REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
29-05-2021	Master of Military Studies (MMS) thesis	AY 2019-2020

4. TITLE AND SUBTITLE

It is time to Separate Control from Command: Supporting Argument to Why the Marine Corps Must Integrate into the Navy's Composite Warfare Concept

5a. CONTRACT NUMBER
N/A

5b. GRANT NUMBER
N/A

5c. PROGRAM ELEMENT NUMBER
N/A

6. AUTHOR(S)
Guard, Mitchell G. (Major)

5d. PROJECT NUMBER
N/A

5e. TASK NUMBER
N/A

5f. WORK UNIT NUMBER
N/A

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
USMC Command and Staff College
Marine Corps University
2076 South Street
Quantico, VA 22134-5068

8. PERFORMING ORGANIZATION REPORT NUMBER
N/A

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

10. SPONSOR/MONITOR'S ACRONYM(S)

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

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited.

13. SUPPLEMENTARY NOTES

14. ABSTRACT

The development of future concepts, such as expeditionary advance based operations, distributed operations, and stand-in forces, continues to drive the Marine Corps to evaluate how they will execute future operations. As a result, the Marine Corps is currently going through a significant force design restructure and evaluating their current doctrine to ensure that they nest within the Navy's littoral operations in a contested environment concept. One area that the Commandant of the Marine Corps, General David H. Berger, wants to evaluate is the Marine Corps's integration into the Navy and, more specifically, into the Navy's composite warfare concept. This paper serves to provide an analytical lens to evaluate why the Marine Corps must integrate into the Navy's composite warfare concept and the best method for effective integration. The Navy's composite warfare concept provides a structure that separates control from command. The composite warfare concept provides commanders centralized guidance via commander's intent, a collaborative planning environment, and decentralized control reinforced through command by negation. Capitalizing on command by negation provides an added degree of freedom for subordinate commanders to use their initiative in executing their mission. Additionally, mission command, above all else, allows subordinate commanders to achieve unity of effort in a dynamic environment composed of numerous threats across multiple domains. The addition of an expeditionary warfare commander within the composite warfare concept will codify the Marine Corps's ability to separate control from command to achieve a distinct advantage over their adversaries in future operating environments.

15. SUBJECT TERMS

Command and Control (C2), Composite Warfare Concept, Expeditionary Warfare Commander (EXWC), Mission Command, Command by Negation

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			USMC Command and Staff College
Unclass	Unclass	Unclass	UU	36	19b. TELEPHONE NUMBER *(Include area code)* (703) 784-3330 (Admin Office)

United States Marine Corps
Command and Staff College
Marine Corps University
2076 South Street
Marine Corps Combat Development Command
Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

TITLE:

IT IS TIME TO SEPARATE CONTROL FROM COMMAND: SUPPORTING ARGUMENT TO WHY THE MARINE CORPS MUST INTEGRATE INTO THE NAVY'S COMPOSITE WARFARE CONCEPT

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

AUTHOR:

MAJOR MITCHELL G. GUARD, USMC

AY 2020-21

MMS Mentor Team and Oral Defense Committee Member:
Nathan M Packard
Approved:
Date: 04 May 2021

MMS Mentor Team and Oral Defense Committee Member:
LTCOL ANTHONY JOHNSTON
Approved: A.C.
Date: 3 MAY 2021

Executive Summary

Title: It is Time to Separate Control from Command: Supporting Argument to Why the Marine Corps Must Integrate into the Navy's Composite Warfare Concept

Author: Major Mitchell G. Guard, United States Marine Corps

Thesis:

Effective integration into the Navy's composite warfare concept, via the expeditionary warfare commander, produces a command and control relationship that is responsive to the dynamic maritime environment, provides the appropriate authorities to seize the initiative, and creates unity of effort for the task force, or joint force maritime component command commander, to synchronizes Marine Corps actions with Navy's maritime operations.

Discussion:

The development of future concepts, such as expeditionary advance based operations, distributed operations, and stand-in forces, continues to drive the Marine Corps to evaluate how they will execute future operations. As a result, the Marine Corps is currently going through a significant force design restructure and evaluating their current doctrine to ensure that they nest within the Navy's littoral operations in a contested environment concept. One area that the Commandant of the Marine Corps, General David H. Berger, wants to evaluate is the Marine Corps's integration into the Navy and, more specifically, into the Navy's composite warfare concept. This paper serves to provide an analytical lens to evaluate why the Marine Corps must integrate into the Navy's composite warfare concept and the best method for effective integration. Moreover, the dynamic nature of today's warfighting environment requires militaries to revolutionize, vice just merely evolve, how they operate within the environment.

General Berger also stated in his planning guidance, that the Marine Corps must integrate into the Navy's composite warfare concept as "a prerequisite to the successful execution of amphibious operations: Marines cannot be passive passengers en route to the amphibious objective area." But why does General Berger say this? What does the Navy's composite warfare concept provide the Marine Corps that it does not already have? And, if the composite warfare concept does provide the Marine Corps benefits, how does the Marine Corps use it within its own command and control structure to achieve unity of effort within the maritime domain?

Conclusion:

The answer to these questions is that the Navy's composite warfare concept provides a structure that separates control from command. The composite warfare concept provides commanders centralized guidance via commander's intent, a collaborative planning environment, and decentralized control reinforced through command by negation. Additionally, command by negation provides an added degree of freedom for subordinate commanders to use their initiative in executing their mission. Additionally, mission command, above all else, allows subordinate commanders to achieve unity of effort in a dynamic environment composed of numerous threats across multiple domains. The addition of an expeditionary warfare commander within the composite warfare concept codifies the Marine Corps's ability to separate control from command to achieve a distinct advantage over their adversaries in future operating environments.

DISCLAIMER

THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

Illustrations

Page

Table of Contents

Acknowledgments

I would first like to thank my thesis advisors, Doctor Anne-Louise Antonoff and Doctor Nathan Packard, of the War Studies Department at the Marine Corps Command and Staff College. Their assistance and dedicated involvement to me throughout the development of my thesis allowed me to pursue a topic and ideas that resonated with me. They consistently allowed this thesis to be my own work while steering me in the correct direction.

Second, I would like to acknowledge Colonel Art Corbett, USMC (retired). Unfortunately, Colonel Corbett passed away during the development of my thesis. His inspiring words to me at the beginning of my research empowered me to take a new and bold approach beyond my comfort zone. He encouraged me to not just to look at how the Marine Corps can evolve, but how it can be revolutionized. Marines who knew him will feel the loss of Colonel Corbett for many years to come, but his professional demeanor, heart-felt engagements, and always-inspiring words will live on in those he mentored.

Finally, I would like to thank Ms. Chari Thompson and her father, Chief Warrant Officer 2 Tom Thompson, USN (retired), for their editorial support. Their commitment to me was unwavering and made the process extremely enjoyable. I knew that they would be open and candidate with me, challenging ideas that did not make sense. I would have not been able to complete my thesis without them.

Thank you all!

Introduction

Published in 2015, Naval Warfare Publication (NWP) 3-56, *Composite Warfare: Maritime Operations at the Tactical Level of War*, facilitates the wargaming, experimentation, and practical application of how the naval force would conduct littoral operations in a contested environment (LOCE) as an element of joint forcible entry operations (JFEO).[1] Within the past five years, but most significantly in the last two years, the Marine Corps likewise has developed new operating concepts as part of distributed maritime operations (DMO) to address their role in LOCE. Those concepts include expeditionary advance based operations (EABO), distributed operations (DO), and stand-in forces.[2] The development of these concepts continues to drive the Marine Corps to evaluate their organization, resources, training, and preparedness to execute future operations that may require the implementation of these advanced concepts. As a result, the Marine Corps is currently going through a significant force redesign and evaluating their current doctrine to ensure that they nest within the Navy's LOCE concept. One area that the Commandant of the Marine Corps, General David H. Berger, wants to evaluate is the Marine Corps's integration into the Navy and, more specifically, into the Navy's composite warfare (CW) concept. This paper serves to provide an analytical lens to evaluate why the Marines must integrate into the Navy's CW concept and the best method for effective integration.

The dynamic nature of today's warfighting environment requires militaries to revolutionize, vice just merely evolve, how they operate within the environment. Effective integration into the Navy produces a command and control (C2) relationship that is responsive to the dynamic maritime environment, provides the appropriate authorities to seize the initiative, and creates unity of effort for the task force, or joint force maritime component command

(JFMCC) commander, which synchronizes Marine Corps actions with Navy's maritime operations.

