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14. ABSTRACT

Employing the US Navy's Composite Warfare Commander Construct to a US Army Corps to conduct Mission Command in Multi-Domain Operations.

The Multi-Domain Operations (MDO) operating concept is informing and influencing United States Army modernization efforts in ways that will bring major changes to how it prepares to command and control during a potential future conflict. This paper analyzes the US Army's continuous struggles with mission command and its embracement of the MDO concept to show that the time for evaluating new C2 constructs is here. It will propose how the US Navy's Composite Warfare Commander (CWC) approach to C2 is theoretically suited for a US Army Corps. Given its theoretical underpinnings, a proposed implementation of a CWC-like structure for a US Army Corps reveals a versatile command structure to help meet the demands of mission command across the multidomain combat depicted in the MDO concept. An analysis of application results in recommendations for the US Army to further analyze and wargame CWC-like or functional command structures in MDO to leverage the principles of mission command.

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Employing the US Navy's Composite Warfare Commander Construct to a US Army Corps to conduct Mission Command in Multi-Domain Operations

by

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Major, United States Army

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Maritime Advanced Warfighting School.

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18 August 2021

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Abstract

The Multi-Domain Operations (MDO) operating concept is informing and influencing United States Army modernization efforts in ways that will bring major changes to how it prepares to command and control during a potential future conflict. This paper analyzes the US Army's continuous struggles with mission command and its embracement of the MDO concept to show that the time for evaluating new C2 constructs is here. It will propose how the US Navy's Composite Warfare Commander (CWC) approach to C2 is theoretically suited for a US Army Corps. Given its theoretical underpinnings, a proposed implementation of a CWC-like structure for a US Army Corps reveals a versatile command structure to help meet the demands of mission command across the multidomain combat depicted in the MDO concept. An analysis of application results in recommendations for the US Army to further analyze and wargame CWC-like or functional command structures in MDO to leverage the principles of mission command.

Introduction

A return to great power competition is resulting in new operating concepts at the service and joint level. Multi-Domain Operations (MDO) is a new vision of the future battlefield and how the joint force will succeed. Retired Air Force Lieutenant General Norman Seip, a senior mentor for multi-domain command and control, states that the goal of MDO operations is to create complex, simultaneous dilemmas at once on the enemy.[1] This new paradigm incorporates traditional and evolving warfare domains to achieve effects in multiple domains simultaneously. The operating concept's simultaneous nature for armed conflict represents an evolution from past joint doctrine that emphasized the integration of warfare domains in a linear offensive or a static defense. Significantly, MDO's influence is shaping individual service and joint doctrine towards more non-linear offensive operations and less-static defensive operations across multiple domains while remaining integrated across the warfighting functions.

As part of the joint force, the United States (US) Army is integral to developing and operating within the principles of MDO. The concept's new operational framework presents a significant departure from AirLand Battle and Unified Land Operations. However, the US Army's July 2020 pamphlet, *Army Futures Command Concept for Maneuver in Multi-Domain Operations in 2028*, intends to guide the service's thinking on organizational change, future combat operations, and modernization priorities.[2] Given these major changes, MDO is generating a myriad of thought-provoking questions, doctrine development, and literature. One such major area of interest is the command and control (C2) structure for MDO at the operational level of war. The simultaneous and sequential nature of MDO using surprise, rapidness, and continuous integration of capabilities across all domains stresses the US Army's traditional C2 hierarchical structure in adequately performing its role in a speed enhanced operating

environment. More specifically, the effects-based operations concept in MDO raises concerns about a US Army Corps' capability to apply mission command, using its current C2 structure that was designed for AirLand Battle. The question at hand is whether the US Army Corps' C2 structure for conducting MDO and practicing mission command requires no modification, a slight modification, or a significant modification.

The declarative answer to the question is the US Army's current C2 construct at the Corps level is unsuitable for prosecuting MDO operations to achieve cross-domain effects in multiple domains simultaneously. It requires a significant modification. By adopting the US Navy's Composite Warfare Commander (CWC) construct at the US Army's Corps level, this C2 structure will establish a task organization for effectively conducting simultaneous and sequential operations in MDO across warfare functions leveraging the principles of mission command. The US Navy's CWC could flatten the US Army Corps' hierarchical structure for decision-making. This could occur by adopting composite warfare commanders for decisive action, functional group commanders, and coordinating directors to prosecute the tenets of MDO to defeat highly capable near-peer enemies.

The first section of this paper introduces the theoretical underpinnings of the US Navy's CWC and how this C2 construct best applies the theory and practice of mission command. The second section will address the US Army's enduring struggles with using mission command given current culture, legacy, and C2 structural concerns. The third section will explain how MDO is different from past operating concepts and is currently informing new C2 constructs for development. The US Navy's CWC doctrine is shown in Army application by proposing how a CWC model can be implemented in a US Army Corps to conduct MDO. Finally, recommendations are made regarding further C2 testing considerations for MDO. If the US

Army is to achieve its goal of having MDO become a joint, multiservice operational concept instead of Army-centric, it must evolve its archaic C2 structure to a more functional command organizational alignment and emphasize the method of decentralized control.

