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Marine Corps University Press (MCUP) offers a variety of scholarly publishing opportunities for faculty, staff, and graduate-level students. In addition to a full catalog of monographs covering Marine Corps history and national security/international relations topics, MCUP also publishes three journals.

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Journal of Advanced Military Studies (JAMS)

The *Journal of Advanced Military Studies* (JAMS) focuses on topics of concern to the Marine Corps and the Department of Defense through the lens of various disciplines, including international relations, political science, security studies, and political economics. Articles may discuss topics from a historical, contemporary, or forward-looking perspective. The Fall 2021 issue focuses on the past, present, and future state of wargaming and the military. Submissions due by 31 July 2021. The special issue of JAMS for 2021 focuses on strategic culture as an analytical lens to better view local, regional, national, and international motivations, behaviors, and strategies. Submissions due by 30 April 2021.

Article submissions for all three journals should be between 4,000 and 10,000 words, footnoted, and formatted according to the *Chicago Manual of Style* (17th edition). For submission guidelines or to submit an article idea, please visit our website or contact MCU_Press@usmcu.edu.

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From the Editors

In 2019, the 38th Commandant of the Marine Corps released his planning guidance that laid out the strategic focus and future direction of the Marine Corps. General David H. Berger's intent for the following four years concurred with the analysis of the previous Commandant and the necessary alignment of the Corps with the *National Defense Strategy* for the future needs of the Fleet by focusing on five areas: force design, warfighting, education and training, core values, and command and leadership.¹ General Berger cogently noted that

the coming decade will be characterized by conflict, crisis, and rapid change—just as every decade preceding it. And despite our best efforts, history demonstrates that we will fail to accurately predict every conflict; will be surprised by an unforeseen crisis; and may be late to fully grasp the implications of rapid change around us.²

Berger's primary concern is that the Marine Corps is not fully prepared—equipped, trained, or organized—to support the naval force.

To that end, force design became the priority for Marine Corps efforts to fulfill its role for the Fleet as prescribed by the U.S. Congress. The level of change required to integrate the Corps of the future with the naval forces of today would not happen overnight and certainly not without a great deal of growing pains to ensure the Corps is equipped and prepared for the future security environment. When *Force Design 2030* was released in March 2020, the Marine Corps was prepared to make the force-wide changes necessary to partner with the Navy and serve as the country's naval expeditionary force.

Our current force design, optimized for large-scale amphibious forcible entry and sustained operations ashore, has persisted unchanged in its essential inspiration since the 1950s. It has changed in details of equipment and doctrine as technology has advanced toward greater range and lethality of weapon systems. In light of unrelenting increases in the range, accuracy,

and lethality of modern weapons; the rise of revisionist powers with the technical acumen and economic heft to integrate those weapons and other technologies for direct or indirect confrontation with the U.S.; and the persistence of rogue regimes possessing enough of those attributes to threaten United States interests, I am convinced that the defining attributes of our current force design are no longer what the nation requires of the Marine Corps.³

Berger's plan pointed to specific areas of change required to make force design a reality: the size, capacity, and capability of the Corps. In an austere fiscal environment, the Marines must assess their current capabilities to achieve a smaller footprint with broader reach—do more with less.

As the reality of COVID-19 and the 2020 U.S. presidential election have so poignantly reminded us all, these tasks cannot and should not rest on any single shoulder and any response should be well considered and intended to benefit the greater good. This issue of the *Journal of Advanced Military Studies* (JAMS) will address elements of the *Commandant's Planning Guidance*, particularly the concept of naval integration and what it means for the Services, especially the Marine Corps. Our authors look to the past for relevant examples of military successes and failures of integration, but they also discuss how future warfare will play out based on these concepts. The authors explore the topic from a variety of perspectives, including those for and against, and they offer analyses of past and current attempts and what naval integration may mean for the future of the Corps. The following articles present the capabilities that will be required to shift from a traditional power projection model to a persistent forward presence and how the Marine Corps can exploit its positional advantage while defending critical regions.

Our first author, Dr. Matthew J. Flynn, presents a historical approach to the topic in his article "The Unity of the Operational Art: Napoleon and Naval Integration." Flynn's research calls for greater coordination between the sea and land domains to improve U.S. national security. His article draws parallels between Napoleon Bonaparte's defeat and the importance of naval integration for military success: "Napoleon's fate reveals a great deal about naval integration and how it explains France's defeat and, most importantly, that there is but one operational art—not one for land and one for sea." Our second author, Andrew Rhodes, also relies on a historical example with his discussion of the salient lessons that can be learned from the Sino-Japanese War. Rhodes encourages professional military educators and planners who are developing future operational concepts to look beyond simply retelling history and consider how the legacy of this conflict might shape Chinese operational choices. He reinforces

the concept that military history is not simply a resource for answering concerns about future conflict, but it encourages us to ask better questions about the role of the sea Services and how they can handle uncertainty when preparing for the future.

Lieutenant Colonel Michael F. Manning's "Sea Control: Feasible, Acceptable, Suitable, or Simply Imperative" offers a historical review of early twentieth century Japanese naval battles as a framework to model possible future contests for control of the maritime domain. Manning believes that control of the maritime domain is a prerequisite for assured access and sets the condition for successful Joint operations. Manning believes that "nations not only have to compete with their enemy's major air and naval capabilities but must also defend against land-based airpower; missiles; torpedoes; short-range, antisurface warfare assets; and coastal mines." Colonel Scott Erdelatz (Ret) and his team of coauthors focused on an old approach for a new era of naval integration that acknowledges the long-term threat posed by China but also considers how much of what we know as the Marine Corps should be retained to fulfill other missions. Erdelatz et al. also analyze how radical integration might incur significant risk for the Marine Corps if long-term force structure decisions are based on still-evolving concepts and unproven technologies. Major Michael Kohler's article, "The Joint Force Maritime Component Command and the Marine Corps: Integrate to Win the Black Sea Fight," discusses how most current Marine and Navy integration takes place at the Service-chief level and primarily focuses on the Pacific. Kohler, however, believes that naval integration is also an important component of a successful defense against Russian expansion in the Black Sea region.

Dr. John T. Kuehn shifts the focus to carriers and amphibious operations with his article "Carriers and Amphibs: Shibboleths of Sea Power." Dr. Kuehn argues that aircraft carriers and Amphibious Ready Groups (ARGs) with an embarked Marine Expeditionary Unit represent shibboleths of seapower that conflate a deeper understanding of where the U.S. Fleet belongs now and where it needs to go in the future to face the challenges of the twenty-first century. Major B. A. Friedman's article, "First to Fight: Advanced Force Operations and the Future of the Marine Corps," then circles back to the traditional Marine Corps stance as always first to fight and the need for advanced force operations in the Corps of the future. Steven A. Yeadon's article, "The Problems Facing United States Marine Corps Amphibious Assault," rounds out the current perspective with a review of issues the Marine Corps has faced with amphibious assaults. Yeadon offers actionable information on current limitations and vulnerabilities of U.S. amphibious forces to chart a way forward for a robust forcible entry capability from the sea.

The discussion closes with two articles looking to the future of naval in-

tegration and the Marine Corps. Major Matthew C. Ludlow's article, "Losing the Initiative in the First Island Chain: How Organizational Inefficiencies Can Yield Mismatched Arsenal," presents what may be considered a losing proposition of initiatives in China's First Island Chain; however, strategic gaps in capabilities have emerged that could dramatically impact the ability to execute an island-defense strategy. The final article by Lieutenant Colonels Terje Bruøygaard and Jørn Qviller, "Marine Corps *Force Design 2030* and Implications for Allies and Partners: Case Norway," offers a larger discussion of *Force Design 2030* and its future implications for American allies with a case study on Norway. The authors encourage the Department of Defense to consider greater interoperability between and among Services and allies, including increased communication with allies on changes happening at the Service and national level of the U.S. armed forces.

The remainder of the journal rounds out with a review essay and a selection of book reviews that continues our focus on naval integration, but it also highlights continuing challenges in national security and international relations. The coming year will be busy for the JAMS editors as we work to provide journal issues on a diverse range of topics relevant to the study of militaries and defense.

The upcoming Spring 2021 issue offers articles on information warfare and propaganda in the digital age. The editors are also interested in acquiring content for a special issue of JAMS that focuses on strategic culture. The Fall 2021 issue of JAMS encourages authors to consider the past, present, and future state of wargaming and the military, including the current status of wargaming and how the Services can prepare for tomorrow with innovative professional military education (PME) and wargaming. Join the conversation and submit an article for consideration. We look forward to hearing your thoughts on these topics and to your future participation as an author, reviewer, or reader. Join the conversation and find us online at www.usmcu.edu/mcupress or on our LinkedIn page (<https://tinyurl.com/y38oxnp5>), at MC UPress on Facebook, MC_UPress on Twitter, and MCUPress on Instagram or communicate with us via email at MCU_Press@usmcu.edu.

Notes

1. *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge* (Washington, DC: Department of Defense, 2018).
2. Gen David H. Berger, *Commandant's Planning Guidance: 38th Commandant of the Marine Corps* (Washington, DC: Headquarters Marine Corps, 2019), 1.
3. Gen David H. Berger, *Force Design 2030* (Washington, DC: Headquarters Marine Corps, 2020), 2.

The Unity of the Operational Art

Napoleon and Naval Integration

Matthew J. Flynn, PhD

Abstract: This article parallels the U.S. Marine Corps' purpose of achieving naval integration with that of the British success in defeating Napoleonic France. The historical context emphasizes the need to ensure that naval integration seeks a unity of the operational art and resists an inclination to bow to operational art as distinct in each domain. Britain's ability to marshal this response via all instruments of national power proved a key determinant of success that is worth emulating today.

Keywords: naval power, seapower, Rear Admiral Horatio Nelson, Napoleon, Trafalgar, continental system

Napoleon Bonaparte, “history’s greatest soldier,” casts a long shadow over U.S. military doctrine. Napoleon had the ability to fix and flank an enemy and win a swift battlefield decision, coupled with the conscious effort to seize the initiative even when on the defense. This mastery of maneuver warfare informs all the Services.¹ This mandate derives from the study of Napoleon’s campaigns where mobility and an unceasing offensive mindset constituted essential elements of his many successful battles. Added to this are the abundant leadership traits this individual can impart today, chief among them that a commander can will their troops to victory. To mirror such attributes pays a heady compliment to that soldier, but that homage faces the challenge of explaining the great one’s fall. After allied powers defeated him at

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Waterloo in 1815, Napoleon left France smaller, weaker, and more subservient to his foremost enemy, Great Britain, than when he first emerged to lead a revolutionary France some 20 years before.

No matter Napoleon's victories, there was always another campaign, another war, another risk of empire via combat arms, until he finally depleted France to such a point that it faced complete ruin. The reason for this failure rests with the better strategy Britain employed to exhaust its rival. While Napoleon remained supreme on land, only Britain, a seapower, proved able to check his ambition to rule Europe.² But that view reinforces a false divide between land and seapower and ignores the need to examine naval integration in step with the Marine Corps' recent call for greater coordination between the land and sea domains to advance U.S. national security aims.³

This understanding reminds one that integration across all domains, including air, space, and cyber, clearly promises to deliver the best warfighting practices, which is a needed footing taking a nation into the future. For this reason, naval integration in the age of Napoleon rebounds on the U.S. military today with obvious implications for strategy seen as a measure of all instruments of national power. That whole of government approach often calibrates the use of force of arms to best effect. That achievement is needed now just as great powers strove to achieve this end during the Napoleonic era. Assessing Napoleon's fate reveals a great deal about naval integration and how it explains France's defeat and, most importantly, that there is but one operational art—not one for land and one for sea. The focus on the unity of the operational art underscores that Britain simply did naval integration better than Napoleon.

The Long War

Britain and France eyed each other as rivals well before the rise of Napoleon. By 1789, as the French Revolution boiled to the surface, Britain had set its strategy: naval power would be at a premium, the use of military force on land purposefully restricted.⁴ Long established as a key component of the British approach to war with France, that strategy depended on a continental "balance of power," a euphemism for ensuring that no one state dominated the continent to then form a coalition against Britain that would threaten that state's position as the leader of global trade.⁵ Understanding its chief source of strength as an economic power, Britain would maximize this advantage and elevate it to something of an art form once Napoleon emerged as leader of France.

French kings, and later Napoleon, coveted a direct blow against the island empire of Britain to end this strategic advantage. That purpose enjoyed the benefit of simplicity: conquering England would undoubtedly end that nation's trade dominance and, therefore, its intrusion into continental affairs. This direct approach had much appeal, but the trouble was the means. Britain

reigned supreme at sea. Moreover, a recent British failure in this arena, a rare French naval victory and one in support of American independence in 1781 just outside the Chesapeake Bay and forcing Britain to surrender an army at Yorktown, Virginia, had reminded Britain of where its military strength must lie—with the navy. Its improved naval doctrine a decade later, best illustrated with a standardized signal book for better tactical coordination at sea, helped make a French attack across the channel costly at best, improbable at worst.⁶ Either way, France's ability to posture as a great power because of its large landmass and huge population would be exposed as a hollow advantage due to its limitations at sea. Risking such an assault could cost France more than it was worth to just stay put and merely threaten invasion.

While France posed a threat to England via a cross-channel invasion, seldom did that posturing go further than that. The French Revolution hurt the cause of invasion in rapid succession. The naval branch of service, full of royal officers, faced harsh purges and many of its key leaders left France as émigrés or fell to the guillotine.⁷ No matter its navy's degraded condition, revolutionary France made the effort. A French fleet staging from Brest managed to threaten Ireland at the end of 1796, but bad weather scattered the invasion force, ending the attack. Another attempt came after Spain allied with France in late 1796, and leaders of both states made joining the naval forces of the two countries a priority. Britain turned back this effort in February 1797, off Cape St. Vincent south of Lisbon, forcing a Spanish fleet to give up the attempted juncture, forestalling any invasion. The French courted another ally in the Dutch, but by the end of 1797, the British crushed a Dutch fleet off the coast of the Netherlands near Camperdown, blunting a potential French effort to mass a fleet to protect an invasion force.

The British successes reflected a conscious effort to shift naval tactics. No longer content to exchange fire between a rigid line of ships, the admiralty encouraged massing ships against a portion of the opposing fleet to force a melee where a fight at close quarters would secure a decisive engagement at sea. Britain had come a long way from executing Admiral Sir John Byng for attempting such a maneuver in 1756, a movement that failed to relieve the port of Minorca.⁸ An initial success came on the Glorious First of June in 1794, when British Admiral Richard Howe bloodied a French fleet escorting a convoy to Brest. While the grain shipment reached France and diminished the success of this battle, Howe's effort encouraged others to shift tactics. Several years later in early 1797, Sir Horatio Nelson embraced this mandate as part of Admiral John Jervis's command when engaging the Spanish fleet at Cape St. Vincent. Nelson moved his ship out of the British line to prevent an enemy concentration during the height of that battle, ensuring a British success. By the end of 1797, although there were difficulties, including mutinies among its crews, Britain's

seapower all but guaranteed it remained in control of the channel and able to repel an invasion. That key success allowed the tampering with naval doctrine to remain something Nelson could take advantage of in the future.⁹

Napoleon's military prowess meant a cross-channel attack received another look and this time from someone able to assess risk, possibility, and gain from such a military strike. In other words, Napoleon was more than a land general. His analysis would evolve but rely on the principle of naval integration. To this end, he faced some old and enduring limitations. Any attack on England involved forcible entry in that a cross-channel attack must defeat the British naval forces in the channel. That Joint operation meant a naval victory first; the land campaign that followed would simply be a campaign similar to any on the continent. Given this assumption, how to gain a naval success dominated much of the planning.

French planning was sound, as far as it went. Britain's limited ground forces in the home islands suggested a French ground force could be successful once landed. But the difficulty in simply embarking an invasion force, even within the confines of a safe harbor, proved imposing. In July 1805, Napoleon faced this limitation when such an exercise at Boulogne-sur-Mer killed at least 200 men as bad weather disrupted the attempt.¹⁰ It was more than merely the weather. Landing craft simply did not exist to make this cumbersome process—never easy—manageable, at least on the scale Napoleon needed.

The problem redoubled when having to disembark onto enemy territory and presumably under duress from at least some resisting force, if not a powerful resisting force. And should the landing be effective, how was the French Army to be maintained thereafter?¹¹ This part of the French plan did not receive enough attention and problems abounded. If the British Army was swept aside by the superior French troops, a widely held belief but one that remained just an assumption, the population could hardly be expected to support the invading force. Living off the land, which was a common practice during the Napoleonic era, could solve this logistical problem, but for how long could the English countryside support an army of some 30,000 troops? And if this was the size of the attacking force, would that be enough to move from the coast to London and therefore dictate peace, assuming peace followed the occupation of the capital?

The entire enterprise presented grave dangers; it also offered the great benefit of ending the resistance of France's intractable foe. Should that happen, French domination of the continent beckoned. Better sailors, better landing craft, and a good deal of luck may have authored some optimism, but the French Navy had few good commanders, little naval know-how, and a corresponding loss of confidence that might have capitalized on any luck that presented itself. The entire

operation was stillborn, though that reality was never fully admitted or accepted.

When the prospect of invasion fell to Napoleon immediately after his successful campaign chasing the Austrians from northern Italy in 1797, he made this necessary calculation. The Directory, the governing body of five men leading revolutionary France, had asked the newly discovered general to solve the problem of invading England. One suspects that the newcomer with clearly unfulfilled ambition got this task to humble him in light of his recently exhibited military acclaim. No one could recommend such an assault and maintain good standing within France, perhaps at any time, but certainly at this juncture of the revolution. French revolutionary armies, with much departure from established military practices, had been able to more than hold their own when led by competent generals such as Napoleon. But no one believed that French naval forces could do the same. The spheres of land and sea were simply too different. Napoleon would not be able to solve this rift, and the Directory, while proving ineffective at leading France, would have surprisingly used some guile if not sophistication to neutralize one potential threat in the person of Bonaparte.¹²

Napoleon soon realized the Directory had forced him into a corner, but he swiftly developed a counterstroke that would get him a new assignment and his career a new lease on life. His proposal rested on solving, if not the cross-channel invasion, the problem of naval integration. He bluntly reported that a naval operation in the channel stood little chance of success given the British fleet present there and the inability of the French Navy to realistically challenge that force. He said nothing about the dubious ability to exploit such a naval success on land no matter how unlikely a favorable outcome at sea. This oversight went unacknowledged in 1798, but it would resurface as a key issue in a few more years when Napoleon again turned his attention to a cross-channel invasion. For now, he offered a plan that captured the key element of using naval and land forces in coordination with one another and that was seeking an objective that pushed strategy well beyond merely the act of military force. Napoleon sought the unity of the operational art and his capability as a military commander again surfaced to the benefit of France.

Egypt

Napoleon hoped to strike Britain's means of military success—its ability to keep a large navy on station not just in the channel but throughout its sprawling empire. A French expeditionary attack on Egypt would nicely serve this end. With the French in control of the Suez region, Britain's trading empire would be dealt a blow—and one hard to counter.¹³ By contesting British designs for dominance of the eastern Mediterranean Sea, Napoleon hoped the island nation would have to respond and do so with both naval and ground forces. The

problem of naval integration would now fall on the British, and there was no certainty they could mount such an effort any better than France. Increasing British forces in and around Egypt entailed a weakening of forces elsewhere. Perhaps that redistribution would encourage rebellions against British power in Latin America or Asia. Even better, interdicting trading routes that flowed through Egypt meant a need for Britain to harness trade elsewhere, again risking British oversight in other parts of its empire. In short, Napoleon hoped to test the viability of the British Empire, discovering tensions and fissures that spoke to its brittleness and lack of resiliency.¹⁴ The American separation from Britain was a not too distant memory to hope for another such setback to British power.

A French strike at Egypt also spoke to a French economy of force. The comparatively modest fleet and landing component required for that action, rather than a strike across the English Channel, would not hamstring other French military concerns. The feasibility of the attack spoke to getting past land and sea warfare as two different ends of the operational art. This single stroke commanded two outcomes at once—military action coupled with a power projection that struck at the heart of British vitality: its economic success. Serving this national security interest meant a stroke of naval integration consisting of the use of force serving a credible strategic purpose.

The Directory handed over to General Bonaparte some 36,000 men and around 400 ships, including 13 warships. The fleet sortied on 19 May 1798, mostly from Toulon, and headed to Malta and then onto Alexandria, Egypt. No particular effort was made to contend with the British surface fleet threatening to enter the eastern Mediterranean to intercept just such an attack. Instead, all was left to chance. Hopefully, Rear Admiral Nelson, in command of the main British naval force in this area of operations, would find only a part of the French fleet and, with better luck, none of it at all. This latter more fortuitous outcome came to pass, and the French made it to both Malta and Egypt without any challenge at sea.¹⁵

This result came despite Nelson's best efforts. Always a captain in search of a fight, he relentlessly sought out the French fleet once he learned of its departure from base. His zealousness worked against him, at least initially. Unknowingly to him, he just missed the enemy in the waters east of Sicily. Frustrated, he sped toward Alexandria having correctly guessed the French destination. He arrived on 28 June, a few days before the French did, a tribute to his ability to move swiftly at sea, and a recognition of that very ability to work against him at times. Concerned he misjudged French intentions, he quit Alexandria and put to sea to resume his pursuit, heading farther east and then backtracking toward Sicily. Once reprovisioned, he moved east again.¹⁶

This pursuit spoke to much about the operational art and dispelled sugges-

tions that two different means to that end were required—one at sea and one at land. Nelson's speed lay bare that a competent sailor could travel distances and meet timetables no matter the clear dependence on winds, currents, and calm seas. Even when a storm initially disrupted Nelson's task force, he recovered swiftly and was ready to meet the French in battle at sea. This foremost aim spoke to his purpose of ensuring the expeditionary nature of the French offensive, made clear by the reported number of transports, did not come to fruition. He would destroy the French escort and then eliminate the helpless transports. There would be no land battle here, only a ship-on-ship engagement that Nelson welcomed, so confident was he in British naval superiority. Maneuverability at sea may well speak to that on land when operations rested in the hands of a competent naval commander, and so too did a desire for a decisive battle. Nelson would end the French threat in a matter of hours, just as Napoleon made crushing his enemy's army the main goal when fighting on land. Any gap between the land and sea evaporated given this understanding of the operational art.

