Fighting Our Way In:

How The Marines Should Assist The Navy In Gaining Sea Control

Date Submitted: 14 MAY 2020

Word Count: 3525 words

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	**2. REPORT TYPE**	**3. DATES COVERED** *(From - To)*
14-05-2020	FINAL	N/A

4. TITLE AND SUBTITLE

Fighting Our Way In: How The Marines Should Assist The Navy In Gaining Sea Control.

5a. CONTRACT NUMBER
N/A

5b. GRANT NUMBER
N/A

5c. PROGRAM ELEMENT NUMBER
N/A

6. AUTHOR(S)

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5d. PROJECT NUMBER
N/A

5e. TASK NUMBER
N/A

5f. WORK UNIT NUMBER
N/A

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Writing & Teaching Excellence Center
Naval War College
686 Cushing Road
Newport, RI 02841-1207

8. PERFORMING ORGANIZATION REPORT NUMBER
N/A

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

N/A

10. SPONSOR/MONITOR'S ACRONYM(S)
N/A

11. SPONSOR/MONITOR'S REPORT NUMBER(S)
N/A

12. DISTRIBUTION / AVAILABILITY STATEMENT
Distribution Statement A: Approved for public release; Distribution is unlimited.

13. SUPPLEMENTARY NOTES A paper submitted to the faculty of the NWC in partial satisfaction of the requirements of the curriculum. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.

14. ABSTRACT

In an era of Great Power Competition, the United States Navy no longer enjoys the ability to operate around the globe with unquestionable sea control. A future conflict with a near-peer adversary would likely involve the Navy fighting to gain and maintain sea control to project power. This paper states that the Navy will need assistance in the fight for sea control against future adversaries. As the wars in Iraq and Afghanistan are ending, the Marine Corps is in a unique position to posture itself as a force multiplier in assisting the Navy in gaining sea control. This paper explains how new technology and platforms, such as the F-35B and the MQ-9 Reaper, allow the Marine Corps to help gain air superiority both as an extension of and independent from carrier aviation and actively aid in the fight for sea control. Additionally, HIMARS and the Naval Strike Missile provide the Marines the ship-based long-range precision fires to deny freedom of the seas to our adversaries while operating distributed from naval surface combatants. Lastly, a fight in the Western Pacific would involve occupying key maritime terrain in which the Marine Corps, similar to operations during WWII, could seize and use to deny an adversary's freedom of maneuver. The Marine Corps must transform from their recent history and take an active role in assisting the Navy in gaining sea control against future adversaries.

15. SUBJECT TERMS (Key words)
F-35, Joint Strike Fighter, HIMARS, Sea Control, Sea Denial, Naval Strike Missile, MQ-9 Reaper, Air Superiority, NIFC-CA, Distributed Maritime Operations

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
a. REPORT	**b. ABSTRACT**	**c. THIS PAGE**			Director, Writing Center
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	N/A		**19b. TELEPHONE NUMBER** *(include area code)* 401-841-6499

Standard Form 298 (Rev. 8-98)

Contents

Abstract

In an era of Great Power Competition, the United States Navy no longer enjoys the ability to operate around the globe with unquestionable sea control. A future conflict with a near-peer adversary would likely involve the Navy fighting to gain and maintain sea control to project power. This paper states that the Navy will need assistance in the fight for sea control against future adversaries. As the wars in Iraq and Afghanistan are ending, the Marine Corps is in a unique position to posture itself as a force multiplier in assisting the Navy in gaining sea control. This paper explains how new technology and platforms, such as the F-35B and the MQ-9 Reaper, allow the Marine Corps to help gain air superiority both as an extension of and independent from carrier aviation and actively aid in the fight for sea control. Additionally, HIMARS and the Naval Strike Missile provide the Marines the ship-based long-range precision fires to deny freedom of the seas to our adversaries while operating distributed from naval surface combatants. Lastly, a fight in the Western Pacific would involve occupying key maritime terrain in which the Marine Corps, similar to operations during WWII, could seize and use to deny an adversary's freedom of maneuver. The Marine Corps must transform from their recent history and take an active role in assisting the Navy in gaining sea control against future adversaries.

Fight to get to the fight, use their own air assets and mobile artillery and missile systems to deny free use of the seas to the adversary fleet.