Origin and Principles of CWC

The US Navy's historical roots to commanding by negation drove the development of CWC for carrier battle groups operating together. Admiral Ernest King's enduring legacy on decentralized control to extend the knowledge and the practice of initiative to subordinate commanders in principle and application remains the cornerstone of the US Navy's command philosophy today.[3] This philosophy of command is codified by JP 3-32, *C2 of Joint Maritime Operations*, it describes how the US Navy's approach towards C2 emphasizes subordinate commanders executing operations independently but in accordance with a thorough understanding of the commander's intent.[4] In supporting this philosophy, the US Navy designed a C2 construct for the maritime domain where operating as a distributed and dispersed force is a required form of warfare. The doctrinal role of CWC enables this philosophy. It acts as a framework for accomplishing both offensive and defensive mission objectives in any domain, either independently or as part of a joint force for the US Navy.

Since its development in the 1970s, the CWC continues to adapt to emerging tactical threats, strategic and operational changes, and force development. Yet the CWC's central concept remains an enabler for offensive and defensive combat operations against multiple targets and threats simultaneously.[5] The CWC's framework of warfare commanders, functional group commanders, and coordinators in Figure 1 facilitates mission command across its C2 structure. Moreover, the CWC doctrine allows for tailored C2 structures dependent on mission and objectives. This is done by adding or deleting commanders, functional groups, or

coordinators as required. An example of the CWC's structural flexibility is seen in the establishment of the information warfare commander to effectively integrate this warfighting capability.[6] The CWC is as relevant today as in the past while remaining flexible enough to adapt its structure to emerging warfare communities and the evolving character of war.

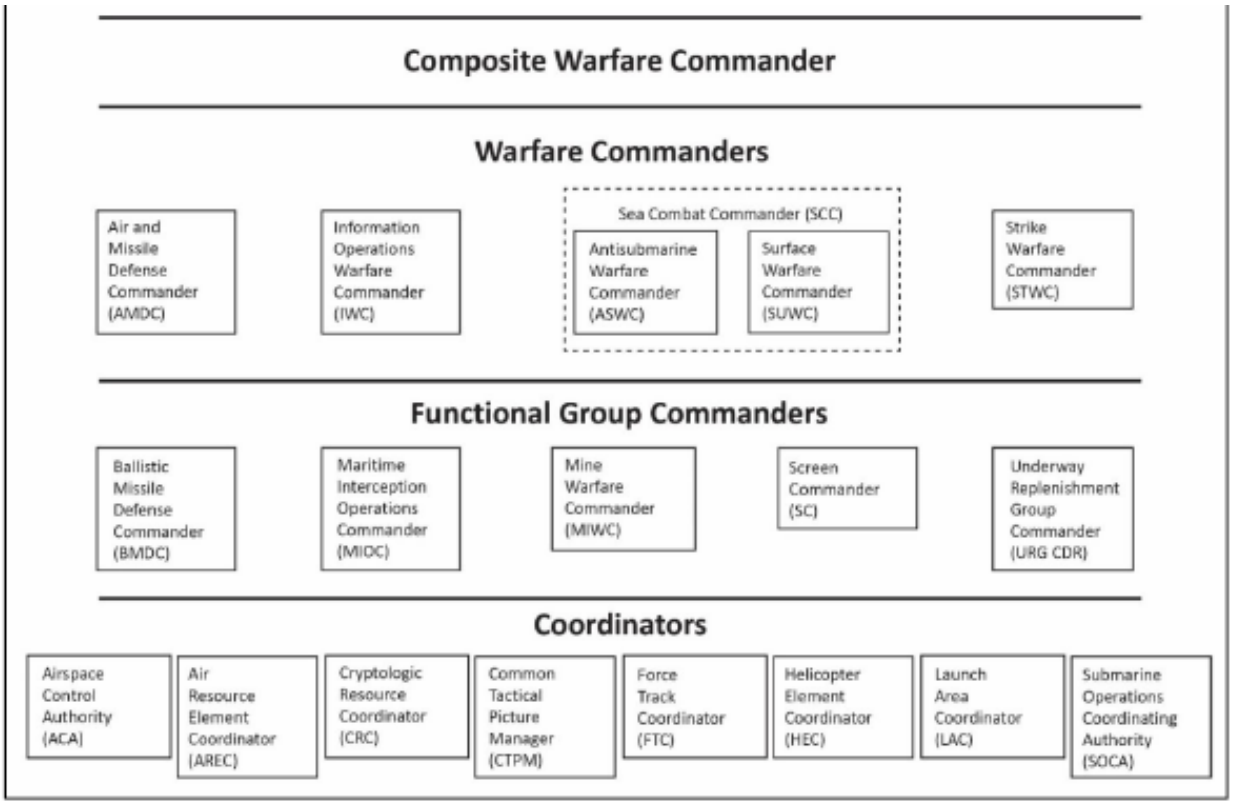

Figure 1: Composite Warfare Commander Framework[7]

Even though the CWC's design is for the US Navy's tactical level of war, the core warfighting principles it contains are applicable for the US Army's operational level of command – the Corps echelon. The warfighting principles of decentralized control, flexibility within and across domains, and achieving multiple objectives (offensive and defensive) simultaneously correlate with the application of MDO. The CWC is purposefully useful for executing simultaneous and sequential operations across multiple domains, just as MDO is described.[8] Lastly, the CWC's command philosophy correlates with the US Army's concept of

practicing mission command for commanders. That these philosophical principles of commanding are shared between the US Navy CWC's construct and the US Army's desires for mission command generates cogitation on why the US Army's C2 structures are so divergent in design from CWC.