Denied that battle on the open sea, Nelson soon learned that the French had landed in Alexandria after all and rushed to return to that destination. He reached that site on 1 August. There, at last, he found the French fleet, and he immediately signaled the attack. The forces were comparable: Nelson in charge of 13 warships and the French with a similar number including the massive 120 gunned *L'Orient* (1791), flagship of the French commander, Vice Admiral François-Paul Brueys d'Aigalliers. Like most French admirals, Brueys could boast of extensive experience at sea and a great fear of meeting the British in battle. With no confidence of success, he assumed a rigidly orthodox defensive position. He arrayed his ships in line at anchor, hugging the shore and facing the wide mouth of Aboukir Bay. That posture suited Nelson, determined to close with the enemy and wage a battle of annihilation. Nelson issued orders stating this mandate but offering his captains great leeway. All his ships were tasked with the same end—break the French line and engage enemy ships as opportunity presented. The aim was to allow his ships to fire on the enemy from both sides of the line, not just one as was the case when defending in line. Nelson had noticed that Brueys had not placed his ships close enough to the shore to prevent an attack from this side as well. Once the British ships could maneuver into position on both sides of the French vessels, the battle would be settled by gunnery ability and a willingness to fight. Nelson was confident those factors favored his force.¹⁷

The British soon engulfed the French line and the desired melee ensued, one segment at a time. After several hours of hard fighting, *L'Orient* caught fire and a tremendous explosion disintegrated the ship. French resolve, never strong, wilted as Nelson's fleet struck one ship after another. Soon, French resistance collapsed. At the Battle of the Nile, Nelson took or destroyed 10 French

ships without losing a ship of his own. The naval arm of Bonaparte's enterprise was lost. With the invasion of Egypt just a month old, the expeditionary nature of the operation appeared to have ended.¹⁸

Napoleon had started landing his ground forces on 1 July, as soon as he arrived in Alexandria, fearing the return of the British fleet. He immediately occupied Alexandria, his first objective, and was well on his way to Cairo three weeks later. As he approached Cairo, he faced a large Mamluk army that he defeated at the Battle of the Pyramids on 21 July 1798.¹⁹ Superior French military arms secured this result; Napoleon formed his infantry into large square formations that repelled the swarming Mamluk cavalry attacks of the Turkish forces. With the enemy chased from the battlefield, the French advanced into Cairo and plotted their next steps.²⁰

Until Nelson reappeared, the French occupation of the region appeared easy enough. The loss of the French fleet brought the goals of the expedition into cold relief. The situation now required a review of the entire operation and a confrontation with expeditionary warfare as a measure of the operational art. In practice, one could say the French had met their goal. The Suez region was under their control, presenting the British with the intended disruption of trading routes to the east. That success, however, now looked tenuous at best with the loss of the French fleet. How long could the French stay in place to reap any benefits from their earlier "success?" The rupture between land and sea operations appeared complete—a forfeiture of the operational mandate of naval integration. Stranded in Egypt, the French military effort appeared to have a limited shelf life. Without reinforcement, resupply, or even communication with Paris to coordinate next actions, the campaign had fizzled as soon as it began.

This crippling outcome came from Britain's seapower, and Britain now looked to complete its success of having bottled up the French ground force. In other words, not content to allow a standoff between sea and land, the British soon looked to conduct expeditionary operations of their own that matched naval success with a ground operation. This effort did require some care, given the strategic risks that Napoleon had believed the British faced were real indeed. To dispatch a large force to the region, both a reinforced fleet and an army was not just impractical but would require an effort that could spawn, if not unrest elsewhere, unwanted tensions in other parts of the empire. The solution was to empower another talented naval officer, Commodore Sir William Sidney Smith, to seek out supporting forces from the Ottoman Empire. A clear look to naval integration would provide the ground forces to team with British naval assets to check French efforts on land.²¹

Smith's diplomatic success at the Ottoman court translated into an operational art skillfully mixing sea and land components that soon witnessed another

er Bedouin army descending on Bonaparte's forces in Syria. Napoleon, though stranded in Egypt, had decided on expanding French power in the region. With land forces alone, he would make good the strategic intent of challenging British economic vitality by turning the Orient into a French stronghold, even if just on land. To this end, he struck Syria, advancing along the coastline to reach Acre, a fortress symbolizing Ottoman control. A military success here could force the sultan to negotiate a favorable agreement with France, one that spurned British authority. This objective had just enough promise to provoke a British reply and soon a great battle unfolded at Acre beginning in March 1799.²²

The British under Smith managed to reinforce that city with cannon, enabling the Turkish garrison to hold. Checked before the city, Napoleon recoiled with no place to go. Turkish resistance was assured and the hope of making them allies gone. His army, already depleted, faced sickness and shortages of food and water. Under duress, Napoleon ordered a retreat to Cairo in June 1799. This maneuver he completed, a significant achievement given his army's condition. His dreams of a kingdom to rival Alexander the Great clearly exposed as a mirage, and he plotted his return to France. Abandoning his army in mid-August, and doing so without permission from the French government, he embarked with a select few on a tiny flotilla and made for France. He reached that destination on 9 October 1799, after a 47 day journey. Again, good fortune had spared him from capture and an end to his career. Instead, once on French soil, he plotted to seize power.²³

The Egyptian campaign foreshadowed many Napoleon realities to come. He would abandon his army again in Russia in 1812. He would need good fortune to succeed in the future, much as what got him to Egypt, and he would again enjoy this favor until he did not. Mostly, however, the parallels rest with the lessons of expeditionary warfare and the resultant impact of that effort on the operational art. A failure of naval integration meant a failure of his larger strategic aims, whether in Egypt as a French general or when fighting in Europe as emperor of France. This relationship was clear at this early stage of his career; the hope of striking such a blow at Britain was the intended purpose of the assault on Egypt. In short, he had calibrated naval integration as operational purpose transposing land and sea, only to see that aim flounder with the loss of the French fleet. Subsequent primarily land operations could not overcome the lack of balance between the two. It was a lesson that begged indulgence, but it was one that Napoleon would never resolve no matter his efforts to do so. What came next was a rise to power, to sit as emperor at the helm of France, but a struggle to measure naval integration as a formula to make France the dominant power in Europe. Napoleon had deduced the means to wage the next war, but he could not be sure he could bring the means to bear. His eventual failure in

this respect was all the more painful to behold given Britain would take this measure successfully and defend its position to dictate power in Europe and across the globe in the near future and for many years to come.

Trafalgar

Napoleon shrugged off his setback in Egypt. France proved willing to do the same. The Directory wobbled, unable to protect the nation from enemies abroad and continuing to prove unable to impose order at home. Perhaps the general of Italian fame could cure both ills. The coup of December 1799 left Napoleon in control but hardly a proven commodity. He had much to do to gain the favor of public opinion, and he acted to that end. Soon, he restored order across France, Napoleon proving a willing and able administrator. However, with Italy again lost to France and under Austrian control, the chieftain, assuming the title of first consul, returned to that theater of operation to blunt this threat and, more importantly, establish himself as a military leader capable of protecting France—accepted in this effort was a furthering of his standing as ruler of the nation should he win a great battle. When he again expelled Austria from northern Italy by June 1800, he returned to Paris to bring peace to France.

He achieved this outcome with the help of other French armies, defeating the Austrians in central Germany, and despite another round of naval operations far to north that involved Nelson countering a Napoleon economic blow directed at Britain. Napoleon encouraged the formation of a coalition serving French interests. If not answering directly to Napoleon, the nations of Russia, Prussia, Sweden, and Denmark announced a northern league of armed neutrality in 1800.²⁴ The group threatened British trade in the Baltic Sea, a region supplying its fleet with key materials. This move endangered Britain in two ways, both extending its operations to contend with previously neutral powers and undermining the very means of sustaining its fleet. This shrewd diplomatic move, while arising from fortunate circumstances, would constitute the height of Napoleon's naval integration.

Britain responded by sending a large fleet, 23 ships of the line, with Nelson second in command, to break up the alliance, short of force if possible. Negotiations went nowhere, and the British struck Copenhagen on 2 April 1801. Nelson led the main attack against the city's strong fortifications, targeting the battle line moored along the shoreline of the city. This bitter fight deadlocked until Nelson offered a way out. He notified the Danes of his willingness to hold fire and end their needless suffering should they capitulate. The Danes agreed, though hardly expended by the fighting. Nelson had tested their faith in bearing the brunt of retaliation against the trade pact threatening Britain and judged correctly they did not want to carry on that struggle at the risk of

great loss and destruction. Naval integration hit a new high here since Britain possessed only a small landing force and Copenhagen could have remained unoccupied, if under blockade. The Danes shrunk from that measure of war, and Nelson next demanded a quick move to the far end of the Baltic to strike the Russian fleet in Reval (Tallinn). Another naval victory would end Russia's involvement in the crumbling neutrality pact. While that fleet had fled before the British arrival, Russia, convulsing under political turmoil as Alexander I replaced his assassinated father, Czar Paul I, left the pact as well.²⁵

The Baltic campaign revealed how naval integration required very limited land forces, if any. The ability to move from strategic necessity—opening the Baltic to British trade—to tactical means, striking Copenhagen or other ports with a fleet action, laid bare the operational harmony of naval purpose serving military ends. States could not partner with France, even in proxy, without costs. The British resolve to wage war against France meant a willingness to risk much to keep vital areas accessible to trade and enforce a measure of diplomacy as Britain saw fit. In turn, bases of operation revealed themselves as key. Denied this station in the Mediterranean until winning the Battle of the Nile, the British prevented that same limitation in the Baltic.²⁶ Seapower could dictate access to bases to sustain naval operations that could help dictate political realities in Europe. That success ensured Britain's global reach remained intact, providing a means that would lead it to victory over France.

The military setting dictated stalemate for now and allowed Napoleon a space to make peace with Britain. This he did in March 1802. The peace assumed more of a truce, and both sides readied themselves to resume the war as occurred in May 1803, when Britain declared war on France. Territorial ambitions remained an issue but larger motives lay behind the source of acrimony. Napoleon, now consul for life, threatened the legitimacy of the monarchies of Europe, and that threat put at risk Britain's demand of balance of power on the continent.²⁷ An expansive France, led by a man of proven military capabilities, posed a threat to British standing in Europe. Even larger still, the British formula for maintaining its power was now in question. Naval integration as a measure of reducing commitments on land in favor of a navy capable of a global projection of power appeared suspect, or at least in need of reassessment. No less than a quest for a single operational art consumed British strategy, which was a need for this principle of naval power projection to be so. If French success on land could upend the British economic benefits arising from its power at sea, Britain's entire strategy was at risk and so too its empire. Whatever military steps came next must mesh with a strategic purpose leaving Britain's trading capacity intact.²⁸

Napoleon's threat to established monarchies on the continent and to Britain as the foremost opponent of that threat advanced with the general's declaration

of himself as emperor of France in December 1804, escalating the conflict by requiring one side or the other to face complete defeat. This new round of hostilities forced Napoleon to again consider how to crush his greatest adversary. The divergence between land and seapower resurfaced and just as pointedly the need to find harmony among those two ends. The side that could orchestrate naval integration to best advantage had the greatest chance of winning the war.

A naval victory at sea remained a possibility for France. Despite defeat at the Battle of the Nile, France still possessed a large fleet. Warships occupied Toulon, Brest, Le Havre, and Rochefort. The British had responded in kind, blockading each port. Any sortie from one base would draw a British reaction. Should the French get past a blockading force, the British fleet would concentrate in the channel and stand ready to blunt a French cross-channel attack. The situation spoke less to stalemate and more to British ascendancy—they possessed freedom of maneuver if not an untethered initiative.²⁹

Napoleon's task was to gain a military victory at sea to enable a land invasion. The problems he had confronted in 1798 remained, although Napoleon's span of control now encompassed the entire French state, so a reevaluation was needed and possible. But his extensive power did not change the naval integration calculus. The need for a naval success followed by a land operation meant his move against Britain fit the category of expeditionary warfare. Compartmentalizing the two needs of naval and land success obscured this manifest reality, and Napoleon would plan an attack unfolding in steps rather than in combination. A series of efforts, first success at sea to then be followed by success on land, was Napoleon's strategic goal. This purpose obfuscated the need for naval integration as an operational purpose.

Any military strike must entail the strategic end of defeating Britain. Again, occupying the home islands met this goal, and was a fair enough measure. But the economic sophistication of the attack on Egypt was absent, traded for the military hammer. A fully integrated force would work all needs simultaneously, forcing Britain to consider the threat France posed as more than merely military. As things would prove, Napoleon's plan may well have done this, but that accidental purpose proved unable to force Britain into more complicated assessments than winning a battle at sea, something it already desired. One could argue that Britain failed to see past its own myopia and indulged a lapse of naval integration in its own right. The difference was that crippling French naval power would force France into a land force, while Britain remained a dual threat. That superior stand would soon dictate the rest of the Napoleonic era.³⁰

First came Nelson's defeat of a combined French and Spanish fleet off Cape Trafalgar in southwest Spain. This battle occurred at the end of extensive maneuvers that said much about Napoleon's effort to achieve the operational art at sea. French naval forces sortied from its southernmost ports and combined

forces in the West Indies. That long trek invited mishap and confusion and both problems arose. But a chase across the Atlantic went in favor of the French, with Admiral Pierre-Charles-Jean-Baptiste-Silvestre de Villeneuve moving from Toulon at the end of March 1805. He reached the West Indies with 11 ships and 8 Spanish ships from Cádiz in southern Spain, that nation again having joined with France to oppose Britain. But he was unable to rendezvous with a second French fleet of five ships from Rochefort. The timing proved impossible to synchronize. Meanwhile, Nelson again led the British pursuit seeking battle at sea. After confirming the safety of Naples, Malta, and Egypt, he tracked the French fleet to the West Indies but failed to make contact there. The French made their way back to Europe seeking an opportunity to leave the British in pursuit and one step behind.³¹

This maneuver gained the advantage Napoleon had hoped to secure. The channel lay exposed if not open. He was no sailor, so he weighed the prospects of a meeting engagement at sea much as he would on land. French ships could be at a certain place at a certain time, if all went well. But things seldom went well. No matter, in this case, the plan in its most basic form worked. The French had outmaneuvered Nelson's fleet to gain a possible window to fight for control of the channel and invade England. On reaching northern Spain at Ferrol at the end of July, Villeneuve added 14 more ships to his fleet. Napoleon ordered him into the channel. However, the admiral demurred, and instead retreated to Cádiz. By the end of August, Napoleon's grand design had failed. Britain amassed 39 ships near Brest, proving Villeneuve's circumspection correct. Now, Napoleon decided to quit the coast and with his army move south toward Austria in early October 1805. His land offensive superseded his imperative to win a sea battle, and so this expeditionary moment was forfeit, an opportunity permanently lost.³²

One can question if Napoleon ever seriously considered risking the channel crossing. The operation was too fraught with peril to be considered genuine. The British always prioritized defending the channel, and a large fleet would have faced Villeneuve's 27 ships of the line no matter what transpired, proving Napoleon's deception and maneuver plan suspect. Moreover, the Austrians had moved through Bavaria toward France and threatened Napoleon's new regime. Having to forestall this outcome required a response and a need for self-defense.³³ A massive land campaign matched the possible threat, even as it underscored a more suitable purpose for France. The risk to Napoleon engaging Austria with his tested army certainly paled in comparison to his need for security in the channel for an uncertain period of time, but at least more than a few days to then achieve a crossing. Villeneuve's return had forced a moment of truth, and it exposed the lack of tying naval action to the strategy of defeating Britain. The immediate threat justified the change in plans,

but blunting Britain's continental allies underscored the superiority of British naval integration that matched coalition partners with strategic naval strength. Britain could repeat and would repeat this form of naval integration time and again after 1805.

The French naval threat was less enduring. Villeneuve, relieved not to have to face a showdown with a British fleet, remained at Cádiz. He then exited that safe harbor to move into the Mediterranean, urged by Napoleon to attack Naples. Nelson waited for him and met the combined French-Spanish fleet off of Cape Trafalgar on 21 October 1805. Nelson again sought and gained his decisive battle by breaking the enemy line and separating the van or lead element from the main body, forcing a general melee that, in a matter of hours, although after bitter fighting, went in favor of Britain. This outcome came from superior tactics: a higher rate of fire and targeting the hulls of ships rather than the masts as the French and Spaniards did. To strike the hull inflicted large casualties and demoralized the crew.³⁴ Still, British ability at sea shone through as well. The zest for engagement, the knowledge that destroying a great many French vessels would directly spell British relief, certainly explained a great deal of the British urgency when fighting at sea. The island nation impervious to assault from sea could look forward to a long war, a needed strategic end tied to its limited use of military force on land. The operational art had never received a more pointed endorsement as a measure of naval integration seeking tactical results tied to strategic purpose.

The glory of Britain's victory and its meaning was only dampened with the loss of Nelson. He fell to a sharpshooter's bullet as he led his ship into the melee. His demise at this battle deflected from his chief accomplishment and that was to gain a decisive result from operational maneuver. Even if this ability rested on relentless pursuit and a decisive battle speaking to tactical prowess, his success at sea served British strategy as it was designed to.³⁵ The great military captain executed one leg of the effort while the other leg moved far ahead. Britain could now redouble its commitment to naval integration as strategic purpose. This aim would carry Britain forward to the conclusion of its long war with France in 1815. And it would win this struggle. In this respect, Nelson's victory at Trafalgar was decisive indeed.³⁶

Napoleon's Continental System

Defeat off Trafalgar exposed the real source of French failure at sea as a deficient strategic position compared to Britain. Napoleon at first embraced the deceit that said otherwise. His campaign against Austria in 1805 ended with the spectacular victory of Austerlitz just northeast of Vienna. Purposely crafted to crush the combined armies of Austria and Russia, Napoleon, feigning weakness, lured his foes into a set piece (pitched) battle. This engagement he won in a matter of

hours, decimating the opposing army. Peace came between France and Austria, although Russia remained a foe and prepared to fight again.

The Battle of Austerlitz in December 1805 as a tactical masterpiece called into light something of Napoleon's operational art.³⁷ He needed that battle and to win that battle in decisive fashion given that his forces extended from France far into Austria. That position invited disaster should the war drag on into the approaching winter. Winning a battle certainly redeemed his vulnerable position, but it taught him to seek that end in every campaign to come. In many ways, that expectation played to Napoleon and France's strengths, so such tests of strength were a logical pursuit. But the backdrop of the operational setting of a successful campaign on land to that of the still larger and ongoing challenge remained unanswered: ending Britain as a threat by addressing the need for success at sea. An operational art delivering land victories meant little if this larger strategic concern was not addressed, dispelling the myth of two operational arts—one on land and one at sea. Naval integration conceptually forced this recognition, if not a resolution.

Napoleon again had little time to weigh this dilemma. Prussia, neutral in the 1805 campaign, clamored for war with France. Consequently, a year after striking Austria, Napoleon attacked to the northeast and engaged the Prussian Army moving toward the frontier with France. While the Prussians could expect a large Russian Army to aid its offensive, that reinforcement was far to the east. In October 1806, when Prussia moved against France and did so by moving forward to attack a French concentration in southern Germany, it stood alone. The timing could not have spoken to more foolhardiness than finding itself facing a large and veteran French army unaided; the year before that Prussian advance may have stopped Napoleon in his tracks. In 1806, the Prussian offense suited Napoleon's plans well. His hope was to envelop this attack before the Prussians gained much ground at all.³⁸

Soon, 160,000 French soldiers intercepted the plodding Prussians and devastated them in a series of disjointed battles at Jena and Auerstedt, both fought on 14 October 1806. With some good fortune, the French forced the Prussians to retreat, a retrograde movement that quickly resulted in the complete surrender of the standing Prussian Army. In a matter of weeks, Napoleon captured more than 125,000 prisoners. This loss, added to the battlefield losses, ended effective Prussian resistance.³⁹ Austerlitz appeared to have a twin.

This French success certainly left Napoleon in a dominant position in western Germany. However, the Russian forces still posed a threat and having slowed their advance, they remained in Poland, daring the French to launch an offensive far to the east. A French army strung out from Frankfurt to Warsaw clearly meant a repeat of the less desirable feature of the Austerlitz campaign, and that was having to win a decisive battle to redeem a worsening strategic situation.

Napoleon accepted the challenge. He quit Berlin and a series of maneuvers won him Warsaw with only a few minor battles as 1806 came to an end. Without a crushing blow, this gain of territory meant little. When a Russian army emerged from winter quarters to engage the French forces even farther east, Napoleon seized the chance to make good on his quest for decisive battle. Instead, he got stuck in a stalemate at Bagrationovsk (*Preußisch Eylau*) in early February 1807, a costly affair for both armies that made clear the hazards of risking battle to gain a strategic reprieve.⁴⁰

This lesson shone forth only in the immediate. The need to link his widening military offensives far beyond French territory to the main task of defeating Britain remained suspect. Napoleon, aware of French unease about continuous war, had offered that link with his proclamation of the Continental System, announced in the Berlin Decree in November 1806. All territory under French control would cease trading with Britain. Deprived of its markets in Europe, the British economy would rupture, forcing Britain to negotiate. Moving east now meant enforcement of that decree. Russia, already a foe, was also a key trading partner with Britain. Forcing Russia to negotiate with France would end this dual threat.⁴¹

This larger cause justified French activity in the eastern hinterlands and near the Russian border. The viability of that end would get its chance to shine since, in the spring of 1807, Russia again accepted the French challenge of battle. Another clash unfolded at Friedland in eastern Prussia, ending with Napoleon destroying a large portion of another Russian army. Czar Alexander I immediately sued for peace, and the two emperors, with the Prussian king in attendance as well, met at the town of Tilsit (Sovetsk) on the Neman River to discuss terms. Unwilling to face the might of French arms, the czar accepted a peace tying Russia to the Continental System. Napoleon had achieved this concord as a blow against Britain, a tremendous achievement.⁴²

The problem was, as was now an established pattern, a French-imposed peace meant another war as things escalated. First, a British expeditionary force again struck Copenhagen to destroy Denmark's fleet. Then, Napoleon attacked Spain. A French corps had crossed Spain and occupied Lisbon to force Portugal to close its ports to Britain, which it did by the end of 1807. The hoped for follow-on success to this operation evaporated once Napoleon deposed the Spanish king, plunging the nation into chaos. In a short time, a widespread guerrilla movement engaged a French army of increasing size, one attempting to pacify Spain. The French achieved this end soon enough, only to see a small British army arrive in Portugal and expel the French there, threatening their hold on Spain. Napoleon responded with a massive attack and swept into Madrid in early December 1808 after scattering the Spanish Army and forcing the advancing British to halt, retreat, and evacuate from the Galician port of A Coruña.