Past and current military professionals support the integration of Navy and Marine Corps commands for amphibious operations, as advocated in the 1990s by Lieutenant David Cayce, Colonel Burton Quist, and Major Thomas Waldhauser. Most recently Major Steven Stepp, Bryan McGrath, and Major Andrew Roberts also addressed the Marine Corps's integration into the Navy. However, among these professionals, they disagree on why the Marine Corps must integrate into the Navy which led to different solutions. Cayce, Quist, and McGrath believe that the current C2 structure is adequate and effective to support future warfighting concepts.[3] That is, the supporting-supported relationship between the commander of the landing force and the commander of the amphibious force is appropriate to address all future operations. While others, Waldhauser, Stepp, and Roberts, believe that a revised C2 structure is needed to support future warfighting concepts.[4] They recommend integrating the landing force within the Navy's organization to produce a hierarchical organization where one force supervises the other during specific elements of the operation. However, the bottom-line is, as General Berger stated in his planning guidance, that the Marine Corps must integrate into the Navy's CW concept as "a prerequisite to the successful execution of amphibious operations: Marines cannot be passive passengers en route to the amphibious objective area."[5] But why does General Berger say this? What has changed in the operating environment that caused the Marine Corps to consider the need to alter its current method of C2 during amphibious operations? What does the Navy's CW concept provide the Marine Corps that it does not already have? And, if the CW concept does provide the Marine Corps benefits, as General Berger alludes to, how does the Marine Corps use it within its own C2 structure to achieve unity of effort within the maritime domain?

To answer these questions, this paper will first look to describe and categorize the Marine Corps's future operating environment. Second, it will evaluate the fundamental tenets of command and control and how those tenets need to influence today's C2 planning for warfare. Third, it will provide the historical background and development of the Navy's CW concept as it's the Navy's command and control structure. Fourth, this paper will propose a controlling idea to how the Marine Corps should view future command and control structures. Finally, this paper will apply the proposed controlling idea to how and why the Marine Corps needs to integrate into the Navy's CW concept.

Future Operating Environment

The National Defense Strategy (NDS) highlights that increasing international competition is redefining the character of war.[6] The Department of Defense (DOD) views and defines this competition as operating below the level of armed conflict or operating in the gray zone.[7] The character of war is driven by a complex future operating environment characterized by two primary factors: the rapid development of technology resulting in increased tempo of warfare and China's pacing actions to compete with the United States.

The expansion of technology produces, as evident within the evolution of computing systems, vast quantities of information that exceed the current abilities of individual commanders.[8] The Marine Corps currently employs platforms that collect large amounts of data which require integration across multiple, if not, all warfighting functions. One example of this is the Joint Strike Fighter, the F-35C. It collects data that Marines in the intelligence, fires, and maneuver warfighting functions use to develop information. Future technological changes in the operating environment are likely to come from the development of the automated systems,

human-machine collaboration, artificial intelligence (AI), quantum computing, and advanced sensors. These technologies are not exclusive to the United States military as majority of them are commercially available. This presents both opportunities and challenges for the DOD, and specifically the Marine Corps, in future operating environments.

These new technologies increase the tempo of warfare. The ability to collect, analyze, exploit, and disseminate information will accelerate due to innovation. While these technologies increase the tempo of warfare, they can aid commanders with managing and processing information to make better and faster decisions; thus, executing their decisions more effectively and efficiently than their adversary. The combination of a complex information environment, adversary capabilities to affect C2 support architectures, and over-reliance on a commander-led decision cycle makes the Marine Corps vulnerable to operational failure. The future operating environment articulated by the NDS describes how potential adversaries have developed sophisticated anti-access/area denial (A2/AD) capabilities as visually portrayed in figure 1.[9]

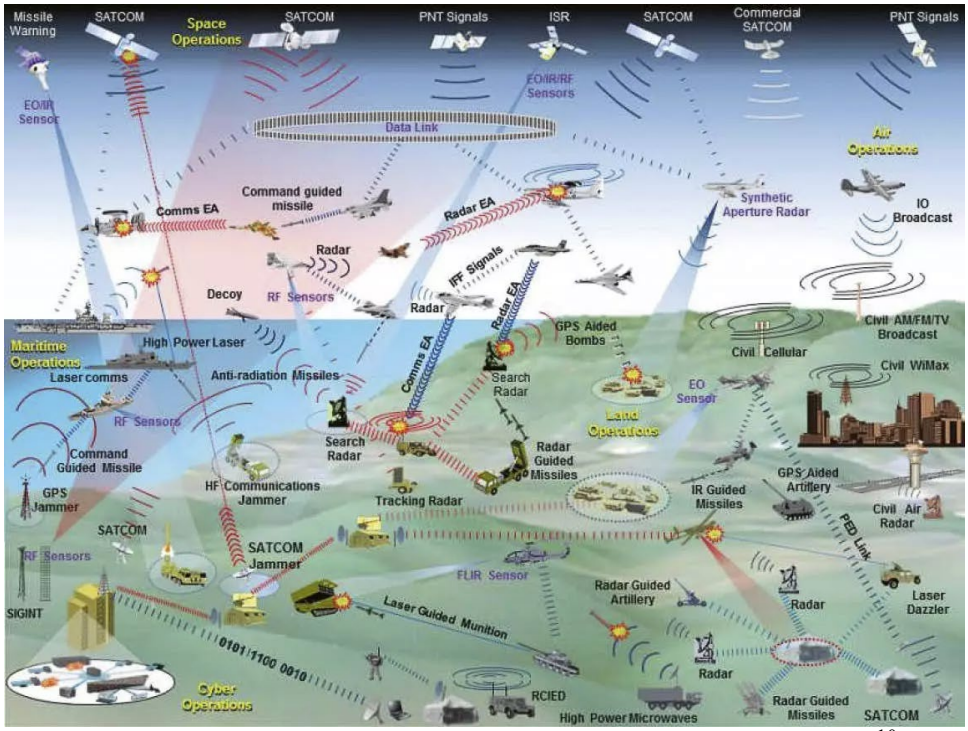

Figure 1: Electronic Warfare in Today's Military Environment[10]

These capabilities include electronic warfare, cyberspace weapons, long-range missiles, and advanced air defenses. To remain effective in the future operating environment, one must assume that a peer, or even a near-peer, adversary will deny, disrupt, obfuscate, manipulate, or degrade the information required for commanders to make appropriate decisions. If the commander is unable to make these decisions, then the adversary has effectively prevented the planned action from occurring, making that commander and their unit combat ineffective.

The second factor characterizing the future operating environment is China's pacing actions to compete with the United States. The NDS highlights that China is the primary competitor to the United States in the Indo-Pacific region where China is influencing and coercing their neighbors to their advantage. China is rapidly modernizing their military, conducting predatory economic actions, covertly militarizing commercial vessels, and asserting their power throughout the region in an attempt to become the regional hegemon.[11] Never has the world in recent history seen such an aggressive actor like China, imposing on other sovereign state's economical inclusion zones or overly confronting political differences with military force before diplomacy.

The 2020 DOD annual report to Congress on China, *Military and Security Developments involving the People's Republic of China*, identified that they are already ahead of the United States in the areas of shipbuilding, land-based conventional ballistic and cruise missiles, and integrated air defense systems.[12] This is genuinely concerning as China continues to intensify its effort to advance its overall position. One area that China is working to improve its military lethality is its militarily organization and C2 structure. The report states "More striking than the PLA's [People's Liberation Army] staggering amounts of new military hardware are the recent sweeping efforts taken by the CCP [Chinese Communist Party] leaders that include completely

restructuring the PLA into a force better suited for joint operations, improving the PLA's overall combat readiness, encouraging the PLA to embrace new operational concepts, and expanding the PRC's oversea military footprint."[13] It continues by describing that the CCP's is solely focused on developing and implementing technology to modernize its command and control structure. "China is pursuing new technologies like AI to support future military capabilities, such as autonomous command and control (C2) systems, more sophisticated and predictive operational planning and intelligence, surveillance, and reconnaissance fusion."[14] This exclusive focus on technology presents an opportunity that the United States military can exploit to gain an asymmetric advantage in the future operating environment. While technology significantly influences a military's ability to command and control, it is their culture that facilitates effective command and control. The 2020 RAND Corporation report, *Command and Control in U.S. Naval Competition with China*, identifies that United States' Navy and the PLA Navy have two vastly different C2 approaches due to their different organizational cultures.[15]

The United States' Navy approach to command and control is characterized by mission command via command by negation. This paper explains this characterization of mission command in greater detail in the next two sections, but until then, the main point to understand is that it is significantly different C2 approach than the PLA Navy. The PLA Navy's approach to command and control is one that RAND characterizes as "control and command" vice command and control.[16] The PLA Navy's culture is reflective of the CCP's culture of authoritarian rule. The PLA Navy operates under a tightly managed C2 structure that allows for little or no delegation of authority or independent action. The RAND report concludes that the "PLA Navy's rigid control and command structure, which endures even as its maritime operations have evolved, is likely to come under increasing strain given the relative independence and greater

operation tempo required by power projection operations."[17] It is the culture of the CCP and its embodiment throughout their military organizations that presents an opportunity for the United States to achieve an asymmetric advantage in the future operating environment.