US Army Struggles with Mission Command

The current US Army Corps C2 structure in Figure 2 originates from the continental staff system, emphasizing a singular commander with a personal, coordinating, special staff structure in support.[9]

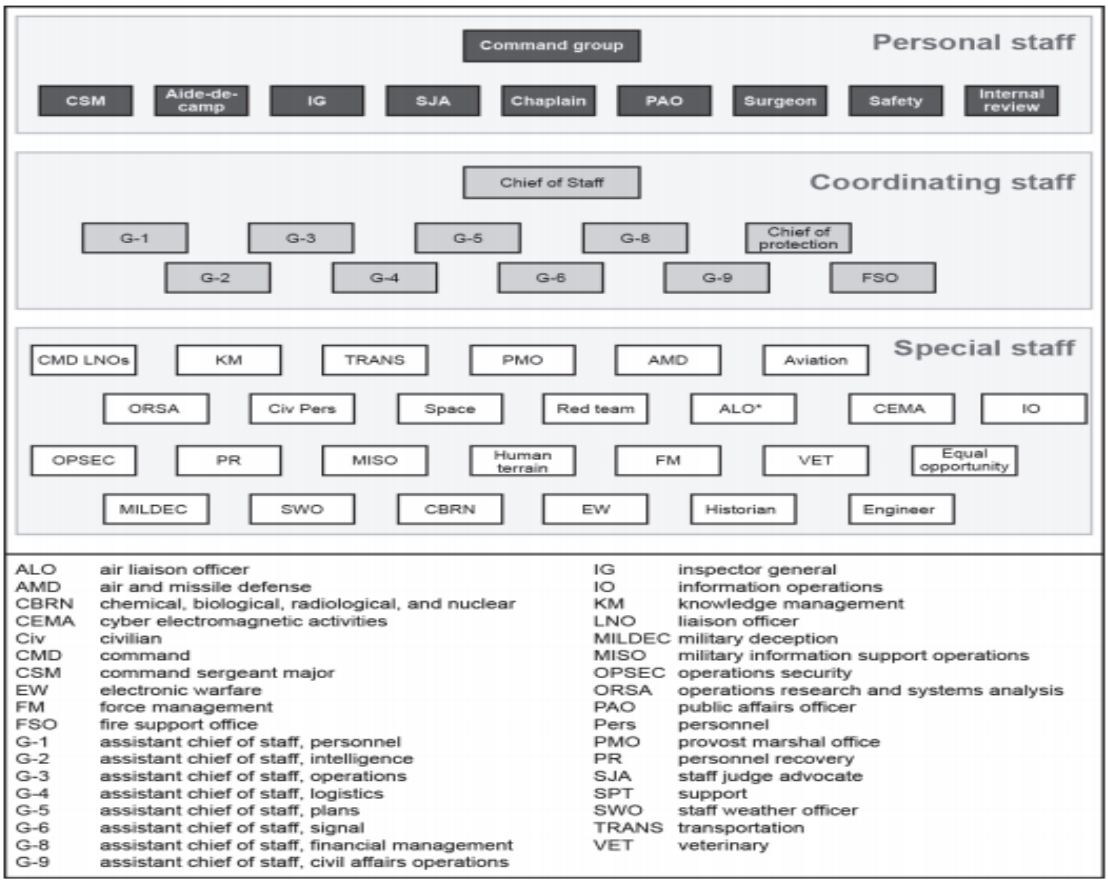

Figure 2: Army Corps Main Command Design[10]

The Corps' C2 design supports a bygone era of operational concepts such as AirLand Battle and Full Spectrum Operations. As MDO takes its position as the US Army's operating concept for combined arms operations at echelons above brigade in 2025, the Corps' C2 structure needs examining for its suitability to achieve the principles of mission command.

Since the Chairman of the Joint Chiefs of Staff's (CJCS) White Paper on instilling mission command across the joint force, the US Army produced an updated version of ADP 6.0 – *Mission Command: C2 of Army Forces*, emphasizing the CJCS's practical application of C2.[11] The CJCS's White Paper highlights the evolving operational environment that necessitates mission command. Specifically, the CJCS noted that the pace of change and the speed of operations will continue to accelerate, that an expansive maneuver space continues to develop (space and cyberspace), and additional warfare complexities will follow. These convincingly indicate that a centralized command structure will be unable to synchronize operations across the factors of time-space-force.[12] The chosen approach towards C2 and way ahead is mission command at the joint and individual branch levels. Although the US Army has embraced mission command doctrine, it has failed to implement the central tenants in operational situations. This results in a mismatch of theory-doctrine-practice at the operational level of war.

The US Army's struggles with mission command as a C2 approach have roots in legacy and culture issues. From a legacy perspective, a heavily science-centric approach towards C2 is a result of corporate management practices that inherently contradict mission command principles.[13] The science-centric approach towards C2 leads to micromanagement at all echelons of command, including in operational settings.[14] Viewing the cultural perspective, challenges of mission command are annotated in various empirical and research studies. Concerningly, one such study highlights how participants assess mission command as ineffectively practiced across

each of its six principles at all echelons of command.[15] These findings articulate the divergence of theory and practice for mission command in US Army forces. Despite comprehensive doctrine and supporting literature, mission command remains a problematic art for the conduct of operations.