A short time later, Britain sent another army to the peninsula to engage the French army there, and the war intensified.⁴³

France, mired in Spain, emboldened Austria. That state again went to war against Napoleon in early April 1809. Still fuming given their defeat in 1805, the Austrians had revamped their army to once more challenge Napoleon on the field of battle.⁴⁴ The punitive nature of the Napoleon peace fueled this next crisis. French ability to maintain control of a good portion of Western Europe was now tested to the utmost. Napoleon rose to the challenge. He marshaled another army in central Germany and rebuffed the Austrian advance into Bavaria. But that success required another lengthy French advance to Vienna and another showdown with the Austrian Army. This next large-scale battle at Aspern-Essling in May 1809 blunted Napoleon's string of military successes. He crossed the Danube just south of Vienna on a makeshift link from one bank to the other, his force of approximately 30,000 men facing an Austrian Army of more than 100,000 soldiers. The French managed to survive and withdraw, but the retreat spoke to a Napoleon defeat. Popular unrest reverberated across Germany, further straining French control of Germany. Only another battlefield success could restore his reputation and reestablish French supremacy, and Napoleon set out to achieve this end.

He would get it at the Battle of Wagram, fought during two days in early July. There, at the same crossing point as before, Napoleon assembled a great host of 160,000 soldiers, confronted by an equal number of Austrians. In this tactical space, Napoleon found some room for maneuver, and he moved to strike the Austrian left flank. That blow invited that same strike against the French, and a perilous struggle engulfed the two armies. The French would prevail, having deflated the Austrian commander, Prince Charles, more than scattering the Austrian army. Each side lost some 30,000 men, and only the loss of fight in the prince spelled the difference in the battle. Napoleon imposed another peace, and Austria fell quiescent, but the new peace was as tenuous as the last.⁴⁵

Twilight

Napoleon appeared to heed this lesson of risking too much on battlefield success. Having survived in 1809, he looked to consolidate French power in 1810, and this purpose meant a chance for a fuller consideration of the operational art as naval integration. He dominated much of the western continent, but Britain remained defiant. Still, the Continental System put the island nation to the test and produced some predictable results: Britain faced hardships and even some turmoil but remained far from collapse.⁴⁶ The British Empire recalibrated its outlays, but not its mission. Seapower would continue to secure economic largess and ground forces would remain limited. Only Arthur Wellesley, 1st duke of Wellington, commanding an army in Spain, remained active in Europe.

Some additional expeditionary threats could again be brokered, but that effort had gone badly in a strike at Walcheren island near Antwerp in 1809, a move designed to support the Austrians. A British army of 50,000 men did little more than serve as a distraction, straining British resources still further.⁴⁷ Wellington's model appeared the wiser choice—an army intended to keep the fighting going in Spain, thereby keeping France off-balance.⁴⁸ Otherwise, that foe of France sought to put together another coalition to oppose Napoleon. Additionally, plying European states to consider resuming trade, if not entering yet another coalition, meant a challenge to French rule, and a validation of naval integration as a function of the operational art as Britain had maintained throughout the Napoleonic period. The British government issued their own decrees, such as the Orders in Council in 1807, demanding that neutral vessels declare themselves at a British port and pay a fee before continuing to Europe. Napoleon denounced that act and those complying in his Milan Decree in December 1807. In both respects, naval integration tested the purpose of ensuring economic vitality as a strategic weapon. But Britain embraced a long struggle, content to prolong the war and wait for the French to make a mistake.⁴⁹

That came soon enough when Napoleon struck Russia in June 1812. Ostensibly the purpose was to force the czar to resume his participation in the Continental System. A French-dominated Europe would deliver lasting security.⁵⁰ Britain's continued resistance undermined this aim, and Napoleon sought recourse. Napoleon could not help but test his fortune again via battle—battle designed to bring land power to bear on the problem of naval integration. Perhaps one could label the French invasion of Russia strategic naval integration should the purpose be economic and targeting Britain economically, as was stated. But the indirection of this aim would prove the flimsiness of such reasoning. Predictably, the Russian armies avoided contact and retreated into the interior. Napoleon followed, incrementally advancing farther and farther into the recesses of an expansive land offering little means of supplying his army. Attrition from want, sickness, and contending with all hazards depleted the vast French Army of 660,000 men to but 130,000 making the final push onto Moscow.⁵¹ On 7 September, another great Napoleonic battle at Borodino, 120 kilometers from Moscow, produced the now frequent bloodbath and dubious success—the Russians retreated some more, the French followed, even occupying Moscow, but the war continued.

This titanic struggle suggests that Napoleon's fate hung on his ability to broker a land decision. The czar's refusal to submit invited this confrontation and achieved the hoped-for result. Napoleon retreated from Moscow in the third week of October, a withdrawal that soon wrecked the remainder of his army. Indeed, the emperor faced complete annihilation and capture, and only some brilliant generalship on his part allowed the French Army to cross the

Berezina River and escape from Russia. This feat prompted him to abandon the remnants of his army and race for Paris to begin the process of quelling the inevitable tide of unrest that faced him after such a colossal disaster. The scope of this loss is hard to set in terms easy to understand. The fall had been rapid and far. And the foolhardy quest of seeking a land offensive of gigantic proportions to achieve a form of naval integration and so humble Britain also had been laid bare as a failure.

A recalibration featuring some other measure of naval integration was now no longer an option. Prussia embraced the struggle and joined Russian armies crossing the Elbe River.⁵² Austria once more threatened war, waiting to see how the next stage of combat unfolded. A land war was again needed. Napoleon led a new, untested army into western Germany and quickly won a series of victories, but again, not decisive enough to force a settlement. When Austria did enter this war, the weight of force was too much for even Napoleon to contend with, and he met defeat after three days of battle at Leipzig in October 1813. This defeat forced him back into France, and he faced a fight for his very survival as emperor as well as for the integrity of the French nation.

Napoleon now contended with enemies on all sides, including Wellington advancing from Spain into southern France. In 1814, France was no longer the revolutionary power that faced similar threats in 1791, when allied armies threatened the state with invasion. Now, the empire was shattered, Napoleon still willing to fight but France was a spent force. Still, the allies offered Napoleon a chance to keep his throne; the old rivalries sapped allied resolve to finish off the usurper from long ago. Instead, Napoleon would force that outcome by refusing to submit, and an allied invasion went forward in January 1814, some 300,000 soldiers threatening France's eastern border alone. Napoleon, perhaps commanding 85,000 soldiers there, took the field and delayed the inevitable until forced to abdicate after the loss of Paris at the end of March 1814.⁵³ In a year's time, the upstart would return from exile and wage the Hundred Days campaign, ending with his defeat at Waterloo and permanent exile to St. Helena Island. This codicil merely punctuated the end, a rapid rise to power seeing an incredibly faster demise and all resting on a single focus—military exploits. The limitations of such standing on land alone had been clearly exposed, leaving the next task a measure of seeing the means to this end as a warning to those planning for future war to avoid such a negative fate with a better concept of naval integration.

Unity of the Operational Art

Was there a better way? Such conjecture is easy in retrospect. Knowing the pitfalls that are to happen make alternative choices all the more desirable, even if the means to that end are artificial in the extreme. In this case, however, some

of that analysis is needed. An operational art wedded to land victories not only invited French defeat but spurned the larger understanding of the operational art. Napoleon accepted the division between land and sea; this was a choice more than a necessity. Even after defeat at Trafalgar in 1805, France had more ships and could still present a naval threat. But that rebuilding effort meant confronting a lack of seamanship. That ability was harder to judge and to overcome. Without such an improvement, further French naval engagement appeared pointless and this is where things went. There was no additional French challenge of Britain at sea. Any such naval considerations were long since abandoned in favor of land campaigns. The division between the two appeared all but accepted by Napoleon, much to the detriment of France.

The Continental System challenges this view, however. Here was a more sophisticated counter to British seapower than its critics allow. True, the need to force Europe to comply with this means of economic warfare helped explain Napoleon's constant and expansive wars.⁵⁴ These endless campaigns invited disaster, and this eventually came to pass. One could admire the great general's ability to last as long as he did and to expand French influence as far as he did, but this compliment too easily forgives his defeat.⁵⁵ France would bow to British mastery, and this outcome represented bitter defeat. Be that as it may, to deny Britain markets on the continent resembled the economic goal behind the attack on Egypt in 1799. This deliberate purpose meant a reckoning with the unity of the operational art, of melding sea and land campaigns into one.⁵⁶ That Europe proved ungovernable for Napoleon speaks to the limits of French power, less a bankrupt effort of naval integration. Britain's strategic position simply proved stronger than France's. Napoleon did not ignore this reality; he strove to do something about it with the most promising means at his disposal—economic coercion. That he failed speaks more to the strength of Britain's operational art and less to a failure of Napoleon to adapt to the threat he faced as a referendum on a better operational art at sea than on land.

Yet, this view confronts the emperor's unwillingness to make peace after the Russian debacle. Tied to a land struggle, the campaign in 1813 made some sense; that of 1814 was unforgivable. France had no reasonable chance to prevail, and it did not. Flouting naval integration had brought Napoleon to this point. If a decision by land was unavoidable after 1812, up to this date, the chance and need to frame naval integration as the unity of the operational art loomed large. As mentioned, the invasion of Russia could be labeled strategic naval integration given the economic purpose of bringing Russia to heel with the Continental System. But the means too far exceeded that purpose. Attempted success on land too much dwarfed this economic, naval pursuit. Additionally, Napoleon had ample time to make this measure and find a suitable application of naval integration meeting the strategic end of humbling British

power. Perhaps Napoleon could reason the ends would take too long via this means. He needed to stay in power. This view lost credibility after 1807, perhaps before that date. More pointedly, his ultimate failure underscored Britain's ability to stay true to its purpose of naval integration. With Britain's operational art superior to that of France, this unity of the operational art would at last seek one guiding principle of the means of war and as such proved there was only one such method, not two (i.e., one for land and one for sea).

Endnotes

1. The Marine Corps is most overt. See the section on "Maneuver Warfare" in *Warfighting*, Marine Corps Doctrinal Publication (MCDP) 1 (Washington, DC: Headquarters Marine Corps, 1997), 72–76. See also John R. Boyd's principles of maneuver captured in a series of videos. See John Boyd, "Patterns of Conflict: Part 4," YouTube, 2 August 2015, 27:35. Boyd, an Air Force officer, greatly influenced the Marine Corps and its adoption of maneuver warfare. See that discussion in the *Marine Corps Gazette*, best captured in the following: William S. Lind, "Defining Maneuver Warfare for the Marine Corps," *Marine Corps Gazette* 64, no. 3 (March 1980): 56; Capt Gary I. Wilson et al., "The 'Maneuver Warfare' Concept," *Marine Corps Gazette* 65, no. 4 (April 1981): 53; and Maj Kenneth F. McKenzie, "On the Verge of a New Era: The Marine Corps and Maneuver Warfare," *Marine Corps Gazette* 77, no. 7 (July 1993): 64. Joint doctrine recognizes nine principles of war that one could say reflect Napoleonic lessons: "objective, offensive, mass, maneuver, economy of force, unity of command, security, surprise, and simplicity." See *Joint Operations*, Joint Publication 3-0 (Washington, DC: Headquarters Marine Corps, 2018), ix. In parallel fashion, the U.S. Army stresses four "tenets of unified land operations" consisting of simultaneity, depth, synchronization, flexibility. See *Operations*, Army Doctrine Publication 3-0 (Washington, DC: Headquarters, Department of the Army, 2019), 3-12.
2. Andrew Lambert stresses England as a "seapower culture" dictating strategy. Lambert, *Seapower States: Maritime Culture, Continental Empires and the Conflict That Made the Modern World* (New Haven, CT: Yale University Press, 2018), 6. Colin S. Gray says seapower nets greater influence than merely land power. Gray, "Sea Power: The Great Enabler," *Naval War College Review* 47, no. 1 (Winter 1994): 18.
3. Naval integration consists of ensuring "persistent naval forward presence [on land] to enable sea control and denial operations." This "operational integration" links land and sea efforts to defeat "long-range precision fires" to gain freedom of maneuver "by traditional large-signature naval platforms." See the Marine Corps definition of naval integration, *Commandant's Planning Guidance: 38th Commandant of the Marine Corps* (Washington, DC: Headquarters Marine Corps, 2019), 2.
4. Martin Robson, *A History of the Royal Navy: The Napoleonic Wars* (London: I.B. Tauris, 2014), 3. For this approach as a "mercantilist war," see Edward Mead Earle, "Adam Smith, Alexander Hamilton, Friedrich List: The Economic Foundations of Military Power," in *Makers of Modern Strategy from Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University, 1986), 219–20, <https://doi.org/10.1515/9781400835461-010>. See "Pitt's Plan" as per the elder William Pitt and continued by Pitt the Younger, in E. B. Potter, *Sea Power: A Naval History*, 2d ed. (Annapolis, MD: Naval Institute Press, 1981), 25–26, 55. Jeremy Black calls this combination a mixture of naval strength and colonial power. Black, *Britain as a Military Power, 1688–1815* (London: UCL Press, 1999), 222.
5. Paul Schroeder, *The Transformation of European Politics* (New York: Oxford University Press, 1994), 116–17.
6. For signaling reform, see Michael A. Palmer, *Command at Sea: Naval Command and*

- Control since the Sixteenth Century* (Cambridge, MA: Harvard University Press, 2005), 163.
7. Palmer cautions against a too categorical condemnation of the revolution's impact on the navy. On the one hand, turmoil ended any push for reforms, so much of the French fleet remained intact. On the other hand, naval reform did not go far enough to capitalize on the new French fighting spirit. Palmer, *Command at Sea*, 164. Philip Dwyer says the French Navy suffered terribly from the revolution. Dwyer, *Napoleon: The Path to Power, 1769–1799* (London: Bloomsbury, 2007), 334. So too does Andrew Lambert, *Nelson: Britannia's God of War* (London: Faber, 2004), xx.
 8. Potter, *Sea Power*, 25.
 9. Lambert, *Nelson*, xxiv; and Roger Knight, *The Pursuit of Victory: The Life and Achievement of Horatio Nelson* (New York: Penguin, 2005), 222, 227.
 10. Palmer, *Command at Sea*, 195.
 11. Piers Mackesy, "Problems of an Amphibious Power: Britain against France, 1793–1815," *Naval War College Review* 30, no. 4 (Spring 1978): 18–19.
 12. Dwyer, *Napoleon*, 335, 342.
 13. Other members of the French government had conceived of this same plan. Steven Englund, *Napoleon: A Political Life* (New York: Scribner, 2004), 191, 269.
 14. Britain's difficulty of maintaining its empire is in Christopher Hall, *British Strategy in the Napoleonic War, 1803–15* (Manchester, UK: Manchester University Press, 1999), xi–xii. Julian Stafford Corbett took this measure in 1911, writing that "defensive fleet operations" must allow for "offensive operations" to gain "sea command." Corbett, *Some Principles of Maritime Strategy* (Annapolis, MD: Naval Institute Press, 1988; London: Longmans, Green, 1911), 209.
 15. The weather and Nelson's lack of frigates handicapped his effort to detect and engage the French fleet. See Knight, *The Pursuit of Victory*, 282–83.
 16. Peter Padfield, *Maritime Power and the Struggle for Freedom: Naval Campaigns that Shaped the Modern World, 1788–1851* (London: John Murray, 2003), 156.
 17. Whether Nelson gave this order to maneuver on both sides of the French fleet is in question. Padfield, *Maritime Power and the Struggle for Freedom*, 160. Roger Knight says he did not. See Knight, *The Pursuit of Victory*, 291.
 18. Padfield, *Maritime Power and the Struggle for Freedom*, 158–60.
 19. *Mamluk*, or slave soldier, refers to a member of one of the armies of slaves that won political control of several Muslim states.
 20. David G. Chandler, *The Campaigns of Napoleon* (New York: MacMillan Publishing, 1966), 223.
 21. Padfield, *Maritime Power and the Struggle for Freedom*, 170–71.
 22. Chandler, *The Campaigns of Napoleon*, 238.
 23. Chandler, *The Campaigns of Napoleon*, 219–45.
 24. Ole Feldbaek, *The Battle of Copenhagen, 1801: Nelson and the Danes*, trans. Tony Wedgwood (Barnsley, UK: Leo Cooper, 2002), 32.
 25. Feldbaek, *The Battle of Copenhagen*, 13, 19, 223–25.
 26. Clark G. Reynolds, *Command of the Sea: The History and Strategy of Maritime Empires* (New York: William Morrow, 1974), 294.
 27. Englund, *Napoleon*, 267.
 28. The difficulty of achieving this balance is in C. I. Hamilton, *The Making of the Modern Admiralty: British Naval Policy-Making, 1805–1927* (New York: Cambridge, 2011), 2; Roger Morriss, *The Foundations of British Maritime Ascendancy: Resources, Logistics and the State, 1755–1815* (New York: Cambridge University Press, 2011), 5; David Andress, *The Savage Storm: Britain on the Brink in the Age of Napoleon* (London: Little, Brown, 2012), iii; and Roger Knight, *Britain against Napoleon: The Organization of Victory, 1793–1815* (London: Allen Lane, 2013), 7–8.
 29. Black, *Britain as a Military Power*, 228.
 30. All rested on keeping the navy at sea for extended periods of time. See N. A. M. Rodger, *The Command of the Ocean: A Naval History of Britain, 1649–1815* (London: Allen Lane, 2004), 379, 543.

31. Black, *Britain as a Military Power*, 229.
32. Padfield, *Maritime Power and the Struggle for Freedom*, 215–16, 228.
33. Matthew J. Flynn, *First Strike: Preemptive War in Modern History* (New York: Routledge, 2008), 20, 25.
34. Potter, *Sea Power*, 57–58; and Andrew D. Lambert, *War at Sea in the Age of the Sail: 1650–1850* (London: Cassell, 2000), 181.
35. Nelson as the architect of this success shines through even when the history is stripped of the myth and legend that surround his name. See Knight, *The Pursuit of Victory*, xxii–xxiii. Lambert makes the same claim in *Nelson*, xvii. Robson says British naval success was always more than just what Nelson accomplished. Robson, *A History of the Royal Navy*, xxi.
36. Scholars debate the decisive results of Trafalgar, stipulating that while England was not again seriously challenged at sea, Britain did face another 10 years of war. See Palmer, *Command at Sea*, 206. David Syrett argues Britain maintained dominance after 1805. See Syrett, “The Role of the Royal Navy in the Napoleonic Wars after Trafalgar, 1805–1814,” *Naval War College Review* 32, no. 5 (September–October 1979): 82. Jeremy Black concurs. See Black, *Britain as a Military Power, 1688–1815*, 231. Lawrence Sondhaus maintains that France’s ability to reach into other states allowed a massive ship-building program to unfold after 1805, straining Britain’s seapower. See Sondhaus, “Napoleon’s Shipbuilding Program at Venice and the Struggle for National Mastery in the Adriatic, 1806–1814,” *Journal of Military History* 53, no. 4 (October 1989): 349. Reynolds concurs, although he stresses that Britain prevailed. See Reynolds, *Command of the Sea*, 315. Richard Glover said something similar. Sheer numbers of French ships after 1805 could possibly overcome Britain’s superiority in seamanship. See Glover, “The French Fleet, 1807–1814: Britain’s Problem; and Madison’s Opportunity,” *Journal of Military History* 39, no. 3 (September 1967): 236.
37. The campaign climaxing at Austerlitz that sees the end of the “old order” speaks to strategic success, even one of grand strategy. See Frederick Schneid, *Napoleon’s Conquest of Europe: The War of the Third Coalition* (Westport, CT: Praeger, 2005), 2. That more wars followed dampens this view and so dampens Napoleon’s successful use of the operational art. That Napoleon pioneered this thinking, see Bruno Colson, *Napoleon on War*, trans. Gregory Elliott (New York: Oxford University, 2015), 197–98, 363. But the limits of change Napoleon brought to Europe in the name of revolution speak to less of a strategic success. See the lack of great wars of liberation in Italy, Spain, Russia, or Germany. For Russia and Germany, see Charles Esdaile, *Napoleon’s Wars: An International History* (New York: Penguin Books, 2007), 472, 499; and Esdaile again for Spain, *Fighting Napoleon: Guerrillas, Bandits and Adventurers in Spain, 1808–1814* (New Haven, CT: Yale University Press, 2004), 89. See also Michael Broers, *Europe under Napoleon, 1799–1815* (New York: Arnold, 1996), 269; and in Italy, Broers, *The Napoleonic Empire in Italy, 1796–1814: Cultural Imperialism in a European Context?* (London: Palgrave Macmillan, 2005), 35, <https://doi.org/10.1057/9780230005747>.
38. Chandler, *The Campaigns of Napoleon*, 460.
39. David A. Bell, *The First Total War: Napoleon’s Europe and the Birth of Warfare as We Know It* (New York: Houghton Mifflin, 2007), 238–39.
40. Chandler, *The Campaigns of Napoleon*, 534–35.
41. Esdaile, *Napoleon’s Wars*, 276–77.
42. Chandler, *The Campaigns of Napoleon*, 588–89.
43. Napoleon’s failure to consolidate his gains by repeated wars after 1807, not just in Spain, but in other parts of Europe, underscored his failure to reach accommodation with other states in Europe, states not friendly to Britain. Esdaile, *Napoleon’s Wars*, 13.
44. Gunther E. Rothenberg, *The Art of Warfare in the Age of Napoleon* (London: B.T. Batsford, 1977), 170–80.
45. For Wagram and the tenuous results of the 1809 campaign, see Chandler, *The Campaigns of Napoleon*, 707–32, 732–36.
46. Mark Philip, “Introduction,” in *Resisting Napoleon: The British Response to the Threat of Invasion, 1797–1815*, ed. Mark Philip (Burlington, VT: Ashgate, 2006), 2, 7, <https://doi.org/10.1057/9780230005747>.