—General Robert Neller, Marine Corps Commandant, 2017

INTRODUCTION

A foundation of U.S. geopolitical security has been maintaining control over the world's seas to protect our trade, maintain freedom of navigation, and defend the homeland. Sea control is the freedom to use the seas in a manner of one's choosing in either a specific location or for a certain time period without significant enemy interference.[1] Having the ability to gain control of the maritime environment when needed has been a symbol of U.S. superpower status and allows the U.S. to project power globally. However, the U.S. advantage is eroding, and the future will likely involve disputed sea control against emerging powers such as China. Losing sea control would have negative strategic consequences, including the inability to project power ashore, maintain strategic deterrence, defend our trade, and interdict the enemy's trade.

Since the end of World War II, the Navy has been able to operate around the world with impunity due to their unquestionable ability to gain sea control in support of its objectives on land. When presented with disputed sea control, the Navy has been able to rise to the occasion with its advanced surface combatants and air superiority to overwhelm any adversary to gain and maintain sea control. Past conflicts such as Operation Desert Storm, the Cuban Missile Crisis, and the Korean War have demonstrated that the U.S. Navy could gain and maintain sea control to project power without much difficulty. While the Marine Corps was a crucial force multiplier to the Navy in the struggle for sea control during WWII, today the emphasis on a fully integrated Navy-Marine Corps team to gain sea control has diminished. The Navy, however, continues to

[1] Mark Nostro, "Discarding the Ptolemaic Model of the Marine Corps," *War on The Rocks*, last modified April 10, 2019, https://warontherocks.com/2019/04/discarding-the-ptolemaic-model-of-the-marine-corps/.

support the Marines in counterinsurgency and land-based operations and has done so for decades. Unfortunately, with rising great power competition, the Navy's maritime superiority, which had been once assured without question, is now in doubt.

As the maritime environment becomes more challenging, the Navy and Marines will likely need to change the supported and supporting relationship in which they have grown accustomed. The National Defense Strategy (NDS), states that our military is not currently ready for the challenge of operating in a contested environment, and we must increase joint lethality to handle these future challenges.[2] If a conflict arose in the South China Sea (SCS), the U.S. Navy would likely have to fight China over disputed sea control in which the Navy would unlikely be able to gain sea control on its own. Unlike their recent history, the Marines can no longer be passive observers as the Navy fights for sea control. Future major naval conflicts will require the Navy to rekindle its WWII-era Navy-Marine Corps team in obtaining sea control by leveraging the Marines' air superiority, long-range precision fires, and ability to occupy key maritime terrain prior to amphibious operations.

FIGHTING OUR WAY IN

Since the widespread use of airplanes in the years preceding WWII, having sea control has been intertwined with command of the air. Professor Milan Vego stated that control of the air has been necessary for amphibious landings since the 1930s, and "sea control has no meaning unless it is combined with control of the air."[3] The successful deployment of the F-35B Joint Strike Fighter aboard the amphibious assault ship the USS America is a marked turning point in our capabilities. This fifth-generation fighter is precisely the capability the Marines require to

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[2] James Mattis, Secretary of Defense, *National Defense Strategy Sharpening the American Military's Competitive Edge*, 2018 (Washington, DC: 2018), 6.

[3] Milan N. Vego, *Maritime Strategy and Sea Control: Theory and Practice* (New York, NY: Routledge/Taylor & Francis Group, 2016), 41.

operate in high-end hostilities against a near-peer adversary. The F-35B's primary role is suppression of enemy air defenses, and using its stealth technology and collection of sensors to penetrate air defenses and neutralize them, ideal for supporting sea control.[4] The F-35B allows the Marines to fight their way into a contested environment and gain control of the air, which is a precursor to setting the conditions for amphibious operations.