In conclusion, the complex security environment, as framed by rising peer and near-peer adversaries, has forced the Navy and the Marine Corps to evaluate how they will execute amphibious operations in the future. The rapid development of technology along with China's A2/AD has the joint force developing new concepts to counter its actions. Along with these new concepts, which this paper discusses later, comes the need to evaluate command relationships and the C2 organization. It is imperative that the proper command relationship and the C2 organization are integrated and enable these new concepts. Moreover, the proper command relationships and C2 structure provides the Navy and the Marine Corps an advantage where they can use the temp of warfare as a constraining factor against the PLA Navy. However, to capitalize on this asymmetric advantage and ensure future operating concepts are supportable, one needs to ask the question if the fundamental tenets and principles of command and control are still applicable in the future operating environment as described above.

Fundamental Tenets of Command and Control

Joint Publication (JP) 1: *Doctrine for the Armed Forces of the United States* describes and defines C2 for the joint force.

> Command and control encompasses the exercise of authority, responsibility, and direction by a commander over assigned and attached forces to accomplish the mission. Command at all levels is the art of motivating and directing people and organizations into action to accomplish missions. Control is inherent in command. To control is to manage and direct forces and functions consistent with a commander's command authority. Control of forces and functions helps commanders and staffs compute requirements, allocate means, and integrate efforts. Mission command is the preferred method of exercising C2.[18]

This definition describes critical aspects of C2 which requires further examination and explanation.

First, the JP-1 links C2 with specific actions for a commander. The commander exercises authority, responsibility, and direction over assigned and attached forces. It is these actions that form the legal foundation for commanders within the joint force. An essential principle to command is the authority that a commander can lawfully direct their subordinates in the assignment and execution of missions.[19] With this authority comes the responsibility to organize their units in a manner that positions them for success. Over the course of warfare, the character of warfare has driven commanders to achieve unity of command and unity of effort to be successful on the battlefield.[20] Unity of command means that "all forces operate under a single commander with the requisite authority to direct all forces employed in pursuit of a common purpose."[21] However, unity of effort expands on the pursuit of a common purpose by including units not within the authority of a specific commander to coordinate and cooperate towards a common goal.[22]

Next, the definition of C2 continues by stating that control is inherent to command, and that control is to manage and direct forces and functions consistent with a commander's authority. Because control is directly tied to a commander and their authority, the principle of command requires that "two commanders may not exercise the same command relationship over the same force at any one time."[23] While the JP-1 uses the words command relationship, the principle is directly associated with control. That is, no two commanders can control the same organization at the same time. From this principle, the joint force developed command relationships that define control authorities and responsibilities. They are combatant command (COCOM), operational control (OPCON), and tactical control (TACON).[24] Without expanding

on each of these control relationships individually, their general purpose provides the commanders the framework to exercise control or the authority to delegate control to a subordinate commander. To illustrate this point, figure 2 shows the chain of command from the President down to the tactical forces, labelled as "Forces/Capabilities Made Available" in the figure. It also shows the control relationship between the multiple organizations and forces.

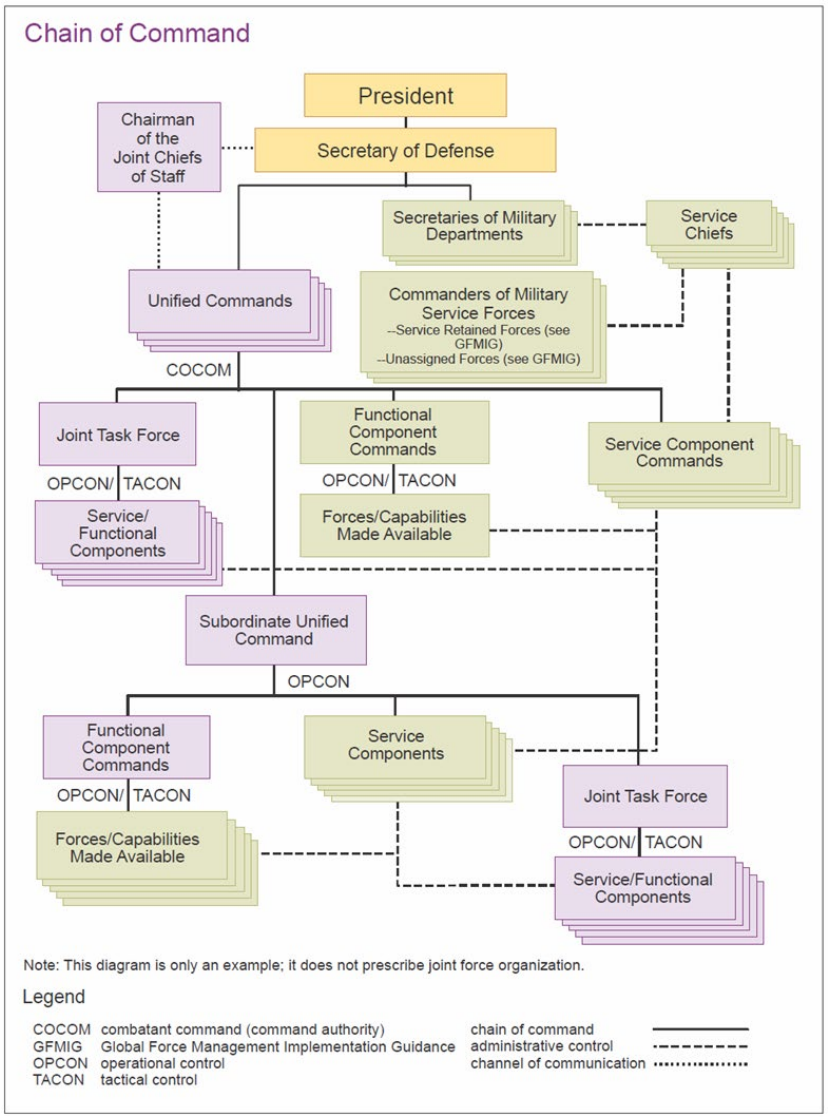

Figure 2: Chain of Command / Control Relationships[25]

Finally, the definition of C2 states that mission command is the preferred method.[26] This too, like unity of command and unity of effort, is an important principle. Mission command is

"the conduct of military operations through decentralized execution based upon mission-type orders."[27] Mission command empowers individuals to use their judgement and initiative to carry out their assigned tasks or missions. This principle directly links the human element within the command structure to the commander's desired outcome. The commander issues his or her desired outcome through their intent. Commander's intent describes to their organization the desired outcome without stipulating specific actions to take to accomplish their intent. The fundamental basis that allows mission command to be successful through commander's intent is the foundation of mutual trust between the commander and his or her subordinates. This is reflected in Navy's command and control structure with their composite warfare concept.

Composite Warfare Concept

The Navy first recognized potential difficulties with C2 in the period leading up to the United States' involvement in World War II (WWII). Prior to WWII, the Navy would fluctuate between centralized and decentralized control of subordinate commanders. This fluctuation was the product of two challenges. First, there was the resistance of the leaders at that time to change from the way they executed control. Second was their 'unwillingness' to give up control. Both control methods provided benefits to the senior commanders, but also presented challenges to the subordinate commanders. Recognizing the importance of speed and tempo in execution, especially against anticipated peer adversaries such as Germany and Japan, Admiral Ernest King, Commander-in-Chief of the United States Atlantic Fleet, ordered his subordinate units to exercise decentralized C2 on the basis that his subordinate commanders could seize an opportunity to gain the initiative and generate tempo against the adversary.[28] Decentralized command continues to be the bedrock of the Navy's C2 philosophy.

The Marine Corps also embraces this concept of decentralized C2 through their philosophy of mission command.[29] The four characteristics of mission command are: planning accounts for the unpredictability of war, providing the subordinate commander flexibility to accomplish the mission, insuring execution is decentralized, and allowing commanders to take advantage of opportunities on the battlefield that might not have been foreseen during planning.[30] Over the years, both services have continued to refine their concepts of C2, most notability with the Navy developing the CW concept for tactical operations.

