expeditionary, interoperable, and resistant to adversary electronic warfare and cyber capabilities. Only then will we be prepared to successfully C2 our forces in a joint effort against a near-peer adversary. The thoughts above are based on first-hand experiences of the 2dMarDiv Communications Company leadership during MWX 1-20. MWX 1-20 was touted as the largest exercise that a Marine division had conducted in twenty years. It also forced communicators to contemplate if we are equipped to fight a near-peer adversary as we would in a C2 denied or degraded environment situation. We centralized our network control in a rear area, allowing subordinate units to tie into that network with minimal equipment on their end, making them lighter and more mobile. We also planned for multiple pathways on multiple frequency bands. The lessons learned from MWX 1-20 highlight the need for more training to professionalize our communications workforce, as it took 2dMarDiv Communications Company nearly a year to become proficient in requirements levied by the Commanding General for the near-peer fight.

USMC

No More CAAT

Return to the doctrinal anti-armor task organization
by 1stLt Alberto Salabarria

The Marine Corps advertises itself as a force-in-readiness, able to deploy at a moment's notice to any part of the globe and defeat any enemy. At our core, we believe that we can stand toe to toe with any peer, exchange blows, and emerge victorious with minimal casualties. This is not without merit, since for the past twenty years we have fought an under-funded, semi-professional enemy and been successful—tactically at least. We have allowed our counterinsurgency tactics, techniques, and procedures of task organizing into combined anti-armor team (CAAT) platoons to become our default, which is ill-suited for a conventional conflict with a peer threat. With an incorrectly tasked group of 0352s, we are unprepared for war against mechanized infantry integrated with light and heavy armor, which Russia, China, and North Korea have put an enormous emphasis on for the past half century. They undeniably out-match Marine Corps forces in mechanized and armored conflict and have the resources and ability to deny the United States local air superiority. This requires an infantry battalion to assume an armor destruction capability beyond that which we have been training toward for the past twenty years. How can Marine Corps infantry secure a foothold long enough for the Army to show up on this new battlefield of contested airspace? The answer, irrefutably, is not by throwing two "CAAT" platoons in the fray and expecting resounding victories using outdated tactics. The Marine Corps needs to rethink their strategy for combatting an armor-heavy adversary. First, CAAT needs to return to the Marine Corps doctrinal employment concept of heavy machine gun platoon and anti-armor platoon. Second, our organic anti-armor assets need to become disag-

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gregated and decentralized, with a new emphasis given to the "ambush mentality" in an offensive capacity. MAGTF Warfighting Exercise 1-20 (MWX 1-20) proved the undeniable need to re-think the critical employment of an infantry battalion's organic armor-killing assets in a peer conflict.

To begin, the mission or task of the Marine Corps against a peer threat should be addressed. As highlighted during MWX, the mission of a Marine infantry battalion—facing a larger force with organic mechanized, armor, and artillery assets with a capable air force—is unlikely to be "destroy." A Marine Corps battalion is not organically equipped to match the relative combat power of a Russian brigade tactical group: the typical employment concept of a primary adversary.[1] Our mission, like it was at MWX, will more likely be to "delay" or "disrupt" in order to allow the joint force to destroy.[2] This can be accomplished by a single missile, fired under the "suppression" of complete surprise, blowing off the turret of the biggest, most expensive piece of equipment on the battlefield and eliminating what the enemy thought was their center of gravity. Using this tactic, coupled with a specific high payoff target list, to target specific assets like breaching vehicles or air defense platforms can have devastating operational or even strategic impacts on the enemy. Even more importantly, it will achieve a psychological victory against the enemy, especially against the individual Soldier.

The CAAT model, which is loosely based off the Army's Bradley and Stryker brigades, contradicts this am-

Javelin teams should be increased in size. (Photo by LtCol Austin Livingston.)

bush mentality.[3] The idea being that the vehicle-mounted heavy machine guns suppress the enemy in order to allow the Saber trucks to employ its TOW missiles or dismounted Javelin gunners. This idea is severely flawed. The expectation of suppressing an advanced armored vehicle or tank that can achieve first round impacts through highly advanced targeting systems is unrealistic, especially from an un-stabilized firing platform and an exposed gunner.[4] Suppressing a threat vehicle would only alert it to your presence, losing the element of surprise, which should be our asymmetric advantage. Marine Corps anti-armor combat should be centered on achieving maximum surprise through ambush tactics, then egressing when surprise is lost.

Returning CAAT to two independent platoons would re-focus on MOS-specific training for each MOS. In the past, the CAAT platoon staff had to split their efforts between their 0331s and 0352s, arguably the two most time intensive and complex MOSs in an infantry battalion. The training objectives of these two MOSs are very different and particular. Each requires specific ranges which, most of the time, do not support the other's objectives. The result ends up with one group being trained, while the other is stagnant accomplishing some "white space" training that could have been accomplished right outside the barracks or in the armory. The counterargument that is continually discussed is that of "cross training." The idea being that 0352s will be better Marines and more well-rounded for mastering machine gun gunnery. While this is true, the logic behind it is flawed and outdated. Being cross-trained as a machine gunner does not make an anti-tank missileman more lethal at his primary task of destroying tanks. The Marine Corps does not need watered down 0352s who are trained in various other MOSs. The Corps needs expert 0352s focused on the one thing that no one else in the battalion has the ability to affect or destroy: armor. The original Marine Corps task organization is correct, allowing platoons to focus on their MOS-specific tasks and mastering their craft.[5]

The HMMWV or JLTV are highly capable of climbing extreme gradients, finding ways to stay outside obvious enemy engagement areas. (Photo by LCpl Kenny Nunez Bigay.)

In the past, Javelin teams have been primarily utilized as attachments, distributed to the companies or used in tandem with CAAT vehicles. Because there was little armored threat in the war on terror, this was acceptable and logical. However, against a peer threat their employment must adapt.[6] First, the size of the Javelin teams should be increased from two to four. This team should be comprised of a driver, team

> *…the size of the Javelin teams should be increased from two to four.*

leader, gunner, and assistant gunner. The increased size of the team would be able to carry more mission essential gear like communications assets, missiles, food, and water, allowing them to operate independently and sustain themselves for prolonged periods of time and for various mission sets. Next, their employment and training should closely resemble that of scout sniper teams, experts in long-range communications, concealment, patrolling, reconnaissance, and ambushes, operating at the

edge of the battalion's battlespace and utilizing their small size and signature to maneuver the battlefield undetected.[7] Not only can independent Javelin teams prosecute armored targets deep into the security area, but they can also serve as another long-range reconnaissance asset for the battalion with their organic optics. Logically, the only difference between an 0317 and a dismounted 0352 team would be ability to destroy armor organically.

In the offense, these teams would be employed well forward of the advanced party as a fixing, infiltration, or penetration element.[8] This tactic allowed 1st Battalion, 6th Marines' (1/6') dismounted Javelin section to destroy five main battle tanks (M1 Abrams in this case) that were waiting in ambush along the battalion's main avenue of approach during the division counterattack at MWX. At that time, the battalion was comprised of a mechanized company in AAVs reinforced with two friendly M1 Abrams, a mounted Saber truck section, and an 81mm mortar section. Using traditional tactics, our advanced party of four Saber and two heavy machine gun trucks would have been destroyed from one volley of the enemy's main guns. However, using small, highly mobile teams and somewhat unconventional tactics, we were

able to seek out and destroy the enemy before he could affect our main force.[9]

In the defense, the Javelin teams coupled with specific target precedence like breaching vehicles or main battle tanks could deny the enemy's ability to even attempt his ground attack. The teams would be disaggregated over ki-

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> *The vehicle mounted Saber should assume a similar role as the LAV-25, serving as organic probes and forward observer platforms of the battalion, never held in the reserve.*

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lometers, not massed in one location, thus denying the enemy the ability to effectively target them and allowing the teams to cover multiple avenues of approach and mass their fires from multiple directions.[10] During MWX, 1/6s' dismounted anti-armor section was tasked with establishing a forward engagement area in the security area roughly twelve kilometers forward of the battalion main battle area. The following day, fifteen enemy Abrams reinforced with breaching vehicles massed toward the Black Top Strongpoint with the intent on creating a gap to be exploited by the rest of their armored and mechanized battalion. However, because of their disaggregated nature, three Javelin teams were able to destroy two tank platoons and a breaching vehicle in an engagement that lasted no more than four minutes. The effects were devastating. The enemy was effectively delayed, which accomplished the assigned mission of the regimental combat team and division, and the AdFor had to withdraw with no idea where our battalion main battle area actually was.[11]

The question then becomes: Are our Saber systems obsolete? Certainly not. Mounted Saber squads should adopt a reconnaissance focused role. This system is the best reconnaissance platform in an infantry battalion as a highly mobile vehicle with the lift capability to sustain itself for several days, the strongest optic in the battalion's ar-

mory, capable of pulling 10 digit grids at 6,000 meters, amplified communications, a weapons system that outranges or matches the most capable enemy main gun systems, and the capability of destructive first round effects. The vehicle mounted Saber should assume a similar role as the LAV-25, serving as organic probes and forward observer platforms of the battalion, never held in the reserve. The battalion should be bold in their employment and give Saber crews significant leeway to develop the situation, rather than be guarded in employing them.[12] This was evident during the Regimental Assault Course during the Integrated Training Exercise for the anti-armor Saber section from 1/6. Rather than probing and bounding forward attempting to locate the enemy, they were held in the rear of the formation waiting to be pulled into the fight. In this instance the battalion had a platoon of tanks attached and were able to destroy the enemy, laying in ambush, with overwhelming firepower. However, leading with tanks is extremely risky. They are severely restricted in terms of mobility thus their routes are easily predictable. The HMMWV or JLTV on the other hand are highly capable of climbing extreme gradients, finding ways to stay outside obvious enemy engagement areas.

Infantry battalions have an inherent anti-armor capability; however, it is incorrectly applied. The commonly accepted CAAT model is ineffective on the modern battlefield against a heavily armored and mechanized peer adversary. Reverting back to the task organization of anti-armor platoon would cost nothing to the Corps; however, it would significantly increase our effectiveness against a peer adversary. The Marine Corps needs anti-armor platoons ca-

pable of employing independent, disaggregated, foot-mobile missile-men utilizing anti-armor tactics focused on small-scale ambushes against specific high pay-off targets. Applying the tactics discussed can be the Marine Corps' resource conscious solution to fight and win on the modern battlefield.

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Intelligence Integration with Logistics

Enemy, weather, and terrain can impact logistical sustainment

by 1stLt Matthew Yeager

From 3 September to 15 December 2019, Combat Logistics Regiment 2 (CLR-2) executed MAGTF Warfighting Exercise 1-20. CLR-2 provided direct support to 2d MarDiv during the execution of this force-on-force exercise that tested MAGTF capabilities. The regiment sustained 2dMarDiv in a highly-contested environment, making intelligence integration paramount to supporting operations in the largest Service-level exercise in recent history. Intelligence integration with logistics operations is paramount in a distributed environment where a near-peer enemy has the capability and capacity to oppose friendly forces across multiple domains. Given the pervasive nature of uncertainty, ambiguity, and friction in near-peer conflict, the constant refinement and analysis of intelligence is vital to sustaining logistics operations. Additionally, command and control and information capabilities are more likely to be degraded or denied in this environment where hybrid warfare expands the complexity of the operating environment. Implications to sustainment operations are more severe in an operating environment where conventional and irregular forces employ information and electronic warfare across a distributed battlespace; therefore, MAGTF intelligence must be synchronized with logistics forces with operationally relevant assessments.

Considering the substantial logistical requirements in a near-peer conflict,

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intelligence integration with logistics is vital in order to provide commanders with assessments of the enemy, weather, and terrain that can impact logistical sustainment. Intelligence preparation of the battlespace (IPB) continuously updates and facilitates situational understanding and assists commanders and staffs in identifying relevant aspects within both the area of operations and area of interest that can affect mission accomplishment. The IPB process is unique: it impacts the range of military operations, is relevant across all echelons, and is the fundamental element used in all planning and deci-

Convoys can be used as collections assets. (Photo by Cpl Daniel Woodall.)

sion making. IPB serves as the initial framework for analysis of the battlefield in all operations, including logistical sustainment.

Near-peer conflict creates a requirement for dispersed operations that extends friendly supply chains and requires a greater understanding of overall physical network analysis, including threats to the rear area. Integrating a robust intelligence, surveillance, and reconnaissance plan for logistics units is a vital component of IPB that enhances force protection for sustainment operations. Logistics intelligence should be integrated with the Division G-2's collection matrix to add value to the common operational and enemy pictures through organic collections. Convoy collections, engineer reconnaissance, and unmanned aerial systems (UAS) employment provide valuable outputs to the LCE and help facilitate multidimensional integration with the GCE. Convoy briefs and debriefs are crucial to facilitating a thorough physical network analysis, civil considerations, and terrain and weather effects on both friendly and enemy operations. Logistics intelligence planners are well postured to provide subject matter expertise on route analysis and the physical network analysis as it relates to infrastructure, supply routes, and evaluating threat and host-nation logistical capabilities. Logistics intelligence planners' ability to synchronize efforts with MAGTF intelligence is critical to accurate common operational picture development. Because logistics intelligence planners are limited in their access to ground-based and aerial collection assets compared to GCE intelligence planners, they primarily rely on information gathered from convoy commanders and tactical logistic operations. Convoy collections are crucial to understanding the modified combined obstacle overlay, which provides a basis for identifying mobility corridors, natural and manmade obstacles, and key terrain. Convoys also provide invaluable collections regarding infrastructure, bridge and inland waterway studies, and airfield studies. Because convoys are vital in providing information that assists logistics organizations in accomplishing their mis-

The LCE has Group 1 UASs like the RQ-11B Raven. (Photo by LCpl Austin Mealy.)

sion, convoy commanders and logistics intelligence planners must synchronize efforts. Convoys are often the only organic collections asset available to logistics intelligence planners and should be more deeply integrated into the intelligence cycle. Conversely, intelligence planners' ability to provide convoys with enemy and mission-specific intelligence drastically increases overall survivability and assists logistics organizations in accomplishing their assigned missions. This mutually supporting relationship between intelligence planners and convoy commanders sets the foundation for intelligence integration with logistics.

Logistics intelligence planners' ability to synchronize efforts with MAGTF intelligence builds upon this foundation. Combat logistic battalions possess Group 1 UAS that typically weigh less than 20 pounds, operate below 1,200 feet above ground level, and can provide intelligence planners at all echelons with products that display the overall friendly force concealment and physical network visuals. Division can employ up to Group 5 UAS that typically weigh more than 1,320 pounds and normally operate higher than 18,000 feet mean sea level at any speed. Logistics intelligence planners can and should streamline their UAS collections into a multi-disciplinary collection plan with

the GCE in order to answer information gaps and threat indicators along main supply routes.

Logistics intelligence plays a vital role in near-peer conflict in a distributed environment. The logistics intelligence IPB process not only facilitates situational understanding for sustainment operation but also for the GCE, highlighting intelligence interdependence across multiple domains. MAGTF Warfighting Exercise 1-20 captured how intelligence integration with logistics can facilitate a greater understanding of the enemy, weather, and terrain—in the context of an extended supply chain and greater threat potential to rear area friendly forces. The distributed environment of a near-peer conflict highlights the importance of a multi-disciplinary and cross-functional IPB process where logistics intelligence is integrated with Division and provides invaluable subject matter expertise to the operating forces of both the LCE and GCE.

USMC

Fighting a Peer Adversary

Part 1: Observations and recommendations from MAGTF Warfighting Exercise 1-20

by LtCol Chris Niedziocha

MAGTF Warfighting Exercise 1-20 (MWX 1-20) was a large-scale, free play, force-on-force exercise conducted at Marine Corps Air Ground Combat Center Twentynine Palms, CA, between 1–9 November 2019. Nearly 10,000 Marines and Sailors drawn from across the Marine Corps participated in the event, which was held immediately after Integrated Training Exercise (ITX) 1-20.[1] 2dMarDiv was the primary training audience.

>LtCol Niedziocha is the CO, 1st Bn, 6th Marines. Part 2 of LtCol Niedziocha's article is on the *Gazette* website.

Major units participating included the 2d, 3d, 7th, and 10th Marine Regiments, elements of MAGs 29 and 31, and Combat Logistic Regiment 2. 40 Commando, a British Royal Marine Battle Group, participated in the exercise as part of the adversary force (AdFor). In the exercise scenario, 2dMarDiv acted as the GCE for a notional joint task force higher headquarters. MAGTF Training Command, the unit responsible for training aboard Marine Corps Air Ground Combat Center, played the role of the joint task force headquarters.[2] The Division was tasked with protecting critical infrastructure and blunting an enemy offensive, setting the conditions for the introduction of follow-on forces that would ultimately restore the territorial integrity of the host country. Specific focus points during the exercise were decision making, command and control in the communications degraded and denied environment, fieldcraft, and tactics. The entire exercise was unscripted. The force-on-force training rewarded creativity, initiative, and problem solving.

The purpose of MWX was to make 2dMarDiv better at fighting a peer competitor. The AdFor did not precisely model a specific threat, but II MEF uses the Russians as a pacing force. Many of the advantages and shortcoming the Russians possess are shared by other potential adversaries, such as the Chinese. We expect the Russians to employ conventional units in conjunction with special operations forces and irregular forces. The Russians are biased toward the offense. They employ armor and mechanized infantry in conjunction with long-range rocket and self-propelled artillery. Their artillery bests ours in mass, lethality, range, mobility, and armor protection. They rely on reconnaissance units and cross cueing from plentiful and decentralized electronic warfare (EW) and unmanned aerial

Decisions matter. *(Photo provided by the author.)*

systems assets to implement their kill chain. They operate under an umbrella of sophisticated and widely distributed self-propelled and man portable air defense assets complemented by tactical aviation: combat proven fixed- and rotary-wing aircraft.

Frontline and elite Russian units push EW assets down to the tactical edge and do not appear encumbered by authorities or operational security concerns in their employment of EW. The Russians have some weaknesses. We still believe the quality of their troops, individual equipment, and training is not up to first-rate western military standards. They are centralized and their mechanized formations are bound to mobility corridors and have long logistic tails.[3] All of these characteristics were possessed by the AdFor. The AdFor was not constrained in any manner. They fought hard and they fought well; they were truly a worthy adversary.

The lessons and observations contained in this article were drawn from 1st Bn, 6th Marine Regiment's (1/6) participation in ITX and MWX. Some observations confirmed existing beliefs, whereas others were a complete surprise. The opinions that follow are those of the author; however, conversations with peers, seniors, and subordinates in and out of 2dMarDiv validate most of what follows. First, here are some observations about MWX.

MWX sought to replicate major combat operations against a peer and largely succeeded. MWX was not actual war, but the stress, uncertainty, friction, and opposing, independent will of the AdFor were real. The AdFor at MWX were well trained, resourced, and highly motivated. The quality of the AdFor met and at times exceeded the quality of the exercise force. 7th Marines formed the base unit of the AdFor with 40 Commando, 4th Tank Battalion, CLB-7, and other attachments representing a much larger force. During the first two thirds of MWX, the AdFor had complete air dominance. AdFor tactical aviation was provide by elements of MAG 31 and numerous squadrons from around the Marine Corps.

Many of the conditions we anticipate experiencing in the next war

Camouflage became second nature for Marines during MWX 1-20. (Photo by LCpl Juan Magadan.)

were present at MWX. The MAGTF did not have air superiority as well as any advantage in surface fires, EW, or signals intelligence assets. This lack of multi-domain dominance pushed participants out of their comfort zone. MWX tested the leadership, stamina, decision making, and fieldcraft of all who participated. The fear of failure, embarrassment, and being beaten was real. Both sides learned and adapted throughout the exercise.