One way the F-35B can enhance the Navy-Marine Corps team's ability to operate in a contested environment is the capacity to interface with existing naval weapons systems—a vital component of the Navy's Distributed Maritime Operations (DMO) concept.[5] The F-35B's capability to tie into the Naval Integrated Fire Control-Counter Air (NIFC-CA)[6] systems act as a force multiplier in the deployment of sensors and targeting platforms across a wide operational area.[7] For the first time, the Navy can rely on Marine aviation as an extension of their weapon and sensor system, allowing both services to increase lethality across the operational area. During a test with an Aegis enabled land-based ship, an unmodified Marine F-35B successfully locked onto a target and passed critical information to a Navy Standard Missile-6 (SM-6) for employment, resulting in a direct hit for the SM-6 using the F-35B's targeting system.[8] Such interoperable capabilities enable Marine F-35Bs to operate in concert with surface combatants, combining speed, range, and lethality. Additionally, the F-35B's stealth and deep strike

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[4] Linda Shiner, "F-35: What the Pilots Say: Firsthand Accounts of Flying the World's Most advanced Fighter," *Air Space Magazine,* last modified April 2019, https://www.airspacemag.com/military-aviation/f-35-faces-most-critical-test-180971734/.

[5] Distributed Maritime Operations is a Navy operational concept that networks sensors and weapons, in both aircraft and ships, to increase lethality across the naval enterprise. Distributed Maritime Operations allows ships to operate independently through interoperability which increases protection while also forcing our adversary to defend a larger geographical area.

[6] The Naval Integrated Fire Control-Counter Air system integrates aircraft and naval vessels through a network of shared data to allow naval surface combatants to extend their engagement area to beyond visual and radar range.

[7] Dan Goure, "Lockheed Martin's F-35: How the Joint Strike Fighter is Becoming a Key Missile Defense Sensor," *The National Interest*¸ last modified January 29, 2018, https://nationalinterest.org/blog/the-buzz/lockheed-martins-f-35-how-the-joint-strike-fighter-becoming-24259.

[8] JNi Media, "F-35 and Aegis Combat System Integrate Successfully in First Live Missile Test," *Jewish Press*, last modified September 14, 2016, https://www.jewishpress.com/news/breaking-news/f-35-and-aegis-combat-system-integrate-successfully-in-first-live-missile-test/2016/09/14/.

capabilities complement the Navy's most advanced warships and weapons systems to strike enemy aircraft, ships, or defensive positions at standoff ranges, reducing risk to our surface force. This new supporting role allows Marine aviation to augment a Carrier Strike Group (CSG) and contribute to the fleet's defense as it moves toward their maritime objective. This role reversal not only reduces the requirement of using surface combatants to protect amphibious ready groups (ARGs) but also provides the Marines with an unprecedented level of flexibility to conduct distributed operations without the need for carrier aviation.

Operating distributed from the CSG gives the joint force an essential capability to persevere in a contested sea control environment – an underpinning of the DMO concept. Freedom of maneuver is needed now more than ever since readiness challenges and maintenance commitments are affecting the availability of U.S. aircraft carriers.[9] The Marines now have the capability, instead of relying on the Navy, to perform crucial functions of aviation with its organic aircraft against any aircraft or air defense assets in the world. A recent ARG deployment confirmed that the F-35B "squadron was able to support all assigned missions: Close Air Support, Suppression/Destruction of Enemy Air Defenses, Air Interdiction, Defense Counterair, and Forward Base Operations."[10] The Marines can directly contribute and support the Navy in fighting for sea control through distributed operations permitting the CSG to conduct separate operations. The F-35B allows the Marines to operate inside anti-access and anti-denial (A2AD) threats to help gain sea control, a capability that the Marines did not have previously. Leveraging this technology enables the Marines to operate distributed from surface combatants and directly contribute to sea control rather than just being a passive observer.

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[9] Megan Eckstein, "Marines Test 'Lightning Carrier' Concept, Control 13 F-35Bs from Multiple Amphibs," *USNI News*, last modified October 23, 2019, https://news.usni.org/2019/10/23/marines-test-lightning-carrier-concept-control-13-f-35bs-from-multiple-amphibs.

