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14. ABSTRACT The modern phenomena of domain convergence coupled with the rise of the PRC as a strategic competitor has made sea control a joint issue. The Navy, Marine Corps, and Air Force have recognized this reality, and altered their operational concepts and force designs to articulate how they intend to contribute to the establishment, consolidation, and exploitation of sea control. This is in contrast to the Army whose newly published <i>Multi-Domain Operations</i> (MDO) has maritime applications, but requires additional analysis to determine the service's specific maritime equities. The following examination posits that the Army will serve as the joint force's enabling service in the maritime domain due to its unique capabilities and expeditionary nature which allow it to use operational fires to facilitate maritime maneuver, protect and sustain critical nodes to consolidate gains, and employ combined arms capabilities to seize key terrain thereby translating sea control into victory.					
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Boots on the Beach:

The Army as the Maritime Enabling Service

Introduction

On the morning of October 20th 1944 420 amphibious vessels supported by 520 surface ships and 2,900 aircraft made their way westward into Leyte Gulf to land 202,000 soldiers for an amphibious assault on the island of Leyte.¹ The subsequent campaign had major tactical significance in the ground and air war, but its impact was most pronounced in the maritime domain. By seizing Leyte, the Allies gained sea control over the Philippines and South China Seas which enabled them to place continuous pressure on the Japanese home islands while denying the Imperial Japanese Navy access to its Southern Resource Area.² Although the war would continue for another year, denying Japan access to these areas ultimately guaranteed their defeat. While the scope and scale of Leyte will likely never be replicated, the lessons from the operation should not be forgotten. Principle amongst those is that a degree of sea control is paramount to a successful maritime campaign, and obtaining sea control is a joint venture. This is a prudent reminder for the Army as the service adapts itself for a potential conflict in the Western Pacific against the People's Republic of China (PRC).

In the Post-Cold War era the Navy's ability to achieve sea control was taken for granted due to the service's nearly uncontested dominance in the maritime domain. However, the modern phenomena of domain convergence coupled with the rise of the PRC as a strategic competitor has made sea control a joint issue.³ The Navy, Marine Corps, and Air Force have recognized this reality, and altered their operational concepts and force designs to articulate how they intend to contribute to the establishment, consolidation, and exploitation of sea control. This is in contrast to the Army, whose new operational concept titled *Multi-Domain Operations* (MDO) has maritime applications, but requires additional analysis to determine the service's specific maritime equities. The following examination posits that the

¹ Vego, Leyte, *The Battle for Leyte, 1944: Allied and Japanese Plans, Preparations, and Execution*. Annapolis, MD, Naval Institute Press, 2006, 176-178.

² *Ibid*, 8

³ Domain convergence is an outcome created by the concerted employment of capabilities from multiple domains against combinations of decisive points in a single domain to create opportunities which the joint force can exploit. Department of the Army, *Operations*, FM 3-0, Washington, DC: HQDA, 2022, 3-3.

Army will serve as the joint force's enabling service in the maritime domain due to its unique capabilities and expeditionary nature which allow it to use operational fires to facilitate maritime maneuver, protect and sustain critical nodes to consolidate gains, and employ combined arms capabilities to seize key terrain thereby translating sea control into victory. To prove this assertion, this study will review the concept of sea control, as well as how the People's Liberation Army (PLA) is postured to contest the US military's control of key sea areas in the Western Pacific. Next, this examination will provide a perspective on how each particular branch within the joint force can leverage their new operational concepts to contribute to the maritime domain despite the challenge posed by the PLA. Finally, this analysis will discuss how the Army's *Muti-Domain Operations* concept, coupled with the service's unique capabilities, can provide invaluable cross-domain effects which will enable the joint force to establish, consolidate, and exploit sea control.

Scope Note

This essay will not discuss how the Army will set conditions for conflict during periods of competition or crisis in the maritime domain. Army doctrine, as well as other studies, have provided analysis on the service's role during these phases, but do not adequately address how it will contribute to the joint force in a conflict.

Why Sea Control?