- doi.org/10.4324/9781315244372; Stuart Semmel, *Napoleon and the British* (New Haven, CT: Yale University Press, 2004), 6; and Wilfrid Prest, *Albion Ascendant: British History, 1660–1815* (New York: Oxford University Press, 1998), 150.
47. Lambert, *Age of Sail, 184*. Reynolds stresses that the British threat to Antwerp strained French commitment of forces as well. See Reynolds, *Command of the Sea*, 313.
 48. Rory Muir, *Britain and the Defeat of Napoleon, 1807–1815* (New Haven, CT: Yale University Press, 1996), 379, 381. Christopher Hall argues the Royal Navy was key to Wellington's success. See Hall, *Wellington's Navy: Sea Power and the Peninsular War, 1807–1814* (London: Chatham, 2004), 2.
 49. Richard Harding says Britain's economy was well positioned to withstand Napoleon's Continental System. See Harding, *Seapower and Naval Warfare, 1650–1830* (London: UCL Press, 1999), 274. Potter says Britain created new markets and increased trade. Potter, *Sea Power*, 81.
 50. Adam Zamoyski, *Moscow 1812: Napoleon's Fatal March* (New York: HarperCollins, 2004), 8, 10. Esdaile says Napoleon's personal ambition drove him to invade Russia. See Esdaile, *Napoleon's Wars*, 458.
 51. See Bell, *The First Total War*, 258, for total numbers. The push to Moscow represents my own math.
 52. Michael V. Leggiere, *Napoleon and Berlin: The Franco-Prussian War in North Germany, 1813* (Norman: University of Oklahoma, 2002), x–xi, 1.
 53. Despite the odds and the outcome, scholars still rate Napoleon's 1814 campaign as one of his best. Michael V. Leggiere, *The Fall of Napoleon*, vol. 1, *The Allied Invasion of France, 1813–1814* (New York: Cambridge University Press, 2007), 40, <https://doi.org/10.1017/CBO9781316257135>; and Andrew Uffindell, *Napoleon, 1814: The Defense of France* (Barnsley, UK: Pen and Sword, 2009), x.
 54. Bell, *The First Total War*, 250.
 55. See the legacy of the French empire as one of resting on French administration, less Napoleon. Stuart Woolf, *Napoleon's Integration of Europe* (New York: Routledge, 1991), 133–34; Broers, *Europe under Napoleon*, 266–67; and Alexander Grab, *Napoleon and the Transformation of Europe* (New York: Palgrave Macmillan, 2003), x, 205.
 56. Colin S. Gray says “the natural relationship between sea and land power is more one of cooperation than of antagonism.” Gray, “Sea Power: The Great Enabler,” *Naval War College Review* 47, no. 1 (Winter 1994): 26.

Same Water, Different Dreams

Salient Lessons of the Sino-Japanese War for Future Naval Warfare

Andrew Rhodes

Abstract: American officers considering the role of the sea Services in a future war must understand the history and organizational culture of the Chinese military and consider how these factors shape the Chinese approach to naval strategy and operations. The Sino-Japanese War of 1894–95 remains a cautionary tale full of salient lessons for future conflict. A review of recent Chinese publications highlights several consistent themes that underpin Chinese thinking about naval strategy. Chinese authors assess that the future requires that China inculcate an awareness of the maritime domain in its people, that it build institutions that can sustain seapower, and that, at the operational level, it actively seeks to contest and gain sea control far from shore. Careful consideration of the Sino-Japanese War can support two priority focus areas from the *Commandant's Planning Guidance*: “warfighting” and “education and training.”

Keywords: Sino-Japanese War (1894–1895), China, seapower, naval history, naval strategy, People’s Liberation Army, Qing Dynasty

Few Americans reflect on the operational and strategic lessons of the Sino-Japanese War of 1894–95, despite that it marks the “birth of the modern international order of the Far East.”¹ For Chinese strategists and histori-

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ans, this first Sino-Japanese War remains a major focus of study and a source of cautionary tales about contending for regional power and employing a navy. Indeed, 1894 was the last time China had a world-class navy: now that the People's Liberation Army Navy (PLAN) has gained international prominence, Chinese navalists have justifiably given new attention to this chapter in China's naval history. Every nation and military Service has its own strategic culture that shapes the way contemporary issues are analyzed through historical analogy. Some of these strategic narratives are a deliberate effort to fit history conveniently to current issues, but the prevailing narrative, whatever its origins, still shapes decision making. Technological change is a major aspect of changes in the character of future naval warfare, but equally important are the stories that a Service tells itself, for these help determine choices on force design and the development of operational concepts.

This article will begin with a brief review of the maritime aspects of the 1894–95 conflict, followed by a summary of the initial conclusions that American naval officers drew from the conflict at the time, reminding American readers that this should not be an obscure conflict for the sea Services. The following section will seek to broaden American understanding of the importance of the Sino-Japanese War by reviewing recent Chinese naval and academic writing on the conflict that have not previously been translated or widely studied in the United States. Finally, the article will offer some conclusions about the key themes that emerge after studying some examples from this body of Chinese-language literature. These writings indicate that, for Chinese strategists and naval officers, the Sino-Japanese War remains an important and salient case study for thinking about the role of seapower in peacetime and in war. The *Commandant's Planning Guidance* calls for correcting insufficient “discussions on naval concepts, naval programs, or naval warfare” and strengthening the presence of a “thinking enemy” in wargaming.² The sea Services' planners and educators should devote further study to the Sino-Japanese War and, most critically, how this history might shape future Chinese decisions.

A Brief Review of the Sino-Japanese War of 1894–95: The Naval Campaigns

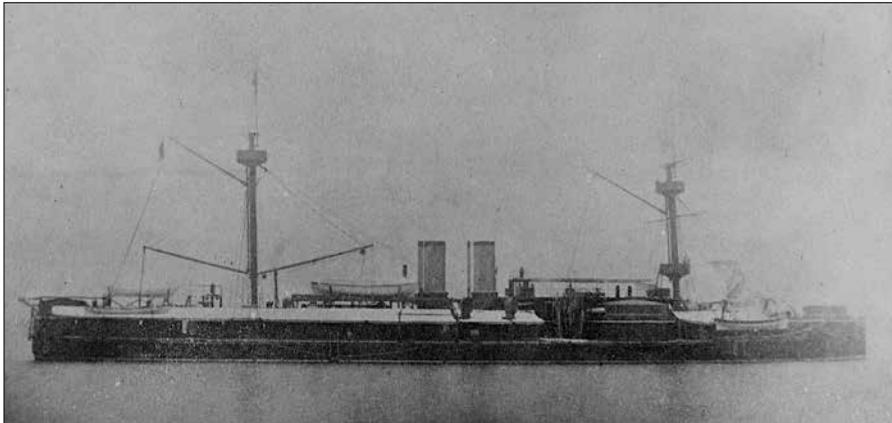
The Sino-Japanese War of 1894–95 (also known as the “Jiawu War” in China, the “Japan-Qing War” in Japan, or the “First Sino-Japanese War”) was much more than a victory of modernizing Japan over declining China. The war is best remembered for the naval battles in which the new Imperial Japanese Navy destroyed China's naval forces, which proved much less effective than most observers had anticipated. To appreciate the influence of this conflict on Chinese naval thinking today, it is important to put the conflict in a broader context than the tactical and operational explanations of Japan's superiority at sea.

The war began as a contest for control of the Korean Peninsula, where China had long been the dominant player. The unrest brought about by the 1894 Tonghak Uprising prompted Japan to challenge China's sphere of influence. Both China and Japan landed troops and sought to use their navies to secure harbors on the west coast of Korea and control the sea lanes through the Yellow Sea. China had invested substantial resources in modernizing its naval forces during the decade leading up to the war and was eager to erase the shame of its naval defeat in the 1884 Sino-French War. However, on the eve of the conflict in Korea, China really had four navies without unified control: the force operating in northern Chinese waters, the Beiyang Fleet (northern ocean fleet), was not only the most modern of China's squadrons, but it was among the most powerful fleets in the world. It had a number of modern warships recently built in European shipyards, and their Chinese crews had impressed foreign observers during maneuvers.³ The Beiyang Fleet fell under the direct control of Viceroy Li Hongzhang, a senior Qing official and one of the leading figures supporting modernization in the late Qing period, who also controlled some of the key land forces in northeastern China. The other Qing fleets, and the diverse array of mismatched units that made up China's Army, were manned, trained, and equipped separately and beyond the control of Li Hongzhang. This arrangement was typical of the multiethnic Qing state, in which an ethnic Manchu ruling dynasty administered a vast empire gained by conquest through an array of separate local forces.

The first naval battle of the war took place in the summer of 1894 near Pungdo Island (a.k.a. Feng Island) in the approaches to the Korean port of Asan. Japanese forces had taken control of the port at Incheon (Chemulpo) and occupied Seoul, demanding the withdrawal of a Chinese army encamped to the south at Asan. War had not yet been declared when Chinese ships with reinforcements approached Asan on 25 July 1894 and the Japanese fleet attacked, sinking a critical transport and damaging multiple combatants. The Japanese Army then defeated the unreinforced Chinese troops several days later and marched north to Pyongyang. After the Battle of Pungdo Island and the defeat at Asan, the Qing court demoted Li Hongzhang and issued strict orders to the Beiyang Fleet not to sail east of the tip of the Shandong Peninsula. In September, Japan won undisputed control over Korea, defeating the Chinese on land at Pyongyang and on sea at the mouth of the Yalu River.

The 17 September 1894 Battle of the Yalu (also known as the Battle of the Yellow Sea) was the pivotal naval engagement of the war and remains a salient example for Chinese authors on naval issues. The battle also put the world on notice that Japan had emerged as a naval power. Foreign observers at the time wrote extensively about the tactical and operational aspects of the battle between two heterogeneous fleets: 12 Chinese ships against 11 Japanese.⁴ Each

Figure 1. The *Dingyuan*, the pride of the Beiyang Fleet, was built in Germany in the 1880s



This predreadnought battleship was larger (more than 7,000 tons), more heavily armored, and mounted heavier armament (two turrets of twin 12-inch guns) than any ship in the Japanese Navy when war broke out. A replica of the *Dingyuan*, built in 2003, is one of main attractions at a museum in Weihai that commemorates the Beiyang Fleet and the Sino-Japanese War.

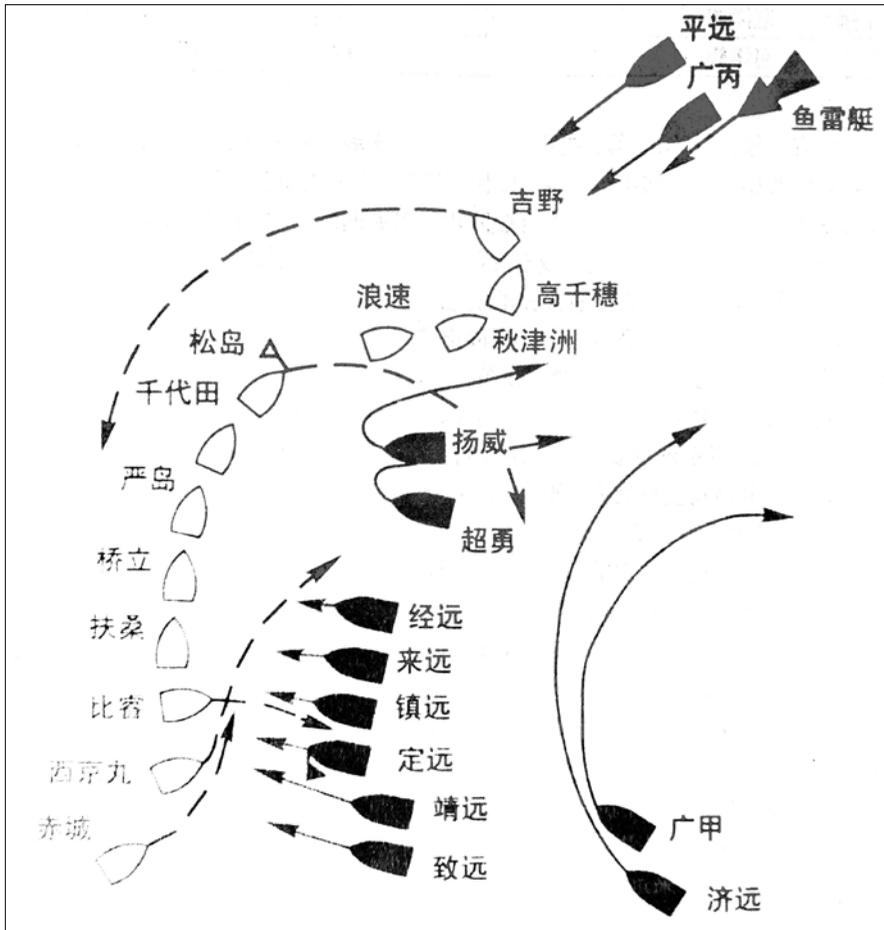
Source: Naval History and Heritage Command, NH 1926.

side had its strengths and weaknesses, and it was not clear at the time which was the favorite.

Subsequent historians have debated the specifics of how the faster Japanese fleet prevailed over the heavier Chinese ships, despite having smaller ships with less armor, by maneuvering in well-coordinated columns and devastating its enemy with sustained, well-aimed fire.⁵ The battle also highlighted many tactical deficiencies on the Chinese side, including inferior formations, breakdowns in command and control, poor-quality munitions, and inadequate damage control.⁶ This last point was particularly damning, as the Japanese ships' key advantage over the Chinese was in quick-firing guns that killed crews and started fires without necessarily dealing the devastating blows of the heavier battleship guns. China's battleships—the *Dingyuan* (1881) and the *Zhenyuan* (1882)—were larger and more heavily armed than any of the Japanese ships but had been unable to bring their heavy guns to bear on the enemy. The two battleships escaped to Port Arthur, but the Japanese destroyed five ships of the Beiyang Fleet while losing none of their own.

After the Battle of the Yalu, the remnants of the Beiyang Fleet remained at Port Arthur, giving Japan a free hand for amphibious landings on the Liaodong Peninsula in support of Japanese forces invading Manchuria from Korea. The day before the Battle of the Yalu, the Japanese Army defeated Chinese forces at

Map 1. Diagram of the Battle of the Yalu



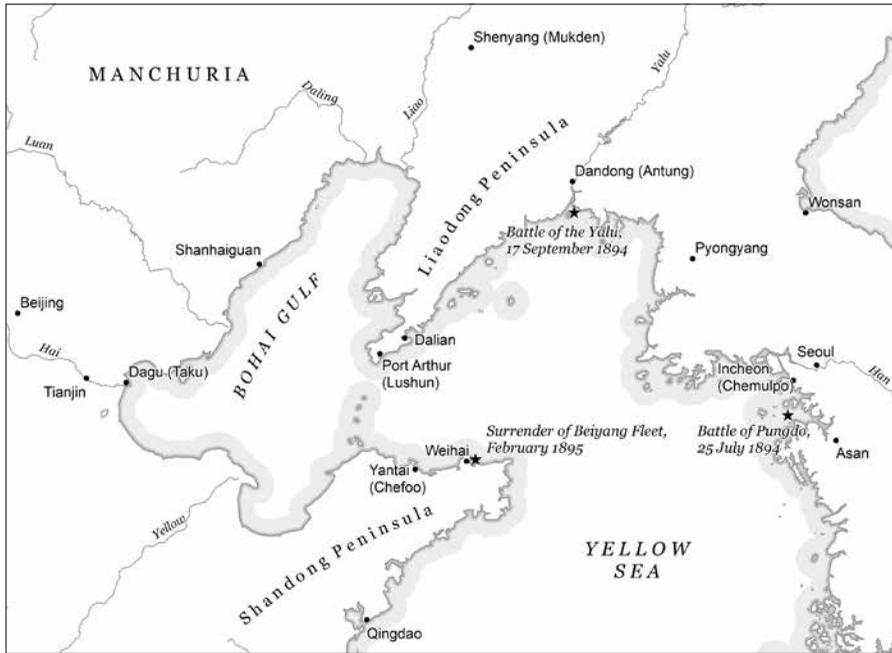
This diagram of the battle came from a 2009 PLA-published military history textbook. Chinese officers study the strategic as well as operational lessons of the Sino-Japanese War.

Source: Courtesy of the author, adapted by MCUP.

Pyongyang and marched north to cross the Yalu and drove the Chinese Army back toward the Qing ancestral city of Mukden (Shenyang). The isolation or final destruction of China's remaining naval forces would further allow the Japanese to sail unopposed into the Bohai Gulf and put amphibious forces ashore near Tianjin or Shanhaiguan for a short march to Beijing. Japanese ships landed on the Liaodong Peninsula at the end of October and within weeks enveloped Port Arthur, China's most important naval base and shipyard, from the landward side. The diminished and defenseless Beiyang Fleet then fled south to Weihai on the Shandong Peninsula.

The Japanese now enjoyed uncontested control of the Yellow Sea and were

Map 2. Key locations in the Sino-Japanese War of 1894–95



Source: Created by the author.

able to divide the army in Manchuria, embark an amphibious force at Dalian, and land it in Shandong. The Japanese fleet made a diversion to the west of Yantai, patrolled the coast, and placed mines to keep Chinese warships inside the Weihai harbor. The Japanese Army went ashore without resistance in late January 1895 on the tip of the Shandong Peninsula and marched west through the snow to encircle Weihai. Within two weeks, the defenses of Weihai crumbled under the combined attack of the Japanese Army and Navy: the city fell on 12 February 1895, and the Japanese captured or destroyed the remaining ships of the Beiyang Fleet in the harbor.⁷ The flagship, *Dingyuan*, was scuttled, while the *Zhenyuan* became part of the Imperial Japanese Navy for the next two decades and fought at the Battle of Tsushima in 1905.

Now utterly defenseless, the Qing court entered peace negotiations at the Japanese town of Shimonoseki and agreed to a treaty of massive concessions, including Japanese control over Korea, a major financial indemnity, new commercial rights for Japanese business, and the cession to Japan of the Liaodong Peninsula, the island of Taiwan, and the nearby Penghu Islands. Japan's lopsided victories and the terms of the Treaty of Shimonoseki confirmed Japanese ascendance in East Asia for a global audience and set the stage for the Russo-Japanese War (1904–5), the next in a series of contests for regional dominance.

Forgotten American Perspectives on a Forgotten War

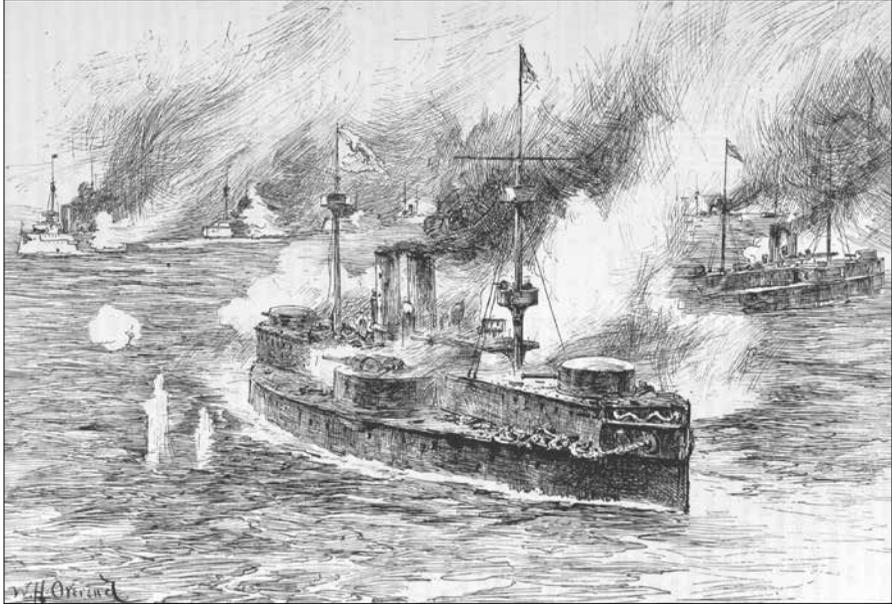
The naval battles of 1894–95 may seem obscure to Americans today, but they were carefully analyzed by American naval officers just after the war. Few American strategists or military officers studied Chinese institutions, culture, and language at the time, and these studies tended to fixate on the tactical and operational implications of the conflict, in part, because American perspectives on the naval conflict were initially shaped by the dramatic eyewitness accounts of foreign observers like Philo N. McGiffin, a legendary Annapolis graduate serving several years as an advisor in the Beiyang Fleet. When the commanding officer of the *Zhenyuan* was incapacitated at the Battle of the Yalu, McGiffin took command of the battleship through the thick of the fighting, becoming badly wounded himself.⁸ In 1895, the U.S. Naval Institute *Proceedings* published an analytical article on the battles by Ensign Frank Marble, drawing on the published accounts of McGiffin and a few European observers.⁹

Marble's article prompted several officers to respond in *Proceedings*, including Lieutenant William F. Halsey Sr., who added several points in support of Marble based on his own experience in the Asiatic Fleet. Halsey noted that "the usual dash and nerve, so characteristic of the Japanese nation, was apparent everywhere," and presumably inculcated the same respect for the Japanese in his son, Admiral Halsey. McGiffin's articles published in the United States and England provided the first draft of English language history of the battle and prompted Alfred Thayer Mahan to publish a commentary of McGiffin's account.¹⁰ Mahan's 1895 analysis of the battle considered the experience of Beiyang Fleet commander Ding Ruchang as "one of the commonest and most deplorable experiences of a war—the hands of a commander-in-chief, present on the scene of operations, tied by the positive instructions of a man, or set of men, at a distance."¹¹ Secretary of the Navy Hilary A. Herbert agreed, noting that "China should have brought on a battle at her own time and in her own way."¹²

Notwithstanding the operational commentary of these senior U.S. officials, Ensign Marble ended his analysis with a more strategic argument that remains highly salient today. Marble's concluding paragraph includes a note of caution for Western analysts who tended to dismiss the fighting qualities of Asian navies, credited European-produced arms with decisive advantages, or believed in their superiority over the still-young Chinese and Japanese naval Services. Marble rebuked such analyses as "ludicrous," recalling centuries of military tradition in Japan, noting that Westerners should acknowledge that Asian officers could also be "masters of their art" and reminding readers that the art of war belongs "not to one nation nor to one age."¹³

As Sally Paine points out, scholarship of the war in English since these initial accounts has been sparse and told mainly from a Japanese perspective,