The CW concept embodies the philosophy of decentralized C2 through the idea of "command by negation."[31] Command by negation is unique to the Navy, whereas the other services do not recognize it.

> The OTC [officer in tactical control] controls CWC [composite warfare commander] and warfare commanders' actions through "Command by Negation." Allied maritime procedures and instructions use the term "Command by Veto" . . . Command by negation and command by veto acknowledge that in many aspects of maritime warfare, it is necessary to preplan the actions of a force to an assessed threat and to delegate some command functions to a subordinate… Once such functions are delegated, the subordinate is to take the required action without delay, always keeping the OTC informed of the situation. . . The OTC and/or delegated commander retains the power to negate any particular action.[32]

The main distinction between command by negation (Navy) and mission command (Marine Corps) is that command by negation occurs when a commander makes a decision when in the presence of their superior, while mission command occurs when a commander makes a decision when not in the presence of their superior.[33] However, while different in execution, the fundamental principle for both command types is that the senior commander delegates appropriate authorities to their subordinate commander to make the decision. Command by negation and mission command enable each other within the CW concept.[34]

It is important to note that the OTC may designate one or more composite warfare commanders (CWC) within the OTC's area of responsibility (AOR). The OTC may do this to ensure that an expansive AOR does not overwhelm one CWC. The CWC can then delegate functional responsibilities to warfare and functional group commanders and coordinating responsibilities to the coordinators.[35] The figure below shows the hierarchy of all the warfare commanders, functional group commanders, and coordinators who work for the CWC and the OTC with the proposed establishment of an expeditionary warfare commander (EXWC).[36]

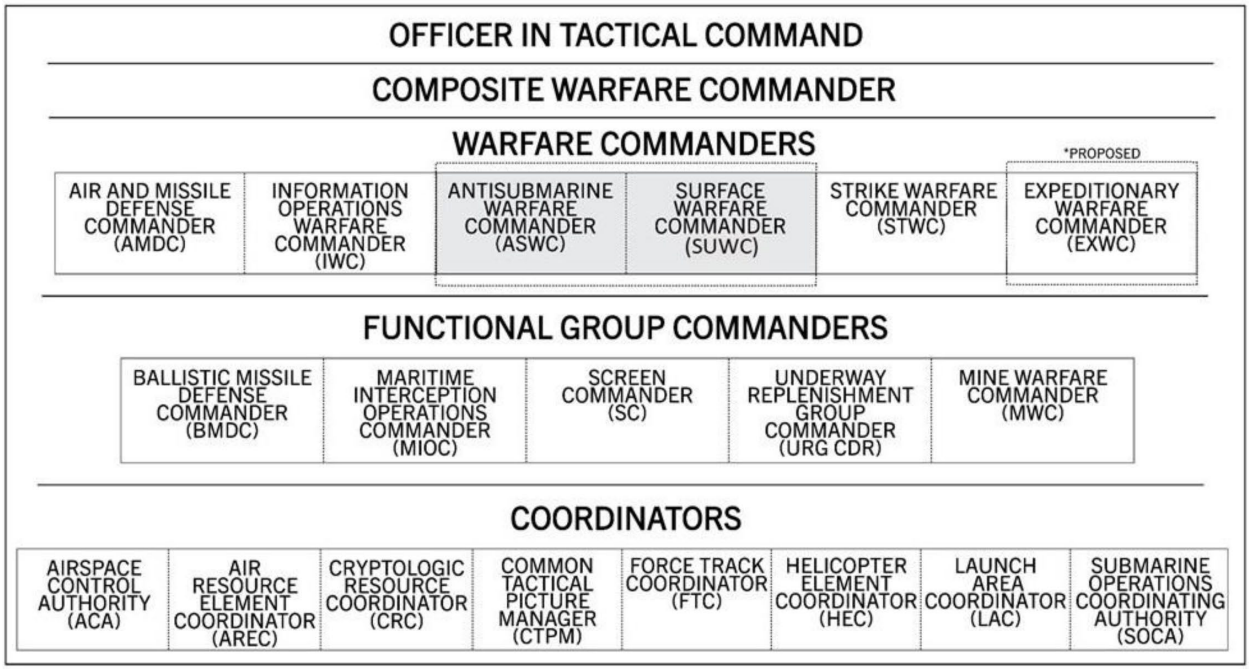

Figure 3: Composite Warfare Organization

Another important element is that the CW concept establishes CW organizations within task organizations by assigning the commander's warfare command functions to subordinates. NWP 3-56 provides the example that a senior Navy tactical-level commander will organize under both a task organization and a composite warfare organization simultaneously; that is, the commander will establish a task force and assign a CWC.[37] This arrangement introduces a

dynamic that allows a CWC to holistically plan and execute missions across multiple platforms that are within the task force, while supporting the OTC or JFMCC's mission.

Using the antisubmarine warfare commander (ASWC) as an example, one can expand upon the point that the commander can and should use all available resources. The ASWC should use all available resources of a carrier strike group, coordinating with the assigned submarine assets (SSNs), air assets (P-3s or MH-60s), and surface assets (destroyers or cruisers) to counter adversary submarine activity. While the control of these capabilities falls under the ASWC during the planning and execution of anti-submarine missions, the command structure of these capabilities is one removed from the other in the task organization.

While the CW concept has clearly accomplished a great deal overall, some concerns do arise from taking a closer look. In principle, the CW concept enables both offensive and defensive maritime operations through the warfare commanders and the established structure. As defined in NWP 3-56, the CW organization consists of a tiered structure whereby the OTC retains the responsibility for the mission and the assigned force.[38] Subordinate to the OTC is the CWC, who is responsible for the planning and execution of the assigned mission.[39] In practice, due to the fundamental nature of CW, the Navy mainly employs the concept to defend their force. While the Navy designed the CW concept for both offensive and defensive missions, they have not used their CW concept for large-scale offensive maritime missions against a peer competitor in real-world operations as they have for defensive operations.[40]

More specifically, CW appears to prioritize some warfighting functions over others. Colonel Todd P. Simmons, previous 22d Marine Expeditionary Unit commander and the current director of the Marine Corps's Expeditionary Warfare School, categorizes the Navy's CW construct as one that focuses on the fires warfighting function rather than a balanced focus on all seven

functions.[41] Examination of the NWP 3-56 highlights the idea that the CW concept focuses warfare and functional commanders on the planning and execution of fires, independent of the method or platform, to which the commanders are responsible.[42] According to NWP 3-56, warfare commanders are "normally assigned the command function to coordinate and control all force weapons associated with their warfare task, they will direct employment of weapons on ships not under their TACON."[43] This language accentuates the earlier point that the employment of fires is the central element of the CW concept. While this is the case, it does not negate the benefits that the CW concept provides to the commanders in the execution of their tasks or missions.

Controlling Idea

Assessing the C2 tenets in future operating environments will reveal significant opportunities for the Marine Corps to revolutionize how they execute missions, specifically amphibious operations, and integrate into the joint force. Colonel Arthur Corbett, USMC (retired) and the primary author of *Tentative Manual for Expeditionary Advanced Base Operations*, regularly advocated that the United States military must think in a revolutionary mindset vice an evolutionary mindset.[44] He gave the example of Netflix versus Blockbuster in the early 2000s.[45] Blockbuster was the dominate company in the video and movie rental industry until Netflix came along and made them obsolete. Netflix revolutionized the video and movie rental industry by streaming content which capitalized on emerging technology, specifically the technology facilitated the expansion of the internet to residential homes. Blockbuster was not able to conceptualize an industry that was different from that which made them remarkably successful until that time. Netflix was able to imagine and build an industry that retained the idea

of renting videos and movies through a revolutionary method. The Marine Corps has the opportunity in the future operating environment to be Netflix and revolutionize how they command and control future concepts.

Up to this point in the Marine Corps, the phrase 'command and control' has been categorized as an action that only the commander performs. That is, the commander is the only individual, due to authority and responsibility, that exercises C2 over his or her subordinates. The conversion of command and control from an adjective (description of authorities and responsibilities) to a verb (the act of exercising authorities and responsibilities) has made the individual elements of command and control inseparable. One cannot exercise control of a unit without command of that unit. The phrase command and control has informally replaced the lexicon of control within the Marine Corps. But this is not surprising as JP-1 states that control is inherent in command.[46] But what if command and control is separated and viewed as two separate functions? What benefits would that provide the commanders and the lowest tactical level Marines in executing their missions?