The execution of MWX, in conjunction with studying our enemy, has uncovered shortcomings in our manning, equipment, and training. The Marine Corps can better prepare for the first day of the next war by improving the capabilities, equipment, and manning of the force. There are quick wins that can be implemented tomorrow with an immediate and noticeable increase in lethality of the force. Some are long-term projects that cut across the entire DOTMLPF[4] spectrum but are worth undertaking nonetheless. I will explain the biggest shortcomings facing the GCE exposed by ITX and MWX and make recommendations. I have sequenced the observations and issues in ascending order of complexity for the fix: the easiest problems are first with the biggest science projects coming at the end. My assessment of difficulty was based on how many as-

pects of the DOTMLPF framework the potential solution would have to cut across, whether the problem is already well defined and the degree of institutional resistance a change would likely encounter. This assessment is highly unscientific and largely my opinion.

Fieldcraft, Concealment a Command and Signal Discipline Matter

Fieldcraft, concealment, and signal discipline are as valid today against a peer as they were against the North Vietnamese Army in the 1960s. As a result of fighting a counterinsurgency for over fifteen years, we have neglected our ability to use cover, concealment, deception, and fieldcraft. These skills proved remarkably effective against the AdFor (and the exercise force) during MWX. Concealment, light discipline, use of terrain masking, and signal discipline prevented both sides from establishing an accurate picture of the battlefield. During MWX, good fieldcraft, concealment, and signal discipline preserved combat power and prevented the attrition of assets used later as the Division transitioned to the offense.

Nearly every tactical plan developed in the past twenty years has a stage or phase called "shaping" where fires, especially aviation, are used to destroy assets creating conditions necessary for

maneuver forces to succeed. Three observations about shaping:

- If you cannot sense, you cannot shape.
- Shaping took far longer than we thought it would because the exercise force and AdFor both employed excellent fieldcraft and camouflage.
- Properly concealed assets are resistant to detection by even the most sophisticated airborne sensors as long as they do not run (creating a heat signature), emit in the electro-magnetic spectrum, or move around, especially on roads.

During MWX the AdFor conducted shaping using ground and airborne intelligence, surveillance, and reconnaissance with complete air dominance. They were able to find some targets but few high value or high payoff targets. When a target was found, it was usually the result of chance or poor fieldcraft. Examples of this were combat service support areas on well-defined terrain features (road intersection) and poor discipline in the rear area: driving to main and forward command posts, driving during daylight, or driving at night with lights on.

However, there is good news here. The Marine Corps is undergoing a fieldcraft and camouflage renaissance since ITX began including force-on-force. Units are practicing individual concealment measures like painting rifles, covering headlights, and managing their emissions in the electro-magnetic spectrum. Units have a renewed emphasis on blackout night driving, vehicle camouflage, and use of radar scattering nets. Command posts have been pared down dramatically, and every piece of rolling stock taken onto the "battlefield" for MWX was scrutinized.

A related aspect of fieldcraft is emissions control (EmCon) which proved very important at MWX. Every unit in 2dMarDiv during MWX either had their own EmCon procedures or followed the Division's Standard EmCon levels are preferable. Units practiced loading tactical assembly areas and the defense in radio silence and made hard decisions on when to radiate. A warning: EmCon must be based on the threat. Simply "going dark" and

Combat operations centers and command posts must be small, mobile, and well camouflaged. (Photo by LCpl Corey Matthews.)

not radiating does the enemy's job for him. Do not needlessly deny yourself use of the electro-magnetic spectrum. If there is no threat detection capability or delivery asset within range and you are able to mask your signal using terrain or a directional antenna, use the electro-magnetic spectrum.

There are several low probability of detection communications assets that allow a unit to communicate while being hard to locate. Employment of basic communications discipline helps in the battle of signatures. Using low power, directional antennas, and encrypted frequency hopping nets all minimize the likelihood of detection. HF communication is not the mysterious lost art we sometimes claim it is. Units that use HF communications regularly are good at it—period. HF voice and data (but not HF ALE)[5] are difficult to locate. One glaring capability gap is the ability to wire in a defense. We have no field phones or wire gear anymore. We should immediately re-field the TA-1 and TA-312 if they are still around. Maneuver units need something basic and need it quickly.

We must sustain the occurring institutional learning and resource it. Cammie netting is a requirement—lots of it. Units should have enough to cut up and apply directly to vehicles and still

have enough to use in the traditional net and pole method. Fieldcraft should be taught in entry-level schools and advanced courses while also having its own standalone course. Certain foreign militaries are very good at fieldcraft and camouflage. The Japanese Ground Self-Defense Force and the Royal Marines excel at fieldcraft. In tactical engagements, units with good fieldcraft had the advantage of surprise. The AdFor (and exercise force) generally knew where the enemy would be but did not know with the degree of precision required to target. Well-concealed units were overflown by aircraft routinely and both exercise force and AdFor units both allowed their enemies to close within small arms range while remaining undetected. The added advantage to good fieldcraft is that even after unmasking in the close fight, most target acquisition means are visual. Not presenting a well-defined outline makes marksmanship harder since it is difficult to pick an aimpoint.

Force-on-Force and Decision-Making Training Matters—and It Works

Our weapons are no better than our adversary's, we have no advantage in tactical EW assets, our logistic lines of support are vulnerable, and we will be fighting an "away game" against an

enemy using interior lines on ground of his choosing. What is our advantage? We can make better decisions faster and embrace uncertainty, chaos, confusion, and human factors in war. The best way to improve decision-making ability is to conduct regular multi-echelon force-on-force training complemented by garrison practical application. Many units focus exclusively on small units to the detriment of training higher echelons. Often people talk about how good squads make good platoons, and good platoons make good companies. That is a true but incomplete observation. Having good squads does not have to come at the expense of a having a battalion competent in all warfighting functions.

Good squads do not ensure you can plan and coordinate fires, communicate in a communications degraded and denied environment, avoid culmination through survivable tactical logistics, and command and control the unit. Good squads must be enabled by responsive fire support; be tied into higher and

adjacent units with effective, survivable communications; supplied with the ammo, food, fuel, batteries, and water they need; and have the ability to mass when required—all while fighting an enemy trying to do the same to you. Train the entire unit at the same time using free play force-on-force in addition to small unit focused training. This ensures you will be prepared to fight a peer adversary.

Effective force-on-force and decision-making training can be done with tools available now. Use ITESS (Instrumented Tactical Engagement Simulation System) regularly.[6] The issued tactical decision-making kits are effective. Do tactical decision games and *Kriegspiels.*[7]

Participate fully in Marine Corps Training and Operations Group events like SPARTAN FURY, SPARTAN WINTER, and SPARTAN DAWN.[8] Force-on-force training works and can be done down to the squad level. Force-on-force training is the best way to understand where you are weak and re-orient your focus onto what really matters—beating an independent willed opponent. Force-on-force training at scale stresses every echelon and simultaneously prepares an entire unit for war. Training in this manner replicates the uncertainty, stress, and friction we all felt during MWX and will feel during the next war.

Notes

1. ITX is one of two Service-Level Training Exercises. From *Combat Center Order 3500.14A, Marine Air Ground Task Force Training Command Integrated Training Exercise Order*:

> The purpose of ITX is to prepare units for combat, under the most realistic conditions possible. The primary focus of training is at the battalion and squadron level and below. ITX will be heavily reliant on combined arms training events that incorporate live fire and maneuver. ITX is a Marine Air Ground Task Force (MAGTF) integration training exercise executed within a standardized scenario that facilitates the readiness assessment of Exercise Forces (ExFor). The use of a standardized scenario that requires units to execute their mission essential tasks under fixed conditions allows MAGTFTC to assess ExFor units against established training and readiness standards. For units not formally assessed, ITX provides unique Block I-III training opportunities not otherwise attainable. The end state is a challenging, realistic training exercise that

produces combat-ready forces capable of operating as an integrated MAGTF.

2. Information available at https://www.2ndmardiv.marines.mil.

3. Center for Army Lessons Learned, Asymmetric Warfare Group, *Russian New Generation Handbook, No. 17-09*, (Fort Meade, MD: April 2107).

4. DOTMLPF means doctrine, organization, training, materiel, leadership and education, personnel, and facilities. The term comes from the Joint Capabilities Integration and Development System. The DOTMLPF spectrum includes every aspect that must be considered when successfully defining a military requirement.

5. HF ALE means high frequency, automatic link establishment. It refers to HF (between 3 and 30 MHz) communications in which both stations constantly scan available frequencies to find the best frequency to communicate on. It is not considered low probability of detection since it constantly sends out a signal to determine the quality of the link between the two stations based on a number of environmental conditions. HF ALE is effective as it reduces most of the trial and error traditionally associated with HF communications.

6. ITESS refers to Instrumented Tactical Engagement Simulation System, the current instrumentation system available to Marine units for force-on-force training. It consists of a laser and receivers and position location information. The information can be captured and "replayed" on imagery to conduct a high fidelity debrief of an engagement.

7. A *kriegsspiel* (literally wargame in German) is a moderated, force-on-force war game played out on a map. It stresses military decision making and tactics. It differs from a tactical decision game in that it is played out against a live enemy with a moderator.

8. Marine Corps Training and Operations Group runs a series of planning exercises focused on different threats. They are part classroom instruction, part planning clinic, part practical application. I have first-hand experience with SPARTAN FURY and SPARTAN WINTER, they were both excellent.

2019 Gen Robert E. Hogaboom Leadership Writing Contest: 1st Place

In the Arena

Lessons learned about leadership, politics, and the media
by Maj Lauren Serrano

>*Maj Serrano is the Commanding Officer of Company B, Marine Cryptologic Support Battalion at the National Security Agency. She is a MAGTF Intelligence Officer, Middle Eastern Foreign Area Officer, and Weapons and Tactics Instructor.*

In 2014, I wrote the article, "Why Women Should Not be in the USMC Infantry." It won first place in the *Marine Corps Gazette* MajGen Harold W. Chase Prize Essay contest. Writing that article was the catalyst to learning many other lessons about leadership, politics, American value manifestations in the military, military culture, social media, public affairs, and the media—many complicated and painful lessons I never learned via the 11 Principles of Leadership or 14 Leadership Traits. Most importantly, I learned what President Theodore Roosevelt meant by being the "man in the arena."

What Happened Next

When the *Gazette* contacted me to tell me I won the Chase contest, my immediate reaction was to redact the article. There is propensity to "fly under the radar" and avoid highlighting oneself. I was scared to expose myself, even if I did believe I was speaking truth to power. My husband looked at me and said,

> Anyone that has ever stood for something has inevitably made waves and enemies, and that's okay. You don't always need to please everyone.

I married wisely.

Before the article was actually published, the prize was awarded by a general officer in a small conference room with just my husband and a couple other Marines. I was already feeling anxiety and opted out of a larger award ceremony. The intimate setting was ideal. I shared with the general that I was concerned about publicly entering a debate about such a controversial topic. He

"It is not the critic who counts; not the man who points out how the strong man stumbles, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood; who strives valiantly; who errs, who comes short again and again, because there is no effort without error and shortcoming; but who does actually strive to do the deeds; who knows great enthusiasms, the great devotions; who spends himself in a worthy cause; who at the best knows in the end the triumph of high achievement, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be with those cold and timid souls who neither know victory nor defeat."

—President Theodore Roosevelt, 1910

told me he was proud of me for having courage and to not let anything that happened next prevent me from ever writing again. I think he knew what was in store for me.

One of my best female friends in the Corps is a huge advocate for integrating women into the infantry. Interestingly, her husband was an instructor at the Infantry Officer Course and has the opposite opinion. I had brunch with them and broke the news that my article was forthcoming. It was an uncomfortable conversation but needed to happen in person. We are still best friends today. *Lesson: It is okay to have different opinions*

A strong group of Marines at the 2018 Joint Women's Leadership Symposium in San Diego, CA. (Photo by Capt Christina Lopez.)

than your friends, but do not let those differing opinions break up friendships (think about how Justices Ruth Bader Ginsburg and Antonin Scalia were great friends despite being on opposite ends of the political spectrum). Engaging in mature debates and respecting the personal opinions of others is essential to good leadership and sound judgment.

The day the article was published, I received dozens of emails, LinkedIn messages, texts, and other messages from service members, active and retired, from all across the country, from lance corporals to general officers. That evening, while having dinner with a fellow captain, he exclaimed, "Dude, you're trending on Facebook and Twitter!" Until then, I did not even know what trending was. I googled my name and was in shock at how many hits came up. Overwhelmed by the attention and scared that I had done something detrimental and irreversible to my career, I cried myself to sleep that night. *Lesson: Choose courage but know that it comes with failure, heartbreak, vulnerability, and lots of emotions.*

In the week following the *Gazette* publication, the article was shared and republished in a variety of other venues, including German and Israeli newspapers. I read some of the comments but only stomached through about a dozen exceptionally hateful ones before I cringed and shut my laptop. I still have

not gone back and read the comments, even on the *Gazette* website. *Lesson: In using anonymity people can be flat out cruel and belligerent. It is okay to be a little deaf to this group; for if you do not, it can paralyze you. Fear of failing and fear of being criticized keeps people outside any arena.*

As opposed to callous critics hiding behind anonymous online personas, some chose to debate my opinion in a professional setting. A peer of mine published a counter article in the *Gazette*, something I tremendously respected and hope continued to move the ball forward on this sensitive topic. Someone at the Harvard Kennedy School contacted me to say my article was mandatory reading in one of their classes and wanted my opinion on several other gender-related topics. A military officer at the Army War College contacted me about his research on women in the military. A senior Marine officer connected me with his daughter who was working on an undergraduate capstone research project about women in combat. I had a passionate but professional debate at the Officer Women's Leadership Symposium with a fellow female captain assigned to The Basic School who adamantly defended the opposite opinion. *Task and Purpose* published an article accusing me of sororicide and thinking like a man, a painful but permissible accusation. Other articles appeared

in publications like *The Free Beacon*, which defended me. I was invited to an interesting academic discussion at the Institute of World Politics. I regularly attend the Joint Women's Leadership Symposium where gender integration is always a hot topic. *Lesson: Ensure the arena you engage in is professional. Those who want to partake in productive, mature debate do so in professional forums. Attack the argument, not the person.*

In the weeks and months following publication, ongoing private dialogue naturally developed with various Marines, service members, and civilian leaders who reached out to me. I had great discussions with one professor at the Marine Corps University and another at the Naval Postgraduate School. A senior female officer working at the Pentagon tucked me under her wing and invited me to all-female lunches and happy hours. I had an extraordinary lunch in Quantico with a legendary female Marine leader who has made a lasting impression in my life. With these leaders, I had passionate discussions about values, the Corps, the meaning of gender equality, and life. Over the years, several of these people have remained mentors in my life. They were not assigned to me, I did not work directly for them, and mentorship was not forced. *Lesson: Sometimes the best mentorship comes from people outside your chain of command and stems from common beliefs, values, and interests. True and lasting mentor-mentee relationships should develop naturally.*

I was surprised by how some of the counterarguments chose to respond and pick apart my opinion. It became evident that many people did not understand the difference between integrating women into infantry units (making them 0311s) and allowing women to serve in combat. Never once did I say women should not serve in combat, be in the military at all, or discredit the many women who have deployed to combat zones and partook in kinetic fire. I have spent twelve months in a combat zone, am proud of that service, and think my time in Iraq aided mission accomplishment. Most people without military experience do not understand the difference between integrating the

infantry and dissolving the combat exemption for women; regardless, their opinions still count and can be loud. *Lesson: People hear what they want to hear. Social issues and policies can be complicated and sensitive. Be prepared for critics to twist your words, put words into your mouth, and make large assumptions—after which it is hard to backtrack. To the most extent possible, ensure your argument is wired tight and nuances explained.*

The Marines United scandal happened well after my article was published. Although the scandal was not directly about integrating women into the infantry, it was related. I closely monitored the situation and reflected on how my previous thoughts about integrating women into the infantry could have unintentionally had adverse effects on the wider issue of misogyny and gender harassment in the military.

In March 2017, I went to the Senate Hearing on Capitol Hill where many Senators grilled the most senior Marine leaders about Marines United, sexism, and the hyper-male culture in our Corps. I sat a few rows back from Gen Neller, SgtMaj Green, then-MGen Reynolds, and several other senior leaders and watched intently as they professionally and compassionately responded to the situation. The tension in the room was palpable. I sat quietly and listed to LtCol Kate Germano (Ret) talking to journalists a row behind me about her experiences at Parris Island. I observed the media go wild when a senator such as Kirsten Gillibrand had particularly harsh comments for the Commandant. I was 39 weeks pregnant, wore civilian attire, blended in with the audience, and barely said a word to anyone—in that moment I was very thankful to be anonymous. I spent the days and weeks that followed evaluating the gender integration issue from a strategic standpoint I had previously been blind to. *Lesson: As situations develop and change, so can opinions. As a junior officer understanding strategic context can be challenging, but try. Leaders never stop growing, thinking, and evolving. Deliberately think about issues holistically and from a myriad of perspectives. Senior leaders exist to solve wicked problems.*

A photo I took while watching the Marines' United Senate Hearings. (Photo by author.)

My original article also caught the attention of the news media. I was invited to interview on Fox News with Bret Baier, CNN, participate in a C-SPAN debate, and appear for several other media outlets or events. Before responding to anything, I ran the request through the Public Affairs section at the Pentagon, who for the most part advised me not to participate. I complied.

Then, about two years after publication, I received another request to participate in a military town hall with the President. The public affairs section said I could participate as it was a military engagement requested by the Executive Office. Although there was some debate about changing my question topic, ultimately it was decided that I could go ahead with asking about female integration as it was a topic the Executive Office was specifically looking to address. I worked with trusted mentors to craft what we believed was the best question to ask the President about female integration. One very senior leader took about 45 minutes out of his extremely busy schedule to coach me through what to expect. I clearly remember him telling me, "Stand tall and look the President in his eyes. I am proud of you." His support gave me courage.

The day of the town hall CNN sent a private black car to pick my husband, one-year-old, and me up from our house in Washington, D.C., and drive us to an Army base a few hours away. In order to protect the President, his whereabouts are kept secret and logistics involving his travel are complicated. This led to a vehicle and driver switch at the gate of the Army base, and my husband and I found ourselves piled into the back of a car with a Medal of Honor recipient and a semi-famous service member who had been featured in a wide-spread military documentary. I awkwardly asked something blunt like, "So what's it like to be a living MOH recipient?" To which he eloquently responded, telling me about receiving the medal and how it has changed his life. I feel lucky to have had that private, special conversation with him; he humbles me.

Once in the town hall space, I was shuffled to a seat by an eager CNN employee. The CNN crew recorded the opening segment prior to the arrival of President Obama. I thought to myself how different CNN anchor Jake Tapper looked in person as opposed to television and was impressed by his ability to turn his television persona on/off like a light switch. When President Obama arrived not a single moment was wasted, cameras rolled, and we jumped right into the town hall with questions from the audience. Shortly into the event, a CNN employee tapped me on the

Behind the scenes of the CNN Presidential Town Hall. *(Photo by Maj David Serrano.)*

shoulder with a microphone and said, "You're next!" Although I had my question memorized, I could not help but look down at my note card in fear of completely clamming up on national television. At one point during President Obama's response, he looked me over and remarked that I must be in better shape than he. I still had the microphone in my hand and wanted to blurt out, "I am four months pregnant, Sir!" However, I figured that would be inappropriate (albeit an unforgettable way to announce the pregnancy to family).

Throughout the town hall, I was thoroughly impressed with the President's ability to think on his feet and eloquently articulate responses despite having no note cards or taking a break. At the conclusion of the town hall, he waded through the audience shaking hands with participants. When it was my turn, I challenged him to do pull ups with me out back of the gym, but he politely declined and said he had to get going.

After the town hall aired on national television, I received dozens of emails and texts from mentors and friends—and ignored the critics. At work the next day, my shop at the FBI played the town hall multiple times on the TV, each time it felt like an out of body experience. Later that week at the Pentagon, I was stopped in the hallway a few times by people who recognized me—a strange

feeling for a captain who is generally a nobody at the Pentagon. It was uncomfortable.