Figure 2. Engraving of the Battle of the Yalu



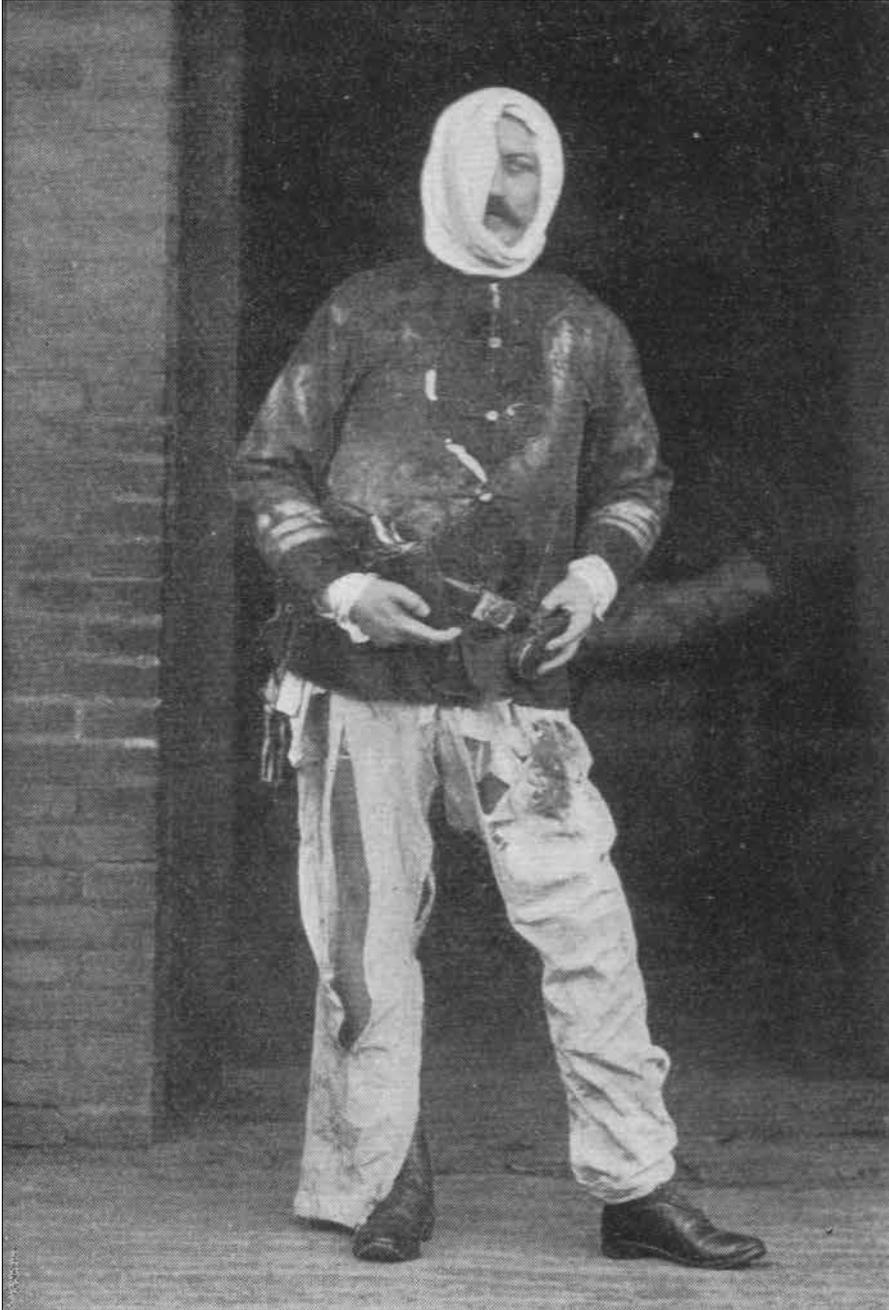
Source: Courtesy of the British Library.

as the victorious Japanese wrote much of the history, and the failing Qing state was not eager to publicize its shame. As an event in naval history, the naval war was soon eclipsed internationally by the Russo-Japanese War and the Battle of Tsushima.¹⁴ Paine filled a major void in 2003 with her book, the first history of the war in English making use of original archival material in Chinese, Japanese, and Russian. James Holmes, Paine's colleague at the Naval War College and a noted author on Chinese naval thought, has also written several recent articles about the conflict, calling for Americans to remember McGiffin's legacy and pay greater attention to a conflict that is well-remembered by Chinese strategists.¹⁵

Current Chinese Perspectives on a Newly Relevant War

The PLAN does not trace its origins to the Qing Navy or the Beiyang Fleet; the PLAN is the naval arm of the PLA, and therefore the navy of the Chinese Communist Party (CCP). The PLAN is not China's national navy, with no direct tie to the navy of a feudal monarchy. The Qing Dynasty represented a pinnacle of corrupt feudalism and foreign domination that the CCP has sought to eradicate. Given the history of the late Qing period and the outcome of the war, it is in many ways remarkable that the PLAN would memorialize the navy of the vilified Qing Dynasty and a disastrous naval defeat. However, the Sino-Japanese

Figure 3. American officer Philo N. McGiffin after the battle



Source: Published in McGiffin's 1895 article in Century Illustrated.

War is a key part of the CCP's narrative of grievance about a "century of humiliation" and the party leadership does draw, when convenient, on historical episodes that highlight the greatness of China's ancient civilization. In addition to promoting the CCP's version of modern Chinese foreign relations, elaborat-

ing the CCP's version of Qing history helps to justify the party's claim to have inherited sovereignty over regions that the pluralistic Qing empire actually won through conquest, not through cultural coherence.¹⁶

The resurgence in Chinese study of the Sino-Japanese War is owed, in part, to a variety of commemorative activities surrounding the 120th anniversary of the conflict in 2014. The PLA leadership held a major event at Weihai in August 2014, including speeches reflecting on the war by two members of the Central Military Commission.¹⁷ Scholars held conferences and published their papers in collections of the conference proceedings, although few of these papers have circulated outside of China or translated into English. Outside of military and academic settings, the anniversary was also set up by a 2012 mass-market film, *The Sino-Japanese War at Sea 1894*, which recreated the battles with sympathetic depictions of the Chinese naval officers who had studied abroad, built up the Beiyang Fleet, and did their best to fight the Japanese despite the failures of the Qing court. China's leading scholar of the Sino-Japanese War, Qi Qizhang, served as a historical advisor during filming. The film won some awards at the Shanghai International Film Festival, though the acting and special effects are unremarkable.¹⁸

One of the most important commentaries on the 120th anniversary—and one of the few that has been translated—was that of Admiral Wu Shengli, the PLAN commander at the time and a major driver of naval modernization during his decade overseeing the force. In a 2014 article in a PLA professional journal, Wu called on his officers to study the lessons of the Sino-Japanese War as a conflict “in which both sides’ navies were central, and in which victory was won through naval battles.”¹⁹ American officers would also benefit from following Wu's advice. Several previously untranslated writings by current PLAN officers and Chinese historians echo the same lessons that Wu emphasized. In particular, they highlight: the pitfalls of “weak ocean consciousness,” the importance of building institutions to support a navy, and the imperative to employ the navy actively and aggressively in combat.²⁰

Recent Chinese writings examined for this article emphasize the importance of “sea consciousness” (*haiyang yishi*, 海洋意识) or “awareness of seapower” (*haiquan yiyi*, 海权意识) among the population as a critical aspect of the nation's maritime power.²¹ The contemporary Chinese Communist narrative of Qing seapower argues that, on top of other failings of the corrupt dynasty, society under the Qing had no connection to the sea, leaving it unable to recognize China's maritime interests and the critical linkage between seapower and great power status. Qing China lacked a merchant class who relied on overseas trade and would represent these interests before the imperial court: even in authoritarian systems like Qing China, the case must be made to the people that the

government must use its workforce and resources for something as ambiguous as “maritime rights and interests.” Gong Yun and Yang Yurong, from the Naval Engineering University, pointed out in 2014 that the Qing “had no interest in the maritime economy due to their stable income from the land . . . and were short-sighted and conservative in naval construction.”²² Three PLAN officers in 2016 argued that China still lacks sufficient “maritime consciousness” and lags behind Japan in this area 120 years after the defeat of the Beiyang Fleet. They note by contrast that Japan makes “Ocean Day” a national holiday and national education policy inculcates children from kindergarten on the importance of the sea to the nation.²³ The CCP leadership’s commitment to maritime power has been highly evident in the last decade, although CCP hardliners and civil society alike have sought to enhance the maritime character of China since the 1980s.²⁴ Calls for China to turn its back on the Yellow River culture and engage in the international maritime economy were widespread in the period of openness before the 1989 Tiananmen Square Massacre, but such arguments now appear in authoritative CCP documents.²⁵ As Wu wrote in 2014, the Qing were defeated because “they still clung to the traditional thinking of valuing the land and neglecting the sea.”²⁶

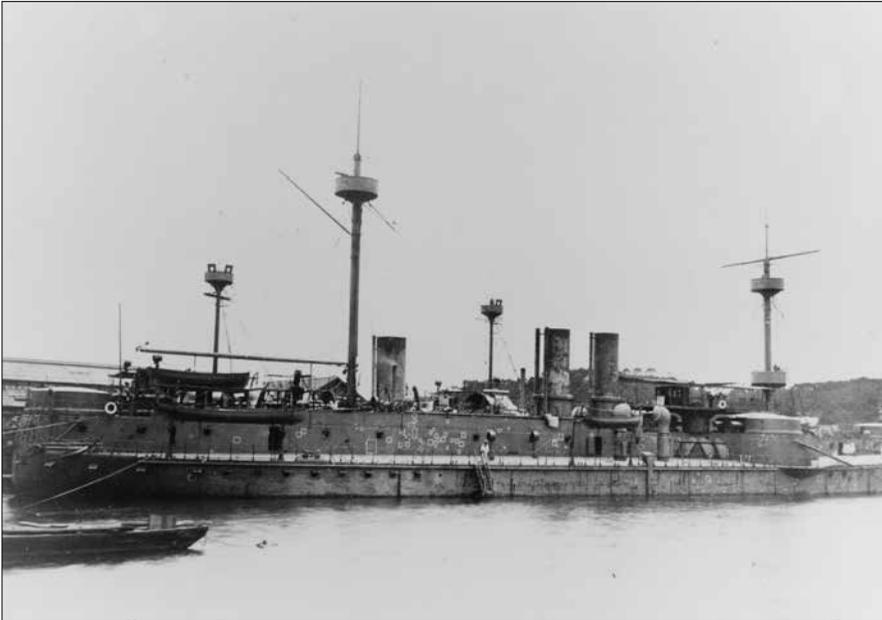
The second key lesson highlighted in recent Chinese articles is the importance of peacetime institutions who undertake the work of building up a powerful navy “commensurate with the status of a maritime power.”²⁷ Contemporary China is obviously more powerful and unified than under the inchoate and divided Qing, and modern China’s level of institutionalization has allowed it to pursue the buildup of a world-class fleet on a far more stable footing than the Qing enjoyed. Several recent Chinese authors explicitly identify as a decisive advantage the institutional support for the Imperial Japanese Navy after the Meiji Restoration. By contrast, they note the naval investments of the Qing were fractured, inefficient, and hidebound.²⁸ At the most basic level, the PLAN has benefited from stable finances and substantial budget growth since the 1980s: indeed, China’s defense white papers more than 15 years ago called for an explicit bias in budgetary support for the navy.²⁹ More recently, the 2015 *China’s Military Strategy*, a defense white paper, called for China to abandon the “traditional mentality that land outweighs sea.”³⁰ This balance is exactly the opposite of the Qing’s commitment to its various Manchu and Han armies over naval forces like the Beiyang Fleet. Institutionalization has also given the PLAN a solid foundation for training, education, and acquisition. In stark contrast to the 1890s, and in some ways in contrast to the 1990s, today’s PLAN does not rely on foreign technology or expertise: it can train its own personnel, educate its own officers, and build its own ships and state-of-the-art weapons. But contemporary authors do not just indict the Qing for misallocating resources;

they label Qing finances as “corruption,” the most grievous crime for Chinese officials in the Xi Jinping era. Much of this corruption discussion was de rigeur for any senior PLA official in 2014. Fan Changlong’s speech at the August 2014 commemorative conference included obligatory warnings about the Xu Caihou and Gu Junshan corruption cases. Nevertheless, the resonant narrative for today’s Chinese officers is that their predecessors perished in 1894 because of malfeasance in Beijing, not just their performance at sea.

The third salient lesson in these articles is the importance of employing the navy actively and aggressively in wartime. This lesson is particularly important for some American planners or commanders who tend to think of the military challenge from today’s China as primarily a question of sea denial. While there can be no doubt that the PLA fields some of the most sophisticated sea-denial capabilities in history, Chinese planners are not bounded by a defensive sea-denial approach to future naval warfare. Chinese writers are remarkably consistent in stating that the Beiyang Fleet was too passive and stayed too close to shore: by failing to challenge the Japanese fleet for sea control they ceded the initiative. A military history textbook published by the PLA in 2009 (in which map 1 appears) noted that the major strategic failing of the Qing was pursuing a policy of passive defense (*xiaoji fangyu*, 消极防御) in which it failed to “actively open up the maritime battlefield” and contest Japanese landings.³¹ Wu Shengli’s 2014 article argued that the Qing “thoughtlessly and passively [sought to] ‘protect their ships and restrain the enemy,’ emphasizing defense of seaports,” while the Japanese “placed emphasis on offensive combat at sea, using all their power to seize command of the sea, and taking the initiative in wartime.”³² The analysis of two officers from the PLAN Submarine Academy regrets that the Qing policy of “war avoidance (*bizhanzibao*, 避战自保) restricted the Beiyang Fleet from coming out, and ceded control of the Yellow Sea and the Bohai Sea.”³³

Recent Chinese authors appear unanimous that Chinese ships in 1894 should have been allowed to take the fight to the enemy, despite Japanese advantages in areas like quick-firing guns. Liu Jin, a Chinese naval historian, wrote in 2017 on the importance of Julian Corbett’s works on naval strategy and reiterated the example of Qing passivity in the Sino-Japanese War. Liu argues that the restrictions dictated by the Qing court were simply passive and cannot be justified as an example of a “fleet in being” (*cunzai jiandui*, 存在舰队) strategy.³⁴ Such a strategy seeks the preservation of core naval force from attack but still retains an offensive object: some historians have cited the restrained Beiyang Fleet as an example. Liu further argues that an accurate interpretation of historical battles, including the Sino-Japanese War, is necessary for the correct employment of a “fleet in being,” which Liu assesses could be an appropriate strategy for the Chinese fleet to employ against the more powerful United States today.³⁵

Figure 4. The *Zhenyuan* after the Battle of the Yalu



Source: *Naval History and Heritage Command, NH 88889.*

Conclusion

These lessons, drawn by Chinese authors about a conflict in Chinese waters more than a century ago, have relevance for American officers and strategists today. Military history is best used not as a source for answers for future conflict but as a means to ask better questions about the role of the sea Services and how to handle uncertainty in preparing for the future.³⁶ In keeping with the *Commandant's Planning Guidance*, American planners will find value in considering the historical analogies their Chinese counterparts use in discussing force design and operational concepts to prepare in peacetime for a “thinking enemy.” Neither the objective facts of the Sino-Japanese War, nor the subjective stories that the PLAN tells itself about that conflict, provide direct causal explanations for the naval programs the PLAN has pursued, nor can they reliably predict how the PLAN will behave in future conflicts. Nevertheless, the consistent narrative the PLAN tells itself about the Sino-Japanese War is an essential part of the story for those seeking to understand the modern Chinese perspective of China's future as a maritime nation and a first-rate naval power.

Force design is a product of the military, government, and (in China's case) party institutions that evaluate requirements and shape force development decisions. The expansion and modernization of the PLAN in recent decades indicates these institutions are dramatically different than those that produced the

Beiyang Fleet in the waning days of the Qing Dynasty. The narrative outlined here on the Sino-Japanese War would reject a fleet architecture designed only for defense in the littorals, even in the age of long-range, shore-based antiship missiles. China began important steps toward a true oceangoing navy in the 1980s, and its commitment to developing a fleet with world-class, blue water combat capability has only deepened since the high command marked the 120th anniversary of the Sino-Japanese War. As the 2020 Department of Defense report to Congress on Chinese military power makes clear, the PLAN is already the world's largest navy, surpassing the U.S. battle force in size, and has become a naval peer in many key capability areas.³⁷ The naval competition of the early 1890s quickly breaks down as an analogy for the current competition, but it does bear remembering that the two newly built fleets that fought at the Battle of the Yalu were considered evenly matched until one greatly exceeded expectations while the other proved a great disappointment.

Like the Beiyang Fleet, today's PLAN is a source of pride for the Chinese people and the CCP leadership, and the PLAN's capital ships are symbols of service and national prestige. But neither the PLAN, nor the Beiyang Fleet, were built only for show, and the prevailing historical lens suggests that in a future conflict Chinese naval commanders should sail the fleet—including prized capital ships such as aircraft carriers—into harm's way. Chinese leaders can argue, with some justification, that they have assimilated the war's lessons on maritime consciousness and naval institutions, but the twenty-first century PLAN has not yet had the opportunity to demonstrate how it has assimilated the third of the salient lessons highlighted above: the active employment of the fleet. This third lesson on active defense in combat is perhaps the most intriguing, since it remains untested in practice. The consensus of the authors cited here suggests that, if they were in command in a future conflict, they would not restrain the fleet behind a geographic line, such as an island chain or an arbitrary meridian. As PLAN officers Liu Lijiao and Chen Wenhua wrote in 2018, "in the future . . . military operations will not be confined to the waters of the near seas . . . the strategic forward area must be pushed outward to defend against the enemy as far away as possible."³⁸ Further, if they were to apply the lessons of 1894–95 as laid out in these recent articles, they would seek to sail the fleet far from shore to take the fight to a superior adversary and contest control of the sea early in a conflict.

Chinese writings make clear that they still see the United States as a superior power and a likely future adversary. Commanders and planners on the side of that assessed adversary will have better options available to counter such a sortie in the future if they attain the "positional advantage," "persistent forward presence," and "long-range precision fire" called for in the *Commandant's Planning Guidance*. But crafting the operational concepts for such a counter are

unlikely to succeed unless they include a “thinking adversary” and consider all of the lenses through which that adversary views an operational problem, including the historic lens. The American sea Services would benefit from greater inclusion of these historical lenses, especially that of the Sino-Japanese War, in analyzing Sino-U.S. competition, educating officers, and crafting training scenarios. The PLAN of 2020 is better built, equipped, and manned than the Beiyang Fleet of 1894, but it remains an open question whether the PLAN would live up to high international expectations or, like the Beiyang Fleet, prove a grave disappointment when meeting a peer competitor in combat.

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Sea Control

Feasible, Acceptable, Suitable, or Simply Imperative

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Abstract: As the United States faces a rise in credible antiaccess/area-denial (A2/AD) threats, the U.S. Department of Defense (DOD) started developing counteraccess denial strategies early in the twenty-first century. Access denial strategies are not a new defensive strategy; what makes access denial challenging on the modern battlefield is the dramatic improvement and proliferation of weapons capable of denying access to or freedom of action within an operational area. Through a historical review of Japanese naval battles during the early twentieth century, a framework to model possible future contests for control of the maritime domain is possible. Control of the maritime domain is the prerequisite for assured access and sets the condition for successful Joint operations. In this article, recommendations for achieving success in this new operating environment are offered, including investing in low-cost technology that extends ranges of A2/AD capabilities.

Keywords: sea control, antiaccess/area-denial, A2/AD, Japanese naval history, defense in depth, Chinese sea denial

For whosoever commands the sea commands the trade; whosoever commands the trade of the world commands the riches of the world, and consequently the world itself.

~ Sir Walter Raleigh¹

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Three-quarters of the Earth's surface is covered by ocean. An adversary that is capable and willing to restrict access to any portion of the maritime domain is a threat to the prosperity of the entire international community, as demonstrated by Japan's aggressive sea-denial strategy during World War II (WWII) in the Pacific. In response, the U.S. Navy regained control of the sea through the systematic destruction of Japan's sea-denial capabilities, which allowed the United States to attack Japan's homeland and gain unconditional surrender. Access-denial strategies are not a new defensive strategy, but the United States is facing a rise in credible antiaccess/area-denial (A2/AD) threats due to the dramatic improvement and proliferation of weapons capable of denying access to or freedom of action within an operational area. To respond to increasing complexity of A2/AD, the creation of a unified U.S. strategy for the establishment of sea control is imperative because control of the maritime domain is the prerequisite for assured access, and assured access sets the condition for successful Joint operations.

During WWII, the United States' control of the sea allowed for the creation of thousands of kilometers of sea lines of communication to move and sustain Allied forces in their progress toward Japan. As Allied forces advanced through the Pacific theater, the breadth and depth of their communication lines extended, requiring greater control of the sea to protect from Japanese naval attacks. Japan's naval aim was to deny the United States access to the Western Pacific Ocean by destroying the Pacific Fleet in a decisive naval engagement. Japan, as a maritime nation, understood that control of the maritime domain prohibited its adversary from moving troops and supplies, which denied the projection of combat power into the Pacific theater.² Japan employed a defensive strategy of layered capabilities throughout the Pacific to keep the United States from projecting combat power capable of defeating established Japanese defenses.

In a modern maritime environment, with a persistent A2/AD threat, operational planners must focus on establishing control of the sea as a primary objective because the current counter-A2/AD concepts increase maritime planning efforts exponentially. Current access-denial threats require a combination of simultaneity, rapid operational tempo, and distributed operations to restore operational access in a contested environment.³ These elements of operational art impact the design and execution of sea control as each element applies additional strain on the management and protection of the maritime domain. In this new era, the Department of Defense (DOD) must determine the key considerations for the geographic combatant commander regarding sea control in a maritime campaign.

The DOD increased the development of its counter access denial strategies early in the twenty-first century as a noticeable rise in credible A2/AD threats took shape throughout the world. The consistent component for the strategies

is the requirement for multiple, simultaneously distributed operations. Specifically in the Pacific region, distributed operations require large sea control efforts to ensure freedom of movement and sustainment for dispersed combat power. The sea control requirements in support of current distributed operations strategies impose a greater challenge for the Navy than previously encountered. In 2018, the Chief of Naval Operations, Admiral John M. Richardson, stated, “it has been decades since we last competed for sea control, sea lines of communication, access to world markets, and diplomatic partnerships. Much has changed since we last competed.”⁴

To determine the key considerations pertaining to control of the modern maritime domain, it is imperative to start by reviewing current U.S. policy and strategy pertaining to access-denial challenges. Understanding the current policy and strategy allows for a review of the developing counter-A2/AD strategies defined by the U.S. Navy, Air Force, and Marine Corps. Once current policy, strategy, and doctrine are analyzed, a historical review of Japan’s naval engagements during the Sino-Japanese War (1894–95), the Russo-Japanese War (1904–5), and the Solomon Islands campaign (1942–43) provides similarities to the current Pacific maritime domain.⁵ The analysis of these naval conflicts illuminates many lessons pertaining to sea control that remain applicable in the current maritime environment. Finally, the identification that control of the maritime domain is the prerequisite for assured access, and that assured access sets the conditions for successful Joint operations, highlights potential areas of future research across the current maritime domain.