Another contributor to mission command's incomplete practice is the US Army's hold on industrial-aged hierarchical structures for operational decision-making. In contrast, the information age has led to paradigm shifts in organizational architecture in the private sector where functional, flat, and now algorithmic management models are being created.[16] The idea of these newly adopted structures focuses on modern control and coordination lines that are flexible and more responsive.[17] Likewise, the joint force has evolved much of its norms and practices away from the linear chain into greater reliance on centers and working groups, hallmarks of flatter structures.[18] Nonetheless, organizational structures, task organization, and decision-making approvals in operational conditions remain relatively unchanged for the US Army, and its struggle with mission command sheds some light on problem areas. The vertical chain of command in the US Army with a singular commander and supporting staff creates decisional gaps between the tactical (Brigade/Division) and operational level (Corps) commanders. This hierarchical structure contributes to the risk aversion nature festering in the US Army, rendering mission command impossible to practice.

Risk aversion impedes mission command progress in all echelons of command. Evidence of risk-averse thinking is illustrated in the National Defense Strategy of 2018 that states the Department of Defense (DoD) will overcome risk-averse thinking and deliver performance by eliminating outdated management practices and structures while integrating insights from business innovation.[19] Improperly applying risk management affects mission command by

imposing behaviors inconsistent with command by negation.[20] This risk aversion approach towards warfare results in commanders conditioned to seek risk acceptance, potentially losing windows of opportunities in dynamic and chaotic operating environments.[21] Mission command exists to exploit fleeting windows opportunity. It relies on disciplined initiative within the commander's intent, unambiguous commander's guidance, trust among commanders to execute independently, and a structure that eliminates risk aversion practices. Overcoming risk aversion tendencies requires a flattening and functional organizational structure.

The US Army will continue to struggle to apply mission command in operational settings until it adopts a different organizing method for C2 at the Corps level. The CJCS's mission command White Paper explicitly states operational commanders have a vital role in effectively integrating mission command into operational art, planning, and execution.[22] Since the formal adoption of mission command as the US Army's central philosophical approach to C2 back in 2014, the struggles of application are in part from inadequate implementation efforts outside of doctrine.[23] Institutionalizing mission command requires significantly more action than revising doctrine. MDO provides an opportunity and impetus for the US Army to evaluate alternative command structures.

MDO and Informing C2 Constructs

MDO is informing C2 construct development at operational level commands across the joint force. The current developing doctrine, *Joint All-Domain C2 Command and Control* (JADC2), emphasizes connecting sensors from all the military services into a single network.[24] However, JADC2 avoids discussion of C2 methods. The parochial focus of JADC2 on C2 infrastructure and systems over C2 constructs is noted in a RAND study highlighting the need for a C2 paradigm shift to account for MDO.[25] The C2 construct currently in use by the US

Army and US Air Force favors centralized commands for decision-making, but is proving obsolete at cross-domain operations from wargames and simulations.[26] MDO is a driving force for C2 constructs of the future to be flexible for transitioning from centralized C2 to distributed control as dictated by the multi-domain fight against near-peer adversaries. The stream of MDO exercises must test innovative C2 constructs rather than relying on old structures for new operating concepts.

As large-scale joint exercises such as Defender Pacific, Defender Europe, and MDO Live 21 commence, key insights and observations from past exercises such as RIMPAC 2018 illustrate the mission command and C2 recommendations for MDO. The US Army Center for Lessons Learned published an initial impressions report documenting structures, task organization, and mission command execution challenges given current C2 designs during RIMPAC 2018.[27] Furthermore, Army Training and Doctrine Command's conceptual belief of dispersed and decentralized operations dominating the battlefield is one of six main challenges confronting echelons above brigade (EAB) commands.[28] EAB commands will set the theater and orchestrate the tactical fight in a cross-domain operating environment for unity of effort. Achieving MDO effects of – penetrate, disintegrate, exploit, and recompete requires testing new C2 constructs at EABs.

Recognizing MDO as an operational level of war concept, the US Army Corps level of command has a paramount role in its adoption. The Corps' role in MDO consists of coordinating deep cross-domain maneuver, shaping the deep maneuver space, executing operational deep fires, and tailoring to multiple missions and functions such as a joint task force.[29] The emphasis on Corps-centric operations under MDO led to the decision to create another Army Corps.[30] The Corps warfighting role for MDO, according to the US Army's Combined Arms Center, entails

synchronizing the operational and tactical echelons.[31] Also, the Corps command post must remain expeditionary and maintain the capability to flex the span of control on divisional and subordinate units as factors dictate.[32] Future Corps formations need a supporting C2 construct to facilitate mission command and orchestrate the tactical fight as an agile centralized command headquarters for MDO. The various lessons learned from MDO exercises justify a focus on testing C2 constructs capable of overseeing the complexities of simultaneous all domain operations.