To understand the importance of sea control it is imperative to conceptualize what it is and perhaps more importantly what it is not. Sea control is sea power which facilitates mission accomplishment in the maritime domain, but due to misconceptions it is often times confused with the concept of command of the sea. Command of the sea implies that a maritime power possesses complete, absolute, and permanent control of a large sea area thereby creating an uncontested maritime sphere of

influence.⁴ While a semblance of absolute control may have been attainable in previous eras, technological changes have accelerated domain convergence making the achievement of absolute control impossible. Due to these changes, the status quo in the maritime domain is an uncommanded sea⁵ which can only be controlled in a geographically and temporally limited manner when one's forces commit to combat action aimed at the seizure of key maritime terrain or securing sea lines of communication outside of their control.⁶ A belligerent achieves control when it is able to operate on a sea area's subsurface, surface, and air with a high degree of freedom. Exercising sea control is the final act of translating maritime power into mission accomplishment. Sea control by itself is never the sole objective; on the contrary, it is sea control that enables the execution of subsequent operations such as power projection ashore, the destruction of enemy maritime shipping, or maintaining sea lines of communication (SLOC) through previously restricted waters.⁷ Ultimately, the objective will determine how sea control is exercised, but the operational factors of time, space, and force will influence the means and ways available for a belligerent to pursue its objective.

The actions that a maritime power takes to achieve sea control vary based on how the operational factors influence an environment during a conflict. This is evident when we examine how force requirements change based on the physical medium (space) which a combatant wishes to control. For example, control of the open ocean is conducive to pure naval action whereas the littorals, marginal, or enclosed seas require joint cooperation.⁸ Time also influences the degree of sea control which a belligerent needs to achieve their objective. For example, one may only require control of a particular area for a period of time to enable freedom of maneuver for a subsequent operation. In this case, the actor must exert sea control over that area until the completion of their mission, at which point they can relinquish control. In other scenarios, sea control may have to be gained and maintained for a prolonged period of

⁴ Milan Vego. *Joint Operational Warfare: Theory and Practice*. Newport, RI, US Naval War College, 2009, II-47.

⁵ Julian S. Corbett, *Some Principles of Maritime Strategy* (London: Longmans, Green, 1918), p77.

⁶ Milan Vego. *Joint Operational Warfare: Theory and Practice*. Newport, RI, US Naval War College, 2009, II-48.

⁷ John B. Hattendorf, "What is a Maritime Strategy." *Soundings*, No 1 (October, 2013), 8.

⁸ Milan Vego. *Joint Operational Warfare: Theory and Practice*. Newport, RI, US Naval War College, 2009, II-49.

time to secure SLOCs to enable operational endurance for a campaign. Since time, space, and force vary during each particular conflict, it is important to conceptualize how the PLA perceives the interaction of these factors in a Western Pacific conflict with the US. Doing so enables the US military to effectively orient itself to the nature of the maritime threat posed by the PLA. The Chinese Navy (PLA-N) provides these insights in their operational concept titled Near Seas Defense and Far Sea Protection (NSDFSP).

Near Seas Defense and Far Sea Protection: The PLA's Approach to Sea Control

Near Seas Defense (NSD) strives to deny US forces access to the Yellow Sea, South China Sea (SCS), and East China Seas (ECS), to enable the PLA to gain sufficient sea-control in localized areas to project power ashore.⁹ To deny US freedom of maneuver west of the first island chain, the PLA-N will use low-cost means such as mines, anti-ship missiles, and surface-to-surface missiles (oriented at regional US air bases) to block critical maritime chokepoints.¹⁰ Once US freedom of maneuver is denied, the PLA-N will exercise local control by using operational fires to neutralize enemy air and coastal defense networks thereby enabling amphibious assault forces to project power ashore and seize inland objectives.¹¹ East of the first island chain, the PLA will use its rocket, bomber, and cyber forces to strike critical US positions such as naval bases, ports, or military industrial facilities to disrupt the US military's ability to mobilize and deploy to the Western Pacific.¹² By degrading the ability of US forces to project combat power, the PLA believes it can leverage its proximal advantage by using mass to overwhelm its regional opponents and achieve its objectives prior to the arrival of the US military. While this framework presents numerous challenges for the joint force, it also contains vulnerabilities which can be exploited.

⁹ Jennifer Rice and Erik Robb, "The Origins of Near Seas Defense and Far Seas Protection." Chinese Maritime Studies Institute, China Maritime Report No 13, No 1 (February, 2021), 1.

¹⁰ Rush Doshi. *The Long Game: China's Grand Strategy to Displace American Order*. New York, NY, Oxford University Press, 2021, 82.