A year after the town hall, I did an interview on All Marine Radio. I put my foot in my mouth a few times and made several comments I wish I had not. Then, I was featured in the *Washington Post* (Nov 2017) with several other female Marines who are four times

> *I was being used as a symbol to promote a political opinion; I was there because I was a female Marine officer who did not think women should serve in infantry units.*

as amazing as I could ever hope to be. I did not like one of the photos the *Post* chose and cringed at the paragraph they truncated our hour-long interview into. *Lesson: Being in the arena creates paths you never knew you would find yourself on. The journey can even be interesting and exciting at times, but do not let the excitement overtake sound judgment, sup-*

press humility, or consume you. Always remember where your loyalties lie. Lesson: Interact with the media using caution and discretion, and always consult Communications Strategy Officers (formerly PAOs). COMMSTRAT is there to help but they are also required to hold the party line and protect the Corps. Stay away from media outlets with political biases. When in doubt, seek mentorship and top cover. Lesson: When a senior leader—in this case the Commander in Chief—requests a forum specifically to discuss charged issues important to the services, rise to the occasion. Especially if they ask, do not just tell leaders what they want to hear, tell them what they need to hear.*

Over the years I have been brought into several sensitive conversations and efforts that were occurred behind closed doors and at high levels of the U.S. Government. I attended several invite-only fancy dinners and luncheons in which I found myself talking to senior military leaders, lobbyists, politicians, fellow out-spoken service members, and key government influencers. One evening when checking in for a Black Tie speaker event I had pre-registered for, the lady at the front desk unexpectedly shuffled me over to a VIP section where some influential people were waiting to talk with me. My drinks for the evening remained complimentary, and I spent the evening deep in conversation about the future of the military service. I always knew these kind of political events occurred, but never thought I would find myself a part of them. Although I always ran my participation through appropriate channels and mentors, I was still cautious about which events to attend and which not to. It was not lost on me that I was being used as a symbol to promote a political opinion; I was there because I was a female Marine officer who did not think women should serve in infantry units. Plenty of men have been vocal about their like-minded opinions, but their gender prevented them from being skylined. *Lesson: Politics is a dirty business. Decisions and influence are derived behind opaque walls. Lobbyists and special interest groups have their own agenda. They could potentially view you as a pawn to further their cause, regardless of follow-on effects to your career*

or personal life. It is important to be aware of these forums and be invited into this arena but do so with eyes wide open.

Even though it has been six years since the *Gazette* published the article, it follows me. It comes up in nearly every hail and farewell, and Marines randomly ask me about it. A few months ago, a fellow female Marine reposted the article in our female Marine-only Facebook group "Actionable Change" with a nasty comment about how not all of us support one another. I responded with a very long post detailing past sexual assault/harassment experiences and the mindset I was in at the time of writing (I was a newly promoted captain coming off a 12 month deployment where sexual assault, harassment, and misconduct had been a constant distractor from the actual mission in Iraq—I was in a dark place), but my last paragraph to the group is worth sharing with a wider audience. I wrote:

> Do I regret writing the article? No. I think it stimulated needed debate and taught me a lot about who I want to be, what I want to stand for, and what kind of [N]ation I want to fight for. In a roundabout way, I also like to think it was a catalyst in driving change and acceptance. Clearly some of the things I wrote about are toxic, and instead of

taking women out of the equation, we have since "fought back" and developed a way to progress. At the time I wrote this article I never thought that would be possible. Do I still have all of the same opinions? Yes and No. Many of my opinions have changed, some remain. I still believe that mission and readiness should drive change vice a social agenda, however, I do recognize the greatness in gender integration. I think allowing the "brotherhood" (i.e., sometimes misogyny) to be accepted is BS. I think expecting men and women to be interchangeable is not only impossible but does a disservice to the amazing qualities that only women bring to the table. I do think sexual assault and harassment will continue to be an issue**. ...** among consensual sexual misconduct and fraternization that is apparently rampant in all integrated units—every unit I've served in is no exception. But do my opinions or any of the above even matter? NO!! The decision to integrate has been made, and we are pressing forward, so why are we still bringing this crap up? I've gotten over it and am on board with progress. I am still an AD [active duty] Marine Officer and when my boss gives me a lawful order—regardless of personal skepticism—I march. I want to march

in the same direction as my sisters in arms.

Lesson: What you publish in writing and post online can become part of your reputation forever—and haunt you if it is bad. It can shape some people's opinions of you before they even meet you or give you a chance. Who somebody was as a 25-year-old lieutenant is not necessarily who they are as a 35-year-old major or who they will be as a 45-year-old colonel. Leaders must evolve with the times, allow themselves to constantly grow, and even change their minds. Being wrong in hindsight is better than having been irrelevant.

Closing Thoughts

I hope sharing some of my experiences prevents people from making some of the same mistakes or at least sheds light on what could happen if you are an opinionated loudmouth like me. I never imagined that an opinion piece in the *Gazette* would lead to meeting the President, make me loved or hated in various circles, or have such a profound impact on my life—both good and bad.

Bottom line, be smartly in the arena—whatever that arena is for you. (It does not have to be writing *Gazette* articles!) Speak truth to power, believe in what you say, and rely on the good people that surround you. "Flying under the radar" is safe, but it will never yield meaningful results or promote change. Change agents take risks. Do not be afraid to have an opinion and articulate it but also know when to swallow personal opinions, end the debate, and follow orders. It is also okay to be wrong or change your opinion. When in doubt, fall back on your morals, values, and mentors. But always remember it is not about you, it is about what is best for the team.

Throughout this entire experience, one thought sticks with me that a mentor comforted me with at one difficult point. He told me that he had gotten in trouble or made waves at almost every rank along his exceptionally successful military career. He told me not to be a coward and be proud. He told me to be in the arena; it is where the leaders are.

A photo of the cover of **Stars & Stripes** *featuring my daughter and me (a repost from the* **Washington Post** *print). (Photo by author.)*

Leadership Lessons from Nicaragua

An unforgettable lesson in an unexpected place
by Col Chris Richie

Every Marine volunteered to serve our Nation when they chose to become a United States Marine. As promotions occur, Marines earn the right to lead a larger number of Marines. Over time, a spirit of selfless service and leadership virtues become synonymous with a Marine's character. Through training, observation, and repetition, leadership traits and principles simply become a part of who we are. I have had the privilege to lead Marines, but more importantly, I have had the honor to serve with countless leaders of all ranks who have inspired me to be a better officer. One such display of unforgettable leadership took place ten years ago in the most unlikely of places, Nicaragua.

The circumstances that brought me to Bluefields, Nicaragua, in September 2010 were completely different than the circumstances that brought Marines here on several previous occasions throughout the contentious history of our two nations.[1] We did not come to protect U.S. interests or to support a rebel force seeking to overthrow their government as had occurred when Marines last landed in Bluefields. Our special purpose MAGTF was on a ten-day mission to conduct military exchanges and provide security for various nongovernment organizations (NGOs) and medical teams conducting humanitarian activities throughout the country.[2] With our past history, it is no surprise that our welcome by the Nicaraguan Navy was lukewarm at best.

As I walked through the impoverished community of El Bluff near Bluefields on the first day of our military-to-military engagement, I could not help but reflect on "Chesty" Puller and

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Each of us has the capacity to make a difference in another person's life, and this is especially true for those of us in leadership positions.[3]

—James Hunter

Smedley Butler whose actions here are legendary. Their mission was to *secure and defend*; our mission was to *protect and build* (partnerships). Later that evening onboard the USS *Iwo Jima* (LHD 7), I noticed one of our NGO teammates who seemed upset. I learned she was disappointed because the U.S. Embassy had not coordinated a school for her to deliver the hundreds of backpacks and supplies as part of her "Give a Kid a Backpack" organizational task. I immediately thought of El Bluff and put her in contact with one of our Marines, providing commander's guidance for him to look into options. Six days later, I listened as she enthusiastically briefed the command deck on what our Marines had done. As she told her story, I was filled with pride to learn of the character displayed by our Marines. Through their quick *initiative*, unselfish *teamwork,* and genuine *humility*, our Marines changed hearts and minds as they planted the seeds for strong partnerships to grow.

Initiative

The small group of eight Marines (lance corporal through staff sergeant) faced a challenging task. For the first couple days of their military exchange, the Nicaraguan Navy personnel treated our Marines with apathy; the school principal treated them with distrust; and the community treated them as unwelcomed guests. One might expect the Marines to lack the motivation to assist; however, their reaction was the exact opposite. In less than eight hours, they coordinated with the school principal and Nicaraguan military to buy into their plan. The solution included a small Nicaraguan boat to come alongside the USS *Iwo Jima* to receive hundreds of supplies and transport them to the school. For many, a backpack filled with school supplies sounds insignificant; however, for such a poor community, this gesture yielded unsurpassed gratitude. The Marines did not simply take the initiative to accomplish a task; they took the initiative to make a difference.

The Marines understood that when you make a difference in the life of one person, they will carry that home to their family, to their friends, perhaps even to their co-workers. Your influence will lead them to influence others and before you know it, there will be an entire wake of positive energy created just because you cared. Their initiative was motivated by a strong desire to make a difference, which makes this unique leadership story more compelling.

> *People will not care how much you know, until they know how much you care.[4]*
> *—President Theodore Roosevelt*

Teamwork

The small team of Marines jumped at the opportunity to not only work with the NGO and civilian populace of El Bluff but also sought ways to include their Nicaraguan counterparts. The principal postponed school for a few hours to conduct a ceremony, with the rest of the community observing as the backpacks were delivered to each child. The general scheme of maneuver called for the Marines to remove the backpack and hand it to the NGO representatives who would hand the backpack to the child. On their own accord, the Marines decided to give that honor to their Nicaraguan military counterparts. In fact, as the ceremony began, the Marines removed themselves from the limelight altogether. They felt this was a moment for the community to share.

Following the ceremony, the Nicaraguan's gratitude could not be understated as they told our Marines what it meant to have been given the opportunity to be viewed as heroes in the eyes of their community. We learned that in spite of their poverty, the community provided the naval personnel with food, gifts, and acceptance. The military personnel at El Bluff did not have the means to do anything in return for the kindness they receive. In other words, for the first time, they were the ones taking care of the community instead of the other way around. They felt valued as contributing members of the team. It was clear by their demeanor that this simple act of enabling them to be a part of the team was worth more than any military exchange ever could be and set the stage for a true partnership to emerge. These Marines looked past the ambivalent treatment and pressed forward. Their sincerity led to acceptance that turned into teamwork. In a short period, their initiative led to the formation of an *ad hoc* team that worked together and accomplished a unified objective.

> *Humility may seem at odds with the image of the heroic, powerful leader. Instead of worrying about how powerful they are, servant leaders focus on what others need.[5]*
> *—Ken Blanchard*

Humility

Our Nation's history books speak of a stormy relationship between Nicaragua and the United States, so it should have been no surprise that our engagement with the Nicaraguans initially fell flat. My commander's diary entry on 17 September states, "The military receptions have been lack-luster, as if they really don't want us here."[6] This all changed on 23 September following the ceremony at the school. When our Marines were seen as people who cared to make a difference and had the desire to enable others, another trait was demonstrated: humility. Humility is not a trait usually associated with Marine Corps leadership; however, humble leaders not only gain the respect of others, they inspire them. A seasoned leader understands that humility is the first step to building a meaningful relationship.

The Marines' innate character allowed them to seize an opportunity to make a difference in people's lives, and they capitalized on it. When the Marines humbly took a step back and included the Nicaraguan naval personnel, they felt appreciated and valued. A ten-day country engagement is not long enough to build a long-term relationship, but it is a start. There is a saying I heard during our deployment, which states, "Those who give will someday forget, but those who receive will always remember."[7] When we return to Nicaragua, I trust the community of El Bluff will remember and greet us as partners. This budding partnership was made possible by a small group of Marines whose initiative, teamwork, and humility set conditions for a future relationship to grow.

> *No Better Friend; No worse enemy.[8]*
> *—Gen James N. Mattis, USMC*

Warriors or Humanitarians

Some readers may argue that humanitarian work with NGOs and a military in a Latin American country runs counter to the Marine Corps warfighting ethos. Perhaps in the era of great power competition and recognition that allies, people, and relationships are paramount for U.S. security, such activities for the Marine Corps should not only be praised; these activities should also be increased. The latest *National Security Strategy* tells us that, "it is part of our culture, as well as America's interests, to help those in need and those trying to build a better future…"[9] The 2018 *National Defense Strategy* even identifies "attracting new partners" as a line of effort.[10] This theme is also articulated

by our Commandant in his planning guidance.[11]

If Gen Robert Hogaboom were still alive, I wonder what he would think.[12] Ninety-three years ago, he and his fellow Marines' warfighting tenacity earned respect from the Nicaraguans. That warfighting spirit continues to thrive in every Marine. Had events during our deployment turned hostile, everyone was prepared to defend themselves. The Nicaraguans knew this. When we arrived, we were greeted with malevolent looks and an attitude of animosity. We departed with handshakes and an attitude of respect and appreciation. Eight young Marines turned potential mission failure into complete mission success simply by the virtue of their character. They not only salvaged our military exchange; they also enabled success for an NGO to brighten the day for hundreds of children. Ten years after their actions, I still recall the valuable leadership lessons from Nicaragua and

> **We departed with handshakes and an attitude of respect and appreciation.**

how Marines with initiative, teamwork, and humility impacted lives and truly made a difference.

Notes

1. In 1910, Smedley Butler led Marines at Bluefields to protect U.S. citizens and support Nicaraguan rebels. In 1926, Marines landed at Bluefields to once again protect U.S. citizens and fight a group led by Augusto Sandino later referred to as the "Sandinistas." In 1985, LtCol Oliver North was involved with the "Iran-contra affair" where the United States allegedly sold arms to Iran to fund contras (rebel insurgents) in the hopes they would take over the leadership of Nicaragua from the socialist Sandinis-

tas. More details are specified in Max Boot, *The Savage Wars of Peace. Small Wars and the Rise of American Power,* (New York, NY: Basic Books, 2002).

2. Operation CONTINUING PROMISE was a single-ship (USS *Iwo Jima*) humanitarian mission conducted from July-November 2010 in Central and South America.

3. James Hunter, *The World's Most Powerful Leadership Principle: How to become a Servant Leader,* (New York, NY: Crowne Business, 2004).

4. Theodore Roosevelt, available at https://www.goodreads.com. However, this quote has also been attributed to many other people over the years including John Maxwell and Earl Nightingale.

5. Ken Blanchard, *Servant Leadership in Action: How You Can Achieve Great Relationships and Results,* (Oakland, CA: Berrett-Koehler Publishers, 2018).

6. Taken from notes in my Commander's Diary.

7. Quote attributed to a Colombian officer during our ten-day engagement with the Colombian Marines.

8. James N. Mattis, *Call Sign Chaos, Learning to Lead,* (New York, NY: Random House, 2019).

9. Department of Defense, *National Security Strategy*, (Washington, DC: 2018).

10. Ibid.

11. Gen David H. Berger, "Together, We Must Design the Future Force," *Proceedings*, (Annapolis, MD: November 2019).

12. Gen Robert E. Hogaboom first served in Nicaragua in 1927. He participated in action against Augusto Sandino's forces and served almost three years in Nicaragua. He was later decorated with the Nicaraguan Presidential Medal of Merit. The annual *Marine Corps Gazette* leadership writing contest is named in his honor.

Choice

Articulating your approach to leadership

by Maj Lindsay E. Mathwick

It is often mentioned that Gen James N. Mattis, USMC(Ret), keeps a copy of Marcus Aurelius's *Meditations* (a common stoic philosophy reference) with him everywhere he goes. But for the most part, it remains one of those books that the rest of us often quote but rarely read. Maybe we think we understand the broad tenets of stoicism, but we would be able to apply them better if we gave them a deeper look.

My introduction to stoic philosophy came through *The Daily Stoic* by Holiday and Hanselman. Over the course of 2019, I included the readings in my morning routine. As with many new habits, I did not notice a shift at first. But, as I strung together a chain of these morning readings, I found myself better able to articulate certain leadership approaches to myself and others. I was better able to explain the "why" behind what I did.

The pursuit of effective leadership is a lifelong task, but within the stoic philosophy lies a framework which offers a measure of order and increased positive outcome. While my own yearlong study hardly makes me an authority, it has provided me with insights into my own execution of leadership and avenues of improvement. This has prompted me to continue these studies and perhaps better understand why *Meditations* is such a respected reference for leaders.

From this vantage point, I offer this short article as a prompt for others to examine the basic tenets of stoic philosophy and determine if and how it resonates with their particular style of leadership.

It is probably worth starting out with the over-arching point of stoicism. While it is not one of the main focus points below, I see it as the umbrella that hangs over all of them: this is the ability

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to recognize what is, or is not, in your control. This is the crucial first step in executing what is under your control, and that is your response. You choose how to view things—be they people, experiences, or challenges—and then you decide your response. You choose. With that umbrella in mind, these next three sections describe how I *choose* to look at people, experiences, and challenges both as a Marine and as a person.

People: Everyone Is Doing Their Best

In leadership we often say that people are the most important thing. I choose to come from a place where I believe everyone is doing their best; that is my baseline. If the outcome you produce is not up to my expectations, I will first assume that I did not provide the right guidance or give you the right tools or training to complete the task. But I will always start by assuming you did your best.

I recognize that it is not always going to be the reality. But what a better, healthier place from which to start rather than automatically assuming someone messed up on purpose and then jumping down their throat in anger. We have all been in a situation where we made a mistake despite our best intentions and efforts. How forgiving were we of ourselves in such situations? Is there any reason not to pass that same tolerance on to others, at least initially? (See *Meditations* 10.30 for Marcus Aurelius' version.)

When something goes differently than I would expect, I try to assess the situation by first asking at least two questions, thereby seeking to better understand what the person's thought process was or how they interpreted the task. This illuminates their view of the scenario in my own eyes, providing a different lens through which to see more clearly.

Looking back over my fifteen years in the Marine Corps, the opportunities to implement this "two question method" occurred most often when I taught at The Basic School; I did not always implement it well. It seemed like my students frequently did things

> *"When people injure you, ask yourself what good or harm they thought would come of it. If you understand that, you'll feel sympathy rather than outrage or anger. Your sense of good and evil may be the same as theirs, or near it, in which case you have to excuse them. Or your sense of good and evil may differ from theirs. In which case they're misguided and deserve your compassion. Is that so hard?"* [1]
>
> —Marcus Aurelius, **Meditations**

that initially seemed way off the mark. Sometimes I launched into them without trying to understand their reasoning or thought process; I usually regretted those reactions when I reflected back on them.

Eventually, I started to more regularly implement my "two question method," although I did not realize how it might relate to stoic philosophy until this past year. When my first reaction was to yell or correct, I instead asked two questions or stepped back and observed for a bit longer before injecting myself into the situation. That usually led to additional questions and a better understanding of the student's thought process. Then it led to a worthwhile conversation between adults where both parties almost always walked away learning something.

There is certainly a point as leaders where we have to lay punishment and responsibility on those who do wrong. I cannot shoulder the whole blame for my Marine who goes out and chooses to do drugs, street race down the highway, or assault another person. But that does not mean that we cannot, at least initially, act with patience and kindness when less black and white situations present themselves and fall short of our initial expectations. As Seneca writes, "Wherever there is a human being, we have an opportunity for kindness."[2] One of the things that helps me when I struggle with this point is to reset my perspective: Is what you are about to get upset about really that big of a deal?

Experiences: Have Perspective in the Present Moment

I see perspective through two lenses: framing (your interpretation of an event) and context (your ability to compare the current situation to a larger one). We often think about perspective as looking back in history at events and learning from or understanding them. My goal is to have that perspective as the experience occurs, rather than having to wait a week or years before the "a-ha" moment.

Framing. Perhaps the most familiar instance of this might be Chesty Puller's quote from Korea: "We're surrounded, that simplifies things."[4] This is not to say

> *"Don't hope that events will turn out the way you want, welcome events in whichever way they happen; this is the path to peace."*[3]
>
> **—Epictetus, Enchiridion**

that "everything happens for a reason." Puller found his regiment surrounded by enemy forces for a slew of other reasons too lengthy to discuss here, but he *chose* to reframe the situation and find something positive.