The testing of C2 constructs for MDO is an essential priority for future exercises. Figure 3 below provides a model of parallel development of MDO and C2 constructs for testing, addressing doctrine, and validating concepts.[33]

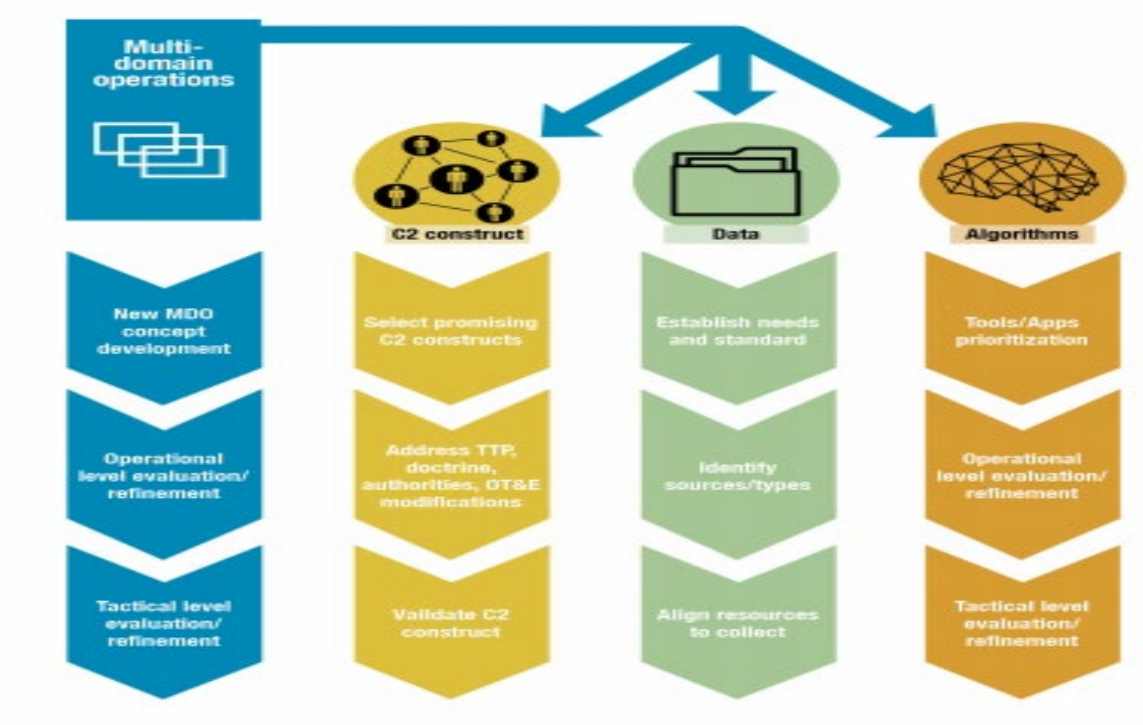

Figure 3: MDO informs C2 construct, data, and algorithms.[34]

As the US Army strives to become MDO capable by 2028 and MDO ready by 2035, the current period provides opportunities to select promising C2 constructs and evaluate their effectiveness.

There are multiple future MDO CONOPS plans, and their required C2 structures will vary by campaign.[35] The US Army has recognized that future C2 structures should be flexible to accommodate the variations of plans and instill mission command principles for employing and managing forces.

As the testing window continues for C2 design, it becomes apparent that the advent of MDO has amplified the US Army's requirement to adopt a new C2 construct, one that enables mission command at the operational level and sets conditions for mission command at the tactical level. The US Navy's CWC construct could be applicable to facilitate mission command, permit decentralized decision-making, incorporate additional warfare communities, and posture the commanding general to focus on the broader picture. This functional approach towards a C2 construct vice the traditional hierarchical organizational structure could solve the mission command and MDO problem sets articulated in this paper.

US Army Corps Implementation of CWC Construct

Implementing a CWC-like construct for a US Army Corps will mirror the three main component parts of warfare commanders, functional group commanders, and coordinators. Warfare commanders in a CWC organizational design for a US Army Corps will exercise command authorities to maximize operational effectiveness through direction, coordination, and control. The command authority will mirror the doctrinal definition of NWP 3-56 of direction – the process of planning, decision-making, establishing priorities, formulation of guidance, and imposing decisions.[36] The US Navy's guidance for establishing a warfare commander involves the control of weapons deployment and/or sensor system employment across the entire force. In the Navy, the composite warfare commander designates the subordinate warfare commander: this is a transferrable concept to the US Army Corps.[37] To assign warfare commanders within the

US Army Corps, the US Navy's doctrinal beliefs and maneuver warfare principles can be used as foundational guidance. Examples of warfare commanders for a Corps' construct might include offensive maneuver commander, defensive maneuver commander, fires commander, intelligence/cyberspace/electronic warfare/space (ICEWS) commander, air-defense commander, information operations commander, civil-military commander, and sustainment commander. This construct's flexibility allows for the commander and his staff to use operational art to establish additional warfare commanders as necessary to achieve the desired C2 construct to accomplish objectives.

Functional group commanders in the CWC construct within a US Army Corps will conduct specific activities that support the Corps' overall mission across the entire area of operations. In similar fashion to the US Navy's CWC construct, the overall commander may designate temporary or permanent functional groups at any phase of the operation.[38] The establishing authority also determines the command authority and functions of the functional group commander, which is promulgated in an order.[39] The main functional group commanders will be maneuver support functions. These group commanders will synchronize efforts with maneuver forces, coordinate with tactical commanders, and operate in a decentralized or centralized manner dependent on the overall commander's designation. Examples of potential functional group commanders for the CWC construct are: multipurpose aviation commander, multipurpose engineer commander, military police commander, and chemical/biological/radiological/nuclear explosives (CBRNE) commander. In addition to these basic functional group commanders, the Corps commander's new capabilities can be grouped and assigned a functional commander for proper employment across the Corps operating area. The commander can build or eliminate functional group commanders at any phase of the operation,

providing flexibility in the C2 construct to employ leadership to leverage functional fields to achieve objectives.