¹¹ *Ibid*, 203.

¹² Jennifer Rice and Erik Robb, "The Origins of Near Seas Defense and Far Seas Protection." Chinese Maritime Studies Institute, China Maritime Report No 13, No 1 (February, 2021), 5.

The Joint Force's Response: Inside and Outside Forces

In a maritime contingency the PLA's area denial network seeks to exploit the cost differential which exists between their means of denial and the US joint force's means of control.¹³ To overcome this asymmetry, the US military should use the concept of Joint Maneuver in the Global Commons (JAM-GC) which describes the idea of conceptualizing combat power as either "inside forces" or "outside forces."¹⁴ Inside forces are low cost and resilient assets capable of operating in an enemy's weapons engagement zone (WEZ), and outside forces are comprised of exquisite assets that are vulnerable within the WEZ but can leverage stand-off capabilities to provide effects.¹⁵ By employing combat power in this manner the joint force can leverage the survivability of its inside forces to create opportunities for outside forces over time. To comprehend each service's role in JAM-GC, it is helpful to understand how they have adapted their operational concepts to enable the joint force to function in this manner.

The Marine Corps (USMC) has made sweeping changes to its force design and operational concept to enable it to become an inside force. As the US military reoriented to focus on the Asia-Pacific region as a part of the Obama administration's pivot to Asia,¹⁶ the USMC recognized it was not optimized to contribute to the joint force due to requirements driven by the Global War on Terrorism which prioritized counterinsurgency operations in lieu of preparation for a maritime conflict against a peer adversary.¹⁷ To address its capabilities gap, the USMC announced a force redesign meant to enable the service to execute a new operational concept titled *Expeditionary Advanced Basing Operations* (EABO).

¹³ Andrew Erickson, et al., "Chinese Mine Warfare: PLA-N's Assassin's Menace Capability." Chinese Maritime Studies Institute, China Maritime Report No 3 (2009), 43.

¹⁴ Michael E Hutchens, et al., "Joint Concept for Access and Maneuver in the Global Commons: A new Joint Operational Concept." Joint Force Quarterly, No 84, January 27, 2019. <https://ndupress.ndu.edu/Media/News/article/1038867/joint-concept-for-access-and-maneuver-in-the-global-commons-a-new-joint-operati/>.

¹⁵ Exquisite assets are characterized as, "expensive, multi-use, and extremely capable platforms." Examples of such assets are capital naval ships and multirole combat aircraft. T.X. Hammes, The Future of Warfare: Small, Many, Smart vs. Few & Exquisite," War on the Rocks, (July 16, 2014). <https://warontherocks.com/2014/07/the-future-of-warfare-small-many-smart-vs-few-exquisite/>.

¹⁶ Kenneth G. Lieberthal, "The American Pivot to Asia," Brookings Institute, December 21, 2021. <https://www.brookings.edu/articles/the-american-pivot-to-asia/>.

¹⁷ GEN David H. Berger, "Notes on Designing the Marine Corps of the Future." War on the Rocks, December 5, 2019. <https://warontherocks.com/2019/12/notes-on-designing-the-marine-corps-of-the-future/>.

The concept is recognition that in modern conflict advancements to long range precision fires enable ground forces to influence sea denial in a manner which harkens back to the days where coastal fortifications served as formidable obstacles to enemy navies thereby making tactical littoral defense the stronger form of battle.¹⁸ To enable the occupation of a land-based maritime defense, the Marine Corps seeks to posture itself as a stand-in force (SIF) that is forward deployed throughout all phases of the conflict continuum to ensure they retain a position of advantage in the event of hostilities.¹⁹ By remaining forward deployed, the USMC believes they can provide the joint force with options which will frustrate an adversary's ability to accomplish their objectives below the threshold of war. In the event of conflict, these forces will use new assets such as passive and active reconnaissance/counter-reconnaissance systems, low signature C2 platforms, and rocket artillery to destroy vulnerable PLA assets operating in the littorals.²⁰ Over time these resilient and lethal kill webs will attrite PLA combat power which will degrade their ability to control critical sea areas.²¹ Leveraging these new capabilities and doctrine, stand-in-forces plan to turn the PLA-N's operational concept against them by denying their freedom of maneuver through key maritime transit routes thereby fixing them in a specific geographic location. Doing so will create opportunities for components of the outside force-such as the Navy- to leverage standoff capabilities to achieve effects despite their limited access west of the first island chain.