[10] Chad A. Vaugh, Marine Fighter Attack Squadron 211 Dawn Blitz After Action Report, *Marine Corps Center for Lessons Learned*, November 4, 2017, https://www2.mccll.usmc.mil/index.cfm

While the F-35B empowers the Marines to operate distributed from CSGs, its capability alone does not permit the ARG to function entirely independent from aircraft carriers. ARGs lack an organic airborne early warning capability, a critical element to operate independently from the CSG.[11] While the Navy's E-2C/D Hawkeye can fill the void at sea, it is too large for amphibious assault ships and must be operated from an aircraft carrier. The Marines attempted to reconfigure an MV-22 Osprey for airborne early warning; however, it was estimated to be too difficult and expensive.[12] To fill this capability, the Marines requested to procure the MQ-9 Reaper, Unmanned Aerial Vehicle, which has proven to be an effective airborne surveillance asset in Afghanistan. Although the MQ-9 does not replicate all the E-2C/D's capabilities, such as APY-9 radar and advanced electronic support measures, the MQ-9 does offer unique capabilities that the Marines depend on the Navy to provide. The procurement of three MQ-9s could provide the Marines 24-hour airborne early warning, communications relay, and electronic warfare, enabling the ARG to fight independently from carrier aviation without losing the capabilities to persist in a contested environment.[13] The F-35Bs stealth and strike capabilities combined with the airborne early warning and communications relay of the MQ-9 help the Marines to directly support sea control while operating independently from the CSG.

Another way the Marines can support the Navy in their attainment of sea control is through ship-based long-range precision fires – specifically anti-ship cruise missiles. For example, the Naval Strike Missile (NSM) and the Maritime Strike Tomahawk (MST) affords the

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[11] Megan Eckstein, "Marines Test 'Lightning Carrier' Concept."
[12] Joseph Trevithick, "Marines Want Their Multi-Role Vertical Takeoff Combat Drone to Be A Flying Radar First." *The War Zone*, last modified June 7, 2018, https://www.thedrive.com/the-war-zone/21376/everything-you-need-to-know-about-the-usmcs-ambitious-vertical-takeoff-combat-drone.
[13] Yasmin Tadjdeh, "Reapers to Give Marine Corps New Set of Warfighting Tools," *National Defense*, last modified June 7, 2019, https://www.nationaldefensemagazine.org/articles/2019/6/7/reapers-to-give-marine-corps-new-set-of-warfighting-tools.

Marine Corps the ability to hold an enemy's fleet in peril through long-range precision fires.[14] Currently, amphibious ships are limited to shipboard self-defense systems and do not have an organic strike capability outside the aviation detachment. The NSM and MST boast unclassified ranges of 400 and 900 nm, respectively, and allow the Marines to deny the enemy's vessels the ability to challenge the use of the seas during distributed or independent operations from a naval strike group. Equipping amphibious ships with anti-ship missiles empowers the Marines to support the Navy in the same way the submarine force does. Not only will the amphibious ships likely be harder to detect, but they will also bring greater lethality to the battlefield.[15] Both the Falklands Conflict (1982) and the Egyptian and Israeli War (1967), documented the deadliness that anti-ship cruise missiles pose against naval vessels. Anti-ship cruise missiles enable our amphibious ships to deny the use of the sea to our enemies and force them to operate at either increased risk or distances.

In addition to employing anti-ship missiles from amphibious ships, the Marines can also provide accurate long-range ship to shore fires through organic artillery assets. The High Mobility Artillery Rocket System (HIMARS) is a battle-proven platform that the Marines used for long-range artillery support in Iraq and Afghanistan. HIMARS can strike ground targets or stationary ships from a few hundred kilometers away and was recently fired from the deck of an amphibious ship.[16] In a test simulating a fight into the SCS, the Marines launched a HIMARS rocket from the USS Anchorage, LPD-23, and struck a simulated enemy air defense asset on an

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[14] Christopher Woody and Ryan Pickrell, "The Marines want a missile to chase down moving ships in the South China Sea and other contested waterways," *Business Insider,* last modified March 6, 2020, https://www.businessinsider.com/the-marines-want-missiles-that-can-chase-down-moving-ships-2020-3.
[15] Megan Eckstein, "Marines Want to Field a Long-Range Anti-Ship Missile 'As Fast As Possible'," *USNI News*, last modified February 19, 2019, https://news.usni.org/2019/02/19/marines-want-field-long-range-anti-ship-missile-fast-possible.
[16] Shawn Snow, "The Corps' HIMARS are going airborne as Marines bring them to targets via KC-130s," *Marine Corps Times*, last modified December 12, 2018, https://www.marinecorpstimes.com/news/your-marine-corps/2018/12/28/the-corps-himars-are-going-airborne-as-marines-bring-them-to-targets-via-kc-130s/.

island over 70 km away.[17] If a conflict arose in the SCS, the ability to fire precision missiles from amphibious ships to neutralize enemy assets would be invaluable to gaining sea control. This test proved the Marines could use their organic capabilities to supplement naval fires and support sea control operations while operating independently from surface combatants. The ability to target the enemy on distant islands allows the Marines to destroy enemy defenses and gain access to disputed waterways or chokepoints. The Marines are proving they have the technical expertise and capabilities to support the Navy in gaining and maintaining sea control.