The controlling idea of separating the functions of command and control is revolutionary for the Marine Corps. However, it is not a new concept. The Australian Defence Force (ADF) published a document in 2019, *ADF Concept for Command and Control of the Future Force*, addressing this very idea of separating the command and control functions from one another.[47] They envisioned a relationship where "control may not necessarily be undertaken by a commander, but will be conducted on behalf of a commander."[48] It continues by describing that their "concept embraces the same principles of mission command at all levels and provides the foundation for it to be implemented in a method beyond what is currently practiced."[49] Their future concept of command and control is "hierarchical command – agile command."[50] Under

this structure, the ADF maintains a hierarchical command aligned with the principles of command. However, the change is in the implementation of "mission layers" within the hierarchical command that designates control relationships at the tactical level during execution.[51] Another important element of their future concept of command and control is how they define the purposes of each element. The purpose of command is to determine *what* needs to be accomplished to achieve their own and their higher headquarters' mission.[52] The purpose of control is to determine *how* to accomplish the commander's intent (the *what*).[53] Control is the delegation, position, capability, or capacity to coordinate between the subordinate elements (the *how*) to accomplish the plan.

While the formal separation of control from command is a transformative idea, the Navy's CW concept provides an established structure from which the Marine Corps can capitalize on the advantages of separating control from command while integrating into the Navy. Before evaluating the Navy's CW concept against the controlling idea, one must understand what this concept is and how it came into existence.

Integration into Composite Warfare

One method for the Marine Corps to successfully integrate into the Navy is to subordinate themselves, when executing maritime operations, to the Navy via the EXWC within the CW concept. The idea of EXWC is provisional. Although the EXWC is not included in the current version of the Navy's CW concept, the *Tentative Manual for Expeditionary Advanced Base Operations* proposes its addition to support further wargaming and experimentation with EABO.[54] This is not the first proposal of establishing the EXWC. The Navy developed Tactical Memorandum (TACMEMO) 3-56.1-19: *Integration of Navy and Marine Expeditionary Warfare*

Capabilities into the Composite Warfare Construct in August 2019, to provide a non-prescriptive method, a starting point, for integrating an EXWC within their CW concept. [55] The Navy and Marine Corps concept development organizations jointly designed the EXWC position. The EXWC provides a flexible control relationship for the Marine Corps that is responsive to the dynamic maritime environment, delegates the appropriate authorities, and creates unity of effort for the task force commander or the JFMCC commander.

Integrating into the Navy's control structure through the EXWC would constitute a significant change to the current C2 relationship between the Navy and the Marine Corps when executing maritime operations. The current C2 relationship for maritime operations, specifically amphibious operations such as a raid or an assault, is a supporting-supported relationship between the commander, amphibious task force (CATF) and the commander, landing force (CLF).[56] Traditionally at the lowest Navy-Marine Corps integrated task force level, the amphibious ready group/marine expeditionary unit (ARG/MEU), the CATF is the commodore of the ARG and the CLF is the commanding officer of the MEU. This relationship establishes a co-equal planning environment between the two commanders and their staffs for the purpose of planning and executing amphibious operations.[57] In execution, this supporting-supported relationship establishes a C2 structure that is dynamic and flexible with respect to the diversity of missions within amphibious operations. These two considerations, co-equality in planning and flexibility in execution, will most likely constitute the minimum acceptable features of any new C2 concepts for amphibious or expeditionary operations. Current doctrine, JP 3-02: *Amphibious Operations,* designates the C2 responsibility of the force, both Navy and Marine Corps, for the ship-to-shore movement to the CATF. It then shifts the C2 responsibility to the CLF when the forces are ashore.[58] The main purpose of this relationship is not to prescribe what commanders

plan or how they execute, but to provide a framework of cooperation and flexibility between the two commanders to support, or be supported, during the different phases of an amphibious operation.

TACMEMO 3-56.1-19 states that the CATF-CLF supported-supporting relationship is still relevant within the CW concept with the addition of the EXWC. This is because JP 3-02 "uses CATF and CLF not as formal titles but as generic terms in reference to those officers assigned to perform certain tasks."[59] The establishment of the EXWC does not remove the previous C2 relationships, but designates a warfare commander through delegation from the CWC as the responsible individual for leading naval forces to achieve their assigned missions and tasks.[60] Either through the CATF-CLF relationship or the CW construct, a cornerstone for both the Navy and the Marine Corps in executing operations is that C2 remains decentralized. Decentralized execution was not always fundamental to the naval force. Composite warfare owes its existence to historical experience with the limitations of centralized C2 in dynamic operating environments. With the incorporation of new technology and the changing nature of their adversaries, the naval force had to develop a solution that allows them to decide and act faster than their opponent.

The desire to integrate the Marine Corps more effectively into naval operations is not new. In 1992, following the United States' conclusion of Operation Desert Shield and Operation Desert Storm, the Marine Corps found itself returning towards its naval roots rather than remaining the land war force that had executed Operation Desert Shield/Desert Storm. This shift is evident in Major Waldhauser's Command and Staff College research paper titled "Entering the Golden Age with the Composite Warfare/Amphibious Doctrine Dilemma." In his paper, Major Waldhauser asks, "What must the Marine Corps do to ensure amphibious operations are

compatible with how the fleet fights today and in the future?"[61] He asked this question at that time because the Navy developed new concepts of naval operations and he was evaluating the Marine Corps's roles within the naval services. He answers this question by recommending six actions. First, elevating the CATF to the role of amphibious warfare commander (AWC) under the CWC to provide the appropriate level of authority and resources to execute an amphibious operation.[62] Second, making the current CLF a general officer rank that coordinates with the AWC to develop the details of the amphibious operation.[63] Third, establishing a Marine Corps landing force (MCLF) commander, at a Major General or Lieutenant General rank, that is co-equal to the OTC and responsible to advise the OTC on how best to employ the assigned Marine Corps force.[64] Fourth, having the Navy and Marine Corps update and integrate their separate amphibious operations doctrines into one naval doctrine that codifies the roles of the AWC, CLF, and MCLF.[65] Fifth, he states that the naval force must exercise his recommended changes in peace-time operations to educate and train the force on how to plan for and execute amphibious operations.[66] What Major Waldhauser does not address in his paper is the broad operations that naval forces may execute outside amphibious operations in support of the OTC or the JFMCC commander such as sea control or EABO. These amphibious operations, as part of new operating concepts, drives the Navy's requirements and are supporting elements within the nation's larger maritime strategy.[67] Finally, the proposed general officer ranks with their associated staffs for the CLF and the MCLF creates additional bureaucracies. While the CW concept focuses on decentralized command to capitalize on initiative and speed to gain tempo, these additional bureaucracies will only stifle it. Moreover, the additional bureaucracies could potentially create the proverbial "rice-bowl" battles where commanders look to have absolute control over their units to protect their command's interests over those of other units.

Future operating concepts focus on a wide range of operations that the Marine Corps will execute in support of the joint force. The idea of separating the control function from command will generate greater flexibility, unity of effort, and tempo for the commander to achieve his or her desired results. Applying the EXWC role in the execution of EABO, one can visualize scenarios that require action by the littoral force in support of another CW commander, the task force commander, or the JFMCC commander. An example of this is that the littoral force via the EXWC may support the ballistic missile defense commander.[68] Additionally, the forces executing EABO will have multiple capabilities that other CW commanders may need to coordinate with or directly control. The CW concept provides the flexibility for these commanders to dynamically work with others in executing their assigned mission.

The separation of control from command is not just represented in the Navy's CW concept. The C2 structure for aviation operations also supports the idea of separating control from command. Chapter 4 of Marine Corps Warfighting Publication (MCWP) 3-20: *Aviation Operations* describes the methods of aircraft control and management of airspace.[69] It embraces the principle of centralized command and decentralized control of the aircraft. Therefore, a joint tactical air controller from a sister service, who is not in the command relationship of the Marine aviation unit, can take control of a Marine aircraft in his or her area of operation and direct it to strike a target. Essential to the effectiveness of this relationship is the coordination, planning, and dissemination of the plan prior to execution. Furthermore, MCWP 3-20 defines units and organizations within the aviation combat element that performs specified control functions at the different command levels.[70] The direct air support center, the tactical air operations center, and marine air traffic control detachment are three examples of separate command organizations that work together in an integrated and decentralized control relationship. The foundation to aviation

operations includes the categories of support as defined in MCWP 6-2: *MAGTF Command and Control*. These categorizes are general, direct, mutual, and close.[71] While these categories are significantly different from one another, the main point to highlight is that the control relationship changes based on the category of support that an aviation platform is performing. This principle of dynamic control is based upon the type of support that is reflected in the Navy's CW concept. The Marine Corps must apply this principle to maritime operations by integrating into the overall CW concept.