The Navy's (USN) new operational concept is titled *Distributed Maritime Operations* (DMO), and it seeks to overcome the PLA's area denial network by disaggregating forces and information at the tactical echelon to overcome command and control (C2) vulnerabilities at the operational level. In essence, DMO seeks to preserve combat power while maintaining initiative by dispersing west of the first island chain and relying on decentralized C2 to enable its forces to deny enemy freedom of maneuver in

¹⁸ Marine Corps Warfighting Lab, *EABO Handbook*, (Quantico, VA: 2018), 19.

¹⁹ Headquarters USMC, "A Concept for Stand in Forces," (December, 2021), 5.

²⁰ Headquarters USMC, "Infantry Battalion Key Changes," (2023). <https://www.marines.mil/News/News-Display/Article/2708161/2030-infantry-battalions/>.

²¹ The use of stand in forces will have both a direct (precision strike, seizure of maritime terrain, scouting, etc.) as well as indirect effect on PLA combat power by diminishing their stockpile of precision guided munitions.

designated sea areas.²² By initially operating as an outside force, the Navy can exploit its relative surface and aerial superiority by pulsing combat power to control maritime choke points, interdicting seaborne commerce, and holding PRC overseas assets at risk.²³ Eventually the cumulative effects of the outside force will contain the PLA-N west of the first island chain where inside forces, such as the Navy's submarine fleet, will be more capable of locating and destroying PLA-N surface assets.²⁴ Over time the combined effects of inside and outside forces will degrade the PLA's area denial network enabling the USN to gain and consolidate sea control over a larger geographic area. By expanding their degree of control, the Navy will create opportunities which the Air Force (USAF) can then exploit.

Similar to the Navy, the Air Force is reliant upon exquisite assets which can deliver tremendous effects, but are costly and rely on vulnerable infrastructure for maintenance and logistics. However, unlike the Navy which can use the sea to maneuver, the Air Force's land-based aircraft are reliant on bases for logistics and maintenance. These bases lack adequate passive and active protection despite being located within the PLA's weapons engagement zone which puts several of the joint force's most effective strike assets at risk.²⁵ To overcome this problem, the Air Force developed the concept of *Agile Combat Employment* (ACE). ACE is a proactive scheme of maneuver executed within threat timelines to increase asset survivability, generate combat power, and create options for the joint force.²⁶ It does so through the development of a network of austere airbases which aircraft will disperse to and operate from

²² Captain Tom Clarity, "Distribute DMO to Tactical Leaders," US Naval Institute, Proceedings, January, 2023.

<https://www.usni.org/magazines/proceedings/2023/january/distribute-dmo-tactical-commanders>

²³ While the PLA only overtly operates one overseas base in Djibouti, the PRC have invested in global infrastructure projects which could be transformed into dual use military facilities during hostilities. Despite the vital nature of this infrastructure, the PLA lacks the expeditionary capabilities required to secure these facilities in the event of conflict. Thomas G. Mahnken, et al., "Tightening the Chain", Center for Strategic and Budgetary Assessments, 2019. 30.

²⁴ The USN submarine force (USW) is capable of delivering devastating effects to isolated naval forces. For example, In a Taiwan contingency US submarines are predicted to destroy 40% of PLA-N amphibious ships within the first seven days. Those percentages increase to nearly 100% in the event of a Spratly Island contingency due to favorable submarine conditions. Eric Heginbotham, et al., "The US China Military Scorecard: Forces, Geography, and the Evolving Balance of Power 1996-2017" The Rand Corporation, (Santa Monica, CA: Rand Corporation, 2015), 212.

²⁵ Curtis E. Lemay Center, "Agile Combat Employment," USAF Doctrine Note 1-21, August 23, 2022, 2.

²⁶ *Ibid*, 1.

in the event of a conflict. Upon dispersal, the service will shift from a centralized C2 network to several dispersed nodes that are defensible, relocatable, and possess authorizations to execute decentralized operations.²⁷ These changes will enable tactical commanders to plan, resource, and execute air missions with limited to no coordination with their higher headquarters. Doing so will complicate an adversary's ability to target strike assets, diminish their stockpile of precision guided munitions, and preserve the Air Force's combat power.