U.S. Sea Control Policy and Strategy

President Donald J. Trump’s 2017 *National Security Strategy* (NSS) directed that the United States be able to defeat any adversary, retain overmatch in capabilities, and ensure the ability to deter potential enemies by convincing them that they cannot accomplish objectives through the application of force or other forms of aggression. Specific to the Pacific, the NSS states that the United States “will reinforce our commitment to freedom of the seas and the peaceful resolution of territorial and maritime disputes in accordance with international law.”⁶ Ensuring freedom in the maritime domain is even more complex in an era when the United States no longer has assured dominance in this domain.⁷

In the current maritime domain, the Joint Chiefs of Staff established the U.S. policy pertaining to freedom of global navigation in the *Joint Operational Access Concept*. The *Joint Operational Access Concept* defined the global commons as areas of air, sea, space, and cyberspace that belong to no one state.⁸ The concept further stated that the essential access challenge for future Joint forces is the ability to project military force into an operational area and exe-

cute sustainment against a hostile and capable adversary. The *Joint Operational Access Concept* labeled the specific access challenge as “operational access.” Once operational access is achieved that creates freedom of action to accomplish the mission and sustain the force, the desired end state for the Joint force is labeled as “assured access.”⁹

To overcome the access challenge described in the *Joint Operational Access Concept*, the Joint Chiefs of Staff published a supportive strategy entitled *Joint Forcible Entry Operations*. The Joint Staff defined forcible entry as coordinated operations across the DOD designed to seize and hold lodgments against armed opposition. The objective of forcible entry operations is to achieve operational access by projecting combat power into an operational area allowing for maneuver space against an armed adversary.¹⁰ The Joint forcible entry strategy provides a list of principles that are necessary for operational success. One of the principles is the superiority of the maritime domains, which the entry strategy labels as sea control. To operationalize the concept of sea control in a modern maritime environment, it is necessary to combine historical naval theories with current U.S. maritime policies.

Sea Control in a Modern Maritime Environment

Naval theorists have studied and debated the concept of dominance in the maritime domain throughout history. One of the earliest case studies is found in the Battle of Salamis (480 BCE). Through control of the sea, the smaller Greek naval force defeated the superior Persian naval force. The success of the Greek naval forces severed the Persian supply lines and ultimately contributed to the survival of Greece.¹¹

Two influential naval theorists, Alfred Thayer Mahan and Sir Julian S. Corbett, established the foundational debate about sea control. Both Mahan and Corbett debated the extent that sea control is possible and the best manner for achieving it. Mahan believed that the navy’s primary focus was the destruction of the enemy’s fleet. Removal of the enemy’s fleet established total command of the sea needed to protect sea lines of communication, secured friendly and neutral commerce, and allowed attacks on enemy trade.¹² Contrary to Mahan, Corbett believed that nations could not conquer the sea because it is not susceptible to ownership. Corbett believed that command of the sea is relative and not absolute, so Corbett favored the strategic defensive and recommended naval blockade as the primary means for sea control.¹³

Mahan and Corbett agreed that for a nation to succeed in war, it must control the maritime domain. Where their theories differ is the type, extent, and purpose of control and the way a state can gain control of the sea. While Mahan saw command of the sea as an operational end in itself, Corbett claimed that command of the sea will never win a war.¹⁴ With both theories, once a nation

gains control of the sea, its adversaries are denied safe access to the maritime domain, which leads to a contest for control of the sea.¹⁵

Significant changes have occurred in naval theory, tactics, and technology since Mahan and Corbett published their theories before the start of World War I. Despite these changes, modern sea control theorists believe that Mahan and Corbett's foundational theories remain valid today. In 2013, Geoffrey Till provided a modern definition for sea control. Till's definition stated that *sea control* provides the ability to disrupt freedom of movement and narrows an adversary's strategic options.¹⁶ In 2015, the Navy published its current maritime control philosophy in *A Cooperative Strategy for 21st Century Seapower*. Using the concepts listed in *Command and Control of Joint Maritime Operations*, Joint Publication (JP) 3-32, along with the concepts in its *Cooperative Strategy for 21st Century Seapower*, the Navy seeks sea control that allows naval forces to establish local maritime superiority and deny an adversary that same ability. Sea control is achieved through the employment of forces designed to destroy enemy naval forces, suppress enemy sea commerce, protect vital sea lanes, and establish local military superiority in vital sea areas.¹⁷

In consideration of post-WWI and II technological improvements, the Navy adjusted its definition of sea control. The Navy's current definition of sea control states that total control or denial of the sea is not sustainable for long periods. Further, in a modern maritime environment, control of the sea, in geographical terms, is more narrowly focused. The Navy defined sea control as a nation's ability to operate in the maritime domain without enemy interference.¹⁸ Regardless of the category or focus of control, the Navy's definition remains rooted in a principle from Corbett's philosophy. Control of the sea is not an end in itself, but the United States requires control in the maritime domain as it "enables strategic sealift and facilitates the arrival of follow-on forces." The *joint operational access concept* defines the introduction of follow-on forces, projected from the maritime domain, as "cross-domain synergy." *Cross-domain synergy* is essential in the modern operating environment as the additive employment of capabilities in different domains enhances the effectiveness and compensates for the vulnerabilities of the others, which provides the freedom of action required in an access-denied theater.¹⁹ The ability to project combat power and establish cross-domain synergy, historically, has created the conditions for a nation to be successful in war.²⁰

Till carries naval theory forward from Mahan and Corbett into the modern maritime environment through his concept that the contest for control of the sea will not occur fleet-to-fleet on the open ocean, but in littoral regions facing very different challenges.²¹ The concept that the contest for control is moving away from the open ocean and toward littoral regions greatly increases the challenge of gaining sea control. Nations not only have to compete with

their enemy's major air and naval capabilities but must also defend against land-based airpower; missiles; torpedoes; short-range, antisurface warfare assets; and coastal mines.

The complexity of operating in the littoral region is evident in the region's basic definition. The DOD defines the *littoral region* as one environment consisting of two components. The first component is the ocean, outward from the shore, which must be secured to support operations ashore. The second component is the land, inward from the shore, which can be supported or defended from the sea.²² Using this definition, the boundaries of a littoral operating environment are constantly changing based on the progress of friendly naval and ground forces.

The increased potential from new threats, along with the technological improvements of all current access-denial capabilities, suggests that the ability to apply sea denial in the littoral region is less challenging while the ability to gain sea control is more complex.²³ One example of the maritime complexities encountered in a littoral region is evident in the 2006 conflict between Israel and Lebanon. As Israeli ships were enforcing a naval blockade off the coast of Beirut, Hezbollah forces fired antiship cruise missiles from the coast, damaging one of the Israeli ships. Operating in the cluttered littoral environment, the ship's reaction times were shortened and it could not effectively deploy defensive measures.²⁴ Had Hezbollah's forces been better trained or a fully funded state actor, they could have effectively stopped the naval blockade through its shore-based sea denial missile capability.

To prevent an adversary from projecting combat power from the maritime domain, a nation must apply sea denial along its coastline. The current terminology for strategies designed to deny an adversary access to any domain is A2/AD. The *Joint Operational Access Concept* defines *antiaccess* as actions and capabilities, usually long range, designed to prevent an opposing force from entering an operational area, and it defines *area-denial* as actions and capabilities, usually short range, designed to limit an opposing force's freedom of action within the operational area.²⁵

The combination of layered antiaccess and area-denial actions and capabilities create a defense-in-depth strategy designed to attrite advancing hostile forces.²⁶ The attrition of advancing enemy forces ensures that adversaries are not able to mass sufficient combat power capable of achieving successful war termination. The critical component of a defense-in-depth strategy is the ability to outrange the adversary in multiple domains. The significance of this style of defense is not a new concept. The Japanese naval leadership designed its defense of the Pacific during WWII using the concept of outranging the enemy through both land-based and afloat aviation, establishing fortified island defenses, and using improved torpedo technology as the critical means of achieving success.

What makes this style of defense concerning on the modern battlefield is “the dramatic improvement and proliferation of weapons and other technologies capable of denying access to or freedom of action within an operational area.”²⁷

Great Power Competition in the Modern Maritime Environment

The NSS identifies China as a current near-peer adversary seeking to replace the established rules-based international order across the Pacific to dictate new international norms and behavior. As a result, Chinese access-denial capabilities are used as the pacing threat presenting the greatest challenge to U.S. sea control efforts in the modern maritime environment. China’s maritime-denial strategy is developed around its short- and intermediate-range ballistic missiles, its antiship cruise missiles, and its integrated air defense systems. To create the most complex challenge, China continues to employ all weapon systems across its air, surface, and subsurface forces, allowing for multiple delivery methods.

China’s antiaccess capabilities are focused on the long-range payload and fixed position targeting ability of ballistic missiles to target fixed infrastructure or large land forces. China’s family of ballistic missiles have the capability to reach all current U.S. fixed infrastructure in the Pacific.²⁸ The precision and lethality of the cruise missile and integrated air defense systems that can target maritime and air forces are the focus of China’s area-denial capabilities.²⁹

China constantly improves its access-denial capability by expanding its ability to launch short-range ballistic missiles, intermediate-range ballistic missiles, and antiship cruise missiles from a variety of land, air, and maritime surface and subsurface platforms.³⁰ China’s ability to launch missiles from air and maritime platforms, compared to its land-based platforms, increases the maximum range of its missiles in relation to the operating radius of the platform from which it is launched. Using multiple, diverse platforms, China increases the range and mobility of its missiles, which increases the complexity and lethality of its access-denial network. The increased range and mobility create the ability for China to engage advancing enemy forces farther from Chinese territory. The overarching principle of all access-denial strategies is to align the cost of an attack with its potential loss, such that a million-dollar missile leads to the loss of a billion-dollar ship.³¹

China is also extending the maximum range of its land-based A2/AD capabilities through the militarization of reclaimed territory in the South China Sea. The militarization of the Spratly Islands, for example, extends China’s interior lines, which increases the range of its access-denial strategy. A nation operating with interior lines possesses the advantage of increased range, volume, and payload of munitions.³² With an understanding of the Navy’s current definition of sea control, it is evident that China’s access-denial strategy, a layered defense in

depth operating from multiple diverse platforms, presents a challenge for the United States' policy of ensuring freedom of access to the global commons in the Pacific region.

U.S. Strategies to Counter Access Denial

To achieve the United States' political aim of ensured access to the global maritime domain, the DOD developed counter-A2/AD strategies to defeat an adversary's attempt to implement sea denial. Specifically, the Air Force, Navy, and Marine Corps developed interconnected counter-A2/AD strategies that contribute to the Joint forcible entry strategy. All of the developed strategies aim to counter or avoid the devastating effects of near-peer, long-range precision fires that can accurately target legacy forward-based U.S. infrastructure, such as large runways, deepwater ports, and major troop installations.³³

The Air Force's 2016 strategic document, *Air Superiority 2030 Flight Plan*, defines the need for capabilities and strategies that provide options to enable Joint force air superiority in the highly contested environment of 2030 and beyond.³⁴ To achieve this goal, Air Force defines five capability development areas. The first area of focus is basing and logistics. Within this capability, the two pillars of *recover and reconstitute* along with *support and sustain* impact the Air Force's counter access-denial strategy within the Pacific. Both pillars target the Air Force's ability to keep fully armed and fueled planes actively engaging denial capabilities.

The Air Force developed the agile combat employment concept to achieve the desired end state of these pillars. To account for the vast distance and the water-to-land ratio of the Pacific theater, the Air Force created a rearming, repairing, and refueling capability that can operate away from large, legacy forward-based runways while creating the smallest signature possible. The agile combat concept designs task-organized, combat support packages tailored to rearm and refuel combat planes rapidly. The agile combat employment concept "operates in austere environments with minimal resources, enabling better support to continuous operations providing projection of airpower from anywhere in the Pacific." An example of a tailored support package would be the Service's Boeing C-17 Globemaster III task-organized to carry the necessary supplies and equipment for cross-trained maintenance and support personnel to rapidly rearm, refuel, and repair Lockheed Martin F-22 Raptors on an austere runway. Upon completion of replenishment actions, the Raptors and the Globemaster would depart as quickly as possible to avoid detection and targeting by the adversary.³⁵ Through the agile combat employment concept, both the support package and the combat airplanes operate in the adversary's denial environment while minimizing their signature on the ground to the greatest extent possible. By inserting and extracting as quickly as possible and avoiding large legacy

fixed aviation infrastructure, the agile combat employment concept keeps fully armed combat aircraft constantly airborne to engage enemy aircraft or destroy A2/AD assets.

With the Air Force focused on combating and minimizing denial capabilities in the Pacific air domain, the Navy, supported by the Marine Corps, focused on defeating maritime access-denial capabilities. Despite modern naval theorists forecasting that the contest for sea control will occur in the littoral regions, the Navy must also remain prepared to win fleet battles in the open ocean. The Navy's ability to protect freedom of navigation in the open ocean is critical because "only through enduring sea power can the United States bring the logistical sinew of the joint force to bear."³⁶

In 2016, the Chief of Naval Operations published the Navy's major counter-A2/AD strategy, *distributed maritime operations* (DMO). This concept "makes geography a virtue by spreading the combat power of the fleet, holding targets at risk from multiple attack axes, and forces adversaries to defend a greater number of targets." Distributed maritime operations also "challenge an adversary's decision-making cycle and material investment methodology."³⁷ Under this concept, Navy ships are employed in a widely dispersed manner, operating on a common data link. Operating on a common data link allows all sensors and weapons across all ships to connect to a common tactical operating picture. A distributed fleet, operating on a common tactical operating picture, possesses a greater offensive and defensive capability against all near-peer access-denial threats. Despite DMO's focus on a fleet-on-fleet engagement in the open ocean, the Navy is equally focused on the landward component of sea control.

The distributed maritime concept allows the Navy to achieve greater working sea control, making it possible for the U.S. Army and Marine Corps to land ground forces on contested shores. Landing ground forces is vital due to the enemy's ability to support sea denial through shore-based missiles and integrated air defense systems. To defeat the land-based component of sea denial, the Navy and Marine Corps developed the littoral operations in a contested environment (LOCE) concept. The littoral operations concept calls for "a modular, scalable, and integrated naval network of sea-based and land-based sensors, shooters, and sustainers" capable of operating within and defeating the adversary's access-denial capabilities. Forces operating within this concept seek to counter the adversary's sea-denial abilities while supporting sea-control efforts to further friendly maritime power projection operations. The LOCE is vital to contesting the maritime domain as future adversaries, operating with increasingly formidable sea-denial technology, can control choke points, hold key maritime terrain, or deny freedom of action and maneuver at ever-increasing ranges.³⁸

One of the supporting concepts within the littoral operations concept is the Marine Corps' expeditionary advanced base operations (EABO) concept.

The expeditionary base concept is under development as complementary to the Navy's distributed maritime operations concept. EABO employs resilient, sustainable, low-signature Navy and Marine Corps assets away from legacy fixed infrastructure, seeking to neutralize or secure adversarial sea-denial capabilities or support friendly sea-control actions. Expeditionary advanced bases can better position naval intelligence collection assets; better posture coastal defense or anti-air missiles; establish forward arming and refueling points for aircraft, ships, and submarines; or provide expeditionary basing for surface screening/scouting platforms. With the publication of the Marine Corps' new force design concept, *Force Design 2030*, the Marine Corps is actively building forces and processes to implement expeditionary advanced base operations, "stand in force operations," and establish a "naval expeditionary force-in-readiness" compatible with the Navy and Joint force counter-A2/AD mentality.³⁹ All of the above-listed possibilities, created under the expeditionary basing concept, increase sensor and shooter capacity while complicating adversarial targeting abilities.⁴⁰

The DMO and EABO concepts are interconnected as land forces employed on an expeditionary advanced base are designed to operate using the same common operating picture as the distributed naval vessels. When both seaward and landward forces are employed with a common operating picture, all sensors and shooters are connected regardless of location. The connection of distributed sensors and shooters, both landward and seaward, increase the efficiency and effectiveness of all systems while reducing the vulnerability of all resources. The expeditionary base concept creates a more dispersed, resilient, and hard to target forward-based element that generates the virtue of mass without the historical vulnerabilities of concentration.⁴¹ Having reviewed the developing sea-control concepts and the current U.S. counter-A2/AD doctrine, it is imperative to review relevant historical examples of near-peer adversaries contesting sea control to identify lessons applicable to a modern maritime environment.

Historical Case Study of Sea Control: Japan, 1900–1945

A review of twentieth-century Japanese naval history identifies many lessons pertaining to the contest for the maritime domain between near-peer adversaries. The Japanese naval experiences during the Sino-Japanese War (1894–95), the Russo-Japanese War (1904–5), and the Solomon Islands campaign of World War II (1942–43) provide operational context for the development of Japanese naval sea control strategy and tactics. Japan's naval history was selected for this case study because in all periods reviewed, Japan sought control of the maritime domain from peer nations possessing equal or greater naval capability. This distinction creates relevance for the United States today, as post-WWII, the United States has not faced a peer threat that possessed equal or greater maritime capabilities than can be seen in the current Pacific struggle with China.

From Japan's naval history, five lessons of sea control are identified that remain relevant today for any nation aspiring for control of the maritime domain.

The first lesson is that successful maritime operations leading to control of the sea are a prerequisite for successful Joint operations.⁴² Throughout the first half of the twentieth-century, Japan demonstrated its ability to establish control of the maritime domain in all three conflicts. In all three conflicts reviewed, Japan sought control of the sea by following the Mahanian principle of seeking a decisive battle in which to destroy the enemy's fleet. In both the Sino-Japanese and Russo-Japanese Wars, Japan's actions inflicted damage to both the Chinese and Russian fleets, ensuring that neither was able to contest Japan's control of the sea. Gaining control of the sea allowed Japan to project combat power ashore and inhibit China and Russia from moving their combat power into or across the theater.⁴³ Japan's actions allowed combat power projection into Korea, China, and Russia, while impacting their adversary's ability to project combat power onto Japanese territory. These conditions created a combat power advantage for Japan, which contributed to its success in both the Sino- and Russo-Japanese Wars.

Japan's naval actions during World War II serve as a counterpoint to the previous sentiment. During the Solomon Islands campaign, Japan's failed maritime operations allowed the United States to contest Japan's control of the Pacific maritime domain. Ultimately, the United States defeated Japan's sea-control efforts, which created conditions for the United States to establish land-based aviation in the Pacific capable of delivering two war-terminating atomic weapons. As shown by Japan's naval history, nations increase their chances of successful war termination when control of the sea creates conditions for Joint operations into other domains.

The next lesson is that control of the maritime domain is so vital that adversaries will contest control of the sea. Despite Japan's early establishment of control of the sea in both the Russo-Japanese War and the Solomon Island campaign, Russia and the United States applied resources to contest control of the maritime domain. In the Russo-Japanese War, Japan established sea control through attacks and blockades of the Russian Fleet in Port Arthur. Understanding the significance of Japanese control of the sea, Russia sent its Baltic Fleet 12,875 kilometers (km) to contest Japan's control of the sea.⁴⁴ While Russia's Baltic Fleet was ultimately defeated by the Japanese Navy, the Russian military leadership accepted the risk of losing the Baltic Fleet in attempts to defeat Japanese control of the maritime domain.

Japan designed its early maritime operations in the Pacific to establish control of the maritime domain to protect the flow of vital natural resources and to prevent the United States from projecting combat power into the Pacific theater. The United States, after recovering from the attack on Pearl Harbor,

Hawaii, contested Japan's control of the maritime domain by applying resources to a Joint Army-Navy plan of attack along a dual-axis approach to the Japanese home islands.⁴⁵ Japan sought to cut off and isolate Australia from the Allied war effort, which the United States could not allow to happen. As a result, the United States developed a campaign focused on capturing the Solomon Islands to protect Australia and create secure sea lines of communications through the southern Pacific. Throughout the Solomon Islands campaign, the United States successfully applied air, land, and maritime assets across multiple engagements to remove Japan's control of the maritime domain. The actions of Russia and the United States demonstrated the significance of sea control between near-peer adversaries and that once sea control is gained, adversaries will apply resources to contest established control.

Japan's third lesson of sea control was that control of the maritime domain is, at best, local and temporary. The Japanese naval philosophy of the early twentieth-century focused on Mahanian principles of total control of the sea through the destruction of the adversary's fleet.⁴⁶ During all three conflicts, Japan attempted to destroy the fleet of its adversary but was unsuccessful in each of its attempts to completely destroy their adversary's fleet. While the Chinese did not attempt to contest Japanese control of the sea during the Sino-Japanese War, both Russia and the United States did challenge Japanese control of the sea throughout the conflict.

In the Russo-Japanese War, Japan's local control of the Yellow Sea and the Sea of Japan did not prevent Russia's Baltic Fleet from traveling to and attacking into Japanese-held waters. Russia's Baltic Fleet was ultimately unsuccessful in its attempts to defeat the Japanese Navy, but their actions demonstrated that the Japanese Navy only controlled the maritime domain in relation to the Korean theater. During the Solomon Islands campaign, for six months, the United States and Japan fought for control of the maritime domain surrounding Guadalcanal. Throughout these six months, both the United States and Japan possessed what is defined today as "control in dispute."⁴⁷ Japan could not control enough of the maritime domain to prevent American forces from projecting combat power ashore in August of 1942 to counter Japanese ground forces emplaced on Guadalcanal. Until February 1943, both nations operated in the waters around Guadalcanal with significant risk as neither side possessed credible sea control.⁴⁸ Both the Russo-Japanese War and the Solomon Islands campaign demonstrate that absolute control is a theoretical extreme and may not be attainable in a near-peer maritime conflict.

With the advances in naval weapons technology, Japan's focus on improving their ability to out-range adversaries was the next impactful lesson. During the interwar period between WWI and II, stemming from the restrictions in the naval treaties, Japan understood they could not compete with peer navies

in battles of capital ships.⁴⁹ As a result, Japan prioritized the technological development of weaponry with longer ranges, such as torpedoes, reconnaissance and attack aircraft, and submarines.⁵⁰ The contest for the maritime domain around Guadalcanal during the Solomon Islands campaign demonstrated this lesson. Japan successfully used torpedo attacks from airplanes, submarines, and destroyers to defeat U.S. capital ships. Japan then coupled these torpedo attacks with night tactics to increase its effectiveness against U.S. ships poorly trained in night tactics. These torpedo attacks and night tactics allowed Japan to not only defeat Navy ships, but it also allowed Japan to land or resupply combat forces on Guadalcanal despite the United States' sea-control efforts.⁵¹ A secondary benefit of torpedo improvement for Japan was the financial investment. The cost of improving and producing the advanced torpedo was far less than what was required to produce larger, more advanced capital ships. As a result, Japan gained an advantage over the United States by producing an effective weapons capability of threatening, and when successful even inflicting, great damage to the United States' expensive capital ships.