Emplacing HIMARS on amphibious ships is more than just a quick-fix solution to a long-contentious problem with these ships. In 2016, General Neller complained that the USS San Antonio was attacked off the coast of Yemen, by Houthi Rebels, and could not return fire.[18] Neither the Whidbey Island-class, Landing Ship Docks (LSD), nor the Wasp or America-class amphibious assault ships, come with a vertical launch system (VLS) for offensive weapons. While the San Antonio-class, Landing Ship Platform (LPD), originally was planned for two VLS, that capability has not been installed.[19] Without a program of record for the VLS, it is unlikely the LSDs will have this capability anytime soon. The solution can be fulfilled by HIMARS, which, unlike aviation platforms, are all-weather strike platforms that can operate in adverse weather conditions and reload faster than a traditional VLS. Unlike a VLS system, HIMARS can be quickly reloaded at sea with additional rockets carried onboard the amphibious ship. In combat situations, HIMARS, which carry six rockets, can be reloaded in ten minutes by swapping out the expended container for another pre-loaded with six GPS-guided rockets via a

[17] Gidget Fuentes, "Marines Fire HIMARS From Ship in Sea Control Experiment With Navy," *USNI News*, last modified October 24, 2017, https://news.usni.org/2017/10/24/marines-fire-himars-ship-sea-control-experiment-navy.
[18] Joseph Trevithick, "HiMARS Goes to Sea: US Marines Now Fire Guided Artillery Rockets From Ships, *The War Zone*, last modified October 24, 2017, https://www.thedrive.com/the-war-zone/15410/himars-goes-to-sea-us-marines-now-fire-guided-artillery-rockets-from-ships.
[19] Joseph Trevithick, "HiMARS Goes to Sea."

self-loading arm. The HIMARS fills the void by providing an available and cost-effective precision firing system that can strike both land targets and stationary ships.

The versatility of using HIMARS from the deck of an amphibious ship extends beyond what a normal artillery system would provide. A recent test used an F-35B as a targeting platform to relay coordinates back to a HIMARS, which fired and subsequently destroyed its intended target.[20] This is an area where we can gain an operational advantage over our adversary. Emplacing HIMARS on the decks of amphibious ships distributes the lethality of long-range precision weapons throughout the force and provides the ARG a significant offensive capability when contesting sea control. Fighting for sea control in the Western Pacific will require distributed, yet interoperable, capabilities like HIMARS to ensure our adversaries cannot deny our use of the seas. The addition of HIMARS transforms the amphibious warship into a multipurpose strike platform that can support the Navy in a maritime campaign through precision ground-attack fires.

The third method that the Marines can support the Navy in sea control is through the occupation of key maritime terrain. A future Chinese conflict would require the Marines to use islands and chokepoints as key terrain to gain sea control. As General Neller remarked, "There's a ground component to the maritime fight. We're a naval force in a naval campaign; you have to help the ships control sea space. And you can do that from the land."[21] A cornerstone of the Marine Corps' history and one of their core missions is the seizure of advanced naval bases to support the maritime campaign. In World War II, the Marines seized terrain throughout the Solomon Islands, most notably Guadalcanal, to support the Navy in gaining sea control. Today, Vietnam is emplacing their own mobile rocket artillery systems, similar to HIMARS, on islands

[20] Shawn Snow, "Marines connect F-35 jet to HIMARS rocket shot for first time," *Marine Corps Times*, last modified October 5, 2018, https://www.marinecorpstimes.com/news/your-marine-corps/2018/10/05/marines-connect-f-35-jet-to-himars-rocket-shot-for-first-time/.
[21] Megan Eckstein, "Marines Want to Field a Long-Range Anti-Ship Missile."

in the SCS to confront the Chinese threat.[22] A conflict in the Western Pacific would likely require the Marines to act similarly and seize islands to set up offensive positions, threatening both enemy shore facilities and naval platforms.