Coordinators in the CWC construct will support commanders by providing services. NWP 3-56 describes coordinators as assets and resource managers who carry out the policies of the CWC.[40] Coordinators will receive services or resources and attempt to fulfill them using the existing commander's guidance.[41] Providing coordinators with subject expertise alleviates the overall commander from supporting functions to operations. If the coordinator cannot fulfill a request, the commander's principal staff can support the coordinator in addressing the issue. Coordinators at the Corps level will play a critical role in linking tactical/operational services, horizontal coordination across warfare commanders, and providing focused guidance to subordinate directorates. Examples of coordinators at the Corps level are: signal (information systems and communications), multipurpose intelligence, human resources, comptroller, air-coordination, and medical services. As with the Navy, the assigning of coordinators within an Army Corps will be mission-oriented and operationally dependent. Coordinators will collaborate with stakeholders across the enterprise and joint force to procure resources, manage those resources, provide services during armed conflict, and identify problems or friction points before escalation.

The figure below conceptualizes the CWC construct for the US Army Corps across warfare commander, functional group commander, and coordinator roles. As a basic building block structure, this construct's flexibility allows for adaptable changes given operational planning variables. The overall commander retains full responsibility and, along with his or her staff, develops the rationale for establishing positions to execute simultaneous and sequential operations in the MDO concept. See Figure 4.

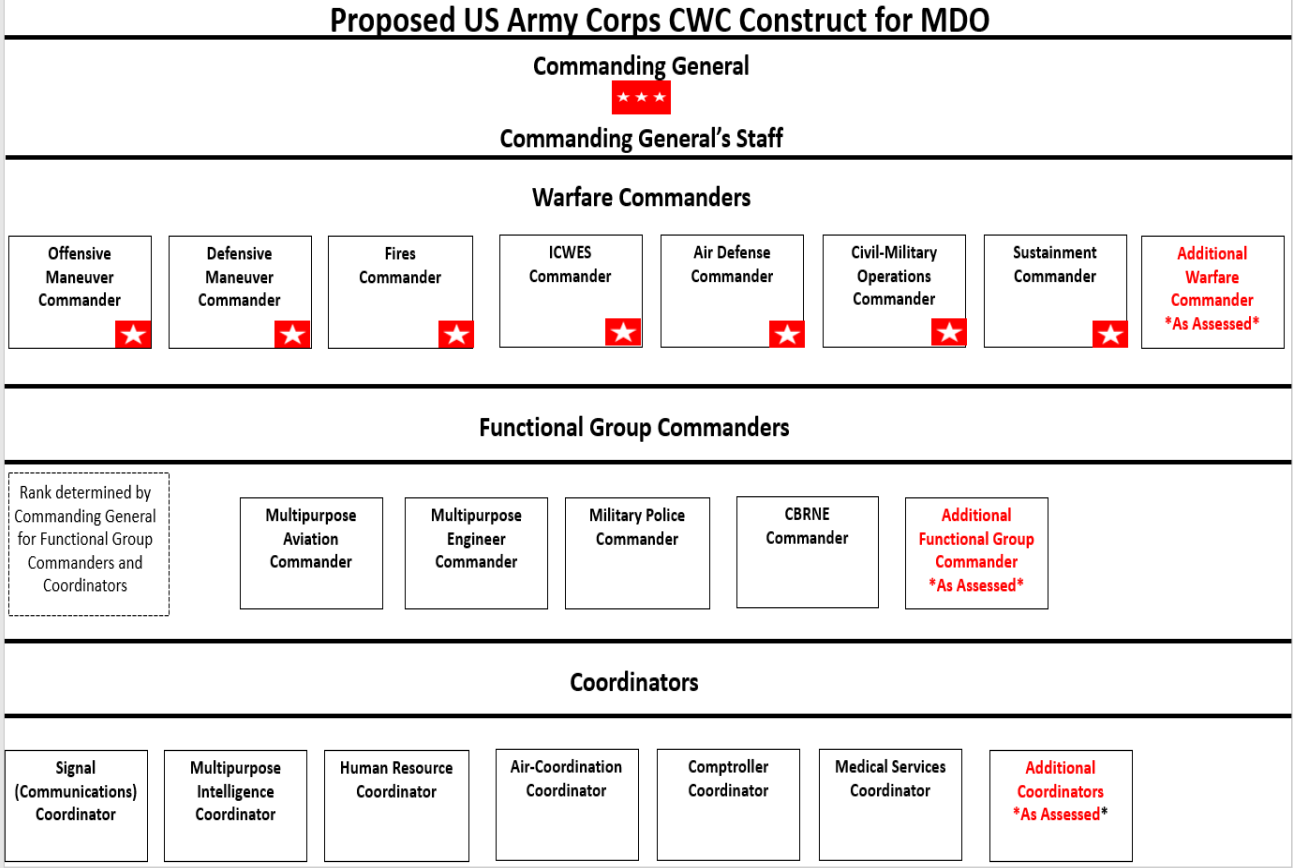

Figure 4: Proposed US Army Corps CWC Construct for MDO[42]

Execution Phase – An Analysis of CWC C2 Using Critical Operational Art Elements

The core justification for adopting a new C2 construct in the US Army Corps is for centrally supporting maneuver warfare and achieving objectives within MDO. The US Army defines maneuver as the employment of forces through offensive or defensive operations to achieve relative positional advantage over an enemy force to achieve tactical, operational, or strategic objectives.[43] Maneuver is the nucleus for applying operational art by commanders to develop operations to organize and employ forces. From the elements of operational art - consisting of - operational maneuver, operational fires, and operational objectives, the justification for implementing a CWC C2 structure in a US Army Corps becomes clear.