To increase the effectiveness of out-ranging the enemy, the use of interior lines provided considerable benefit to the belligerent possessing the ability to reinforce or concentrate its elements faster than the enemy force can reposition. In the Russo-Japanese War, Japan defeated Russia's Baltic Fleet after the Baltic Fleet sailed 12,875 km prior to engaging Japanese naval forces possessing interior lines.⁵² During the Solomon Islands campaign, the United States defeated Japanese naval forces after Japan overextended its interior lines attempting to isolate Australia. The capability to out-range an adversary allows a nation to blunt the combat power of an advancing adversary. When supportive interior lines increase a nation's ability to out-range its adversary, a smaller nation can reduce an unfavorable balance in combat power.

The final lesson gained from these three conflicts was the contribution ground forces provided to sea-control efforts. During all three conflicts, Japan sought immediate control of the sea to allow for the delivery of combat power onto hostile shores or to claim undefended territory. During the Sino-Japanese and Russo-Japanese Wars, the Japanese ground forces focused on defeating the enemy's army to achieve victory. During the Russo-Japanese War, after the successful Japanese naval blockade of Port Arthur, Japanese ground forces contributed to control of the maritime domain by using siege weapons to complete the destruction of the Russian Fleet anchored in the harbor.⁵³ The destruction of Russia's Port Arthur Fleet achieved Japan's Mahanian goal of absolute control of the waters in the Yellow Sea as well as the Sea of Japan. Without the direct contribution from ground forces, Russia's Port Arthur Fleet might have remained intact, which would have complicated Japan's control of the maritime domain once the Baltic Fleet arrived.

Another aspect regarding ground-based forces that is critical to sea-control efforts is the impact of land-based aviation assets. With the advancement of technology and the development of airplanes, during the interwar period both Japan and the United States identified the superiority of land-based aviation to carrier-based aviation. While carrier-based aviation revolutionized fighting in the maritime domain, the advantage in range and payload provided by land-based aviation far outstripped carrier-based aviation.⁵⁴ Henderson Field, established on Guadalcanal during the Solomon Island campaign, provided critical land-based aviation support to the United States' contest for control of the sea during the Solomon Islands campaign. The projection of ground forces can support or enhance a nation's sea-control capability either through the extended range of land-based aviation or through direct ground force action against an adversary's sea-control capabilities.

Japan, in all three conflicts, understood that control of the sea was critical for its ultimate success as control of the maritime domain set the conditions necessary for a favorable balance of combat power. In the Sino-Japanese and Russo-Japanese Wars, Japanese leadership set their initial military aim on establishing control of the sea to allow for the projection of combat power necessary to achieve their political aim. During WWII, however, Japanese leadership set their initial military aim on establishing control of the sea to deny the United States from projecting combat power into the Pacific theater. During the Russo-Japanese War and the Solomon Islands campaign, both Russia and the United States viewed Japan's control of the sea as sea denial, which required both nations to contest Japan's control. Russia and the United States demonstrated that a willing adversary, capable of contesting established sea control, ensures control of the sea is temporary or localized. Finally, the Japanese naval leadership learned that the critical capabilities for gaining control of the maritime domain are the ability to out-range the enemy and the ability to project ground forces capable of supporting sea-control efforts.

Historians claim that Japan was successful in both the Sino-Japanese and Russo-Japanese Wars, not because of its great military strategy and action but because China and Russia failed in their respective military strategies and actions. S. C. M. Paine claims that Japan developed its flawed WWII naval strategy from the theory of "victory disease" as Japan was successful in the two previous conflicts due to poorly executed naval strategy and tactics by China and Russia.⁵⁵ The contest for sea control in the Pacific theater demonstrated that a significant component of grand strategy between peer nations must be control of the maritime domain.

Recommendations for Further Research

The creation of a unified U.S. strategy for the establishment of sea control is im-

perative because control of the maritime domain is the prerequisite for assured access, and assured access sets the condition for successful Joint operations. A unified strategy, published by 2022 with an executive agent identified within the DOD, ensures that all Services work in concert to develop mutually supporting concepts, applicable to as many domains as possible, while avoiding redundant technology, systems, or processes. Ideally, this unified strategy would create areas applicable to interagency and international partners to further increase the effectiveness and reduce waste. Specific to the maritime domain, as the Navy cannot maintain sea control of the entire globe, international partners operating from a common sea-denial strategy provide the combat power needed to ensure global freedom of the maritime domain. Based on the historical lessons identified from the review of near-peer adversaries contesting sea control, and the access-denial capabilities of current near-peer adversaries, the following recommendations are provided for further research and review.

The primary effort should be the development of a unified DOD counter-A2/AD strategy applicable across all domains. Specific to the maritime domain, the strategy must holistically balance the logistical requirements arising from the multitude of distributed operations designed to defeat access-denial capabilities. Small forces dispersed across the maritime geography require an extensive logistical network to ensure all forces remain combat effective. While the DOD is working to make units as self-sufficient as possible, certain classes of supply, such as munitions, are still required to be resupplied. A logistical network, including the distribution of assets, to sustain a theater of dispersed ships and forces does not currently exist. Ensuring a logistical focus will avoid the failure Japan encountered when it overextended its interior lines during WWII.

The strategy should also focus on the expansion and integration of concepts that directly apply ground combat forces, either land-based aviation or combat troops, into a contested environment to defeat adversarial sea denial and support friendly sea control. The agile combat employment, expeditionary advanced base operations, littoral operations in a contested environment, and distributed maritime operations concepts reduce vulnerability for small elements while achieving the benefit of dispersed, coordinated lethality. These concepts create the conditions for control of the sea and assured access allowing for the follow-on of large land forces necessary to end wars. All developed concepts that are designed to defeat access-denial capabilities require coordination within the DOD to ensure efforts are not unnecessarily redundant, or worse—counterproductive. Japan demonstrated the benefit of ground troops directly supporting sea denial during the destruction of Russia's Port Arthur Fleet in the Russo-Japanese War.

Two critical components of any concept that applies ground forces to support control of the maritime domain are delivery platforms and technology

supporting access to a common operating picture. The Navy's current inventory of amphibious ships, which are considered capital ships, are too lucrative a target to operate inside an access-denied environment to deliver dispersed sea-control capabilities.⁵⁶ Smaller, less expensive delivery platforms are required to transport the numerous ground units necessary to support control of the sea. Once all forces are delivered, they must be connected to a common operating picture to coordinate command and control as well as execute effective fires. All Services must operate on the same operating picture to maximize all distributed forces and ensure dispersed forces do not become isolated. The requirement for access to a common operating picture can be a critical weakness if an adversary possesses the ability to impact cyberspace and communications technology.⁵⁷ The significance of this critical weakness will require specific manpower and equipment augmentations to protect it, or it will require more cyber warfare training for all ground forces to ensure they can protect themselves.

The final recommendation for further review is the research and investment in rapidly produced, low-cost technology that extends the range of counter-A2/AD capabilities. Capital ships and fifth-generation aircraft are expensive but necessary in the modern maritime environment. However, as the Japanese torpedo demonstrated during WWII, a low-cost, well-designed, long-range weapon that can damage or destroy a capital ship is equally valuable. Each domain is challenging, and when combined, an operating environment becomes immensely complex. Modern military technology that is required to compete with a technologically advanced peer is expensive. A unified counter-A2/AD strategy must balance the financial requirements necessary to be competitive across all domains.

Investments in portable antiship and anti-air missiles; command and control technology; amphibious troop delivery platforms; and intelligence; surveillance; target acquisition; and reconnaissance equipment all extend the effectiveness of ground-based, sea-control assets. Ground forces that can employ, remotely guide, or provide targeting information for antiship and anti-air missiles have a direct positive impact on sea-control efforts. Investments in smaller amphibious platforms that can autonomously deliver troops, distribute supplies, or carry missile systems across the archipelagic waters of the Pacific are needed. Last, the continued investment in unmanned aircraft systems to support intelligence, surveillance, target acquisition, and reconnaissance capabilities contributes to the increased effectiveness of sea-control troops.

To depict the suggested strategy, the below fictional description is offered. A violent struggle occurs between China and its neighbors for control of parts of the Pacific. The United States enters the conflict after hostilities have begun and must support its Asian alliances in disrupting China's established sea-denial strategy. To defeat the established defense in depth and execute Joint forcible

entry operations, the United States and allies will have to execute distributed operations in a coordinated and simultaneous manner to create and maintain rapid operational tempo to off-balance Chinese forces. Employing all Services, the Joint Force Maritime Component Commander (JFMCC), as the unified commander, will seek to reestablish sea control that will make forcible-entry operations and assured access in the theater possible. The JFMCC will employ all forces and assets to identify and attack critical vulnerabilities throughout the theater to pose multiple dilemmas to the adversary and ensure the enemy knows they are at risk across their entire defense in depth. The JFMCC will combine current concepts from all Services to spread out Chinese combat power and overwhelm the sensor-to-shooter network allowing U.S. forces to execute forcible-entry operations that will create lodgments allowing for follow-on forces required to end the conflict. This strategy will be the opposite of the Soviets' interwar period deep operations concept that was designed to create a gap in the enemy's front line sufficient to allow second-echelon forces enough space to rapidly penetrate deep into the enemy's rear area.

The JFMCC and their staff will operate from a single common operating picture that all Services have access to. Navy ships, deployed using the distributed maritime operations concept, allow the JFMCC to control the open ocean creating secure sea lines of communication, employ long- and medium-range maritime missiles, provide amphibious aviation capabilities, and create an afloat forward-staging base for Marine Corps operations while ensuring U.S. capital ships are less vulnerable to attack. Air Force aircraft, operating under the agile combat employment concept, contribute to the JFMCC's requirement for air superiority and provide intelligence, surveillance, target acquisition, and reconnaissance capabilities to Navy and Marine Corps forces seeking to destroy enemy naval and coastal forces. Marine Corps forces executing stand-in force operations, actively disrupt adversarial A2/AD capabilities, or transmit known locations to either Navy or Air Force assets via the common operating picture can then disrupt or destroy A2/AD capabilities.⁵⁸ The U.S. Army's multidomain task forces are employed in coordination with Marine Corps forces to disrupt and destroy adversarial A2/AD capabilities and assets. The multidomain task forces contribute to the overall common operating picture while also augmenting Space Force capabilities and concepts to control and defend all aspects of the JFMCC's cyber domain. All Services will operate in a coordinated manner, under a single unified commander, to identify, create, and exploit multiple gaps in the enemy's sea-denial architecture, thereby gaining the benefits of mass without suffering the negative historical impacts encountered by large massed formations.

To ensure success against an established Chinese defense in depth that is built on credible and lethal A2/AD assets and capabilities, all U.S. forces must

be distributable, resilient, tailorable, interconnected, and able to sustain while producing a minimal signature. The above concept requires an investment strategy as described in the previous recommendations. Of significance, all Services need to invest in interoperability for communications across all platforms, weapons systems, and networks. Only through interoperability will the common operating picture allow for a distributed network of assets that are part of a rapid and accurate kill chain. Coupled with advancements in automation and artificial intelligence, an interconnected kill chain across the Services will threaten any A2/AD strategy. To augment and support Marine Corps and Army distributed elements, the Navy needs to invest in small autonomous crafts that can rapidly transport and relocate troops and supplies across the maritime domain while maintaining a minimal signature. Finally, Marine Corps and Army forces need to invest in low-cost weapons systems that can deliver damaging effects to large, expensive adversarial assets. As an example, they need to identify and develop weapons analogous to a maritime rocket-propelled grenade or a maritime improvised explosive device.

Conclusion

In the current operating environment, Joint operations are required to create the conditions for successful war termination. Through control of the maritime domain, the projection of combat power from the sea has historically been the prerequisite to successfully ending wars. In the modern maritime domain, which includes the open ocean as well as the littoral region, a force that can control the sea possesses a combat power advantage.

As stated in the *Joint Operational Access Concept*, sea control establishes the foundation for assured access that enables Joint operations. Through the historical review of Japanese naval conflicts, five lessons are identified that operational planners can apply to military plans seeking control of the maritime domain. To illustrate these lessons in a current maritime environment, China's access-denial strategy and capabilities were provided as an example that U.S. sea control plans can be modeled against.⁵⁹ China's continued advancement of its A2/AD capability, coupled with its actions in the South China Sea, pose an obstacle to the United States' political aims in the Pacific region. China's developing access-denial strategy, similar to Japanese development during the interwar period, seeks to establish control of the sea by creating a layered defense-in-depth strategy. China's strategy is focused on the destruction of the advancing combat power of an adversary attempting to contest China's control of the maritime domain. China's strategy aims to prevent its adversaries from achieving Joint operations that have historically proven necessary to successfully end wars. China's access-denial developments focus on increasing the maximum range of its access-denial capabilities through advancements in its missile arsenal and

militarization of reclaimed territory. The combined landward and seaward capabilities, distributed across multiple platforms, including a new domestically built aircraft carrier, ensures adversarial attempts to control or deny the sea are temporary and narrowly focused. More importantly, China's access-denial network is equally capable of denial across both elements of the maritime domain: the open ocean as well as in the littoral region.

The key considerations for the geographic combatant commander regarding sea control in any campaign involving the maritime domain are clear. Access denial, a layered defense in depth, is designed to prevent an advancing force from massing combat power in any domain. To penetrate this style of defense and establish operational access, dispersed forces must conduct rapid, simultaneous operations that are coordinated across a common operational picture. Once operational access is restored, ground forces can be projected into hostile territory to support gaining control of the sea. Control of the maritime domain is the prerequisite to setting the conditions for assured access. Assured access is required for the projection of large-scale, follow-on ground forces that have historically ended wars. Specific to the Pacific region, rapid, simultaneous, distributed operations require a large amount of sea control, either in time or geographic area. Large amounts of sea control require coordinated concepts and approaches across all Services as the manpower and resource requirements are considerable. Finally, the personnel, resources, and concepts required to gain control of the Pacific maritime domain have not been exercised in either a holistic or coordinated manner in decades, yet our named pacing threat has been improving its strategies and capabilities. The DOD needs a unified counter-A2/AD strategy with a matching investment strategy to ensure success in future violent conflicts over control of the sea.

Endnotes

1. Sir Walter Raleigh, "A Discourse of the Invention of Ships, Anchors, Compass, &c.," in *The Works of Sir Walter Raleigh, Kt.*, vol. 8 (Oxford, UK: University Press, 1829).
2. *Joint Operations*, Joint Publication 3-0 (Washington, DC: Joint Chiefs of Staff, 2017), VIII-15. Due to the limited scope of this study, the focus on the maritime domain is not intended to exclude the importance of any other domain or ignore the interconnected nature of all domains. *Joint Operations* defines the operational environment as encompassing the physical areas of the air, land, maritime, and space domains; the information environment (which includes cyberspace); as well as the electromagnetic spectrum (EMS). *Joint Operations* then defines mission success in large-scale combat as full-spectrum superiority; the cumulative effect of achieving superiority in the air, land, maritime, and space domains; the information environment; and the EMS.
3. *The Operations Process*, Army Doctrine Publication 5-0 (Washington, DC: Department of the Army, 2019), 2-21. All terms related to operational art, such as *simultaneity*, are defined within this publication.
4. *A Design for Maintaining Maritime Superiority: Version 2.0* (Washington, DC: U.S. Navy, 2018), 3.

5. John Prados, *Islands of Destiny: The Solomons Campaign and the Eclipse of the Rising Sun* (New York: Penguin, 2012), 260–362. The Solomon Islands campaign (1942–43) was an amphibious campaign fought between Japan and the United States seeking control of the Solomon Islands chain in the South Pacific. Throughout this campaign, fighting occurred in the air, land, and maritime domain, demonstrating the critical interconnectedness of cross-domain actions and support.
6. *The National Security Strategy of the United States of America, December 2017* (Washington, DC: White House, 2017), 28, 47.
7. *The National Security Strategy of the United States of America*, 3; *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military's Competitive Edge* (Washington, DC: Department of Defense, 2018), 3–6; and *Description of the National Military Strategy, 2018* (Washington, DC: Joint Staff, 2018), 2.
8. *Joint Operational Access Concept (JOAC): Version 1.0* (Washington, DC: Department of Defense, 2012), ii.
9. *Joint Operational Access Concept (JOAC)*, 1.
10. *Joint Forcible Entry Operations*, JP 3-18 (Washington, DC: Joint Chiefs of Staff, 2018), vii. The forcible entry concept defines a *lodgment* as a designated area in a hostile or potentially hostile operational area (such as an airhead, a beachhead, or combination thereof) that affords continuous landing of troops and materiel while providing maneuver space for subsequent operations.
11. Sam J. Tangredi, *Anti-Access Warfare: Countering A2/AD Strategies* (Annapolis, MD: Naval Institute Press, 2013), 11; and Barry Strauss, *The Battle of Salamis: The Naval Encounter that Saved Greece—and Western Civilization* (New York: Simon and Schuster, 2004), 73–107. Themistocles, the leader of the Greek alliance, developed a plan to abandon the Greek cities and fight from ships. At the Battle of Salamis, the Greeks established their battle plan in the narrow channel between the island of Salamis and the Athenian territory, allowing the Greeks to win a decisive battle against the superior Persian naval force. The Persian defeat allowed the Greeks to eventually control the supply lines supporting the Persian forces.
12. Capt Alfred T. Mahan, *The Influence of Sea Power Upon History, 1660–1783* (Boston, MA: Little, Brown, 1890), 138. Alfred Thayer Mahan (1840–1914) was a U.S. naval officer and his two most noted writings are *The Influence of Sea Power Upon History, 1660–1783* and *The Influence of Sea Power Upon the French Revolution and Empire, 1793–1861*. Mahan experienced combat as a Union naval officer during the American Civil War. He commanded the USS *Wachusett* (1861). During his career, he served as an instructor at the U.S. Naval Academy and president of the U.S. Naval War College. Mahan's tactical focus was the concentration of the fleet executing an aggressive offensive at critical points to achieve victory in decisive battles.
13. Julian S. Corbett, *Some Principles of Maritime Strategy* (Annapolis, MD: Naval Institute Press, 1911), 15, 91. Sir Julian Corbett (1854–1922) was a British naval historian and his most noted writing is *Some Principles of Maritime Strategy*. After earning his law degree, he began lecturing at the Royal Naval College and later served as secretary of the Cabinet Historical Office. Corbett categorized sea control as general or local, temporary, or permanent, therefore he favored the strategic defensive and recommend naval blockade as the primary means for sea control above physical destruction or capture of enemy warships.
14. Everett Carl Dolman, *Pure Strategy: Power and Principle in the Space and Information Age* (New York: Routledge, 2005), 40.
15. David C. Gompert, *Sea Power and American Interests in the Western Pacific* (Santa Monica, CA: Rand, 2013), 2.
16. Geoffrey Till, *Sea Power, A Guide for the Twenty-First Century*, 3d ed. (London: Routledge, 2013), 331. Geoffrey Till is a naval historian, an emeritus professor of maritime studies, and director of the Corbett Centre for Maritime Policy Studies.
17. *A Cooperative Strategy for 21st Century Seapower* (Washington, DC: Department of

- Defense, 2015), 22–23; and *Command and Control of Joint Maritime Operations*, JP 3-32 (Washington, DC: Department of Defense, 2018), 23–27.
18. Stansfield Turner, “Missions of the U.S. Navy,” *Naval War College Review* 27, no. 2 (March–April 1974): 6. The categories of sea control are absolute, working, and control in dispute. *Absolute control* occurs when one side has complete freedom to operate without interruption by the enemy as the enemy is unable to operate at all. *Working control* occurs when one side has the general ability to operate with a degree of freedom as the enemy can only operate with high risk. *Control in dispute* occurs when each side operates with considerable risk while establishing working control for limited portions for a limited time to conduct specific operations.
 19. *Joint Operational Access Concept (JOAC)*, 14–23.
 20. Tangredi, *Anti-Access Warfare*, 157. “The forces that achieved a greater degree of cross-domain synergy were indeed victorious, but it must be admitted that such is the case in all combined arms warfare.”
 21. Till, *Sea Power*, 36.
 22. *Command and Control of Joint Maritime Operations*, x.
 23. Till, *Sea Power*, 150; and Gompert, *Sea Power and American Interests*, 9.
 24. Phillip E. Pournelle, “The Deadly Future of Littoral Sea Control,” U.S. Naval Institute *Proceedings* 141, no. 7 (July 2015): 26–31.
 25. *Joint Operational Access Concept (JOAC)*, i.
 26. *Joint Operations*, JP 3-0 (Washington, DC: Joint Chiefs of Staff, 2017). *Defense in depth* is a defensive strategy that layers multiple supporting engagements across time and space that increase the probability for success in the defeat of any adversaries’ advancements.
 27. *Joint Operational Access Concept (JOAC)*, ii.
 28. “Missiles of China,” *Missile Threat*, Center for Strategic and International Studies, 14 June 2018; and *Military and Security Developments Involving the People’s Republic of China, 2019: Annual Report to Congress* (Washington, DC: Department of Defense, 2019), 45.
 29. Maj David S. Rainey, USMC, *Expeditionary Advanced Base Operations in the India-Pacific Command Area of Responsibility* (Fort Leavenworth, KS: School of Advanced Military Studies, 2019), 13. An integrated air defense system is designed to limit an adversary’s use of the air domain by combining antiair detection capabilities and antiair weapons systems that operate under a common command and control network.
 30. *Military and Security Developments Involving the People’s Republic of China, 2019*, 31–47.
 31. Capt Sam J. Tangredi, “Breaking the Anti-Access Wall,” U.S. Naval Institute *Proceedings* 141, no. 347 (May 2015): 40–45.
 32. *Joint Planning*, JP 5-0 (Washington, DC: Joint Chiefs of Staff, 2017), IV-28. *Joint Planning* defines *interior lines* as a central position where a friendly force can reinforce or concentrate its elements faster than the enemy force can reposition. A force operates on interior lines when its operations diverge from a central point. With interior lines, friendly forces are closer to separate enemy forces than the enemy forces are to one another. Interior lines allow an isolated force to mass combat power against a specific portion of an enemy force by shifting capabilities more rapidly than the enemy can react.
 33. Arthur Corbett, *Expeditionary Advanced Base Operations (EABO) Handbook: Considerations for Force Development and Employment* (Quantico, VA: Marine Corps Warfighting Lab, 2018), 15.
 34. *Air Superiority 2030 Flight Plan: Enterprise Capability Collaboration Team* (Washington, DC: U.S. Air Force, 2016), 2.
 35. SrA Isaac Johnson, “Airmen Exercise Agile Combat Employment at Red Flag Alaska,” Kadena Air Base, 16 August 2019.
 36. Corbett, *Expeditionary Advanced Base Operations*, 21.
 37. *Surface Force Strategy: Return to Sea Control* (Washington, DC: Department of the Navy, 2017), 10.