While seizing islands in support of maritime objectives is not new for the Marines, how they execute this must adapt to fit the current operational environment. The difference today and a key component of the Marine's Expeditionary Advanced Base Operations (EABO) is landing Marines ashore without naval gunfire support. In a reversal of roles, the Marines would support their own landing and establish firing positions for HIMARS that would support naval surface combatants and CSGs as they fight for sea control.[23] As General Uribe, I MEF Deputy Commanding General, stated, "It's an all hands to the fight. On ship, we have Marines sitting below deck. They have weapons. We've got to think about creative ways to utilize that capability."[24] Establishing HIMARS ashore provides overwatch for amphibious warships and affords the Marines an ability to protect themselves while the Navy is fighting in a separate location. The flexibility offered by HIMARS cannot be overstated; they provide deep shaping fires at an accuracy and range previously only achieved by aviation assets.

Unlike using HIMARS to strike stationary ships from the land, using HIMARS to strike ships on the move is an entirely new concept for the Marines. To increase the Marines' capability of providing sea control support to the Navy, the Marine Corps is investing in the Ground-Based Anti-Ship Missile (GBASM), which uses the NSM to strike moving ships at a range of roughly 405 nm.[25] The Marines successfully tested this system in December 2019 with promising results. The GBASM program includes the Navy-Marine Expeditionary Ship

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[22] Joseph Trevithick, "HiMARS Goes to Sea."
[23] Megan Eckstein, "Navy Wants to Invest in Amphibious Ship Upgrades, But Funding, Timing Still Unclear," *USNI News*, last modified March 13, 2019, https://news.usni.org/2019/05/13/navy-wants-to-invest-in-amphibious-ship-upgrades-but-funding-timing-still-unclear.
[24] Megan Eckstein, "Navy Wants to Invest In Amphibious Ship Upgrades."
[25] Christopher Woody and Ryan Pickrell, "The Marines want a missile to chase down moving ships."

Interdiction System (NMESIS) which is comprised of an unmanned Joint Light Tactical Vehicle with a launch platform, called ROGUE fires, explicitly designed for the NSM.[26] NMESIS is a lightweight, expeditionary, and highly mobile system designed to deliver lethal fires and move to a new location before counterfire is returned. In a modern-day version of Guadalcanal, the Marines land, secure a firing position, and use their HIMARS and GBASM systems to destroy enemy targets, including mobile naval ships. Instead of an unsinkable aircraft carrier, the Marines could turn key terrain into an unsinkable firing position that could shoot down enemy aircraft, sink enemy ships, and target fixed land positions on distant islands. This unprecedented capability allows the Marines to take an active role, instead of standing idly by, in supporting the Navy in gaining local sea control.

Some might argue the Marines are focusing on over-specialization for a specific scenario against a specific adversary. General Berger, the Marine Corps' Commandant, stated that he intends to change the Marine Corps' structure and capabilities to best prepare for a future Chinese conflict. This restructuring ignores the hard-learned lessons from Iraq and Afghanistan and forgets the name the Marines made for themselves over the last 70 years.[27] To support the sea control mission, the Marines will need to cut capabilities; for example, the Marines announced they are getting rid of their tanks, some tubed-artillery, and cutting aviation squadrons as a tradeoff to support sea control.[28] The Marines are planning on divesting some of the same combat support that enabled them to be successful in Hue City, Fallujah, and Marjah. Low-intensity combat has characterized the last twenty years of combat operations, and the

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[26] Arun Mathew, "U.S. Marine Corps Seeking to Integrate Naval Strike Missile on Unmanned JLTV ROGUE Fires Vehicle for Anti-Ship Capability," *Def Post*, last modified March 14, 2020, https://defpost.com/u-s-marine-corps-seeking-to-integrate-naval-strike-missile-on-unmanned-jltv-rogue-fires-vehicle-for-anti-ship-capability/.
[27] Mark Cancian, "Don't go too Crazy Marine Corps," *The War on the Rocks,* last modified January 8, 2020, https://warontherocks.com/2020/01/dont-go-too-crazy-marine-corps/.
[28] Kyle Mizokami, "After Nearly a Century, the U.S. Marine Corps Is Ditching Its Tanks," *Popular Mechanics,* last modified March 24, 2020, https://www.popularmechanics.com/military/weapons/a31915295/marine-corps-tanks/.