This "reframing" does not diminish the significance or importance of an event, but it allows you to choose a more positive response. Imagine being the one to deliver the news to the regimental commander that the unit was surrounded and outnumbered. What type of a reply would you hope to receive? A professional, measured response seasoned with some positivity, or an impulsive, angry reaction? The better question might be, if you were the regimental commander, which reply would you look back on with pride?

Context. Your ability to place an event in a larger context affects perspective as well. A majority of people in this world have had bad things happen to them directly or to people they care about. Parents lose children, natural disasters inflict massive damage and casualties, and before painful diseases take hold of loved ones. These are some of the toughest experiences that come to my mind. So, when unfortunate experiences happen in my daily life or at work, I place them in the context of these others, and it makes the scenarios staring me in the face seem absolutely manageable.

Again, I have no intention of diminishing the importance of the event itself. My focus is on the response that I choose, and I am better able to choose a response that is in line with my values and that I can look back on with pride if I keep some perspective in mind.

That is not to say that I am 100 percent successful in this point. I have instances as a Marine and as a human being where my replies are more impulsive reaction than measured response. I welcome those shortfalls; they are where my learning occurs. This ties to my final point: how I choose to look at challenges.

Challenges: There Is No Growth in the Comfort Zone

When I look back on my time in the Marine Corps, the periods I enjoy reminiscing about the most are the tough ones. When I showed up at The Basic School as a young captain, I was not a good instructor. I struggled to re-learn all the material and confidently and coherently convey it to students in a way that made any sense.

The first couple months were not pretty. I had to step far out of my comfort zone and grind through extra hours of preparation to bring myself to the level of instructor expected at our introductory school. By the time I left, I was an entirely different instructor, Marine, and person than when I first arrived. It can be tempting to only remember the last portion of that tour when things were clicking, and I felt confident in my abilities. Because of that, I remind myself that I became a

> *"The true man is revealed in difficult times. So when trouble comes, think of yourself as a wrestler whom God, like a trainer, has paired with a tough young buck. For what purpose? To turn you into Olympic-class material."*[5]
>
> **—Epictetus, Discourses**

very good instructor not in spite of the challenges I had but because of them.

It can be very hard to see that in the moment. I look back on that time, now almost eight years ago, and the lessons are clear; I am grateful for those challenges. But in the moment, it was hard to embrace and welcome those uncomfortable months.

Instead of that initial reaction where we might be perturbed by an obstacle, the stoics encourage us to choose those uncomfortable situations; that is where the learning occurs. Seneca even recommended setting

> aside a certain number of days, during which you shall be content with the scantiest and cheapest fare … it is while fortune is kind that it should fortify itself against her violence.[6]

Translated into a modern adage: get comfortable being uncomfortable. When you face challenges and shortfalls, do not become dejected. See them as an opportunity to reflect, learn, and grow.

Your Choices

When you choose to believe that everyone is doing their best, your approach to others is one of understanding and less of judgment. When you choose to shift your view of circumstances, the result is a calmer, more reasoned response. Both lead to a more positive and healthy environment, whether that be on the sports field, the workplace, or with the family. When we still fall short in some of these situations, we must continue to choose to embrace the challenges we face, reflect on them, and learn from them for future development.

Even though stoicism is not a complete leadership guide that applies to all situations, it is a useful addition to one's repertoire of leadership tools, regardless of your style. Even in instances where stoicism is not a dominant tool, it still can strengthen the foundation of one's leadership style. Choose wisely.

Notes

1. Marcus Aurelius, *Meditations*, translated by Gregory Hays, (New York, NY: Modern Library, 2002).

2. Lucius Annaeus Seneca, *On the Happy Life*, translated by Aubrey Stewart, (Los Angeles, CA: Enhanced Media, 2016).

3. Epictetus, *Enchiridion*, translated by Robert Dobbin, (London, UK: Penguin Group, 2008).

4. Martin Russ, *Breakout,* (New York, NY: Penguin Group, 1999).

5. Epictetus, *The Discourses*, translated by Robert Dobbin, (London, UK: Penguin Group, 2008).

6. Lucius Annaeus Seneca, *Letters from a Stoic Volume I*, translated by Richard Mott Gummere, (Los Angeles, CA: Enhanced Media, 2016).

USMC

Combined Arms Is the Foundation

Being prepared

by LtCol Thomas Przybelski

>LtCol Przybelski was an Infantry Officer and has completed five deployments in support of Operation IRAQI FREEDOM and Operation ENDURING FREEDOM. He is currently a student in the Master of Business Administration program at Harvard Business School.

> *"Military operations other than war and small wars are not simply lesser forms of general war."*
>
> **—MCDP 1**

Heard recently at a conference were two linked statements that bear further thought. They are the ideas that Marine units should train to conduct high intensity, combined arms attacks because "it is the hardest thing we do" and the related idea that units that are good at high intensity, combined arms can "step-down" along the range of military operations to conduct other missions. These ideas can lead deploying units to train to a complex combined-arms capability—often thought of as the most dangerous scenario—as a readiness end state. However, this concept for readiness has not served U.S. military ground forces well in the past. Instead, the challenges of whatever ground forces were actually employed to do—the most likely scenarios—have turned out to be significantly, even overwhelmingly,

complex in their own right. Still, high intensity, combined arms combat is fundamental to the Marine Corps. It is what units, and the Marines in them, must be prepared to do. To resolve this conflict between most likely and most dangerous scenarios, units preparing for future challenges should think of high intensity, combined arms training

as the foundation rather than the peak of their preparation.

First, no one area of warfare should claim to be the "hardest thing." In describing the challenges of future three-block wars, for example, Gen Charles C. Krulak spoke not about combined arms attacks on fortified positions but rather asymmetrical adversaries, non-combatant/combatant blurring, and persistent media. With his assertion that "modern crisis responses are exceedingly complex endeavors," one could conclude that a three-block-war is the hardest thing.[1] Others have said that opposed amphibious landings—multi-Service, multi-domain, command transition—qualify as the "most difficult of all military operations."[2] Furthermore, the 2006 edition of *Field Manual 3-24, Counterinsurgency* included a leading quote for chapter one: "Counterinsurgency is not just thinking man's warfare—it is the graduate level of warfare."[3] This is seemingly another claim to the hardest thing. Training for high intensity combined arms has plenty of competition for consideration as the greatest challenge in war—enough to see that trying to choose one is a poor idea.

No one area of warfare should claim to be the "hardest thing." (Photo by Sgt Miguel Rosales.)

Secondly, the U.S. military should stop holding to the idea that training for high intensity combat is the pinnacle of preparation. Speaking in 2012, MG Anthony Cucolo, USA, recommended that of the possible scenarios to prioritize, the Army should "focus on the hardest one. The hardest one is high-intensity combat operations … if we focus on [that] I firmly believe we can do almost anything else."[4] For the Marine Corps, the Training and Education Command staff has described the goal of the Integrated Training Exercise (ITX) as, "This exercise will serve as the natural capstone to battalion-/ squadron-level unit training."[5] While the idea of high-intensity, combined arms as a capstone is prevalent, its place as something to move down from has not worked well in practice.

In the lead up to the Vietnam War, the military was largely dismissive of the need to prepare specifically for counterinsurgency. While President John F. Kennedy saw the problem requiring a "wholly different kind of military training," many military leaders were not impressed with the need to modify training away from the conventional standard.[6] Among those generally resistant was the Army Chief of Staff from 1960 to 1962, GEN George Decker, when he said, "Any good soldier can handle guerillas."[7] In contrast, BGen Samuel Griffith, a former commander of the 1st Raider Battalion, recommended that units preparing for the insurgency in Vietnam study foreign languages, cut back on battalion exercises, and favor small unit exercises. Rather than focus on conventional high intensity combat training, he suggested that units prepared for that kind of fight reminded him of "amateur firemen. They do more damage than the flames they may finally put out."[8] In practice, fighting an insurgency proved exceptionally challenging—not something lesser. In the post-Vietnam era, many returned to the failed concept. David Petraeus writing in 1986 noted,

> there remain a few military officers who cling to the notion that no special capability is needed because big units can handle small wars—that in the words of General Curtis LeMay, 'If

you can lick the cat, you can lick the kitten.'[9]

The Vietnam War should have been the notice to the U.S. military that picking a "hardest" and stepping down to other forms of war did not work.

More recently, once ground units began deploying to Iraq and Afghanistan, they did not simply keep training for high intensity combined arms. The pre-deployment training plan quickly changed to focus on counterinsurgency skills. The traditional combined arms exercise went through a number of iterations to more closely align with deployed requirements and experience. Units did not succeed by stepping down from high intensity, combined arms attacks and instead quickly adapted to their training to the fight they were in.

… many military leaders were not impressed with the need to modify training …

Marine units should avoid both giving anything the status of hardest and suggesting that there is a point from which everything else is easier. If these were useful concepts, then the Vietnam War might have been a success and units deploying for deployment to Iraq and Afghanistan should never have adjusted their training. While training for high intensity combined arms is critical, it should not be used to disrespect the complexity and challenges of other missions. The right structure instead is thinking of combined arms as the foundation for success and not the capstone. Combined arms is the base that grounds the MAGTF at all levels, both in direct application against an enemy and in the way Marines think about problems. From that foundation, units at all levels should keep moving. That might be to train on counterinsurgency, irregular warfare, amphibious operations, foreign humanitarian assistance, advising foreign militaries, or any number of other possibilities. Just as shooting skills are

foundational for the individual—every Marine a rifleman—training for high intensity, combined arms engagements is foundational for units. This type of training allows units to *step up* to additional, complex scenarios, not step down to lesser forms of warfare. Combined arms is the beginning, not the end.

Notes

1. Charles C. Krulak, "The Strategic Corporal: Leadership in the Three Block War," *Leatherneck*, (Quantico, VA: January 1999).

2. Ian Speller and Christopher Tuck, *Amphibious Warfare: Strategy and Tactics from Gallipoli to Iraq*, (London, UK: Amber Books, 2014).

3. Department of the Army, *Field Manual 3-24 (FM 3-24), Counterinsurgency*, (Washington, DC: 2006). Perhaps, tellingly, this quote was dropped in later editions.

4. Sydney J. Freedberg, Jr., "Wake Up and Adapt, Incoming War College Chief Tells Army," *Breaking Defense*, (April 2012), available at http://breakingdefense.com.

5. TECOM Staff, "Training the Middleweight Force in the Post-OEF Environment," *Marine Corps Gazette*, (Quantico, VA: December 2012).

6. Joint Chiefs of Staff, *Joint Publication 3-24, Counterinsurgency,* (Washington, DC: 2010).

7. Andrew Krepinevich, Jr., *The Army and Vietnam,* (Baltimore, MD: Johns Hopkins University Press, 1986).

8. Ruthven E. Libby and Samuel B. Griffith, "Counter-Insurgency: Problems for Professionals," *Marine Corps Gazette*, (Quantico, VA: January 1963).

9. David H. Petraeus, "Lessons of History and Lessons of Vietnam," *Parameters*, (Fort Leavenworth, KS: August 1986).

USMC

Reinvigorating Maneuver Warfare

Our priorities for manning, training, equipping, and educating should be on our close combat units

by MajGen William F. Mullen III

>MajGen Mullen is the CG, Training and Education Command.

With the publication of *Fleet Marine Force Manual 1, Warfighting,* our 29th Commandant, Gen Alfred M. Gray, cemented maneuver warfare not only as the Service doctrine but as a warfighting philosophy to guide all Marine Corps actions. It excelled at shaping how the Marine Corps prepared and pursued war as evidenced by the successes achieved during the Gulf War and beyond. Unfortunately, our ability to think and act as maneuver warfare adherents diminished during the steady state operational periods of the subsequent conflicts in Iraq and Afghanistan and caused our 37th Commandant, Gen Robert B. Neller, to ask, "How do we reinvigorate Maneuver warfare?" This question caused me to

think long and hard, and the result was the conclusion that our Marine Corps needs to fundamentally change how it educates, mans, trains, equips, and even perceives its close combat forces. Before we get to those recommended changes though, we need to describe how we arrived at this point.

The Decline of Maneuver Warfare

I believe Gen Neller asked the question regarding reinvigorating maneuver warfare for three primary reasons. First, the changes we have

seen in the Fleet Marine Forces over the past eighteen years of involvement in Operations ENDURING FREEDOM and IRAQI FREEDOM. After the successful maneuver warfare centric invasions of both Afghanistan and Iraq, counterinsurgency operations required Marines to "fight" from largely static positions. While small units employed maneuver warfare to gain positions of advantage during firefights, large-scale maneuvering was not required, which caused our skills to atrophy overall. These changes were compounded by the increased operational tempo, a great deal more prescription with training requirements, and less time between deployments. The result over time has generated small unit leaders who are less engaged with their subordinate unit leaders and leaders, in general, being more directive because of a lack of trust. These factors also engendered the belief on the part of many of our leaders that they had little to no control over the training in preparation for deployment, so they did not take ownership as much as they should. These factors have also led to a decrease in subordinate initiative where we have subordinate leaders thinking it is acceptable to merely wait for orders instead of taking intelligent initiative based on intent.

The second reason is the growth of technology that enables seniors to reach well down into the lowest tactical levels to direct actions they deem appropriate, as well as the extensive reporting requirements that only seem to grow from year to year. The ability to rapidly communicate with anyone, anywhere, at any time is a tremendous temptation
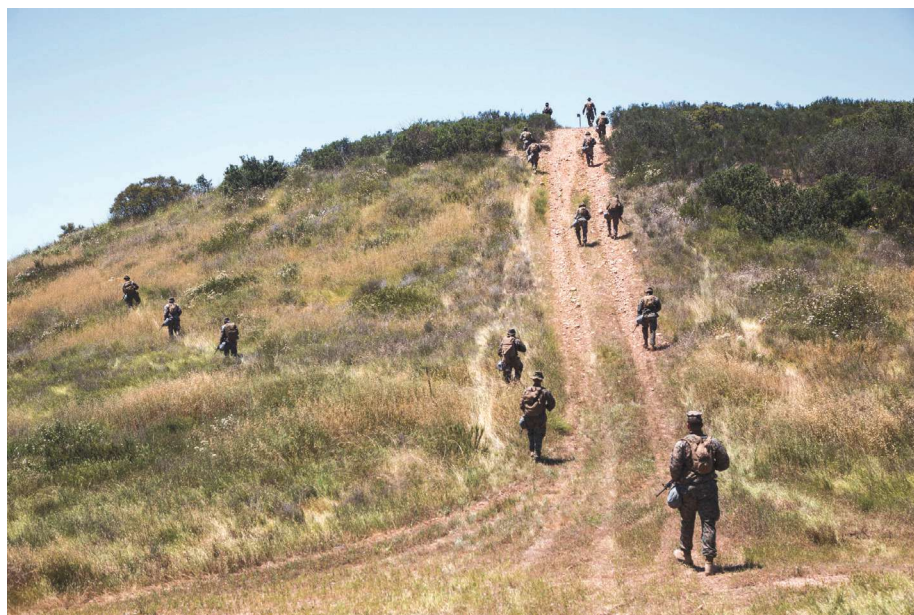
Physical training involves more than the PFT and CFT. (Photo by LCpl Julian Elliot-Drouin.)

We need to ensure our small unit leaders are competent. (Photo by LCpl Devin Darden.)

that can, and often does, lead to over-reach for non-essential and seemingly spurious reasons. Rather than increasing our speed, it causes hesitation and, in some cases, paralysis on the part of subordinates. Reporting is a major factor in this since control from above—real or perceived—inhibits subordinate confidence resulting in a reluctance to take the initiative and act on intent. The growth in both directive control and reporting requirements leads subordinates to feel they are not trusted, and this further undermines our maneuver warfare philosophy because these things lead to the perception that the leaders of our institution do not understand our own philosophy and that our institution itself does not act as if our philosophy matters.

The third reason is that, over the past few decades, our Corps has increasingly allowed a focus on expensive acquisition programs to dominate our thinking, investment priorities, and, even worse, to define who we are in our dialogue with Congress and the American people. While driven by the demands of the planning, programming, budgeting, and executing process and understandable to a point, none of these programs define the Marine Corps. Our Marines define the Marine Corps. Even if we had none of these programs, our ethos would enable us to find a way to get

the mission accomplished. By allowing the planning, programming, budgeting, and executing agenda to drive our narrative, our internal audience—our Marines—have focused more on the material things they believe they need instead of the requirement for personal professional development of our leaders and the pursuit of tactical competence across our units.

The three reasons mentioned above have also combined with an institutional obstacle that currently stands in the way of enabling maneuver warfare. This institutional obstacle is the way we man units that inhibits the timely building of cohesive teams. The "business rules" approach to manning almost guarantees a lack of available time to form a cohesive unit and build the trust that is essential to the conduct of maneuver warfare. Based on our strategic guidance, the units that need to adhere to our warfighting policy the most are our close combat units, but they consistently seem to be the lowest priority for ensuring the best quality leadership at every level, particularly at the small unit level. We spend a great deal of time and effort selecting lieutenant colonel-level commanders and sergeants major, while spending little to no time ensuring that they have a fully manned and qualified command team all the way down to perhaps the most important point—the squad level.

The challenge with all that has been stated is that there is perceived to be a "say-do" gap in that we profess to believe in our maneuver warfare philosophy, but in practice we are doing things that undermine our ability to adhere to that philosophy for a variety of reasons. This say-do gap creates dissonance within our ranks while undermining the credibility of senior leaders and belief in the institution overall.

Maneuver Warfare's Essential Ingredients

Our philosophy of maneuver warfare can only exist when essential ingredients are present. The first, most important, ingredient in maneuver warfare is having leaders who possess maturity, intelligence, and a coach/teach/mentor mentality. Also, these leaders must understand our philosophy thoroughly and possesses the ability to inculcate every aspect of it in their units. The lack of such leaders inhibits getting to even the rudiments of our philosophy because if the leader is not interested or does not understand it, no one else in the unit will care. As with just about everything else, it has to start with the unit commanding officer, and since we seem to be suffering from anti-intellectualism where so many of our leaders do not read and study their profession anywhere near enough, many leaders today too often lack the required level of understanding.

The second ingredient is unit cohesion. It comes from a team having all its key leadership positions filled and stable for the entire duration of its training, deployment, and recovery period. It also comes from a solid and challenging training regimen—based on a clearly understood higher purpose—that demonstrates to all on the team that each member can be counted on and assists all leaders in understanding the capabilities and the limitations of their seniors and subordinates. Sun Tzu told us to know ourselves, and this is what cohesion enables. Without knowing ourselves and coming together as a team, we would merely be lucky to beat any opponent.

The third ingredient is competence. Competence on the part of seniors and

subordinates needs to come both upon their arrival with a solid base of knowledge regarding the billet they will hold, as well as participating as part of the team during the training period that demonstrates the competence of all the unit's leaders. This demonstration of competence further enables cohesion. Without competence in the senior leader, subordinates doubt the capacity of the unit to accomplish any mission, and the effect is corrosive in the extreme. Without competent subordinates, leaders distrust their subordinates' ability to fulfill their intent in an effective way. In both cases, units experience difficulty in building cohesion, and their poor performance reflects this condition during training, or worse, in combat.

When you combine the ingredients above, you gain the trust between seniors and subordinates that is absolutely critical and which enables them to operate as a team with little more than intent to go by as the guiding premise. This trust enables seniors to know that their subordinates will take their intent and accomplish the mission in the best manner possible, regardless of changing conditions, and require little more in the way of guidance unless the intent needs to change. It also enables subordinates to trust that their seniors will not micro-manage them or pull the rug out from under them when they take whatever action is required to accomplish the intent provided. There is a reason why people refer to the speed of trust—when you have it, you need less communication, and it provides for a great deal more initiative which results in greater agility across the organization. Without it, you have leaders hesitant to make decisions and more oriented on protecting themselves than in accomplishing the mission as quickly and effectively as possible.