The Marine Corps has studied and experimented with integrating into the Navy's CW concept. Two examples of this are the exercises Sea Dragon and Bold Alligator. A recommendation as dramatic as subordinating the control of Marine Corps units via the EXWC during maritime operation, requires verification of applicability and effectiveness, while providing senior Marine Corps commanders reassurance that the Navy is prepared to employ the assigned Marine Corps units.

Moreover, historical battle studies, such as the amphibious assault at Guadalcanal during WWII, the amphibious assault at Inchon during the Korean War, and the amphibious demonstration during Desert Storm, do not provide either the scenario or the framework to evaluate subordinating the control of the Marine Corps units in the CW concept. It would not evaluate whether the EXWC would be an effective method of C2, generate unity of effort and tempo, or be acceptable for senior Marine Corps commanders. While those historical events provide substantial lessons in the planning and execution of amphibious operations, they lack the scalability and multidimensional threats posed by current A2/AD systems. The versatility of the threat is important to consider. The naval force is currently required to operate below the level of armed conflict but must be prepared to quickly escalate to unlimited warfare, if required. This

means that C2 structures must be adequate regardless of the size or type of naval force required. The multidimensional threat posed by today's adversaries is also important to examine. The current threat by peer and near-peer adversaries is one where the naval force is required to view it not only from a maritime perspective, but from all domains that affect the maritime domain. Today's technology is increasingly enabling military assets from the land, air, space, and cyberspace domains to affect the maritime domain. The C2 structure of a naval force must be able to operate within, and account for, the multidimensional threats as characterized by the future operating environment.

Conclusion

To achieve the Commandant's vision of a fully integrated naval service, the Marine Corps force must advocate for the establishment and fill the role of the EXWC within the Navy's CW concept. This recommendation of integrating into the Navy's CW concept is not just to merge or to have the same C2 structure as the Navy, but to take advantage of what it provides. The CW concept provides commanders centralized guidance via commander's intent, a collaborative planning environment, and decentralized control reinforced through command by negation during maritime operations. Additionally, command by negation provides an added degree of freedom for subordinate commanders to use their initiative in executing their mission.

Mission command, above all else, allows subordinate commanders to achieve unity of effort in a dynamic environment composed of numerous threats across multiple domains. The EXWC within the CW concept codifies the Marine Corps's ability to separate control from command to achieve a distinct advantage over their adversaries in future operating environments. When technology is driving force for competition between two actors, one must look at

something that is more revolutionary than evolutionary. The fundamental tenets of command and control highlight the importance of mission command via commander's intent. By allowing capable units to control the actions of another, one reduces the decision cycle to act and takes advantage of a situation that may be limited in time or space. Overlaying this idea on the future operating environment where the CCP is the United States' primary belligerent, it provides the Navy and the Marine Corps an asymmetric advantage over the PLA Navy. A validated CW concept with an integrated EXWC provides a flexible naval control structure focused on mission control vice hierarchical command. This allows the Navy and the Marine Corps to operate faster and within the PLA Navy's decision-making cycle exploiting the tempo of warfare to their advantage. A CW concept that integrates the Marine Corps within its control is responsive to the dynamic maritime environment, provides the appropriate authorities to seize the initiative, and creates unity of effort for the task force or JFMCC commander by synchronizing Marine Corps actions with Navy's maritime operations.

Endnotes

[1] US Department of the Navy, *Integration of Navy and Marine Expeditionary Warfare Capabilities into the Composite Warfare Construct,* Draft TACMEMO 3-56.1-19 (Washington, DC: Department of the Navy, August 28, 2019), preface.
[2] Headquarters, US Marine Corps, *Commandant's Planning Guidance* (Washington DC: Headquarters, US Marine Corps, July 16, 2019), 10-11, https://www.marines.mil/News/ Publications/MCPEL/Electronic-Library-Display/Article/1907265/38th-commandants-planning-guidance-cpg/.
[3] Lieutenant David M., Cayce, USN, "Composite Maneuver Warfare Commander," *Marine Corps Gazette* 79, no. 3 (March 1995), 44, https://search-proquest-com.lomc.idm.oclc.org/ trade-journals/composite-maneuver-warfare-commander/docview/221423028/se-2?accountid=14746; Colonel Burton C. Quist, USMC, "Naval Expeditionary Warfare Update," *Marine Corps Gazette* 80, no. 3 (March1996), 39, https://search-proquest-com.lomc.idm.oclc.org/ trade-journals/naval-expeditionary-warfare-update/docview/221428364/se-2?accountid=14746; Bryan McGrath, "Adapting Command and Control for 21st Century Seapower," *Center for International Maritime Security*, April 16, 2019, https://cimsec.org/adapting-command-and-control-for-21st-century-seapower/.
[4] Major Thomas D. Waldhauser, USMC, "Entering the Golden Age with Composite Warfare/Amphibious Doctrine Dilemma," Master's thesis. USMC Command and Staff College, 1992, ii, http://www.globalsecurity.org/military/ library/report/1992/WTD.htm; Major Kevin J. Stepp, USMC, "Composite Warfare Doctrine – Providing the JFMCC with the Optimal Command and Control Method for Amphibious Operations," Master's thesis. Naval War College, 2015, 15, https://apps.dtic. mil/dtic/tr/fulltext/u2/a621058.pdf; Major Andrew Roberts, USMC. "Closing the Seams in Naval Integration: Actual Action or more Spilled Ink?," *Marine Corps Gazette* 103, no. 2 (February 2019), 23, https://mca-marines.org/wp-content/uploads/2019/01/MCG-February-2019-sm.pdf.
[5] Headquarters, US Marine Corps, *Commandant's Planning Guidance* (Washington DC: Headquarters, US Marine Corps, July 16, 2019), 10, https://www.marines.mil/News/ Publications/MCPEL/Electronic-Library-Display/Article/1907265/38th-commandants-planning-guidance-cpg/.
[6] US Department of Defense, *Summary of the 2018 National Defense Strategy of the United States of America: Sharping the American Military's Competitive Edge* (Washington, DC, January 19, 2018), 2, https://dod.defense. gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.
[7] US Department of Defense, *2018 National Defense Strategy*, 6.
[8] US Department of Defense, *2018 National Defense Strategy*, 6.
[9] John R. Hoehn, *Joint All-Domain Command and Control (JADC2)* (Washington, DC: Congressional Research Service, March 18, 2021), 1, https://fas.org/sgp/crs/natsec/IF11493.pdf.
[10] Commander Malte von Spreckelsen, DEU, "Electronic Warfare – The Forgotten Discipline: Why is the Refocus on this Traditional Warfare Area Key for Modern Conflict?," *The Journal of the JAPCC*, no. 27 (Autumn/Winter 2018), 42, https:// www.japcc.org/electronic-warfare-the-forgotten-discipline/.
[11] US Department of Defense, *2018 National Defense Strategy*, 2.
[12] Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China* (Washington, DC: Office of the Secretary of Defense, September 1, 2020), vii, https:// media.defense.gov/2020 /Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL. PDF.
[13] Office of the Secretary of Defense, *Annual Report to Congress*, ii.
[14] Office of the Secretary of Defense, *Annual Report to Congress*, 161.
[15] Kimberly Jackson, Andrew Scobell, Stephen Webber, and Logan Ma, *Command and Control in U.S. Naval Competition with China* (Santa Monic, CA: RAND Corporation, 2020), ix, www.rand.org/t/RRA127-1.
[16] Jackson, Scobell, Webber, and Ma, *Command and Control in U.S. Naval Competition with China*, xi.
[17] Jackson, Scobell, Webber, and Ma, *Command and Control in U.S. Naval Competition with China*, xi-xii.
[18] US Department of Defense, *Doctrine for the Armed Forces of the United States*, JP-1 (Washington, DC: US Department of Defense, July 12, 2017), I-18, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp1_ch1.pdf.
[19] US Department of Defense, *Doctrine for the Armed Forces of the United States*, V-1.
[20] Captain Daniel W. Krueger, USA, "Shared Understanding – Gaining Ground in a Complex World," in *Mission Command in the 21st Century: Empowering to Win in a Complex World* (Fort Leavenworth, KS: The Army Press, 2016), 19, https://www.armyupress.army.mil/Portals/7/Primer-on-Urban-Operation/Documents/mission-command-in-the-21st-century-uFl.pdf.
[21] US Department of Defense, *Doctrine for the Armed Forces of the United States*, V-1.