To support expeditionary basing, the USAF will overhaul its distribution networks by transitioning from a theater controlled system to a hub and spoke network. Clustered basing will require stockpiling distinct commodities at different bases instead of centralizing them at a major hub. While these changes will preserve resources thereby enhancing operational endurance, it will do so at the cost of sortie generation which will make it challenging for the Air Force to achieve air superiority at the onset of a conflict.²⁸ As a result, the service will initially be a part of the outside force where it will execute an aerial denial campaign east of the first island chain designed to destroy PLA-AF long range strike aircraft.²⁹ Over time as the PLA's area of control is diminished, the Air Force can move its strike assets to more advantageous positions enabling them to destroy deep targets in the PLA's rear area.³⁰ While transitioning to ACE improves the Air Force's ability to retain combat power during a conflict with a peer adversary, it also requires adaptation to enable its effectiveness. From logistics to air defense the Army is suited to provide the augmentation required to support ACE, but the USAF is not alone in this regard. Due to the Army's new operational concept, expeditionary nature, and broad capabilities it is well-suited to be the enabling service for the entire joint force during a maritime conflict.

The Army's Role: the Joint Force's Maritime Enabling Service

²⁷ Curtis E. Lemay Center, "Agile Combat Employment," USAF Doctrine Note 1-21, August 23, 2022, 4.

²⁸ Curtis E. Lemay Center, "Agile Combat Employment," USAF Doctrine Note 1-21, August 23, 2022, 10.

²⁹ Thomas G. Mahnken, et al., "Tightening the Chain", Center for Strategic and Budgetary Assessments, 2019. 54.

³⁰ *Ibid*, 34.

In 2021 Secretary of the Army Christine Wormuth described her service's role in the Pacific as the "linchpin." Wormuth went on to claim this was an appropriate analogy because the Army provides capabilities which –like a linchpin- enhances the functionality of the other services.³¹ While this is true, this characterization does not offer the granularity required to understand the army's equities in a Pacific conflict. Fortunately the army's new operational concept titled *Multi-domain Operations* as well as its force redesign provides us with a better idea of how the service can be used to contribute to the joint force in a maritime environment. MDO leverages ground forces which possess technological overmatch to enable their execution of operations that are agile, sustainable, and capable of achieving effects throughout an adversary's operational depth to create opportunities which the joint force can exploit.³² An Army capable of multi-domain operations can contribute to a maritime conflict; however its traditional roles in contiguous land campaigns require us to reimagine how it can be effectively utilized. So, instead of using broad analogies such as the linchpin service, it would be helpful to describe how the Army planned to use its new capabilities to provide effects. This analysis proposes that a more accurate description of the Army's role in a maritime environment is that it serves as the joint force's enabling service without which none of the other branch's operational concepts are viable. The Army can fulfill this role by using operational fires to enable maneuver, securing vulnerable base areas to consolidate gains, sustaining distributed forces to facilitate endurance, and finally seizing key maritime terrain to translate sea control into victory.

Perhaps the most impressive new capability fielded by the Army is its Multi-Domain Task Force (MDTF) which provides unrivaled precision strike capabilities at the theater level. The MDTF is an operational fires unit designed to synchronize precision effects in all domains against an adversary's anti-access and aerial denial (A2AD) networks.³³ The MDTFs are comprised of organic intelligence, air

³¹ Andrew Eversden, "Wormuth: Here's the Army's Role in a Pacific Fight," *Breaking Defense*, December 01, 2021. <https://breakingdefense.com/2021/12/heres-what-the-army-would-do-in-a-pacific-fight-wormuth/>.

³² Department of the Army, "Multi-domain Operations," FM 3-0, (October, 2022), 1-2, 3.