What is described above can best be stated as the maneuver warfare equation: Quality Leaders + Extended Cohesion + Core Competence = TRUST. This trust is essential to action maneuver warfare. Without trust, there can be no mission command. Without trust, combined arms is dangerous at worst and ineffective at best. Trust is the fundamental fuel that is needed for the fu-

ture fight. Our Corps' challenge is that almost every institutional process we utilize works against this equation, and when coupled with a high operational tempo, we will always fall short. With that said though, we do achieve this ideal in some cases with the commanders who "get it" and work to achieve this in the units they command. Absent the institutional processes that standardize and enable the equation above, we will fail to achieve consistent and predictable outcomes. In order to reinvigorate maneuver warfare, we have to change the way we educate, man, train, and equip our close combat forces, which is where we need this capability the most.

> *We need to establish career length PME continuums for our officers and SNCOs ...*

Reinvigorating Maneuver Warfare in the 21st Century

To alleviate the challenges mentioned above and thereby enable the Corps to return to fulfilling our maneuver warfare philosophy, we need to treat the close combat forces of the Marine Corps differently. Given our strategic guidance, these forces are our Corps' direct bid for success when executing daily tasks in the current and future operating environments. As our strategic guidance specifically directs, these close combat units must be educated, manned, trained, and equipped differently from the rest of the Marine Corps. An analogy would be a NFL team. Everyone in the organization is a member of the team, but those who go out onto the field to engage with the opposing team directly are the ones who get the most focus, so they are treated differently from everyone else. They are the team's bid for success—they win the game through their actions on the field. It is the same for our close combat units, so they must be treated differently also. The changes recommended below apply across the Marine Corps in some cases,

but apply to our close combat force in particular:

Education. We need to establish career length PME continuums for our officers and SNCOs, with progress in them tied to promotion and strictly enforced. It has to be more than just attending a formal PME course or accomplishing it through distance education. All of our leaders need to understand that they have joined a profession and that there are career length continuing education requirements that must be accomplished to continue to be a member of the profession of arms. We are currently working on proposals for these continuums, which, if adopted, need to be sustained and enforced across the Marine Corps. We must have more intelligent leaders at every level who truly understand our philosophy and what is required to make it work. This becomes even more imperative as we increase in rank and responsibility. As former Secretary of Defense James N. Mattis once said, "the price of a lack of competence in our profession is filling body bags until we figure it out." This has never been acceptable, but as the pace of change in the operating environment gets faster and the challenges get more complex, his statement is truer now than ever.

Manning. We need to prioritize stability and cohesion over a longer term in our close combat forces much more than we do now. As soon as a close combat unit returns from post-deployment leave, all of the new members they are going to get should be standing by and ready to join to enable the team to cohere and train throughout the entire work up period. This in particular means leaders at their normal table of organization rank, with the training they need to set them up for success accomplished before they arrive at their unit.

Each leader in a close combat formation needs to be periodically evaluated, to include 360-degree evaluations, to eradicate toxic leadership. These evaluations can be used with more junior leaders to influence them to be better leaders if there is a challenge, but as leaders become more senior, they get less of a chance for remediation, especially if they have been counseled earlier in

their career for the lack of appropriate leadership. Our Marines deserve only the best, most committed leaders we can provide, and we need to be ruthless in the pursuit of that objective. Again, leaders in close combat units have to be treated differently. We try as an institution to enable stringent screening of commanders, but we continue to see evidence that we still have room to improve.

We need to ensure our small unit leaders are competent and have something that sets them apart from the junior Marines they are leading. We can do this by making the advanced infantry training courses provided by the Schools of Infantry both required and "Ranger School-like" experiences for our junior leaders. This will cause them to realize that before they go, they need to be well prepared, and when they return, they are a different person from the Marine they were previously. The more junior courses should be a requirement for promotion to the next grade with the honor graduate promoted two ranks. This will generate a much better sense of confidence in our junior leaders and will enable the Marines they lead to truly look up to them as someone they can aspire to be—they will also be more likely to be the role model leaders that we need given the guidance we have re-

ceived. The Squad Leader Development Program is a step in the right direction, but it is not nearly enough.

We need to raise the required GT score as well as the lower age limit for membership in our close combat units so that we get the smarter, more mature Marines we need. The Information Age we are in has generated a sense of transparency through increased access to information which means that more people, to include our Marines, are "influence-able" by the dissemination of disinformation. This is especially true since many of our young Marines are not inclined to dig deeply or think critically about what they are mentally absorbing. If it rhymes with what they want to believe, they are inclined to accept it as fact. As we pursue our national interests across the globe, our Marines must understand the impact of their every action, or inaction, or we will continue to experience challenges in the operational environment. Whether willful or not, ignorance threatens our ability to accomplish our assigned missions, undermines public confidence in our institution, and erodes trust within our ranks.

An adjunct to what was stated above is that the more junior members of our close combat units need to understand that they are not *entitled* to be there.

They should have to earn their spot on the team, and keep it over time, through demonstrated performance in all aspects of training and being a Marine 24/7. Failure to comply means being warned and counseled at first then cut from the close combat team for failure to adjust. When cut, they should be placed in a pool of Marines who have also failed to comply. These Marines will continue to train in order to try and earn a spot in a different unit (as long as there are no legal or behavioral issues) and will have one more chance to be a part of a close combat unit if they are recommended for that chance by the leadership of the training pool. If they fail again, they are given another MOS or a job elsewhere supporting the fleet. This effort is designed to get at the "need to belong" that Dick Couch speaks of in his book *A Tactical Ethic* (Annapolis, MD: Naval Institute Press, 2010). If Marines know they will have to earn their spot, then protect what they have earned through continuous performance, just like on a football team, most will rise to the occasion with a corresponding rise in the competence and cohesion of our close combat units. Once they realize that they can lose their spot, they will work a great deal harder to stay there and the training pools will not be as large as some might think.

Training. Our close combat units deploy for different reasons and their training is, and should continue to be, oriented on the challenges they will face once deployed. That said, there still needs to be a culminating event that everyone recognizes will likely be more difficult than what they will face when deployed. Whether this is a Marine Corps Combat Readiness Evaluation or an Service-level training exercise, it needs to be standardized from the standpoint that the evaluators see many different units and can best judge the unit they are currently looking at by direct comparison. It also needs to be fully instrumented to enable the collection of every aspect of the exercise. This will enable data analysis for identification of trends that need to be fixed across the force. They should also train against a live, thinking enemy, and train to failure at every opportunity—with

There needs to be a culminating event that everyone recognizes as the standard to be used for comparison with other like units. (Photo by Sgt Andy Martinez.)

each event reviewed in the after-action review process and reset to be run again if needed to cement in the lessons that need to be learned.

The physical training for close combat units also needs to be different from the rest of the Marine Corps. To get to the warrior athletes we need, the regimen needs to include aspects of functional fitness as well as hiking and combat endurance courses as part of a regular routine for these forces. It should also include nutrition counseling and the involvement of athletic trainers to prevent injury and help with recovery when injury occurs. We have made a start in this area but need to do more. There should also be a different Combat Fitness Test for close combat units that involves some challenges and tactical tasks coupled with hiking and speed marching to ensure that every member of the team is in peak physical condition and able to keep up under combat conditions. Once again, different rules for the close combat units that are our bid for success on the battlefield.

Equipping. The way we spend money has to demonstrate what is most important to us and that means we should be spending a great deal more on our close combat units. By several estimates that were validated by the Office of the Secretary of Defense Cost Assessment and Program Evaluation as well as listed in our strategic guidance, these close combat units take 90 percent of the casualties in combat, yet form the smallest percentage of our Marine Corps overall. An accelerated acquisition process coupled with prioritizing close combat units will enable them, and only them, to get the best equipment and technology available in the shortest amount of time. This focus on our close combat units will significantly enhance our chances of winning in combat, but it will also demonstrate to the members of those units that they are indeed our main focus. Special operations forces already have this focus, and the more we can approach what they do for their teams, the better. This is not to make our close combat units a close replica of special operations forces, but to give them more confidence in what they are using in combat and more confidence

We have to dominate the fight. (Photo by LCpl Jacqueline Parsons)

in themselves as a team. We have to ensure that any fight we engage in with our close combat units is not a fair fight in any way. We have to dominate and win every fight, or we will have lost in everyone else's eyes. The confidence that comes from clear dominance is priceless.

Enabling and Sustaining

Bureaucracies follow certain predictable behaviors regardless of the requirements levied upon them. As a large, bureaucratic institution we struggle against organizational friction to enact lasting change —the recommendations contained in this article are no exception. Making some or all of the changes recommended in this article has the potential to reinvigorate maneuver warfare, but change of this nature also takes more time than most think—it is a generational shift that must be sustained over time. When we get distracted by a high operational tempo, we tend to lose focus. To prevent this, we should establish maneuver warfare tactical contact teams consisting of recognized experts who visit exercises, talk to the participants, observe operations, and provide relevant lessons learned to all concerned. These contact teams should be the conduit through which lessons are disseminated in all directions and can be the "directed telescope" for the Commandant to be able to measure and

influence progress toward enabling the maneuver warfare culture throughout the Marine Corps, but in particular, in our close combat units where it is essential to success.

All of this is a great deal to ask, but so is combat, especially when data indicates that the units we are talking about take the overwhelming percentage of casualties in any fight. Becoming a part of one of these units, as well as continuing to maintain one's position or move up in one of them has to be something different from the average Marine experience. There are those who will call these changes unfair but so is taking 90 percent of the casualties in any fight. Institutionalizing the measures required to reinvigorate and maintain a culture of maneuver warfare are vitally necessary to ensure that the next close combat fight we engage in is a crushing and thoroughly demoralizing experience for anyone who chooses to be our opponent in that fight.

>USMC

Maneuver Warfare

The way forward

by GySgts Neil D. McCoy, Adam D. DuVall, & Joshua L. Larson, & SSgt Luke T. Hudson

Twenty-eight years ago, the Marine Corps published *Fleet Marine Force Manual 1, Warfighting*, solidifying maneuver warfare as its warfighting doctrine and philosophy. *FMFM 1* has since been renamed *MCDP 1, Warfighting*, and its writings have stood the test of time through the last eighteen years of combat in the Middle East and beyond. Marine Maj Ian Brown published a book entitled *A New Conception of War: John Boyd, the U.S. Marines, and Maneuver Warfare*,"[1] the most comprehensive history of the Marine Corps and its relationship with maneuver warfare. This work highlights the level of acceptance of maneuver warfare throughout the Marine Corps, as well as Marines' reservations with the concepts in application. Today, it is generally accepted by the Marine Corps that practicing maneuver warfare in both its physical form and as a mindset will continue to elevate the Corps as a warfighting organization.

The problem with the current outlook, however, is that, although the Corps has made it clear verbally for the last three decades that we prepare and fight wars under the philosophy of maneuver warfare, it is rarely seen in practice in training environments, at our schools, in the Fleet Marine Force, and—most important of all—in combat. Therefore, going forward, the Marine Corps must address the current level of understanding of maneuver warfare, the current implementation of maneuver warfare inside the Corps today, and how, through training and education, we can transition the responsibility of maneuver warfare to the small unit leaders of the Marine Corps.

Where We've Been and Where We Are

The *Correlates of War* database has recorded 464 conflicts since 1815, with 82 percent occurring between state and non-state actors.[2] The most well-known of these wars include the French-Algerian War, the Irish "Troubles," the Vietnam War, and the Philippine Insurrection. These four among many other hundreds of conflicts show a trend falling further away from conventional state versus state warfare. The Marine Corps, however, continues to place the majority of its peacetime training focus on state versus state fighting. To reinforce the point of misplaced focus, for the last fifteen years of combat, Marines have not faced a single uniformed or "state" enemy force on the battlefield. Furthermore, Marines are tasked to remain flexible enough to deal with multiple types of operations ranging from stability operations to high-intensity combat. These are tall orders for young men and women who, in most cases, possess a still developing prefrontal cortex.[3] At face value, both the United States and the Marine Corps demand its Marines embody the traits of the professional warrior and practice our warfighting doctrine in order to defeat the enemy, and yet the Service does a poor job of explaining, teaching, and assessing the concepts of maneuver warfare in both training and educational environments.

Presently, while maneuver warfare is acknowledged as the Corps' warfighting philosophy, the authors have identified a significant disparity between the level of understanding between the officer corps and enlisted community. This disparity stems from the lack of implementation of maneuver warfare in both its physical form and as a mindset in the daily lives of Marines. Having been through every level of enlisted PME that exists today in the Marine Corps, the authors argue that the vast majority of enlisted Marines, regardless of MOS, possess a severely deficient understanding of maneuver warfare. This requires im-

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mediate attention. One of the greatest problems is that Marines who serve outside the GCE believe that the principles of professional warfighting either lie outside of their level of expertise or do not apply to them. And yet, according to *MCDP 1, Warfighting*,

> Every Marine has an individual responsibility to study the profession of arms. A leader without either interest in or knowledge of the history and theory of warfare … is a leader in appearance only.[4]

This is where we are now.

Where to Go from Here

Having acknowledged where the ideas and concepts of maneuver warfare have been and where they are now, our next logical step is to recognize and implement methods that will better prepare us for war. Before continuing, however, we ask you, the reader, to reflect on these two questions:

- What are the timeless qualities that we require from our warfighters?
- How do we cultivate those qualities?

These questions will likely produce a variety of answers from leaders across the Service; however, instead of answering them directly, the authors propose a focus in three areas that will develop qualities that will serve well in any kind of conflict. The areas include personnel management, focused and purposeful training, and command sponsored PME.

Personnel management. This is one area that has not been improved, updated, or evolved fast enough since the adoption of maneuver warfare by the Marine Corps. Marines continue to be placed in billets based on a number of questionable criteria with temperament, ability, and intellect falling very low in that ranking system. Too often, Marines are placed in billets and in geographical locations simply because a position has opened, they just so happen to be up for rotation, or the needs of the Marine Corps dictate that move. While these factors may indeed have an effect on our manpower model, they should not be the dominant determining factors for billet assignment. *MCDP 1* states:

> Since war is at base a human enterprise, effective personnel management is im-

portant to success. This is especially true for a doctrine of maneuver warfare, which places a high premium on individual judgment and action. We should recognize that all Marines of a given grade and occupational specialty are not interchangeable and should assign people to billets based on specific ability and temperament.[5]

In order for the Corps to effectively educate Marines on the tenets of maneuver and develop technical and tactical proficiency, the right men and women must be placed in key billets around the globe. This is particularly true for instructor billets at the schoolhouses. Through student-centered learning and exercises that focus on problem-based decision making, the right instructors can inculcate in young Marines a thirst for lifelong learning that will eventually begin to change the culture of the Marine Corps.

Focused and purposeful training. Standards-based training that seeks to mimic the rigors of combat has long been the mantra of our warfighting institution. Too often in the FMF, however, training simply becomes a checklist-based execution of tasks that are pulled from the training and readiness manuals with almost no tie-in to actual modern combat. To be clear on this point, a Marine *does not* need direct combat experience to create tie-ins. This can be done by retrospectively analyzing the experiences of warriors who have gone before us. Take combat marksmanship as an example. There have been proven methods that focus on intuitive gun fighting that are utilized across the world in many allied armies, particularly their special forces communities. These methods seek to perfect the basic fundamentals of shooting combined with a relentless combat mindset to increase speed, accuracy, and overall lethality against the enemy. The Marine Corps, however, continues to practice annual rifle training that has remained fundamentally unchanged in the last 20 years, and, what is more, it is only conducted *once a year* for every Marine. Focused training implies that one must spend hours conducting the task via thousands of repetitions. If there is any hope of achieving a level of proficiency in marksmanship that modern combat

demands, it is imperative that the entire model of training be revamped. The type of focused training that contains a "why" behind it will also act as a "gateway drug" when introducing the ideas of maneuver warfare to young Marines. By reaching the deepest parts of their thought process with an exercise like shooting and perfecting an employment technique, we can exploit their interest to facilitate conversation about the art of war and how the task they are currently performing relates to it.

Yet another example of this focused and purposeful training would be the 2019 1stMarDiv Infantry Rifle Squad Competition, won by a rifle squad from 2d Battalion, 7th Marines (2/7). During the course of the 7th Marine Regimental Squad Competition and subsequent training at Camp Pendleton leading up to the Division competition, the squad from 2/7 scarcely focused on performance examination checklists or rigid/structured training per the infantry training and readiness manual. Instead, the squad, guided by four SNCOs and NCOs from the regiment, concentrated on scenario-based live fire and patrolling exercises, tactical decision games, discussions of maneuver warfare, and non-standard approaches to combat marksmanship. These reinforced perfect repetitions, intuitive gun fighting, and employing a combat mindset at all times. The squad members unanimously attributed their victory at the Division competition to the non-standard training. This preparation was solely based on commander's intent and a ruthless focus on developing a mindset for winning in combat, not winning a competition.

PME.

> Self-directed study in the art and science of war is at least equal in importance to maintaining physical condition and should receive at least equal time.[6]

In conjunction with focused and purposeful training—or more simply put, deep knowledge of and skill in the science of warfare—PME should be vigorously implemented at every level of a Marine's career. Furthermore, identifying those who have a particular aptitude for the art, history, and theory

of warfare is a responsibility that leaders cannot take lightly as these are the men and women who will shape the way we fight in the future. Some maneuver warfare-focused PME programs exist in the FMF. The members of 2/5, over the course of the last two years, were able to develop a thirst for PME inside their battalion that directly related to increased lethality during training and on deployment. Several SNCOs and officers of the unit identified a need to distribute Marines with a passion for the art of war and education throughout the maneuver companies. Former instructors from the School of Infantry and graduates of Infantry Small Unit Leaders Course were dispersed based on temperament and ability. They then easily developed effective training events, making the events interesting and opportunities to explore warfighting concepts in a manner that generated buy in or retention from the Marines. The focus that these key individuals placed on professionalism, history, current events, progress, and competition fostered an environment where Marines willingly sought out education in maneuver warfare, which subsequently resulted in a greater efficiency in the execution of warfighting skills.[7]

According to the *Commandant's Planning Guidance*,

> What we need is an approach that is focused on active, student-centered learning using a problem-posing methodology where our students/trainees are challenged with problems … We have to enable them to think critically, recognize when change is needed and inculcate a bias for action without waiting to be told what to do.[8]

The Commandant charges the Marine Corps with developing a more effective approach to learning and becoming better decision makers with a bias for action. This is not a new idea. In fact, a young infantry staff sergeant submitted it as a proposal to the Commandant's 2017 Innovation Symposium 2017. The submission was awarded as a winner. The staff sergeant's proposal focused on institutionalizing decision-forcing cases, tactical decision games, and sand table exercises into not only PME schools but also the FMF. This plan was widely recognized by the Marine Corps as a vast improvement to the current model of instruction.[9] After receiving such praise, however, nothing happened. It seems counterintuitive that the staff sergeant's proposal has not been institutionalized and ruthlessly enforced at the education facilities, even after receiving the Commandant's endorsement.

The authors invite all Marines to challenge the ideas in this article and use it as a catalyst for discussion. By no means do we think that the abovementioned training and education methods are *the* answer to building maneuverists—there is no set recipe. We only hope this sparks honest, frank, and fruitful discussions for implementing more effective means of developing a culture of maneuver warfare throughout the Marine Corps.

Conclusion

Gen Alfred M. Gray, LtGen Paul K. Van Riper, and Mr. John Schmitt once spoke in an interview about the intellectual renaissance that took place within the Marine Corps during the post-Vietnam era.[10] Each spoke of the difficulties they encountered with the lack of acceptance of maneuver warfare at an institutional level. Even with a growing acceptance of the ideas throughout the last three decades, practice and study of maneuver in not only its physical form but as a mindset is slow going in implementation across the force. We as a Corps need to institutionalize the concepts that have been solidified as our doctrine for so long and adopt more focused, purposeful, and adaptive training and education methods that assist in the preparation for combat. Gen Berger recently reinforced the fact that outdated training and education models will not be enough to defeat the enemy in future asymmetrical battles when he stated,

> As good as we are today, we will need to be even better tomorrow to maintain our warfighting overmatch. We will achieve this through the strength of our innovation, ingenuity, and willingness to continually adapt to and initiate changes in the operating environment to affect the behavior of real-world pacing threats.[11]

The Commandant has clearly communicated his intent. It is now time for this warfighting organization to go forth and execute.