Maneuver in MDO 2028 is conceptually different from past operational concepts. The Army's Future Command assesses the conduct of 21st Century information age warfare is distinct from 20th century mechanized warfare in many essential ways for which the US military in general, and the US Army in particular, must change to address.[44] These changes directly affect the concept and application of maneuver in MDO. Specifically, the integration of multiple domains or warfare capabilities (space, cyberspace, electronic warfare, information warfare) is necessary to operate in cross-domains and successfully achieve effects on enemy forces designed by MDO.

The C2 structure needed to enable the maneuver of Corps-level forces within the multiple domains of MDO require a significant change. This change requires a supporting C2 construct that executes decisions more swiftly, timely, and accurately, and in more domains than past operating concepts. Harmonizing multiple domains of warfare involves the conduct of echeloned maneuvers. Echeloned maneuver across MDO will collect intelligence and target fires across echelons with operational reach advantages achieved by working across domains. Minimizing C2 decision timelines will become even more critical for integrating warfare community and functional group commanders in MDO. A way to do this is to flatten the organization by command authorities and adopt a new functional structure that enables seizing, retaining, and exploiting the initiative in a complex, multidomain operating environment.

Despite its technology-oriented system and architecture focus, a critical element supporting MDO is the growing development of JADC2. The JADC2 systems and architecture could facilitate mission command and enable subordinate commanders to recognize opportunities to exploit against the enemy. In addition, JADC2 is being developed to provide a continuous operational preparation of the environment to enable situational understanding.[45] As

a component to the solution for maneuver in the 21st century, the US Army recognizes that its traditional forms of C2 are obsolete given the operational context, environment, threats capabilities, and information age. Leveraging JADC2 requires commanding by the principles of mission command. Commanding by mission command from the operational level of war necessitates mission-type orders and decentralized operations. The disrupted operational nature of MDO demands finding the optimal balance of controlling forces and providing freedom of maneuver to subordinate commanders. A CWC construct allows for command by negation by warfighting function operating under common intent and objectives. The CWC construct for commanders and coordinator decision-making at the US Army Corps level achieves the operational level of war's synergistic nature to link tactics and strategy effectively.

Operational fires are receiving a renaissance and renewal of purpose in MDO. The US Army's functional concept for fires in MDO requires the integration and synchronized employment of mutually supporting lethal and nonlethal fires across all domains, electromagnetic spectrum, and the information environment to create multiple dilemmas for the adversary, achieve overmatch, and enable friendly freedom of maneuver.[46] The operational fires warfighting function is expanding significantly with emerging fires concepts being developed for deep-area operations and precision. Several factors are noted in the effectiveness of direct and indirect fires to include a force structure allowing for the effective utilization of fire capabilities across domains.[47] The current structural organization of combat units suits fires employment for COIN operations and AirLand Battle doctrine. Striking effectively first through direct or indirect means in MDO requires a functional and flattened command structure like the CWC. This would raise warfare capabilities from buried staff roles up to a commander's levels and put them on par with traditional warfighting functions.

All these beneficial aspects of incorporating a CWC-like construct for the US Army Corps focus on accomplishing (joint) operating objectives. Operational objectives are usually achieved through joint and combined, rather than through single-service, operations.[48] The functional command aspect assigning warfare commanders, group commanders, and coordinators allows for stronger ownership and representation of these communities for the joint or combined force. Establishing a flatter structure acknowledges that operational objectives will be contested across domains and occurring simultaneously. Objectives will continue to fall into three categories: (1) combat related, (2) combat supporting, and (3) other.[49] Once operational objectives and intermediate objectives are determined for campaign using MDO, the commanding general can modify the CWC-like construct to best position his key leaders and warfare specialist to make decisions that accomplish the US Army and joint force objectives across the three categories.

The application of operational art supports the argument of maneuver warfare and aiding elements will operate differently in MDO, requiring a different C2 structure to make decisions effectively. The US Army's concept for EAB in MDO places a requirement for operational level commands to support tactical maneuver units by protection across all domains, synchronizing critical capabilities, resourcing properly, and balancing the exercise of C2. A renewed emphasis on operational level commands to shape and manage the battlefield drives changes across the warfighting functions. Incorporating a CWC C2 construct bests achieves the Corps' headquarters role in comparison to current hierarchical command structure developed for archaic operating concepts. The US Army's renewed emphasis on mission command is made necessary by the MDO concept that envisions the future operating environment as distributed, cross-domain,

high-tempo, and joint. This demands a new C2 construct that is functional and flexible for decision-making. The CWC construct holds promise.

Counterargument: CWC Designed for Tactical OPS and MDO for Traditional C2

Arguments against implementing a CWC or functionally designed command structure at the Corps level of command focus on two main themes. First, the US Navy developed the CWC during the Cold War and uses this C2 structure at the tactical level of war. Second, MDO and cross-domain synergy will require a detailed command vice mission command method that leverages technologically advanced and efficient C2 infrastructure. The merits of these arguments center on C2 design choice and the best approach towards C2 across the competition continuum of MDO at the operational level of war.