³³ Department of the Army, "Army Multi-Domain Transformation: Ready to Win in Competition and Conflict," Chief of Staff Paper #1, (March 16, 2021), 12.

defense, sustainment, and operational fires capabilities. The rocket battalion is composed of a Short Range (HIMARS) battery, Strategic Mid-Range (SMRF) battery, and Long-Range Hypersonic (LRHW) battery with each battery consisting of four launchers. The short range battery will use upgraded HIMARS with the Precision Strike Missile (PRsM) which has a max range of 310 miles. The SMRF batteries will use SM-6 or land-launched Tomahawk Land Attack Missile (TLAM) with a max range of 1,100 miles. The LRHW batteries will use the Army's new hypersonic missile which has a maximum range of 1,725 miles.³⁴ The MDTF requires maritime lift assets to deploy, but once it is in a suitable launch location their organic capabilities make them both lethal and survivable. In particular, the SMRF and LRHW batteries provide unmatched land based strike capabilities for the joint force which can destroy hitherto denied targets thereby hastening the transition of lethal outside forces into inside forces. This is vital, because although the MDTFs are capable of operational level strikes, they alone will be unable to deliver the effects necessary to attrite PLA maritime forces due to their limited volume of fire. However, by destroying critical nodes they will enable the freedom of maneuver of lethal air and naval assets which are capable of delivering larger payloads. As ground launched precision fires enable joint assets to posture further forward, they will require secure operating sites which the Army is also tailored to provide.

As the joint force expands its control west of the first island chain it must secure forward operating sites for land based aircraft and naval assets to use. These new base areas will be vulnerable to threats due to their proximity to the enemy's weapons engagement zone. The Army can mitigate these risks by leveraging its diverse capabilities to secure these forward sites. For example, the Army can provide active protection in the form of wide area security forces and ground-based air and missile defense, passive protection in the form of engineer support, and niche capabilities such as CBRN recon/defense and EOD disposal. All of these capabilities can be rapidly deployed in the event of a contingency because they reside organically in USARPAC which is the largest component command in

³⁴ Andrew Feickert, "The Army's SMRF System," CRS, (Washington, DC: December 2022), 1.

INDO-PACOM.³⁵ Functions such as these are critical to successfully executing distributed operations such as the ones described in the ACE and DMO concepts. While managing dispersed basing may be conceptually challenging for services like the Air Force and Navy which are accustomed to operating from sanctuaries, the Army has extensive experience operating base clusters in contested support areas. By performing these functions the Army will enable the consolidation of sea control which will allow for the joint force to rapidly transition to offensive operations. As the rate of operations increase, so too will the joint force's demand for logistics which will require the Army's distribution networks to meet.

While people commonly perceive that intra-theater maritime lift is a Navy and Marine Corps equity, this is ignoring a key capability which the Army can provide. The Army operates 132 ships which is more lift assets than the entire Military Sealift Command (MSC).³⁶ These ships perform a variety of functions ranging from amphibious operations, joint logistics over the shore (JLOTS), intermodal causeway services, and harbor/port support functions.³⁷ Whereas the Navy's MSC is focused on inter-theater support as well as resupply at sea, army vessels are well suited for distribution in the littorals. One of the unique features of these watercraft as compared to those in the MSC is that army ships are manned by active duty or reserve soldiers as opposed to the merchant mariners which operate the Navy's support ships.³⁸ Since these vessels are manned by uniformed service members they can be outfitted with military C2 systems which enable resilient and secure communication. This enhances the Army's ability to provide timely logistics support to dispersed units operating in electromagnetically contested environments. In addition, due to the ambiguous signatures and endurance of Army watercraft, they are capable of blending in with other maritime traffic which provides passive stealth to lift assets delivering supplies to ground forces. Despite the utility of these ships, they remain overlooked by the joint force.

³⁵ "The United States Army in the Pacific: USARPAC," (September, 2022), 5-6.

³⁶ Department of the Navy, "Ships of the MSC," <https://sealiftcommand.com/about-msc/ships-msc>.

³⁷ Department of the Army, "Army Watercraft Operations," ATP 4-15, (Washington, DC: April, 2015), 1-3, 4.

³⁸ Department of the Navy, "Ships of the MSC," <https://sealiftcommand.com/about-msc/ships-msc>.

While the Navy attempts to bolster its amphibious fleet, the army already possesses the assets required to conduct maritime lift. This can alleviate a large portion of the capability gap identified by the Marine Corps which is requesting 30 new light amphibious ships to bolster the Navy's maritime lift capacity.³⁹ This request does not take into account the Army's 8 LSVs, 35 LCUs, and 13 LCMs which can move 5,000, 500, and 82 tons of cargo respectively.⁴⁰ This capability is currently underutilized, but will be required to meet the joint force's maritime distribution requirements in a future conflict. Much like these watercraft, army tactical maneuver units are also overlooked because they are considered ill-suited for maritime operations in austere terrain. However, due to divestments made by the USMC, the Army's combined arms capabilities will be necessary if the joint force requires power projection ashore.