Notes

1. Ian Brown, *A New Conception of War, John Boyd, the U.S. Marines, and Maneuver Warfare*, (Quantico, VA: Marine Corps University Press, 2018).

2. Sebastian Gorka and David Kilcullen, "An Actor-centric Theory of War. Understanding the Difference between COIN and Counterinsurgency," *Joint Forces Quarterly*, (Washington, DC: National Defense University Press, 2011).

3. Experience and the developing prefrontal cortex; information available at https://www.ncbi.nlm.nih.gov.

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

5. *MCDP 1.*

6. Ibid.

7. Personal communication between GySgt Joshua Larson and author on September 2019.

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

9 Innovation Symposium 2017 Award Ceremony; information available at https://www.dvidshub.net.

10. MAGTF Instructional Group, "Warfighting Panel," YouTube video, 1:23:29, (March 2015), available at https://www.youtube.com.

11. *38th Commandant's Planning Guidance*; and *MCDP 1, Warfighting*.

USMC

Enduring Presence, Engaging Mission

United States Marine Corps Forces Korea

by Col Timothy G. Burton, LtCol Matthew R. Crouch & Capt John J. Parry

The United States Marine Corps has a long and storied connection with the nation of South Korea. From the 1871 excursion of the Marines in Korea during the Disturbance in Shinmi[1] to the combat of the Korean War, our Service's history is punctuated by events in which the Korean Peninsula looms large. Today is no different. In light of the "Pivot to the Pacific," the Marine presence in Korea offers a unique opportunity to significantly enhance the ability of Fleet Marine Forces Indo-Pacific Command to achieve the strategic objectives laid out by the *Commandant's Planning Guidance* (Washington, DC: HQMC, July 2019) and inherent in our current *National Defense Strategy*. U. S. Marine Corps Forces Korea (MARFORK) achieves this by fulfilling its unique missions to ensure Marine Corps access to the Korean Peninsula as a base of operations within the Indo-Pacific Theater and developing effective interoperability with our Republic of Korea (ROK) allies.

Marines on the Peninsula in the Modern Era

In the years immediately following World War II , the Marine Corps found itself in the grips of dramatic cuts, with a personnel reduction of 84 percent from its wartime high.[2] At that time, many strategists and bureaucrats had come to see the world in terms of a nuclear race. Unable to anticipate the frequency of limited wars going forward, they questioned the relevance of large standing armies and doubted the Marine Corps' utility.[3] The Korean War quickly highlighted the shortcomings in those views.

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>>LtCol Crouch served in the G-3 for U. S. Marine Corps Forces Korea from July 2019 to July 2020. A former Site Commander, Norfolk, and Commanding Officer MAG-49 Detachment D, he has served on staff at U.S. Marine Corps Forces Command, I MEF (Fwd), as an ACE Executive Officer with VMM-264 (26th and 22d MEUs), and as Pilot Training Officer and Weapons and Tactics Instructor with HMM-268. His service includes multiple combat tours in Iraq and Afghanistan and two and a half years in the People's Republic of China as an Olmsted Scholar.

>>>Capt Parry is a Communication Strategy and Operations officer currently assigned as an augment at Officer Candidates School. Capt Parry has served during Operations Enduring Freedom and Oaken Lotus as well as tours with U.S. Marine Corps Forces Korea, II MEF, and the School of Infantry.

> *Today, the Marine Corps maintains a permanent presence in the ROK ...*

Marines changed the course of the Korean War when the 1st Provisional Marine Brigade landed at Busan to reinforce Gen Walton H. Walker and the 8th Army's Pusan Perimeter. Their actions beginning in the summer of 1950, which included the surprise landing at Inchon, the recapture of Seoul, the march north toward the Yalu River, and the actions at Chosin.*

The following year lead some to say, "Marines saved Korea, and Korea saved the Marine Corps."[4] This pitched conventional fighting validated the continued need for a force in readiness in the Atomic Age and reinforced the strategic impact of forward presence in spite of the advent of the nuclear arsenal. Since that time, the Marine Corps has continued to play a role in the defense of the Republic of Korea, participating annually in a variety of unilateral and bilateral training and exercises on the Korean Peninsula. Today, the Marine Corps maintains a permanent presence in the ROK in the form of both component support of the U.S. sub-unified command of United States Forces Korea (USFK) and in the permanent Marine facility at Camp Mujuk in the city of

*Modern anglicized spellings for these locations are Busan, Incheon and Chosun. We have used the more archaic spellings common in Marine Corps documentation and historical references.

Pohang. As a result, today's United States Marines stand more ready to reinforce South Korea now than they did in June of 1950. From this posture, MARFORK supports two strategic missions: deterring North Korean aggression and maintaining a forward presence to counter the Chinese pacing threat.

MARFORK: The Marine Mission in Korea Today

Established in 1995 to support component requirements within USFK, the MARFORK commander historically served as the Combined Forces Command and USFK Assistant Chief of Staff, C/J-5 Strategy.[5] This dual-hatted construct divided the MARFORK commander's focus between the mission of setting the theater for the Marine Corps and the combined and joint force strategic planning responsibilities of the C/J-5. By 2018, continued North Korean provocations and increased tensions on the peninsula prompted staff augmentation to MARFORK to meet the new demands of the changing strategic picture. The enhanced staff included several more officers as well as a dedicated general officer as the commander. These changes enabled MARFORK to focus more deliberately

PFC Luther R. Leguire raises U.S. flag at American consulate in Seoul while fighting for the city raged around the compound, 27 September 1950. (Marine Corps photo by Sgt John Babyak.)

on setting the conditions for success in the Korean theater of operations. The weight behind the augmented staff and senior leadership improved overall readiness and highlighted the value of the Marine Corps presence in Korea to the joint and combined community.

Today MARFORK sets the conditions for the successful introduction of follow-on forces to Korea in the event

of a crisis or contingency operations. MARFORK does this in two ways: by preparing for the successful reception of those forces and supporting their readiness through rotational training visits to the Korean Peninsula. Additionally, the MARFORK staff works to solve complex operational-level problems associated with the Korea family of plans. It also strengthens the United States' alliance through building interoperability with the ROK Marine Corps. MARFORK's component responsibilities encompass complete support to theater operational plan requirements from armistice through war. Any prospective Northeast Asian crisis will naturally intersect with Korea, and MARFORK will play a part in any response across the range of military operations.

MARFORK and the Pacing Threat

The *Commandant's Planning Guidance* designated III MEF as the main effort. This increased focus on the INDOPACOM theater significantly increased the relevance of the MARFORK mission, making it an exciting time to serve on the staff. Indications suggest that the MARFORK role will evolve again. The below provides insight into what the future may hold for Marines in Korea.

Marines of the 1st MarDiv swarm ashore in a bloodless, unopposed landing at Wonsan, North Korea. Wonsan was captured by fast moving Republic of Korea Troops while the invasion fleet was held up by the densest minefield in history. (Marine Corps photo by Sgt Frank C. Kerr.)

A Marine with Golf Company, 2dBn, 2dMar trains a ROK Marine on combat marksmanship at Rodriguez Live Fire Complex 6 December 2019. The training between the two forces enhances the ROK-U.S. alliance and helps to build upon the interoperability between the two Marine Corps. (Marine Corps photo by Sgt Parker R. Golz.)

The Chinese efforts for regional hegemony in concert with the strained economic and military resources of the United States will increase the need for stable alliances. These relationships, characterized by mature military interoperability, will leverage the operational capabilities of our regional allies to provide strategic balance. Necessarily, MARFORK will expand its role as an agent for the Marine Corps' cooperation with the ROK Marine Corps.

U.S. Marine Corps, Republic of Korea Marines Corps, New Zealand Army, and Australian Army, conduct amphibious assault training at Doksukri Beach, South Korea, 12 March 2016, during Exercise SSANG YONG 16. SSANG YONG 16 is a biennial military exercise focused on strengthening the amphibious landing capabilities of the United States and its allies. (Marine Corps photo by Sgt Briauna Birl.)

Operationally, this cooperation will increase the lethality of the combined Marine Corps team. Strategically, it will accelerate the transition of U.S. forces from unilateral military engagement to widespread regional coalition efforts. Demonstrating the capacity of the world's two largest Marine forces to fight a coordinated, multi-domain effort will both entice potential future allies to consider the benefits of aligning with the United States and present our adversaries with a complex multi-faceted obstacle to their hegemonic pursuits. An interoperable, combined ROK-U.S. Marine Corps force necessarily changes our adversaries' strategic calculus.

China's continued aspirations for regional dominance, its aggressive pursuit of advantageous economic relationships (to the determent of poorer nations), and its development of more sophisticated offensive weapons systems validate the need for a combined, interoperable naval force-in-readiness. This requirement, coupled with to regional training areas and scarcity of access across the INDOPACOM theater, ensures that training venues on the peninsula will remain the preferred choice for enhancing the readiness of Marine units. This means that MARFORK will play a greater role in training coordination for FMF INDOPACOM units and will take the lead in facilitating units' access to the unparalleled opportunities presented by the Korean theater of operations training locales.

Lastly, access to the Korean Peninsula is essential for sustaining our amphibious capability in a dynamically changing operational environment. As we plan for a future fight in increasingly contested environments and ponder the implications of anti-access, area-denial tactics on naval force deployment, forward presence will be an essential element for developing diverse basing options. Whether as a sustainable base of operations inside the contact layer, or as a critical node in a network of temporary launching points for combat operations, Korea remains prime strategic real estate. As a permanent resident and subject matter expert on accessing the infrastructure of the Korean nation, MARFORK's role as a

coordinator for all forms of regional support to the MAGTF in peace or in war will become more important than ever.

security. Similarly, Marine access to Korea is increasingly relevant because of today's changing strategic picture and all that implies. The more capable

> **The Korean War demonstrated that, despite technological change at the dawn of the Cold War, forward deployed conventional forces remained not only relevant but critical…**

It is an exhilarating time to serve on the Korean Peninsula. As the strategic environment continues to change, service within MARFORK will become more challenging and more rewarding as well. The Korean War demonstrated that, despite technological change at the dawn of the Cold War, forward deployed conventional forces remained not only relevant but critical to South Korean sovereignty and U.S. national

that MARFORK becomes, the more flexibility and maneuver space Fleet Marine Forces Indo-Pacific Command will have across the entire contact layer with the Chinese pacing threat; thus, MARFORK provides a strategic advantage.

Notes

1. Andrew C. Nahm, *Korea: A History of the Korean People*, (Seoul, ROK: Hollym, 1996).

2. Allan R. Millett, *Semper Fidelis: The History of the United States Marine Corps*, (New York: The Free Press, 1991); and BGen Edwin H. Simmons, USMC(Ret), *The United States Marines: A History, 4th ed.*, (Annapolis, MD: Naval Institute Press, 2003).

3. Ibid.

4. *Semper Fidelis.*

5. Headquarters Marine Corps, *MCWP 7-10, Marine Corps Componency*, (Washington, DC: 2016).

Making the AAVC7 Useful

To make it good, we must use it while it's bad

by Capt Zac Blanchard

>*Capt Blanchard was the Communications Officer for 2d Tank Battalion at the time of writing. He was temporarily assigned to 2d Assault Amphibian Battalion as the Assistant Communications Officer for a deployment for training in early 2018. He is currently an instructor at the United States Naval Academy.*

While the assault amphibian vehicle command and control variant (AAVC7) provides an impressive list of "brochure capabilities," it is currently a combat-ineffective platform. To make it useful, maneuver units must attempt to fully employ it and then communicate their after-action feedback with the parent assault amphibian battalion, division-level leadership, and Program Manager Advanced Amphibious Assault (PM AAA). Thorough employment and feedback will resolve the AAVC7's structural issues and, more importantly, guide the development and prioritize the fielding of the amphibious combat vehicle command and control variant (ACV-C). If successful, the GCE will gain a mobile, armor-protected, amphibious command and control (C2) capability. If unsuccessful, units will continue to rely on sub-par, alternative mobile C2 nodes.

In this article, I first discuss the current state of the AAVC7 in the Fleet Marine Forces. Second, I discuss the vicious cycle of dysfunction and organizational neglect which has greatly hindered AAVC7 employment. Third, I discuss real improvements I saw in my year-and-a-half as a communications officer who frequently employs the AAVC7 as my battalion's C2 node and who also makes recommendations for training commands, the Marine Corps Combat Readiness Evaluation, and technological upgrades to the AAVC7. Finally, I recommend the Marine Corps expedite the development and fielding of the AAVC7's replacement: the ACV-C.

Photo of the back of a C7. One of six workstations in the AAVC7. Each workstation can choose to listen to, talk on, or ignore the six VHF nets, HF net, SatCom net, UHF-line of sight net, and Iridium satellite phone connection over headphones connected to the screen at the top of the image. A networked ruggedized laptop can be placed in the mount at the middle of the image.

The Current State of the AAVC7

The *Commandant's Planning Guidance* (Washington, DC: HQMC, July 2019) calls for the Marine Corps to prepare for combat in an environment that is both amphibious and filled with an unprecedented enemy capability to locate our forces and strike rapidly with catastrophic accuracy. Thus, the employment of an amphibious C2 node, which can go from static to mobile immediately and lose little capability while moving on-road, off-road, or in the water, is not a nice-to-have but a tactical imperative.

The AAVC7 provides this needed capability with five power-amplified VHF nets, three additional VHF nets, one satellite communications (SatCom) net, one HF communications net, one UHF line-of-sight, and an Iridium satellite cell phone connection—all provided via headset at six workstations whose users can easily pick and choose which nets to monitor, transmit on, or ignore. Furthermore, the AAVC7 provides ruggedized laptop access at each workstation that can be networked internally, and in some situations externally, as well as friendly force tracking through a Blue Force Tracker (BFT) terminal and fire support coordination through an Advanced Field Artillery Tactical Data System. The AAVC7 is, in short, an excellent C2 platform: on Paper.

Unfortunately, as the saying goes, the AAVC7 "briefs better than it executes." The communications suite is both complicated and, worse, unique to the platform, which leads to unfamiliarity among communications planners, battalion staff, and the Marines who must install, configure, and maintain the gear. Besides being difficult to operate, the communications suite is a maintenance nightmare, and the mechanical system is only slightly more reliable.

Rather than deal with the heartache and time, most units opt to C2 from several HMMWVs parked together. The HMMWV method is slower to set up and tear down, more restricted by terrain, less survivable, and complicates critical tasks like the deconfliction of air and fires. Some units have replaced HMMWVs with MRZR all-terrain vehicles; while much lighter than the

AAVC7, the MRZR approach is even more limited for C2. Regardless, both the HMMWV- and MRZR-based C2 nodes are far more reliable, and neither requires a Navy-Marine Corps Achievement Medal-level effort by communications and ground electronic maintenance Marines to work as advertised.

A Vicious Cycle of Shortfalls and Neglect

Because the AAVC7 is so impractical to use, units avoid it. AA battalions and PM AAA thus shift priorities concerning manpower, funding, and technological development to the personnel carrier variant (the AAVP7) that infantry units actually employ. This neglect further worsens the structural issues with the AAVC7, thus continuing the vicious cycle.

The AAVC7's mount for an Iridium phone. This antiquated mount, which does not work with the current Iridium phones, stops a battalion staff from using the Iridium on-the-move.

The most absurd case of AAVC7 neglect by the AA community is the AAVC7's BFT system. All the AAVP7s, which outnumber the AAVC7s more than 10 to 1, have had the current BFT system installed since before 2018. The AAVC7s, however, have maintained the legacy BFT system which cannot encrypt communications, thus making

it nearly useless in both exercises and operations. It is so useless that both 1st and 2d Tank Battalions compensate by removing the legacy BFT antenna, mounting a tank battalion antenna, and jerry-rigging the second generation BFT systems into the vehicle with a combination of parachute cord and zip ties.

To reiterate, the primary program of record responsible for providing mobile C2 to the GCE is, as far as I am aware, *the only platform in the Marine Corps that still uses the legacy BFT system*. This is the communications equivalent of an infantry battalion whose officers and SNCOs are issued M1 Garands.

To be clear, the absurdity of the legacy BFT is not the only example of the AA community prioritizing the communications suite on the AAVP7 over the AAVC7. For instance, the AAVC7 can employ an Iridium satellite communications cell phone, but the mount for the phone only works with the legacy Iridium phone—which 2dMarDiv no longer has. Literally, the only thing stopping a unit from being able to make phone calls to anywhere in the world from all six staff seats is an antiquated mount, which PM AAA had no plans to replace until very recently. A systems engineer who works with the AAVC7 explained "it would be very easy to upgrade the Iridium mount. We would just need that input from the operating forces."[1]

The prioritization of troop carrying over C2 is leading to the ACV-C likely being fielded at least several years after the ACV-Personnel Carrier (ACV-P). This will significantly hurt the GCE's ability to command and control. The previous AA Advocate and current 2d AA Battalion commander wrote in May that the purpose of the ACV-C is to "provide infantry battalions, regiments, or divisions mobile command posts with modern communications."[2] If this statement is no longer true, in light of the *Commandant's Planning Guidance*, then the ACV-C should not be developed, and a different solution for mobile command posts should be vigorously pursued. However, if the ACV-C remains the designated solution for mobile C2, then it is inexcusable for a Service already notoriously behind

our sister Services in communications technologies to disregard such a critical C2 asset.

To Make the AAVC7 Good, Use It While It's Bad

Unfortunately, the most effective way to rectify the AAVC7's structural issues and prioritize the effective, rapid fielding of the ACV-C is to continue to use the AAVC7 despite its current issues while ensuring leaders in the amphibious community—both in the Fleet Marine Forces and the Supporting Establishment—are held responsible for these shortcomings.

In short, to make the AAVC7 good, we must use it while it's bad. This is a painful prescription (trust me) and undesirable in the near term for both battalion leadership and communications officers. It is very tempting to not use the platform when faced with garbled VHF transmissions, damaged cabling, inoperable screens, and other all-too-common features of the AAVC7, and instead shift to the standard HMMWV-based C2 set-up.

Of course, the AAVC7 has been successfully employed before, with 1st Battalion, 8th Marines' positive experience at Integrated Training Exercise 1-19 being an example (though, focusing only on its ability to manage six VHF nets at six staff seats, they did underutilize the equipment).[3] The successes, just like the failures, should be clearly articulated and learned from.

Improvements Made

The news is not all bad. Indeed, the AAVC7's capabilities, and 2d AA Bn's ability to prepare it, have improved greatly over the last two years. Both 2d AA Bn and PM AAA have made significant improvements to the AAVC7. First and foremost, the intercom system has been replaced, and the new system (the Harris RF-7800i) is far more reliable and user-friendly. I cannot overstate the importance of this improvement. VHF is still king on the battalion-level, and I now have confidence that my operations officer can sit in a seat and talk clearly over any of the VHF nets. Several additional improvements—like the replacement of the RT-1523 radios
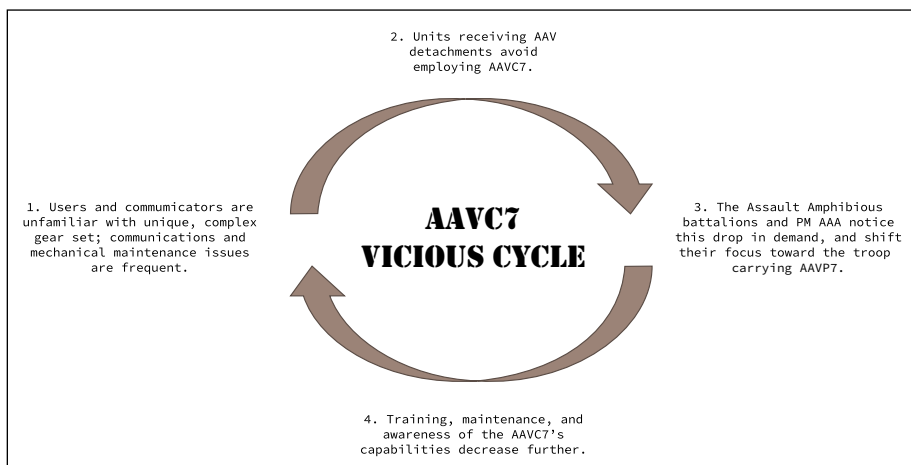

Figure 1.