The first argument against adopting the CWC into an Army Corps is that it is not an operational level C2 concept. Rather, the Navy developed the CWC architecture and doctrine during the Cold War for the specific tactical purpose of defending high-value assets such as the Carrier Battle Group or Amphibious Ready Group.[50] This objective of protection led to establishing a composite warfare commander within the fleet's tactical groups primarily to orchestrate operations to counter threats.[51] In charge, the Officer in Tactical Command (OTC) assumed responsibilities and authorities for the CWC while reporting to an operational level commander.[52] During maritime operations, more than one CWC can operate in an Area of Operations under the Joint Force Maritime Component Commander (JFMCC).[53] Therefore, the US Navy uses the CWC during joint maritime operations in a way that is more comparable to how the US Army uses divisions, not the Army's employment of Corps. Applicability of CWC doctrine and construct is appropriate to the tactical level of command for Army forces, but as an organizational framework, the Corps' role more relates to the JFMCC over a CWC construct.

The second critical argument against implementing a CWC or functional command structure is that the current C2 structure of the Army Corps is flexible enough to adapt to MDO by adding staff positions. MDO requires that only a few positions be added to the current C2 design of an Army Corps to account for warfare's evolving character. Because the existing staff structure is modifiable, the operational level Corps commander has always had many organizational options to ensure the Corps' C2 needs were optimized for the mission. For example, to meet MDO needs, a Corps' implementing a G7 or J7 as a principal staff officer for EAB commands is a possible permanent solution to integrate cyber, space, and information warfare elements.[54] The main C2 structure modernization effort for the Army Corps is therefore not found in design but in new technology. What is needed is a single network across the service branches to provide a cloud-like environment for the joint force to share ISR data and transmit communications across the same network to enable faster decision-making.[55] This technological solution to C2 is intended to secure and protect the network from adversaries, provides a joint common operating picture, and leverages artificial intelligence algorithms to identify targets, recommend optional weapons, and process data for the commander to make more accurate decisions. Similar to how MDO is guiding the US Army modernization efforts of its weapon platforms, the need for C2 network modernization is more prevalent than an organizational construct modification.

In addressing the first counterargument, to focus on the level of war is to miss the CWC's philosophical nature that enables effective, mission command style C2 of subordinate forces. Admittedly designed for the tactical level of war, the CWC's theoretical underpinnings are the desired capabilities that make it ideal for adopting this construct at the operational level. The Corps' roles and functions in MDO differ from past operating concepts with the Army returning

to designating a field army as the likely (joint) land component command organization.[56] With this, the Corps assumes an operational-tactical warfighting role that connects the details of tactics with the goals of strategy by leveraging the principles of mission command. Therefore, the CWC's construct will support the US Army's overarching goal of fixing its C2 issues by flattening the organization as much as possible.[57] This results in mission command practices while maintaining necessary control for the Corps' headquarters to influence the outcomes of operations.

To address the second counterargument, its premise fails to address how to reach effective military decision in MDO even with an improved technological architecture. In fact, technical solutions and supporting data collection from artificial intelligence for decision-making entices detailed command, not mission command. MDO requires the practice of mission command by commanders for successful operations.[58] Adding staff billets or slightly modifying existing command structures does not address the purpose of C2 being to implement effective military actions faster than an adversary in any conflict setting on any scale.[59] Modernization of networks is a hardware solution that will secure and protect information but not shape the warfighting mindset to approach C2 by the tenants of mission command. Focusing on organizational models and decision-making authorities is more important as MDO continues to refine and update. After testing and selecting a C2 construct to facilitate the operating concept and practice of mission command, then the development of network solutions should follow.

Specific Recommendations

The Army will continue to assess, exercise, and adjust MDO doctrine for the foreseeable future. There are many areas for recommendations that are cost-friendly and assignable to different organizations for testing. C2 is a significant area of emphasis as a modernization effort

for enabling MDO. The following recommendations support the Army's modernization strategy aimed at transforming the Army in order to conduct MDO against near-peer competitors. These recommendations are (1), analyze the proposed CWC construct for an Army Corps' headquarters during wargaming at the Mission Command Battle Lab, (2) incorporate the proposed CWC construct for a Defender series exercise in the future and collect insights by the Army's Center for Lessons Learned, and (3) include a CWC like construct or functional command structure for evaluation during operational planning at the Command and General staff College, School of Advanced Military Studies, and Army War College for student responses and wargaming insights. The outcomes of these recommendations can test the application of a CWC like construct at different echelons of command for mission command and decision-making in a MDO conflict.

Conclusion

> "No single activity in war is more important than command and control. Done well command and control adds to our strength. Done poorly, it invites disaster, even against a weaker enemy.[60]" - MCDP 6, *Command and Control*.

The US Army cannot afford to allow its current C2 construct to invite disaster during MDO. Adopting the CWC construct at the US Army's Corps level will allow the operational commander to apply the tenets of mission command and effectively fight the organization in simultaneous operations across multiple domains. The US Army's continuous struggles with mission command and MDO's revolutionary impact on modernization, doctrine, and warfighting functions necessitates the adaptation of a C2 construct to facilitate mission command. In this paper, the proposed CWC construct establishes warfare commanders, functional group commanders, and coordinators under the commanding general at the Corps level of command to

conduct MDO and C2 in the information age with the objective of decisively defeating near-peer adversaries.

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