As discussed earlier, the purpose of sea control is not control itself, but rather the ability to exercise that control in pursuit of a follow on objective. Often, sea control translates to victory by enabling the joint force to project power ashore in the form of an amphibious assault followed by a ground campaign. When analyzing the likely outcomes of a PRC invasion of Taiwan for example, most wargames conclude that US maritime forces will achieve limited sea control after a series of lethal air and naval battles, but will be unable to destroy the remnants of the PLA Army (PLA-A) on the island.⁴¹ Due to the limitations of the Taiwanese Army, it is unlikely they will have the offensive capacity to dislodge the remanence of the PLA-A without augmentation from US ground forces.⁴² Such augmentation will require amphibious forces capable of executing joint forcible entry operations (JFEO) as well as a subsequent ground campaign. While amphibious assault is traditionally a USMC responsibility, the

³⁹ Todd South, "Back to the Ship: Marines Need Ships to fight. Will they get them," Military Times, (March, 24 2022). <https://www.militarytimes.com/news/your-military/2022/03/24/back-to-ship-marines-need-ships-to-fight-will-they-get-them/>.

⁴⁰ Michael Carr, "Save the Army's 'Navy'" US Naval Institute, Proceedings, September, 2018. <https://www.usni.org/magazines/proceedings/2018/september/save-armys-navy>.

⁴¹ Mark F. Cancian, Matthew Cancian, Eric Heginbotham, "The First Battle of the Next War: Wargaming a Chinese Invasion of Taiwan," CSIS, (Washington, DC: January, 2023), 2-3. https://efaidnbmnnnibpcajpcgiclfndmkaj/https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/230109_Cancian_FirstBattle_NextWar.pdf?WdEUwJYWlySMPIr3ivhFolxC_gZQuSOQ.

⁴² Jacquelyn Schneider, "The Uncomfortable Reality of the U.S. Army's Role in a War Over Taiwan," War on the Rocks, (November 30, 2021). <https://warontherocks.com/2021/11/the-uncomfortable-reality-of-the-u-s-armys-role-in-a-war-over-taiwan/>.

service is no longer capable of executing these operations without significant augmentation from the Army.

When the Marine Corps adapted EABO as its operational concept it made several challenging decisions. The service recognized that it required stand-in forces which meant divesting logistically burdensome combined arms capabilities. These divestments were coupled with doctrinal modifications which shifted the Marine ground combat element's primary means of decision from maneuver to stand-off fires.⁴³ While these modifications might make the Marine Corps better suited to serve as a stand-in force, they do not bode well for their ability to conduct JFEO or large scale ground combat operations. Unfortunately, there is a common misconception that light and motorized forces (such as the stand-in forces) are best suited for ground conflict in a maritime environment due to their light logistical footprint. While these units certainly play a role, ground campaigns require combined arms capabilities to succeed regardless of the environment. For example, tanks played a crucial role in securing the lodgment on Sicily during WWII when an armored counterattack attempted to drive the 7th Army back into the sea at Gela.⁴⁴ On Leyte, the Army relied on canon artillery to suppress entrenched Japanese positions because the Navy was involved in surface actions which inhibited their ability to support.⁴⁵ Even in the Falklands (which is known for the daring action of beleaguered infantryman) British ground forces relied on the mobility offered by rotary wing assets to enhance their ability to maneuver and increase their tactical endurance.⁴⁶ All of these examples demonstrate a combined arms capability that was used during an amphibious assault or follow on operation which was completely or partially divested by the Marine Corps.⁴⁷ To overcome this emergent capability gap, the joint force will have to rely on the Army's combined arms formations to project power ashore and ultimately translate sea power into victory. Whether it is

⁴³ Marine Corps Warfighting Lab, "GCE 2030 v.2" USMC Warfighting Laboratory, 220429.

⁴⁴ Carlo D'Este, *Bitter Victory: The Battle for Sicily, 1943*, New York, NY, Harper Perennial, 1989, 286-289.

⁴⁵ *Ibid*

⁴⁶ Douglas N. Hime, "The 1982 Falklands-Malvinas Case Study," The United States Naval War College, Joint Military Operations Department, NWC 1036, (June 4, 2010), 31-44.