(the PRC-119F, for those Marines old enough to remember it) with a next-generation radio—will further increase the AAVC7's value to maneuver commanders and desirability among communications officers.

On the battalion level, 2d AA Bn has re-organized its structure and priorities to better support external requests for the AAVC7. Most importantly, 2d AA recently created a general support (GS) platoon focused only on providing four AAVC7s and their associated AAVP7s to external units.

Besides the creation of a GS platoon, the 2d AA Battalion S-6 (Communications) has also placed a greater emphasis on both supporting and maintaining the AAVC7s within H&S Company; the Program Office has stepped up the frequency of its training, particularly for AAV crewmen; and the battalion will soon be fielding an eight-foot whip HF antenna that will safely enable HF on-the-move communications.

The Way Ahead

However, more needs to be done before the AAVC7 provides value to the GCE's C2 capabilities. First, the AAVC7 should be incorporated into the field exercises at the Basic Communications Officer's Course and the Infantry Officer Course's three-week PALM FIELD Exercise. The MAGTF Communications Planner Course should tour an AAVC7 as well. These are relatively easy efforts, since 3d AA Battalion maintains a company in Twentynine

Palms so the logistics burden would be minimal. The most necessary curriculum change, however, is at the Assault Amphibian Officer's Course, where the current curriculum only allots one day out of twelve weeks for AAVC7 familiarization.

Second, any infantry battalion deploying on a MEU or Unit Deployment Program deployment should be evaluated on its ability to employ the AAVC7 as a C2 node in its Marine Corps Combat Readiness Evaluation. The Marine Corps Combat Readiness Evaluation's high-stakes environment would rapidly familiarize units with the AAVC7 and significantly increase the demand signal to fix structural issues limiting the AAVC7's effectiveness.

Third, the AAVC7's satellite communications capabilities need to be significantly enhanced through greater fielding of the networking-on-the-move (NOTM) AAV and by redesigning the communications suite to incorporate several Multiple-User Objective System (MUOS) nets. SatCom deficiency was already a weakness with the AAVC7 before the sudden loss of the BFT program and is now a critical vulnerability. PM AAA should expedite the fielding of the AAV NOTM to 2d AA Bn in order to have at least one system installed and trained on in time to ship it out to Twentynine Palms for MEF Exercise 1-21 this October. Ideally, this system would be a NOTM-lite, that still communications on the Ku/Ka SatCom band but without many of the unneces-

sary, bulky, costly capabilities that the current NOTM system possesses.

Beyond the NOTM, PM AAA must redesign the AAVC7 to better support MUOS SatCom nets. To those familiar, MUOS' ability to allow Secret Internet Protocol Router Network and clear, reliable SatCom voice communications through a radio is a "game changer."[4] Yet, each MUOS net requires an external on-the-move satellite communications antenna and a PRC-117G radio. Currently, the AAVC7 only has one PRC-117G and the SatCom antenna is not MUOS-compatible. While there is currently a plan to install a MUOS-compatible antenna in Fiscal Year 2022, I personally am skeptical of that antenna's ability to provide useful data rates to a battalion staff. Beyond the antenna, the MUOS radio is not currently tied into either the intercom system or the internal network, making it useful on the move and impractical while static. While these issues are not difficult to overcome, they are the sort of headaches that will make units stop requesting the AAVC7 and reinitiating the vicious cycle I discussed earlier.

Currently, the AAVC7 only has one SatCom antenna. This is insufficient for current standards, and particularly for a regiment. At the 1stMarDiv Exercise STEEL KNIGHT 1-20 this past December in Twentynine Palms, 1st Tank Battalion mitigated this shortfall by mounting two additional satellite

communications antennas and PRC-117Gs.[5] In order to make the process more user-friendly, the AAVC7 should be redesigned to provide at least two, if not three, SatCom nets without modification. I argue the same should be done for the ACV-C, which is currently only designed to have one SatCom antenna.

Lastly, as mentioned, units must actually employ the AAVC7. Division G-6s should facilitate and encourage its use. Battalions slated for MEUs are an obvious choice—their mission is largely amphibious, and they can train with the AAVC7 throughout their deployment cycle to build familiarity. Also, the recent improvements I mentioned are due in no small part to the insistence of tank battalions to employ the AAVC7: with the deactivation of all tank battalions, the onus now falls squarely on infantry units.

Prioritize the ACV-C

Yet, whatever improvements are made to the AAVC7, PM AAA's top priority should be expediting the fielding of the ACV-C. Currently, the first 29 ACV-Cs are planned to reach the Fleet Marine Force in early 2024. The previous Commandant pushed to have the ACV-C fielding expedited,[6] and we should continue to work to expedite the process under Commandant Gen David H. Berger. The ACV-C's advances in maneuverability, survivability, land speed, reliability, and communications

capability will provide much greater value to commanders than the AAVC7, even if significant improvements in capabilities and reliability are made to the AAVC7.

In the bigger picture, regardless of whether one believes that the ACV's fielding is "recklessly disregarding the 'key drivers of change'"[7] or critical to supporting expeditionary advanced base operations and sea control,[8] the ACV-C will be the C2 platform for battalions and regiments most in line with the *Commandant's Planning Guidance* for at least the next decade. We must prioritize it accordingly.

Notes

1. Personal interview between author and Michael Moynagh, Systems Engineer, PM AAA, on 10 February 2020. PM AAA has recently began the effort to replace the mount, but this is only after receiving input from 2d AA Bn—who was made aware from 2d Tank Bn's feedback. Thus, it illustrates the point that while the AAVC7 does have multiple design issues, many are fairly easily fixed—if units will take the time to employ the AAVC7 and provide good feedback.

2. Lynn Berendsen, "Every ACV a Sensor: Influencing Future Operations," *Marine Corps Gazette*, (Quantico, VA: May 2019).

3. Personal interview between author and the Battalion Communications Officer, 1st Battalion, 8th Marines, 2d MarDiv, on 8 February 2020.

4. YiCheng Garrard, "Technology: Revolutionary in moderation, fatal in excess," *Marine Corps Gazette*, (Quantico, VA: October 2019).

5. Personal interview between author and Battalion Communications Officer, 1st Tank Battalion, 1stMarDiv, on 7 February 2020.

6. Personal interview between author and the ACV program Hardware/Software lead, PM AAA, on 10 February 2020.

7. Jay T. Snelling, "The Amphibious Combat Vehicle Delusion," *Proceedings*, (Annapolis, MD: June 2019).

8. Justin D. Davis and Neal T. Jones, "The Wisdom of the Amphibious Combat Vehicle," *Proceedings*, (Annapolis, MD: October 2019).

The ACV-C will share a common hull with the ACV-P, with twice the number of VHF antennas, as well as an HF antenna, and one satellite communications antenna.

Commandant's Professional Reading List

A call

by Capt Olivia Garard

Just as there is risk to the Marine Corps' modernization, there is more risk inherent in failing to adapt. If the Marine Corps shifts its posture and design without also shifting its minds, then a critical conceptual vulnerability remains. New equipment and headquarters are required, but if they are not connected to the appropriate mental models and frameworks, their value will be limited at best. Given that none of the current eight "Commandant's Choice" books for all Marines focuses on naval integration, the probability of this occurring is too great to leave to chance. The Marine Corps must modernize its institutional mind by revising the Commandant's Professional Reading List.

Professional reading lists circumscribe an "organization's intellectual priorities and canonical foundation." These lists, as I have written before, "display [organizational] values." Since 1989, when then-Commandant Gen Alfred M. Gray issued the order, the Marine Corps has had a Professional Reading List. The list has evolved over the years and was last published and updated by former Commandant Gen Robert B. Neller in March 2019.

The *Commandant's Planning Guidance*, published in July 2019 by Commandant Gen David H. Berger, is a profound reorientation for the Marine Corps. It sets the Marine Corps on a path toward executing the responsibilities set forth in the 2018 *National Defense Strategy*. Gen Berger's "Notes on Designing the Marine Corps of the

> **By reading, you learn through others' experiences, generally a better way to do business, especially in our line of work where the consequences of incompetence are so final for young men [and women].**
> **—Secretary James N. Mattis**

> **>Capt Garard is an Unmanned Aircraft Systems Officer currently serving with the Marine Corps Warfighting Lab.**

Future" further underscores the imperative, scale, and degree of the change required. A reading list in support of the *Commandant's Planning Guidance* will help its implementation.

This article provides recommendation to modernize the Commandant's Professional Reading List. First, it establishes a set of ten books narrowly focused on the demands of the guidance. Marines, like before, are required to read a minimum of five. Second, it separates out two categories, the main effort, which is the set of ten works, and the supporting effort, a collection of subsets of works for further exploration divided by interest (e.g., strategy, history, technology, leadership, and by region). Crucially, the list is no longer segregated by rank. Given that warfare's future is no longer about the general—it is about the sergeant and the lieuten-

ant—it is imperative that all Marines have a conceptual understanding that moves seamlessly between the tactical and the strategic. Additionally, narrowing the focus to a key ten works means that the likelihood that a colonel and corporal have recently read the same book is greater. This fosters more of a book club mentality that can easily fit into a training and exercise schedule.

It should also be noted that *MCDP 1, Warfighting,* is no longer included on the list. Our doctrine must saturate how we plan, think, and act. It is an implied task to continuously refactor our thinking through a *warfighting* lens. It is an expectation to read and re-read *Warfighting*. It need not be called-out. Most importantly, the intellectual main effort establishes the "canonical foundation" necessary for the force demanded by the *Commandant's Planning Guidance*. In fact, such a conceptual reorganization will enable Marines "to challenge the status quo and continue to ask the hard questions—regardless of the discomfort they produce."

These are the ten recommended books for the main effort:

There are some other books to consider for the Commandant's Professional Reading List. (Photo by LCpl Rebecca Eller.)

Small Boats and Daring Men: Maritime Raiding, Irregular Warfare, and the Early American Navy by Benjamin Armstrong. If there were only one book to recommend, this is it. Armstrong's book argues persuasively for a third type of naval warfare, *guerre de razzia*, to add to the conventional duality between *guerre d'escadre* and *guerre de course*. Charting the development of the early American Navy, Armstrong also unearths understudied Marine Corps history. Future amphibious operations will likely look more like the naval operations found in Armstrong's book than the large-scale amphibious operations of World War II and War Plan Orange. The *Commandant's Planning Guidance* requires the naval integration, mission command, and persistent forward presence found in *Small Boats and Daring Men*, but with the addition of missiles, unmanned technologies, and ubiquitous sensing. This is the Marine legacy with which to frame future operations.

By More Than Providence: Grand Strategy and American Power in the Asia Pacific Since 1783 by Michael Green. While Armstrong's book provides the foundation for past naval integration and a new way of thinking about operations, Green's book provides the historic details on why we, the Navy-Marine Corps Team, were ordered to focus on the IndoPacific in the first place. Explaining *why* is essential to ensure subordinates carry out a commander's intent. This common understanding describes the historical reasoning behind the priority demanded by the *National Defense Strategy* and the Commandant's recent guidance in support of staffing the force. Green's book helps to underscore why this is the Marine Corps' main effort, setting the mental conditions required to implement the 21st century version of *guerre de razzia*.

Fleet Tactics and Naval Operations, Third Edition by CAPT Wayne P. Hughes Jr., USN(Ret) and RADM Robert P. Girrier, USN(Ret). To integrate with the Navy, the Marine Corps must understand how the Navy fights as a fleet. There is no better option than *Fleet Tactics*. From the six cornerstones—*sailors matter most; doctrine is the glue of good tactics; to know tactics, you must know weapons; the seat of purpose is on the land; "A ship's a fool to fight a fort";* and *attack effectively first*—to salvo equations, Hughes and Girrier comprehensively describe the tactical tenets on which naval operations are based. If the Marine Corps is to serve as the supporting component, then the Marine Corps must understand how the navy fights to best support naval operations. Moreover, the third edition

accounts for trends in technology and the information environment, including cyber and the electromagnetic spectrum, all of which are crucial in future fights.

On Tactics: A Theory of Victory in Battle by B.A. Friedman. This book should be shoved into a cargo pocket and taken to the field. It comprehensively looks across the various principles of war put forth by theorists and questions that ones hold. The Marine Corps excels at tactics, yet it is imperative to have a theoretical underpinning of those tactics to challenge choices, decisions, techniques, and procedures. Importantly, Friedman's work contextualizes tactics within strategy, helping to clarify how tactical actions have strategic effects or, in other words, how the corporal becomes strategic.

A New Conception of War: John Boyd, the U.S. Marines, and Maneuver Warfare by Ian T. Brown. Brown's book explores the birth and development of the Marine Corps' maneuver warfare philosophy. This replaces *First to Fight: An Inside View of the U. S. Marine Corps*, focusing on different periods of Marine Corps intellectual history. Brown explains the legacy and prevalence of John Boyd's thought, particularly his observe, orient, decide, and act (OODA) loop, within the Marine Corps. Boyd's work provided the theoretical grounding for the development of maneuver warfare, the current Marine Corps doctrine. Most importantly, this serves to reinvigorate maneuver warfare and fan intellectual curiosity in the future force.

The Art of War by Sun Tzu, translated by Michael Nylan. Both Carl von Clausewitz's *On War* and Sun Tzu's *The Art of War* are no longer on the Commandant's Reading List. Of the two, Sun Tzu should be returned to the list. Nylan's translation is masterful. She clearly captures nuance that can be lost in the aphoristic-like work. For example, "Thus the troops who win care more about victory, and less about doing battle, and the troops liable to defeat care most about going into battle and less about seeking victory." This captures the tension between competition and conflict and the conceptual reorientation demanded by the *National Defense*

Strategy. What shines in this edition, too, is the clarity of the effect of terrain, climate, weather, and humans on action. Like all classics, it begs for re-reading and is short enough to engender that.

Legacy: What the All Blacks Can Teach Us About the Business of Life by James Kerr. Leadership can be taught; this is a core tenet of the Marine Corps. But it requires careful scrutiny and continuous practice. The All Blacks, the winningest rugby team, serves as such an example. Kerr utilizes clearly modeled examples. Particularly insightful is the shifting balance between coaches and players over the course of the week. Coaches be-

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The supporting effort would be a compendium of works, organized by category vice rank, where Marines can find further sources of education based on their reading of the main effort.

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gin each week strongly determining the conduct of practice. This slowly shifts to a player's led game by the end of the week. This transformation of command and ownership over intent is necessary for disaggregated formations operating under mission command, especially as we continue to put more burden on small ad hoc teams.

Ender's Game by Orson Scott Card. Fiction is essential and *Ender's Game* is a classic. A story of friendship, leadership, betrayal, and tactics, *Ender's Game* is a cultural reference point and a way to demonstrate the power of science fiction to stretch our imaginations about how we could fight in the future. Each year, we get closer and closer to training and fighting like Ender Wiggins. For instance, we have virtual reality and augmented reality to help train more frequently with less resources. Live, virtual, and constructive networks allow integration in training exercises of disparate elements, both real and synthetic. And, of course, commanding and controlling machines, operating at various levels of autonomy, is a new required skill set. All of which find relevance and reference in *Ender's Game.*

Starship Troopers by Robert A. Heinlein. Another work of science fiction, Heinlein's classic is an exploration of dedication, duty, and combat leadership. It follows a mobile infantry trooper through his recruitment, basic training, service, commissioning and officer training, and finally his ascension to command. *Starship Troopers* offers an accessible way to examine professional military service. As the titular troopers fight in an extremely disaggregated fashion, sometimes hundreds of miles apart from each other, the tactics portrayed have new relevance for distributed operations and mission command.

The White Donkey: Terminal Lance by Maximilian Uriarte. There are many reasons this work should be included on the main effort. First, buy-in. It has likely already been read by many enlisted personnel and officers and would serve as a near immediate work of common access. Second, it is a graphic novel. Having a non-book book on the main effort demonstrates the commitment to the larger goal of the collection, fostering a collective dialogue around works that speak to the Marine Corps' necessary trajectory regardless from which media they emerge. Third, it provides an opportunity for leaders, at all levels, to discuss post-traumatic stress and returning from war—as necessary for individual Marines as it is for an institution that has been tasked by the *National Defense Strategy* to redeploy and move beyond the legacy of the last twenty years.

The main effort is also weighted toward recent works and in support of implementing the *Commandant's Planning Guidance.* This is intentional. It is meant to establish professional habits of engaging in and keeping up with current professional debates. The focus

is on national strategy, naval strategy within the national strategy, the logic behind why the strategies are what they are, and then the operations and tactics that the integrated naval force should be prepared to execute in support of both. These are the ten best works that capture that sentiment. Secondly, every main effort needs a supporting effort. The Commandant's main effort reading list should be supported by the Commandant's expanded reading guide where Marines, who are interested in further reading, can easily find recommendations. This would also be a tool for leaders to tailor professional reading to the needs of their mission, unit, and situation.

The supporting effort would be a compendium of works, organized by category vice rank, where Marines can find further sources of education based on their reading of the main effort. The list, presented in more of a menu-based form, could be easily integrated into the Marinesmobile smart phone app with links to the sources themselves or points of purchase. Categories could include: strategy, technology, Indo-Pacific region, leadership, military history, Marine Corps history, fiction, and memoirs. Nor should it be limited to books; links to professional journals, websites, audiobooks, and podcasts would enhance the richness of the Marine Corps Professional Reading Program.

Whereas the main effort would be updated annually or biennially, options within the supporting effort could be continuously refreshed. This would enable works, like *Small Boats and Daring Men*, to spread faster throughout the Corps. It would also foster interoperability between recommended podcasts, websites, audiobooks, videos, and professional journals. Our intellectual collaboration should mimic how we expect to fight: distributed and under mission command. This framework provides a place to start.

>*Author's Note: Quoted text is taken primarily from the* 38th Commandant's Planning Guidance *published in July 2019 and the* National Defense Strategy *published in 2018.*

USMC

Integrating the Physical and Cognitive Dimensions with Military Deception

Part I
by Maj Joshua Montero

Cognitive Shortfalls and Solutions

The former Commandant of the Marine Corps' *Marine Corps Operating Concept* (MOC) emphasizes maneuver, agility, and expanding combined arms employment in the physical and cognitive dimensions of conflict.[1] The future operating environment will see the confluence of informational and human aspects (cognition) meeting traditional physical factors.[2] While Marines are generally able to get their arms around the physical dimension of conflict, the cognitive remains elusive. What exactly is the cognitive dimension? How does one maneuver in the physical and cognitive dimensions to generate and exploit psychological, technological, temporal, and spatial advantages over an adversary—the foundational aspects of the operating concept of the 21st century MAGTF? The first part of this two-part article will define the cognitive dimension, describe its traps and shortfalls, and

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address how to overcome these hurdles. Part II will illustrate how to integrate the physical and the cognitive dimensions of conflict, specifically with deception operations.

Cognitive Defined

ATP 5-0.1, Army Design Methodology, states that cognition is the mental process of knowing that includes awareness, perception, reasoning, and intuition.[3] Cognition is simply mental activity that enables us to be aware, understand, and make decisions. *MCDP 1, Warfighting*, (Washington, DC: 1997) recognizes the mental characteristics of war. It states that "mental [and moral] forces exert a greater influence [than the physical] on the nature and outcome of a war." The mental forces grasp complex situations, make decisions, devise strategies, and develop plans. However, the doctrine emphasizes the difficulty of grasping the mental forces and cautions against the temptation to exclude them from the study of war.