Marines are quite good at it. By pivoting to support sea control, the Marines' risk both mission failure and Marines' lives if they have misidentified the most probable conflict of the future.

Opponents of the pivot to sea control argue the Marines are throwing away highly specific skills for a chance to successfully predict the next conflict in which their overspecialization pays off. The Marine Corps' pivot to support the Navy in their fight for sea control is not an overspecialization; instead, it is returning to the Marines' core mission – the seizure of advanced naval bases. General Berger wants the Marines to stop acting as a second land army, primarily how we operated for the last twenty years, and he stressed, if our legacy capabilities are not useful in a SCS fight, they should be removed from our inventory.[29] Marines are naval in character, and the NDS challenges the services to increase their joint lethality in a contested environment. This means the Marines must be prepared to fight and operate within a contested environment alongside the Navy, gaining sea control through the seizure of advanced naval bases and land operations in support of a naval campaign.[30] The Marine Corps' pivot towards specialization in supporting the Navy's sea control fight is not a wrong turn, but rather, realigning priorities to support their core missions in today's current environment.

RECOMMENDATIONS

The Marine Corps has identified platforms and ways in which they can best support sea control; however, the adage that we must practice how we intend to fight rings truer now more than ever. The Navy and Marine Corps team can accomplish this by increasing training and exercises designed towards seamless integration for a future sea control fight. This tighter naval

[29] Euan, Graham, "Lessons for Australia in US Marines' New Guidance," *The Strategist*, last modified August 12, 2019, https://www.aspistrategist.org.au/lessons-for-australia-in-us-marines-new-guidance/.
[30] General David H. Berger "Notes on Designing the Marine Corps of the Future," *The War on the Rocks*," last modified December 5, 2019, https://warontherocks.com/2019/12/notes-on-designing-the-marine-corps-of-the-future/.

integration can help realize the full combat potential of the Navy-Marine Corps against a near-peer competitor. For example, using F35B sensors to cue up a missile from a surface combatant or even from a HIMARS requires more practice to achieve better efficiency. A single successful test proves the theory, but more training is necessary for this method to be reliable. The Navy-Marine Corps team should expand upon integrated training to include a variety of distances, climates, and conditions. Moreover, many questions remain as to how well this works in a degraded communication environment, a likely scenario in the future. As the Marines add strike capabilities to the ARG, an in-depth look into doctrine, command and control, and tactics to understand how best to incorporate a strike capable ARG into naval warfare is needed. For example, the feasibility and value of making the Marine Expeditionary Unit (MEU) Commander a strike warfare commander as part of the Composite Warfare Commander concept should be further explored.

Lastly, if the Marines intend to support the Navy in sea control, the Marines may need to reevaluate its flight hour allocation. Flight hours for F-35s are scarce, and decisions will have to be made as to the priority for our future missions.[31] Mastering air-ground integration consumes many of the allocated flight hours, which demonstrates the Marines are not fully transitioning to support sea control. By allocating a larger percentage of flight hours to naval integration and reducing the effort to master air-ground integration, would signal that the Marines fully support sea control missions.

CONCLUSIONS

As the Navy and Marine Corps transition to fight a near-peer competitor, operating in a contested environment, such as the Western Pacific, will be a challenge for both services. The joint forces, per the NDS, are not postured correctly for the problems of Great Power

[31] Mark Nostro, "Discarding the Ptolemaic Model of the Marine Corps."

Competition, specifically operating within a contested environment. The Marine Corps has identified specific deficiencies in meeting the intent of the NDS and is pivoting to meet the needs of the current operating environment. For the first time in over 70 years, the Navy is facing a future in which sea control is not guaranteed, and future conflict in the Western Pacific would likely involve disputed sea control. The Navy will likely need assistance in future sea control missions, and the Marines can help. Getting back to its roots, the Marines need to focus on supporting the Navy in gaining and maintaining sea control. No longer passive observers, the Marines need to take an active role in supporting the Joint Forces Maritime Component Commander in sea control missions during future conflicts. The Marine Corps can best support the Navy in gaining sea control through gaining air superiority, ship-based long-range precision fires, and occupation of critical maritime terrain prior to amphibious operations.

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