[22] US Department of Defense, *Doctrine for the Armed Forces of the United States*, V-1.
[23] US Department of Defense, *Doctrine for the Armed Forces of the United States*, V-1.
[24] US Department of Defense, *Doctrine for the Armed Forces of the United States*, II-24-II-25.
[25] US Department of Defense, *Doctrine for the Armed Forces of the United States*, II-10.
[26] US Department of Defense, *Doctrine for the Armed Forces of the United States*, I-18.
[27] US Department of Defense, *Doctrine for the Armed Forces of the United States*, V-15.
[28] Department of the Navy, *Integration of Navy and Marine Expeditionary Warfare Capabilities into the Composite Warfare Construct*, 1-2.
[29] Headquarters, US Marine Corps, *Command and Control*, MCDP 6 (Washington, DC: Headquarters, US Marine Corps, April 4, 2018), 79, https://www.marines.mil/Portals/1/Publications/MCDP%206.pdf.
[30] Headquarters, US Marine Corps, *Command and Control*, 109.
[31] US Department of the Navy, *Maritime Operations at the Operational Level of War*, NWP 3-32 (Washington, DC: Department of the Navy, October 2008), 1-7, https://dnnlgwick.blob.core.windows.net/portals/14/Courses/Maritime%20Staff%20Operators%20Course/Read%20Ahead%20Documents/2.%20NWP%203-32,%20pages%207-1%20to%207-4.pdf?sr=b&si=DNNFileManagerPolicy&sig=qVAwAF6UMvgFhJCW5rvYS88fvIloX%2FBF2RMnVxy6k7Y%3D.
[32] US Department of the Navy, *Maritime Operations at the Operational Level of War*, 4-20.
[33]Navy Warfare Development Command Concepts Directorate and US Marine Corps Warfighting Laboratory Concepts Branch, *Primer on Naval Command and Control and the Composite Warfare Organization* (Quantico, VA: US Marine Corps Laboratory, January 2020), 6.
[34] Navy Warfare Development Command Concepts Directorate and US Marine Corps Warfighting Laboratory Concepts Branch, *Primer on Naval Command and Control and the Composite Warfare Organization* (Quantico, VA: US Marine Corps Laboratory, January 2020), 7.
[35] Department of the Navy, *Maritime Operations at the Operational Level of War*, 1-16.
[36] Department of the Navy, *Integration of Navy and Marine Expeditionary Warfare Capabilities into the Composite Warfare Construct,*1-16.
[37] Department of the Navy, *Composite Warfare: Maritime Operations at the Tactical Level of War*, NWP 3-56 (Washington, DC: Department of the Navy, December 2015), 1-2.
[38] Department of the Navy, *Maritime Operations at the Operational Level of War*, 1-11.
[39] Department of the Navy, *Maritime Operations at the Operational Level of War*, 1-15.
[40] Lieutenant Commander Shane Tanner, USN, ""CWC, Departing": Return of the Task Force Commander" Master's thesis. Naval War College, 2009), 4, https://apps.dtic.mil/dtic/tr/fulltext/u2/a503146.pdf.
[41] Colonel Todd P. Simmons, discussion with Commanding Officer, November 16, 2020.
[42] Department of the Navy, *Integration of Navy and Marine Expeditionary Warfare Capabilities into the Composite Warfare Construct*, 6-11.
[43] Department of the Navy, *Composite Warfare: Maritime Operations at the Tactical Level of War*, 3-7.
[44] Colonel Art Corbett, USMC (ret), "Joint Forcible Entry Operations" (Lecture, USMC Command and Staff College, Quantico, VA, December 2, 2020).
[45] Corbett, "Joint Forcible Entry Operations" (Lecture).
[46] US Department of Defense, *Doctrine for the Armed Forces of the United States*, V-1.
[47] ADF Department of Defence, *ADF Concept for Command and Control for the Future Force* (Commonwealth of Australia: Department of Defence, 2018), 17, https://theforge.defence.gov.au/sites/default/files/adf_concept_for_command_and_control_of_ the_future_force_v.1_signed.pdf.
[48] ADF Department of Defence, *ADF Concept for Command and Control for the Future Force*, 18.
[49] ADF Department of Defence, *ADF Concept for Command and Control for the Future Force*, 18.
[50] ADF Department of Defence, *ADF Concept for Command and Control for the Future Force*, 9.
[51] ADF Department of Defence, *ADF Concept for Command and Control for the Future Force*, 9.
[52] ADF Department of Defence, *ADF Concept for Command and Control for the Future Force*, 17.
[53] ADF Department of Defence, *ADF Concept for Command and Control for the Future Force*, 18.
[54] US Department of the Navy and Headquarters, US Marine Corps, *Tentative Manual for Expeditionary Advanced Base Operations* (Washington, DC: Headquarters, US Marine Corps, February 2021), 3-10, https://intelshare.intelink.gov/sites/mcwl/TMEABO/_layouts/15/WopiFrame.aspx?sourcedoc=/sites/mcwl/TMEABO/SiteAssets/TM%20EABO%20-%20First%20Edition%20Rev%2020210211.pdf&action=default.

[55] Department of the Navy, *Integration of Navy and Marine Expeditionary Warfare Capabilities into the Composite Warfare Construct*, preface.
[56] US Department of Defense, *Amphibious Operations*, JP 3-02 (Washington, DC: Department of Defense, January 4, 2019), I-2, https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_02.pdf.
[57] US Department of Defense, *Amphibious Operations*, III-3.
[58] US Department of Defense, *Amphibious Operations*, III-15.
[59] Department of the Navy, *Integration of Navy and Marine Expeditionary Warfare Capabilities into the Composite Warfare Construct*, 3-6.
[60] Department of the Navy, *Integration of Navy and Marine Expeditionary Warfare Capabilities into the Composite Warfare Construct*, x-x.
[61] Waldhauser, "Entering the Golden Age," ii.
[62] Waldhauser, "Entering the Golden Age," 9.
[63] Waldhauser, "Entering the Golden Age," 11.
[64] Waldhauser, "Entering the Golden Age," 11.
[65] Waldhauser, "Entering the Golden Age," 14.
[66] Waldhauser, "Entering the Golden Age," 14.
[67] U.S. Navy, U.S. Marine Corps, and U.S. Coast Guard, "Advantage at Sea: Prevailing with Integrated All-Domain Naval Power," 7, https://media.defense.gov/2020/Dec/16/2002553074/-1/-1/0/TRISERVICESTRATEGY.PDF.
[68] US Department of the Navy and Headquarters, US Marine Corps, *Tentative Manual for Expeditionary Advanced Base Operations*, 3-10.
[69] Headquarters, US Marine Corps, *Aviation Operations*, MCWP 3-20 (Washington, DC: Headquarters, US Marine Corps, April 4, 2018), 4-2, https://www.marines.mil/portals/1/Publications/MCWP%203-20%20GN.pdf?ver=2019-05-09-091513-003.
[70] Headquarters, US Marine Corps, *Aviation Operations*, 4-3.
[71] Headquarters, US Marine Corps, *Aviation Operations*, 4-2.

Bibliography

ADF Department of Defence. *ADF Concept for Command and Control for the Future Force*. Commonwealth of Australia: Department of Defence, 2018. https://theforge.defence.gov.au/sites/default/files/adf_concept_for_command_and_control_of_the_future_force_v.1_signed.pdf.

Cayce, Lieutenant David M., USN. "Composite Maneuver Warfare Commander." *Marine Corps Gazette* 79, no. 3 (March 1995), 44-46. https://search-proquest-com.lomc.idm.oclc.org/trade-journals/composite-maneuver-warfare-commander/docview/221423028/se-2?accountid=14746.

Corbett, Colonel (retired) Art, USMC. *Expeditionary Advanced Base Operations (EABO) Handbook: Considerations for Force Development and Employment*. Version 1.1. Quantico, VA: Marine Corps Warfighting Lab, June 1, 2018. https://mca-marines.org/wp-content/uploads/Expeditionary-Advanced-Base-Operations-EABO-handbook-1.1.pdf.

Corbett, Colonel (retired) Art, USMC. "Joint Forcible Entry Operations." Lecture. USMC Command and Staff College, Quantico, VA, December 2, 2020.

Cyr, Captain Brian P., USMC, Captain Thomas C. Gillespie, USMC, Captain Steven M. Lesher, USMC, and Captain Patrick D. Minor, USA. "Composite Warfare and the Amphibians." *Marine Corps Gazette* 76, no. 11 (November 1992), 64-70. https://search-proquest-com.lomc.idm.oclc.org/trade-journals/composite-warfare-amphibians/docview/206357371/se-2?accountid=14746.