Commanders and planners (particularly members of an operational planning team) must not simply have knowledge of the physical estimates and capabilities of each force; they must understand the mental, cognitive aspects of individuals and groups within each force. Sun Tzu reinforced this approach when he wrote:

> Know the enemy and know yourself; in a hundred battles you will never be in peril. When you are ignorant of the enemy but know yourself, your chances of winning or losing are equal. If ignorant of your enemy and of yourself, you are certain in every battle to be in peril.[4]

These key architects and decision makers of plans and operations must understand the aspects of cognition that include intuitive thinking, often shaped by biases and experience, and deliberate concentration. Conscious and unconscious thinking affects warfighting. Planners must recognize this. Victory in the cognitive dimension requires planners to guard against cognitive traps and exploit those of an adversary.

Cognitive Traps and Shortfalls

The term "heuristic" often describes general problem-solving procedures in everyday life.[5] Some might refer to it as general rules of thumb, common sense, or a gut feeling. Essentially, heuristics are mental shortcuts, often based on past experiences, to find adequate solutions to the problem sets and complex situations that occur in daily life. For example, drivers leverage past situations

and experiences to each day's drive, often without thinking much about it. Examples of heuristics are the *availability heuristic*, which relies upon available past memories of an experience; and the *similarity heuristic*, which categorizes situations based on a representative trait.[6] But heuristics have downsides. Many biases, which are underlying and often unconscious beliefs that affect behavior, exist within heuristics. Examples include the *positive illusions bias* (overconfidence), the *availability bias* (making decisions based on information that most easily comes to mind), and the *confirmation bias* (pursuing confirming information). Intelligence analyst and author Morgan Jones writes that biases are generally a good thing and that "for the most part our biases … are highly accurate and become more so as we grow older."[7] He further states that biases are instinctive and outside our control. Consider Figure 1 from *Thinking Fast and Slow*, a CMC reading list book by Nobel Prize–winning psychologist Daniel Kahneman (see Figure 1). What do the three exhibits have in common? The answer is ambiguity. You likely read the one on the left as A B C and the one on the right as 12 13 14. However, since both the "B" and "13" are identical, you could have read them as A 13 C or 12 B 14. But, in most cases, you would not. The middle exhibit conjured an image of a building with money *or* a body of water such as a river, but imagining both images is unlikely, just like both ABC and A13C did not come to mind. The brain resolves this ambiguity without us even being aware of it. This also happens with biases; we often do not realize our biases are driving our decisions and thinking. Our biases are generally accurate when solving simple problems, but they cause dire consequences when they negatively impact complex problems. Kahneman states that our mind normally has intuitive feelings and opinions about almost

everything.[8] Therefore, it is imperative that we, as commanders and planners, understand how different biases that unconsciously exist from our upbringing, culture, education, and past training and combat experiences affect our thinking.

The MAGTF Staff Training Program (MSTP) often witnesses the negative impact of biases in training exercises. MSTP observed the confirmation bias during a MEF-level exercise when the MEF expected an enemy force to move into its area of operations. Then the staff misinterpreted an enemy demonstration as evidence to confirm their belief. Because of the enemy's deception plan, the MEF focused resources away from the enemy's main effort and toward a division that ended up never entering the MEF's area of operations.

Additionally, MSTP observes the

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planning fallacy as one of the most prevalent cognitive shortcomings: planning becomes so optimistic that the plan becomes a best-case scenario. A routine example is casualty estimations. During exercises, the enemy destroys a key bridge or uses unmanned aircraft systems to provide observation for long-range artillery fires, which is certainly in the realm of practical enemy action; however, a planning fallacy does not allow for these scenarios. The result is often an overconfident plan that does not account for realistic enemy actions, which leads to higher-than-expected casualties. Often, these planning missteps result from team member similarity and a lack of bias awareness.

Each planning team across the Marine Corps is unique in its own way, but there are key similarities: planning teams consist mostly of homogeneous Marines of similar race and sex in their mid-30s and 40s with stable families and similar upbringings, training, combat, and educational experiences.[9] Consequently, most operational planning teams are inculcated with similar views of the operating environment, cognitive processes, and problem-solving skill sets. Yet, according to Marine Corps Intelligence Activity's *2015–2025 Future Operating Environment Implications for Marines*, they will solve problems and deal with crises caused by ethnic and religious disenfranchisement, changes in demographics, populations migrating from rural areas to urban slums, sophisticated extremism, and complex social interactions.[10] While regional area officers offer a unique perspective, most Marine Corps planners will have difficulty relating to the struggles and desperation of the peoples they will encounter or the enemies they may fight on the battlefield. Cognitive traps, however prevalent, can be mitigated. Planners can bridge the gap between our Western thinking and the thinking in which much of the world's instability lies.

Cognitive Solutions

Individuals perceive the world through a lens formed by a mindset of assumptions and core beliefs that can be so engrained that they unconsciously and consciously resist information that does not conform to their mindset.[11] There are information gaps when framing a problem, and individuals rely on prior beliefs and assumptions to fill the void on why events occurred (i.e., potential heuristic traps). Solutions to cognitive traps and shortfalls include, but are not limited to, bias awareness, the Ma-
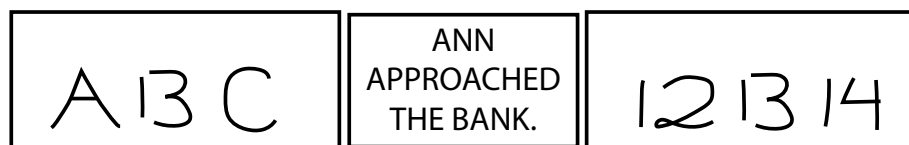

Figure 1.

rine Corps Planning Process (MCPP), the Red Team, restating problems, and consulting outside perspectives.

The first step in overcoming cognitive hurdles is to know common cognitive biases and fallacies, as discussed in the previous section. Kahneman's *Thinking Fast and Slow* and Rolf Bodelli's *The Art of Thinking Clearly* are excellent books to provide insight and understanding in regard to how and why individuals think the way they do, as well as recommendations for overcoming certain biases once recognized. Additionally, Richard Nisbett—a social psychology professor and co-director of the Cultural and Cognition Program at the University of Michigan, Ann Arbor—describes in exemplary detail the differences in thought between Western and Eastern cultures in his book, *The Geography of Thought*.

Once planners understand biases and fallacies, they can maximize the MCPP. The problem framing step within the MCPP calls for the consideration of the cognitive dimension of the information environment. This cognitive dimension requires us to know ourselves (referring back to Sun Tzu), and, therefore, planners and commanders must be aware that individual and group biases will exist throughout the MCPP. Design, as part of problem framing, supports understanding the cognitive dimension

as well. It is a continuous activity that occurs throughout planning and execution, to include assessment. *MCDP 6, Command and Control*, corroborates the importance of design because "new information that does not agree with our existing image requires us to revalidate the image or revise it—not easily done in the turbulence and stress of

> **Planners and commanders can use certain individuals, much like a "devil's advocate," to bring awareness to observed biases and to revalidate contrary information.**

combat."[12] Planners and commanders can use certain individuals, much like a "devil's advocate," to bring awareness to observed biases and to revalidate contrary information.

The Red Team is a remedy to overcome cognitive challenges within small group dynamics. It is an organizational element comprised of trained and educated members who provide an independent capability to fully explore alternatives in plans and operations.[13] These personnel receive six to nine weeks of training in areas of self-awareness, critical thinking, group-

think, and mitigation techniques. Red Team members learn how to recognize and overcome the cognitive biases within groups.

Since the Marine Corps implemented Red Teams in 2013, MSTP has observed that most Red Team billet holders at the MEB and MEF level primarily fill other critical billets such as the current operations officer or plans officer. Key billets must be a priority, of course, but not at the expense of such a key aspect within the MCPP. As *MCDP 6* states, someone must be designated to challenge the group's assumptions or revalidate new information that does not agree with the group's existing image. This is because "once a mind-set has taken root, it is extremely difficult to dislodge because it is beyond the reach of our conscious mind."[14] The Red Team, when staffed with the right people, offers commanders and planners independent critical analyses of alternate perspectives in order to strengthen a plan.

Exposing the mind to new information and different perspectives challenges undesirable biases. One technique is to restate the problem in as many different ways as possible without losing the original meaning. Planners might consider reversing the problem statement, such as encouraging a group to do action "A" rather than discouraging them from doing action "B." Furthermore, boldly changing the focus might present new perspectives—such as focusing on military actions to impact an area's economic situation instead of the area's security situation. Another technique is to ask several "why" questions to explore the cause-and-effect relationship underlying a particular problem. The answers to "why" questions get at causal links behind events and problem symptoms.[15]

3d MLG staff works through the MCPP. (Photo by 1stLt Tori Sharpe.)

The cognitive dimension requires activities that promote understanding and help decision making. (Photo by 1stLt Tori Sharpe.)

Meta-questioning—asking higher-order questions to enable a more complete understanding of a topic—is another way to reveal undesirable biases. An example of meta-questioning is, "All reasoning depends on the idea that X is the source of conflict. Why is reasoning based on X instead of Y?"[16] These techniques simply offer different perspectives to view information and the problem set without losing the original meaning.

Lastly, pursue assistance outside the command or unit in order to significantly reduce biases and incorrect assumptions about a problem set. The United States is full of subject matter experts on nearly every culture Marines are likely to encounter. Seek them out. For conventional operations, perhaps the broader intelligence community can assist with developing a psychological profile on an enemy commander to better understand an adversary in the cognitive dimension.

Conclusion

The MOC emphasizes maneuver, agility, and expanding combined arms employment within the physical and cognitive dimensions of war. The cognitive dimension entails mental activities that promote understanding and enable decision making. Cognitive biases are often unconscious and can lead to error through cognitive shortfalls and traps. Fortunately, solutions exist, such as individual and group awareness, the Red Team, and outside perspectives. Part II will illustrate, through military deception, how to integrate the cognitive and the physical dimensions to achieve an operational advantage.

Notes

1. Headquarters Marine Corps, *Marine Corps Operating Concept: How an Expeditionary Force Operates in the 21st Century*, (Washington, DC: September 2016).

2. MOC. See also Marine Corps Intelligence Activity, "2015–2025 Future Operating Environment Implications for Marines," (Quantico, VA: June 2015).

3. Department of the Army, *Army Techniques Publication 5-0.1, Army Design Methodology*, (Washington, DC: 2015).

4. Sun Tzu, *The Art of War*, translated by Samuel B. Griffith, (Reprint: New York, NY: Oxford University Press, 1971).

5. Tayyab Maqsood, Andrew Finegan, and Derek Walker, "Biases and Heuristics in Judgment and Decision Making: The Dark Side of Tacit Knowledge," *Issues in Informing Science and Information Technology*, (2004), available at https://www.informingscience.org.

6. Maj Blair Williams, "Heuristics and Biases in Military Decision Making," *Military Review*, (Fort Leavenworth, KS: 2010).

7. Morgan Jones, *The Thinker's Toolkit: Fourteen Powerful Techniques for Problem Solving*, (New York, NY: Three Rivers Press, 1998).

8. Daniel Kahneman, *Thinking Fast and Slow*, (New York, NY: Farrar, Straus and Giroux, 2011).

9. Most operational planning teams observed by MSTP consist of Marines in grades gunnery sergeant through sergeant major/master gunnery sergeant and major through colonel. According to Military One Source data compiled from the Defense Manpower Data Center Active Duty Military Personnel Master File (September 2014), females only account for 6 percent of all grades E7 through E9 and 4 percent of all grades O4 through O6; minorities account for 35 percent of grades E7 through E9 and 17 percent of grades O4 through O6; additionally, only 9 percent of grades E7 through E9 are single parents, while only 4 percent of officers O4 through O6 are single parents. This report can be found at http://download.militaryonesource.mil.

10. "2015–2025 Future Operating Environment Implications for Marines."

11. *Army Techniques Publication 5-0.1.*

12. Headquarters Marine Corps, *MCDP 6, Command and Control*, (Washington, DC: 1997).

13. Joint Staff, JP 2-0, *Joint Intelligence*, (Washington, DC: 2013).

14. *The Thinker's Toolkit.*

15. *The Applied Critical Thinking Handbook*, University of Foreign Military and Cultural Studies, (Fort Leavenworth, KS: January 2015).

16. *Army Techniques Publication 5-01.*

>Editor's Note: Part 2 of Maj Montero's article will appear in the August issue of the MCG.

USMC

Building a Fitter Corps

by Maj Shawn F. Carian

Fitness is an imperative part of being a Marine and is ingrained in who we are upon entry into the Marine Corps. Marines must be fit to perform their duties on the battlefield at a moment's notice. In recent years, the Marine Corps has continually sought to refine and revise fitness standards. The Corps revised scoring approximately two years ago in an attempt to increase fitness across the force while also trying to enhance the challenge of achieving a high score. Although scoring may have changed, I doubt our force has actually become "fitter." I propose changing the fitness grading system to a pass or fail, ultimately providing Marines a percentile with which they place across each fitness test event. A pass/fail system will provide several advantages over our current system. Pass/fail will remove the perceived controversy of scoring between male and female Marines, thereby increasing a sense of equality. A pass/fail system will simplify the tracking and completion of each individual and the unit while still ensuring fitness of the force.

Oxford Dictionary defines fitness as, "the quality of being suitable to fulfill a particular role or task." Fitness, from the Marine Corps' perspective, is to perform your role in combat, whatever that might be. Currently, the Marine Corps operates on a 300-point scale for grading the fitness level of a Marine. The 300-point system is the same for both the Combat Fitness Test (CFT) and Physical Fitness Test (PFT). The current system does little to motivate a Marine to do more than what is required; as long as the Marine has a first class PFT, he is not worried about improving fitness.

In concert with a pass/fail system, I recommend rating fitness by percentages within the overall force. By placing a percentile for each event, the Marine will be able to see where they place across the entire Marine Corps. As the Marine becomes more fit, so does the Corps. Marines are ingrained with the desire to succeed from day one of boot camp, this means no Marine wants to place in the bottom fitness percentile within the Corps. The desire to succeed and excel will drive Marines to push harder and increase their fitness as well as provide better feedback to the Marine and to the Marine Corps. Tracking the data provided will allow Marines to see where they struggle or excel, a unit to see where they struggle or excel, and the data could be compiled by the force fitness instructors to develop programs that better address the needs of the Marine or unit.

With the percentile system, the Marine would be given a percentile for each event (pull ups, crunches, run, ammo can press, movement to contact, maneuver under fire). Once the percentile is assigned to the Marine, they would then be given a cumulative score for the entire PFT, entire CFT, and overall compilation of events. The system will provide a better overall assessment of a Marine's fitness and allow for the Corps to become fitter over time. If the Corps becomes more fit overall, the next change is to simply raise the criteria for pass/fail. The system could continue to evolve and adapt, even if the Corps changes events or tests.

Essentially, the Marine Corps will have a database similar to that of the CrossFit Games, specifically the CrossFit Open. The Marines will see where they place overall for each event, total PFT, total CFT, and combined overall. Creating a percentile ensures that tracking is occurring across the force, and allows for scores to be pulled at any time, to include where a unit or individual places within the Marine Corps. Ultimately, we will not need a max repetition, but rather the Marine would push until failure to achieve the best possible score.

One criticism this proposal may receive is the impact on the promotion system. However, this would not hinder the promotion system since promotions should not place heavy emphasis on a Marine's fitness. As stated earlier, fitness is the ability of the Marine to perform his role within the Corps. Fitness is not a primary means for promotion, but it does hold weight in composite scores for junior Marines. Removing the fitness portion of the composite score will not hurt the force. By removing the fitness test portion of the composite score, the result will actually assist in ensuring quality Marines are being promoted, as opposed to a Marine who is merely fit and can shoot. Fitness can still be included as a component of proficiency/conduct of the Marine and failure of a PFT/CFT could still have negative consequences. Therefore, the impact on the promotion system should not detract from moving to the proposed pass/fail system.

For these reasons, I propose changing the score to a pass or fail, ultimately providing the Marine a percentile which they place across each fitness test event. An overall pass/fail with a percentile score provides a comprehensive way of measuring fitness resulting in the collection of more data for the Marine Corps and force fitness instructors to help further develop the overall fitness of our Corps. If we want a force to be more fit, a percentile-based approach is the best option to achieve the goal of a fitter Marine Corps.

War In 140 Characters

reviewed by CPT William Forrest, USA

War In 140 Characters provides an in-depth analysis of social media and imparts to readers an easily digestible "so what" regarding how social media has changed modern warfare. This book focuses on a few key events, including the 2014 Israel mission in Gaza, the conflict in Ukraine, and government attempts to utilize information to their benefit. By diving deep into critical events in recent history and highlighting power shifts, the book illustrates the phenomenon of social media and explores its effects on war and politics.[1]

Throughout its early chapters, the book promotes the idea that nations will need to gain legitimacy in order to use force in future conflicts. The chief example of this is the 2014 Gaza conflict in Israel.[2] The analysis regarding the Gaza conflict shows the increased ability of social media to proliferate narratives as a political game-changer. Israel needed to create legitimacy in order to act in Gaza; however, it was unable to do so initially.[3] Israel quickly realized that their narrative was the only way to obtain legitimacy and acted accordingly. Using social media to rapidly proliferate a narrative and enable the use of force is crucial to attain victory in modern conflicts.

With the advent of social media, the government has lost the "net" it used to monitor media production. The loss of this net has severely decreased the government's ability to control conflicts. On the opposite side of the spectrum, social media has significantly increased the individual user's ability to output content. In addition to this, media consumers are locked into "echo chambers" by social media. These echo chambers are prod-

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ucts of the algorithms used by companies to pander desirable content to users.[4] The results of all this are mass production of galvanizing media the government cannot filter. With this loss of control, extra-governmental organizations such as ISIS can spread their influence while governments are almost powerless to stop it.

The last chapters highlight the governments' inability to contain or utilize this new media. In this respect, the government is restrained by authenticity.[5] Government sponsored media carries the stigma of corrupt influence or a hidden agenda. In comparison, an individual's messages are intrinsically authentic and truthful. Thus, the players who can influence the social media game are individuals not governments. These new powerful individuals are termed "*homo digitalis.*" The loss of trust is crippling for democratic nations because governments must now rely on homo digitalis to act on their behalf. Essentially, governments are unable to defend themselves from the information campaigns of impassioned extremists without homo digitalis there to protect them.

In conclusion, *War In 140 Characters* is an excellent analysis of how social media has changed warfare in
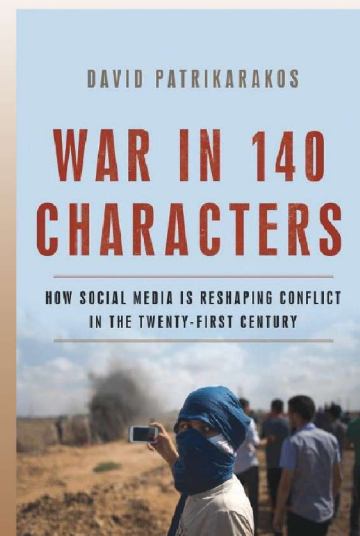
WAR IN 140 CHARACTERS: How Social Media Is Reshaping Conflict in the Twenty-First Century. By David Patrikarakos. New York, NY: Basic Books, 2017.
ISBN: 978-0465096145, 320 pp.

the modern age. The book thoroughly compiles examples of the shift in power from nation states and oligarchies to *homo digitalis*.[6] This book is a must read for anyone who has a stake in modern warfare and especially for those leaders who are seeking to be the most prepared for today's battlefield.

Notes

1. David Patrikarakos, *War in 140 Characters: How Social Media Is Reshaping Conflict in the Twenty-First Century,* (New York, NY: Basic Books, 2017).

2. Ibid.

3. Ibid.

4. Ibid.

5. Ibid.

6. Ibid.

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