⁴⁷ Force Design 2030 divestments include a 25% reduction in rotary-wing lift squadrons, 66% reduction of cannon fired artillery batteries, and the elimination of tank companies. Headquarters USMC, "Force Design 2030," (March, 2020). 7.

coordinating forcible entry operations, theater logistics, or fires as a part of a maritime campaign, the joint force will require robust C2 networks and hierarchies to coordinate operations. Critics of the Army's Multi Domain Operations concept are quick to point out that while the other services appear to be decentralizing these capabilities the Army seems to be aggregating its C2 networks.

Disperse to Survive: An MDO Counterargument

This critique is made because the Army is bolstering its division, corps, and theater headquarters with new assets and capabilities to enable them to execute multi-domain operations. Such changes include a bolstered G39 staff section (information warfare) and the shift of a preponderance of its reconnaissance capabilities to the division echelon and above.⁴⁸ This is in contrast to the other services whose new concepts seek to disperse assets, information, and capabilities to lower tactical echelons to overcome disrupted C2 systems at the operational level. Ultimately, these critics believe that modern wars such as the ones in Ukraine and Nagorno-Karabakh demonstrate that multi-domain capabilities retained at higher echelons are less effective because C2 nodes will be targeted and degraded during a conflict.⁴⁹

While technological advancements have increased the complexity of modern conflict, they have not altered the underlying principles of maneuver based warfare which MDO prioritizes. Proponents of disaggregated C2 networks argued that modern war will be characterized by the use of decentralized kill webs which leverage data, unmanned sensors, and precision guided munitions to achieve effects. These advocates argued that widely circulated reports which claimed that the Ukrainian Armed Forces leveraged assets such as drones, man-portable anti-tank weapons, and commercial satellite communications demonstrated the validity of their logic.⁵⁰ Fast forward to today and neither belligerent in the war in

⁴⁸ Army University Press, "Army 2030," YouTube Video, July 8, 2022, <https://www.youtube.com/watch?v=Dselm4YUW6U&t=200s>

⁴⁹ John Vandiver, "Marine Corps boss says war in Ukraine Validates his vision for service's future," Stars and Stripes, (September 16, 2022). https://www.stripes.com/branches/marine_corps/2022-09-16/marine-corps-berger-ukraine-7354546.html.

⁵⁰ David Johnson, "The Tank is Dead: Long Live the Javelin, the Switchblade, the...?," War on the Rocks, (April 18, 2022).

Ukraine can get enough artillery or armor for their use in future large scale combined arms operations.⁵¹ Furthermore, preliminary reports from the conflict have indicated diminished optimism associated with nascent military technologies such as low-cost unmanned aerial systems, loitering munitions, and even cyber effects.⁵²

What the war in Ukraine should teach us is that new technology can create multi-domain effects, but those effects are inconsequential if they occur in isolation to one another. Like most tactical actions, cross-domain effects are both temporally and geographically limited when executed in isolation. However, when several tactical actions are coordinated in conjunction with each other they have a cumulative effect which leads to operational results. Such coordination and synchronization is most effectively done by a robust and experienced headquarters which has the requisite personnel, infrastructure, and capacity to plan such operations rather than delegating these capabilities to tactical formations. MDO recognizes this requirement, and realigns capabilities and assets to enable higher level headquarters to coordinate and execute multi-domain operations. Doing so postures the Army to serve as the enabling service which the joint force can rely upon to create cross-domain opportunities which the other services can exploit. As the enabling service, the Army will be vital in a maritime conflict where the unique characteristics of the domain will require the service's capabilities, expertise, and operational concept to support the joint force's ability to gain, consolidate, and exercise sea control.

⁵¹ Barry Knuston and Gregory Newbold, "The Ukraine War has Taught us this: A combined-arms team is essential," The Hill, (October 5, 2022). <https://thehill.com/opinion/national-security/3669824-the-ukraine-war-has-taught-us-this-a-combined-arms-team-is-essential/>.

⁵² Mykhhaylo Zabrodskyi, et al., "Preliminary Lessons in Conventional Warfighting From Russia's Invasion of Ukraine: February-July 2022," Royal United Services Institute, (2022), 37, 58, 60-62,