Gregson, Colonel Wallace C., USMC. "Keeping Up with Navy Doctrine." *Marine Corps Gazette* 74, no. 12 (December 1990), 14-16. https://search-proquest-com.lomc.idm.oclc.org/ trade-journals/keeping-up-with-navy-doctrine/docview/206360867/se-2?accountid=14746.

Headquarters, US Marine Corps. *Aviation Operations*. MCWP 3-20. Washington, DC: Headquarters, US Marine Corps, April 4, 2018. https://www.marines.mil/portals/1/Publications/MCWP%203-20%20GN.pdf?ver=2019-05-09-091513-003.

Headquarters, US Marine Corps. *Commandant's Planning Guidance*. Washington DC: Headquarters US Marine Corps, July 16, 2019. https://www.marines.mil/News/Publications/MCPEL/Electronic-Library-Display/Article/1907265/38th-commandants-planning-guidance-cpg/.

Headquarters, US Marine Corps. *Command and Control*. MCDP 6. Washington, DC: Headquarters US Marine Corps, April 4, 2018. https://www.marines.mil/Portals/1/Publications/MCDP%206.pdf?ver=2019-07-18-093633-990.

Hoehn, John R. *Joint All-Domain Command and Control (JADC2)*. Washington, DC: Congressional Research Service, March 18, 2021. https://fas.org/sgp/crs/natsec/IF11493.pdf.

Jackson, Kimberly, Andrew Scobell, Stephen Webber, and Logan Ma. *Command and Control in U.S. Naval Competition with China*. Santa Monic, CA: RAND Corporation, 2020. www.rand.org/t/RRA127-1.

Krueger, Captain Daniel W., USA. "Shared Understanding – Gaining Ground in a Complex World." In *Mission Command in the 21st Century: Empowering to Win in a Complex World*, 19-23. Fort Leavenworth, KS: The Army Press, 2016. https://www.armyupress.army.mil/Portals/7/Primer-on-Urban-Operation/Documents/mission-command-in-the-21st-century-ul.pdf.

Mahnken, Thomas G. "Asymmetric Warfare at Sea: The Naval Battles off Guadalcanal, 1942–1943." *Naval War College Review* 64, no. 1 (Winter 2011), 95-121, https://www.jstor.org/stable/pdf/26397177.pdf.

McGrath, Bryan. "Adapting Command and Control for 21st Century Seapower." *Center for International Maritime Security*, April 16, 2019. https://cimsec.org/adapting-command-and-control-for-21st-century-seapower/.

Navy Warfare Development Command and US Marine Corps Warfighting Laboratory. *Primer on Naval Command and Control and the Composite Warfare Organization*. January 2020.

Office of the Secretary of Defense. *Annual Report to Congress: Military and Security Developments Involving the People's Republic of China*. Washington, DC: Office of the Secretary of Defense, September 1, 2020. https:// media.defense.gov/2020 /Sep/01/2002488689/-1/-1/1/2020-DOD-CHINA-MILITARY-POWER-REPORT-FINAL.PDF.

Quist, Colonel Burton C., USMC. "Naval Expeditionary Warfare Update." *Marine Corps Gazette* 80, no. 3 (March 1996), 38-41. https://search-proquest-com.lomc.idm.oclc.org/trade-journals/naval-expeditionary-warfare-update/docview/221428364/se-2?accountid=14746.

Rakow, Colonel William M., USMC. "MAGTF Operations with the Fleet in the Year 2000." *Marine Corps Gazette* 74, no. 7 (July 1990), 17-19. https://search-proquest-com.lomc.idm.oclc.org/trade-journals/magtf-operations-with-fleet-year-2000/docview/206325291/se-2?accountid=14746.

Roberts, Major Andrew, USMC. "Closing the Seams in Naval Integration: Actual Action or more Spilled Ink?." *Marine Corps Gazette* 103, no. 2 (February 2019), 23-26. https://mca-marines.org/wp-content/uploads/2019/01/MCG-February-2019-sm.pdf.

Spreckelsen, Commander Malte von, DEU. "Electronic Warfare – The Forgotten Discipline: Why is the Refocus on this Traditional Warfare Area Key for Modern Conflict?." *The*

Journal of the JAPCC, no. 27 (Autumn/Winter 2018), 41-45. https:// www.japcc.org/ electronic-warfare-the-forgotten-discipline/.

Stepp, Major Kevin J., USMC. "Composite Warfare Doctrine – Providing the JFMCC with the Optimal Command and Control Method for Amphibious Operations." Master's thesis. Naval War College, 2015. https://apps.dtic.mil/dtic/tr/fulltext/u2/a621058.pdf.

Tanner, Lieutenant Commander Shane, USN. ""CWC, Departing": Return of the Task Force Commander." Master's thesis. Naval War College, 2009. https://apps.dtic.mil/dtic/tr/ fulltext/u2/a503146.pdf.

US Department of Defense. *Amphibious Operations*. JP 3-02. Washington, DC: US Department of Defense, January 4, 2019. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_ 02.pdf.

US Department of Defense. *Doctrine for the Armed Forces of the United States*. JP-1. Washington, DC: US Department of Defense, July 12, 2017. https://www.jcs.mil/Portals/36/ Documents/Doctrine/pubs/jp1_ch1.pdf.

US Department of Defense. *Summary of the 2018 National Defense Strategy of the United States of America: Sharping the American Military's Competitive Edge*. Washington, DC: Department of Defense, January 19, 2018. https://dod.defense.gov/Portals/1/Documents/ pubs/2018-National-Defense-Strategy-Summary.pdf.

US Department of the Navy. *Composite Warfare: Maritime Operations at the Tactical Level of War*. NWP 3-56. Washington, DC: Department of the Navy, December 2015.

US Department of the Navy. *Integration of Navy and Marine Expeditionary Warfare Capabilities into the Composite Warfare Construct*. Draft TACMEMO 3-56.1-19. Washington, DC: Department of the Navy, August 28, 2019.

US Department of the Navy. *Maritime Operations at the Operational Level of War*. NWP 3-32. Washington, DC: Department of the Navy, October 2008. https://dnnlgwick.blob.core. windows.net/portals/14/Courses/Maritime%20Staff%20Operators%20Course/Read%20Ahe ad%20Documents/2.%20NWP%203-32,%20pages% 207-1%20to%2074.pdf?sr=b&si= DNNFileManagerPolicy&sig=qVAwAF6UMvgFhJCW5rvYS88fvIloX%2FBF2RMnVxy6k 7Y%3D.

US Department of the Navy and Headquarters, US Marine Corps. *Littoral Operations in a Contested Environment*. Washington DC: Headquarters US Marine Corps, 2017. https://www.hqmc.marines.mil/Portals/160/LOCE%20full%20size%20edition.pdf? ver=2018-06-20-095003-177.

US Department of the Navy and Headquarters, US Marine Corps. *Tentative Manual for Expeditionary Advanced Base Operations*. Washington, DC: Headquarters, US Marine Corps, February 2021. https://intelshare.intelink.gov/sites/mcwl/TMEABO/_layouts/15/WopiFrame.aspx?sourcedoc=/sites/mcwl/TMEABO/SiteAssets/TM%20EABO%20-%20First%20Edition%20Rev%2020210211.pdf&action=default.

US Navy, US Marine Corps and US Coast Guard. *Naval Warfare.* NDP-1. Washington, DC: Department of the Navy, Headquarters Marine Corps, and Department of the Coast Guard. April 2020. http://docshare01.docshare.tips/files/16017/160175893.pdf.

US Navy, US Marine Corps and US Coast Guard. *Advantage at Sea: Prevailing with Integrated All-Domain Naval Power*. Tri-service Strategy. Washington, DC: Department of the Navy, Headquarters Marine Corps, and Department of the Coast Guard. December 2020. https://media.defense.gov/2020/Dec/16/2002553074/-1/-1/0/TRISERVICESTRATEGY.pdf.

Waldhauser, Major Thomas D., USMC. "Composite Warfare Amphibious Doctrine Dilemma." *Marine Corps Gazette* 14, No. 79 (November 1992), 68-69. https://archive.mca-marines.org/publications/composite-warfare-amphibious-doctrine-dilemma/.

Waldhauser, Major Thomas D., USMC. "Entering the Golden Age with Composite Warfare/ Amphibious Doctrine Dilemma." Master's thesis. USMC Command and Staff College, 1992. http://www.globalsecurity.org/military/library/ report/1992/WTD.htm.