38. *Littoral Operations in a Contested Environment, 2017* (Washington, DC: Department of the Navy, 2017), 9.
39. Gen David H. Berger, *Commandant's Planning Guidance: 38th Commandant of the Marine Corps* (Washington, DC: Headquarters Marine Corps, 2019); and *Force Design 2030* (Washington, DC: Headquarters Marine Corps, 2020).
40. *Littoral Operations in a Contested Environment, 2017*, 13; and Corbett, *Expeditionary Advanced Base Operations*, 22–25.
41. Corbett, *Expeditionary Advanced Base Operations*, 25; and *Littoral Operations in a Contested Environment, 2017*, 13. Expeditionary advanced bases may also control, or at least outpost, key maritime terrain to improve the security of sea lines of communication and choke points or deny their use to the enemy and exploit and enhance the natural barriers formed by island chains.
42. Tangredi, *Anti-Access Warfare*, 243. “In defeating anti-access warfare, successful maritime operations are a prerequisite for joint operations. Not an add-on, not yet another domain, not just one of a number of equal claims on resources.”
43. S. C. M. Paine, *The Japanese Empire: Grand Strategy from the Meiji Restoration to the Pacific War* (Cambridge, UK: Cambridge University Press, 2017), 35, 52–57. In the Sino-Japanese War, Japan’s military strategy prioritized control of the sea to allow for the movement of roughly 100,000 troops to mainland Asia. In the Russo-Japanese War, Japan conducted a surprise night attack against the anchored Russian squadron in Port Arthur, which ensured the squadron remained unable to impede the movement of Japanese combat power, compounded Russia’s burden to move combat power due to the damage of the Trans-Siberian railway, and denied Russia the ability to project combat power onto the Japanese home islands.
44. Julian S. Corbett, *Maritime Operations in the Russo-Japanese War: 1904–1905* (Annapolis, MD: Naval Institute Press, 1994). On 15 February 1904, the Russian minister of war defined the war efforts for Russia. Of the five war efforts described, “command of the sea” is the first and most critical war effort. Russia’s fifth and final war effort was to land Russian troops in Japan to defeat Japanese forces and end the war on their terms.
45. Edward S. Miller, *War Plan Orange: The U.S. Strategy to Defeat Japan, 1897–1945* (Annapolis, MD: Naval Institute Press, 1991), 335.
46. David C. Evans and Mark R. Peattie, *Kaigun: Strategy, Tactics, and Technology in the Imperial Japanese Navy, 1887–1941* (Annapolis, MD: Naval Institute Press, 1997), 70. Akiyama Saneyuki studied in the United States reviewing U.S. Naval War College course material and personally interacting with Alfred T. Mahan about naval theory. Akiyama also spent time on an American vessel as a foreign observer during the Spanish-American War. Upon his return to Japan, Akiyama blended his Western studies with his historical research on Eastern philosophers of war, such as Sun Tzu, to create a unique Japanese naval theory. A principle that Akiyama embedded in his theory, like Ardant du Picq, was the power of the unique Japanese will. His impacts on naval tactics merged modern tactical maneuvers, such as night attacks and fleet formations, with classic principles of deception, concentration, and indirect attacks. Akiyama’s enhanced methods of instruction, along with the new tactics and theory of naval warfare, were responsible for creating a new generation of Japanese naval officers that would fight many of the world’s great naval powers before the country’s ultimate defeat in World War II.
47. Turner, “Missions of the U.S. Navy,” 6. *Control in dispute* refers to when each side operates with considerable risk. This involves the need to establish working control for limited portions for a limited time to conduct specific operations.
48. Prados, *Islands of Destiny*, 350–62.
49. Evans and Peattie, *Kaigun*, 194–96, 233–37. The United States proposed a 10-year moratorium on capital ship construction and a schedule for the scrapping of specific warships in each of the five largest navies to reach stabilized limitation in total tonnage. The limits focused on total tonnage per country, maximum tonnage, and ordnance per class of ship and a nonfortification clause for all Pacific powers. Japan agreed to a 70

- percent ratio in heavy cruiser tonnage while maintaining the right to build an unlimited number of cruisers, destroyers, and submarines.
50. Evans and Peattie, *Kaigun*, 130, 218, 270, 307.
 51. Richard B. Frank, *Guadalcanal: The Definitive Account of the Landmark Battle* (New York: Penguin, 1990), 598–618, 637–46.
 52. Evans and Peattie, *Kaigun*, 116–29. After sailing for eight months, the ships and sailors of the Baltic Fleet were in poor condition. With the loss of the port at Lushun, upon arriving in the Far East, the fleet had no safe harbor to recover and refit in. Japanese ships spotted the advance screen of the Baltic Fleet and the Battle of Tsushima took place between 26 and 28 May 1905. Through good tactics, excellent internal communication, and some advantageous weather the Combined Fleet was able to destroy the entire Baltic Fleet while sustaining minimal casualties.
 53. Evans and Peattie, *Kaigun*, 110–16. By December 1904, with an established position above the port allowing unobstructed visibility of the squadron, Japanese forces were able to apply direct fire from siege guns, damaging or destroying all anchored Russian ships.
 54. Evans and Peattie, *Kaigun*, 334–40.
 55. Paine, *The Japanese Empire*, 369; and H. P. Willmott, *Sea Warfare: Weapons, Tactics, and Strategy* (Strettington, UK: Antony Bird Publications, 1981), 32.
 56. The term *capital ship* is not a doctrinal term. Historically, the term has been used to refer to the largest, most expensive, and most powerful ship a navy possesses, such as battleships or aircraft carriers. For the purpose of this project, capital ship is used to denote the significant cost and capability of U.S. Navy amphibious assault shipping. Economically, each amphibious assault ship, excluding Navy and Marine Corps personnel and combat equipment, is an investment of billions of dollars. When fully loaded with a Marine Corps combat power projection capability, manpower, and equipment, a single amphibious assault ship provides a considerable landward and seaward sea-control capability. The loss of a single amphibious assault ship, in terms of economic resources and capability, would be impactful to the Department of Defense. The U.S. Navy amphibious assault class includes the following categories: landing helicopter assault (LHA), landing helicopter dock (LHD), landing platform dock (LPD), and the landing ship dock (LSD)
 57. This study did not discuss the impact of the information environment, which includes cyberspace or the electromagnetic spectrum due to the scale and scope of this project. By no means does this omission ignore the importance of this domain in the modern operating environment. The ability to attack and protect friendly aspects in this domain are critical to the success of distributed forces operating on a common data link.
 58. Berger, *Commandant's Planning Guidance*, 10. "Stand-in Forces are designed to generate technically disruptive, tactical stand in engagements that confront aggressor naval forces with an array of low signature, affordable, and risk-worthy platforms and payloads optimized to operate in close and confined seas in defiance of adversary long-range precision 'stand-off capabilities'."
 59. Precision analytical modeling using China's A2/AD strategy and capabilities is beyond the scope of this research project. Conceptually, China's continued advancement of its A2/AD technology and increased posturing actions throughout the South China Sea are the critical components for comparison to Japan's actions during the interwar period.

Naval Integration An Old Approach for a New Era

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Abstract: Current debates on naval integration mostly focus on whether the naval Services' warfighting concepts are on target—the *why* of naval integration—or whether integration efforts are jeopardizing the Marine Corps' ability to fulfill longstanding roles and missions. An underappreciated aspect of this topic is the process, or the *how*, of naval integration. The actions of the U.S. Navy and Marine Corps during the interwar period are a positive example of naval integration and indicative of the long-term effects that can follow. Many current developments, in particular the growing partnership of the Marine Expeditionary Force (MEF) and fleet commands, are examples of effective naval integration and will help ensure that the Services arrive at the proper end state.

Keywords: naval integration, naval expeditionary operations, fleet operations, Navy operations, Marine Corps operations, amphibious operations, sea control, sea denial, deterrence, interwar period, composite warfare, command and control

There is a great deal of discussion today about the wisdom of an all-in commitment by the Marine Corps to naval integration and the risks associated with divesting of legacy capabilities. Some believe that the

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Marine Corps has simply gone too far, while others argue that a bold approach is required to make up for ground lost to strategic competitors such as China and Russia while the nation fought two wars in the Middle East.¹ Advocates of the latter position believe that the urgency of the situation does not allow for a piecemeal approach. This debate has been front and center in military journals, with prominent authors on both sides of the debate. Virtually all acknowledge the long-term threat posed by China, but there are significant differences of opinion regarding how much of the Marine Corps should be retained as a multipurpose crisis-response force to fulfill other missions, often independent of the Navy, such as counterinsurgency or sustained land combat. Critics of radical integration are also concerned that the Marine Corps is incurring significant risk by making long-term force structure decisions based on still-evolving concepts and unproven technologies.

While these debates about *why* and how far naval integration should go are important, an equally important but less-focused on element is the process of *how* to implement naval integration. While process is a less glamorous topic than strategy, roles and missions, or force design, it is every bit as important in the current environment. First, both the Chief of Naval Operations (CNO) and the Commandant of the Marine Corps have made historic policy and acquisition decisions that make it clear that they are not turning back. Right or wrong, the naval Services *are* moving toward far greater integration.² This fact highlights the importance of managing the process in a manner that plays to the strengths of each Service and makes the nation more secure. Second, while national strategy, Service warfighting concepts, and theater plans will evolve over time, the growing importance of sea control and sea denial and their role in deterrence has become evident. These functions will undergird all future naval warfighting concepts in an era of great power competition. Third, a disciplined process of naval integration will validate capabilities and identify capability gaps that will inform strategy and force structure decisions. The process itself can and should help shape the end state.

The actions of the Navy and Marine Corps during the interwar period provide excellent examples of effective integration and its potential effects.³ In 1933, the establishment of the Fleet Marine Forces (FMF) represented a dramatic and new, almost radical, commitment to integration, cementing the Marine Corps' already close relationship with the Navy. At a time when the Marine Corps was fulfilling missions in places such as Nicaragua and Haiti, the decision to fence off the equivalent of a Marine brigade for exclusive service with the Navy was a bold one. This force reported directly to the commander in chief, U.S. Fleet. Over the next decade, the decision yielded wide-ranging impacts across the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) spectrum. It spawned

the development of new technology and led to experimentation and exercises to validate the tactics associated with amphibious operations. The FMF decision also created new energy to complete the drafting of a document that would redefine the nature of naval integrated operations: the *Tentative Landing Operations Manual* (TLOM).⁴

The TLOM was completed in 1934 and addressed the critical components of amphibious warfare, including command relationships, naval gunfire, air support, ship-to-shore movement, the tactics of securing a beachhead, and logistics.⁵ The development of modern amphibious doctrine was directly tied to *the* operational and strategic question that Navy and Marine Corps leaders had been pondering since at least 1912: how to defeat Imperial Japan in a naval campaign in the Pacific if and when war came.⁶ It was an ambitious project since there was no precedent in how to conduct successive assaults on heavily defended islands across an ocean expanse. Many of the authors were students at Marine Corps Schools in Quantico, excused from classes to work on the project. One Marine captain said of his work on the TLOM's aviation committee that they "approached the subject . . . with a lantern in one hand and a candle in the other—but neither of these seemed to throw much light on the subject, so we wound up hiding our lights under a bushel and using the imagination that God gave us to use for this particular purpose." Though at times guided only by their imaginations and "fear and trembling" for those who would put their ideas into action, the TLOM and its doctrinal successors have stood the test of time.⁷ Starting with *Landing Operations Doctrine*, Fleet Tactical Publication 167 (FTP-167) in 1938, this doctrine has been the playbook by which all U.S. and allied forces have conducted amphibious operations from the Guadalcanal, Normandy, and Inchon landings to the long-range assault of Task Force 58 into southern Afghanistan in 2001.⁸ The modern manifestation of the TLOM is now found in various Joint and Service publications addressing amphibious operations and its component elements such as embarkation and ship-to-shore movement. The most important of these is *Amphibious Operations*, Joint Publication (JP) 3-02.⁹

The Fleet Marine Force Imperative: Then and Now

The commitment to reestablish and reinvigorate the Fleet Marine Force by the Commandant of the Marine Corps, General David H. Berger, represents a bold commitment to greater naval integration during the current interwar period.¹⁰ The Chief of Naval Operations, Admiral Michael M. Gilday, has likewise committed to closer partnership with the Marine Corps and has described the war-fighting end state of the Navy as the capability to deliver decisive "Integrated American Naval Power" to the nation.¹¹

The strategic imperative driving naval integration today, as in the 1930s, in-

volves developing the necessary capabilities to deter, and if necessary, defeat an authoritarian regime in the Pacific. However, the fundamental military problem is different to that faced in the 1930s, owing to factors such as the U.S. strategic position in the world, the impact of modern technologies, and the new normal of competition below the threshold of conflict.¹² China's militarization of reefs in the South China Sea (SCS) highlight the importance of deterrence in order to avoid similar or worse *fait accompli* scenarios that are difficult, if not impossible, to reverse.

As General Berger stated in his *Commandant's Planning Guidance: 38th Commandant of the Marine Corps* (CPG), "the focal point of the future integrated naval force will shift from traditional power projection to meet the new challenges associated with maintaining persistent naval forward presence to enable *sea control and denial operations*."¹³ That is to say, the aims are to maintain a persistent forward presence in littoral areas, including within the weapons engagement zone of potential adversaries, and to deter competitors such as China from bullying, coercing, or invading their neighbors.¹⁴ To be a credible deterrent, these forward-postured forces must be able to control use of the sea for friendly purposes (sea control) or deny use of the sea and key littoral areas (sea denial) to adversaries. Though no longer the focus it once was, the ability to seize battlespace through traditional—yet thoroughly modified tactics, techniques, and procedures—amphibious operations remains a core capability.¹⁵

Increasingly, the Navy will be challenged to effect sea control or project power against adversaries such as China, Russia, and Iran, especially in their home regions. Ubiquitous satellite coverage, advanced sensors, artificial intelligence (AI), unmanned systems, and long-range cruise and ballistic antiship missiles have narrowed the military and technological advantage that the United States has enjoyed for the past several decades. Hybrid warfare tactics have complicated the calculus further. Until the United States develops new technologies and force-employment concepts, it will be increasingly challenged by adversaries able to hold high-value targets, such as aircraft carriers, at risk.¹⁶

Other Services have a critically important role to play, but the synergy of two Services within one military department, a common naval heritage, and a history of habitual operational relationships make the Navy and Marine Corps ideal partners to counter China's hegemonic ambitions in the Western Pacific while deterring other revisionist powers.¹⁷ Just as *Landing Operations Doctrine*, FTP-167, guided the conduct of amphibious operations for all the U.S. Armed Services during World War II (WWII), there is reason to believe that Joint doctrine can evolve from current naval Service developmental efforts such as the *Expeditionary Advanced Base Operations (EABO) Handbook: Considerations for Force Development and Employment*.¹⁸

The End State: Well-Defined Enough?

If improving the capability to effect sea control and sea denial are the proper and primary reasons for naval integration, *what* the Navy and Marine Corps will look like at the end of a successful naval integration effort—the force structure end state—is less well-defined. What proportion of the Marine Corps should be optimized for EABO versus crisis response or more traditional power-projection missions? Should all Marine Expeditionary Forces and Marine Expeditionary Units be mirror-imaged, or should they be tailored to account for different theater priorities and operations plans?¹⁹ The Commandant has said that he welcomes an “informed debate,” and it is clear that the debates will continue and be influenced by myriad factors, including combatant commander priorities, world events, and congressional funding.²⁰

For now, the direction from the naval Service chiefs is clear. The Marine Corps, or some portion of it, will be wholly devoted to sea control, sea denial, and fleet sustainment as described in warfighting concepts such as distributed maritime operations (DMO), littoral operations in a contested environment (LOCE), and EABO.²¹ These warfighting concepts, along with combatant commander operation plans, *will* continue to evolve, as they should. During the interwar period, War Plan Orange, the plan developed to deal with potential war with Japan, was updated at least a half dozen times. To improve the Services’ capability to conduct sea control and sea denial and contribute to the refinement of concepts and plans, the integration process must be well managed and properly weighted. If not, it is likely that the Navy and Marine Corps will waste time, energy, and money and ultimately fail to effectively deter China and other competitors from realizing their territorial and/or political ambitions.

Naval Integration Across DOMTLPF-P Doctrine and Policy

The Navy and Marine Corps continue to publish an impressive number of strategy and concept documents that describe the military problems facing the naval Services, even though the classification level of many of these documents inadvertently hinders broader understanding and debate. However, one thing that remains missing is a broader metanarrative that describes why the nation needs the Marine Corps and how an integrated naval Service is critical to the nation’s defense at this time. A benchmark document that did just that is *The Role of the Marine Corps in National Defense*, Fleet Marine Force Manual (FMFM) 1-2, published in 1991.²² Avoiding contemporary jargon, well crafted, and succinct, *The Role of the Marine Corps in National Defense* clearly articulated the Marine Corps’ roles and responsibilities in naval campaigns, continental campaigns, and Joint operations. Such a document would be invaluable in answering questions from Congress and forestalling squabbles with other Services—likely one

of its original purposes—and should be updated and republished as a top priority.

The Services should create a new framework for naval expeditionary operations *from the sea* (i.e., traditional amphibious operations as described in *Amphibious Operations*, JP 3-02) and *to the sea* (i.e., operations as described in DMO, LOCE, and EABO). New concepts and doctrine should also take into account the attributes and capabilities of the other Services since the challenges posed by adversaries such as China and Russia can only be addressed by a Joint force operating across all warfighting domains. Doing so will require expanding the concept of a *fleet*, similar to that of Captain Wayne P. Hughes, who, in *Fleet Tactics and Naval Operations*, pointed out that much of the Soviet Navy was composed of land-based bombers and missiles during the Cold War.²³ It will require acknowledging that a Rockwell B-1 Lancer bomber carrying ship-killing missiles (e.g., long-range antiship missiles) or an Army terminal high-altitude area defense (THAAD) and Patriot Advanced Capability-3 (PAC-3) site may be as important as a Marine Corps expeditionary advanced base (EAB) or a destroyer to the Joint force maritime component commander (JFMCC).²⁴ Current Navy and Marine Corps concepts—and those in development—could and should evolve to become doctrine with applicability to all the Services. Such an approach makes the most sense from both a warfighting *and* taxpayer perspective.

The Service headquarters should avoid becoming involved in tactical command and control arrangements. This is more than just getting Beltway agendas out of the Fleet's way.²⁵ The Fleet is where tactical innovation happens. That innovation also takes time. It took a previous generation 13 years to develop workable amphibious doctrine. It will require more than a few months to work through multidomain command and control and other issues. Moreover, command and control constructs should be driven by the mission, forces available, and communications capabilities; factors and nuances that only the Fleet has a proper appreciation for. It is also important to note that fleet warfare is changing. While the Navy has long trained and operated at the strike group (carrier strike group or expeditionary strike group) level, there is a growing awareness that the Navy must learn to master fleet-level warfare, with multiple strike groups and Marine Corps formations operating in harmony.²⁶ This means that current tactical-level command and control arrangements and doctrine will inevitably change and will need to adapt.

An example of a flexible approach to command and control (C2) was demonstrated by Vice Admiral Charles W. Moore Jr. and Brigadier General James N. Mattis as the nation mounted its initial military response to the terrorist attacks of 11 September 2001. Moore, serving as the Naval Forces Central Command (NAVCENT) and 5th Fleet commander, selected Mattis as commander of the hastily formed Naval Expeditionary Task Force 58 instead of

a Navy flag officer. In a similar fashion, Mattis took a nonstandard approach, electing to form what was essentially a composite Marine Expeditionary Brigade (MEB) from two separate Amphibious Ready Groups/Marine Expeditionary Units (ARG/MEUs) instead of a more doctrinal amphibious force with one commander, landing force and one commander, amphibious task force. Both Moore and Mattis allowed the nature of the mission, the forces available, and principles such as simplicity—versus doctrine or precedent—to inform their decisions in the sphere of command arrangements. Task Force 58's subsequent successful long-range assault into southern Afghanistan from amphibious ships in November 2001 validated the wisdom of their approach.²⁷

Given this and other positive examples of operations that have benefited from flexible command arrangements, the hyper focus on composite warfare absent a fuller understanding of the tasks to be accomplished by EABs or Marine Littoral Regiments (MLRs) seems premature. Unique mission requirements drive command relationships and arrangements. This is especially true when considering the added complexity of controlling weapons systems with ranges potentially exceeding hundreds of miles, rather than tens of miles, and as a result must call into question orthodox notions of the employment of Marine forces at the tactical, operational, and strategic levels of war. While a sense of urgency is understandable, too much Service headquarters' guidance threatens to hamstring commanders in an area where flexibility is a prerequisite, not a liability.

Additionally, while the Commandant's guidance specifically mentions that the Marine Corps must be able to operate within a composite warfare construct, it appears that this direction has been distorted to mean that a Marine officer must be a warfare commander.²⁸ A more appropriate focus for the Marine Corps would be to determine where and when it is appropriate to provide resources and capabilities to the warfare commanders (e.g., air, surface, subsurface, information warfare) and what programmatic changes would be required to fully realize this particular form of integration. Depending on the scenario, a Marine element ashore with the proper fires, C2, and scouting/antiscouting capabilities could participate in the composite warfare construct of a task force in a fashion similar to that of a destroyer. If the Marine element in the task force provides the preponderance of capability for a specific mission, then it might be appropriate to be designated a warfare commander. In the end, command arrangements should be an outgrowth of the objectives and forces available and not predetermined.

Training, Leadership, and Education

On the positive side, there is good news to report in the way of curriculum changes underway in places such as Marine Corps University and the U.S. Na-

val War College. After a slow start, there has been a demonstrable increase in the focus on great power competition, China, naval warfare, hybrid warfare, and wargaming and momentum is only growing. Recent online competitive wargames based on Pacific War scenarios conducted by the Marine Corps Command and Staff College and the Training and Education Command (TECOM) Warfighting Society have demonstrated their educational value.²⁹ There is a need for more games with a maritime focus, particularly since most commercial off-the-shelf games today are land-centric. Schools should also maintain a strong emphasis on past examples of military innovation and military organizations that have successfully adapted to the changing character of war.³⁰ An educational organization leading the way in wargaming and innovation is Marine Corps University's Brute Krulak Center for Innovation and Creativity in Quantico, Virginia. It functions as a hybrid "think tank/do tank" and has become a hub for wargamers and original thinkers. The Krulak Center offers a growing catalog of publications, podcasts, and short videos on their website.³¹

Wargaming and simulation have been a high priority in the naval Services, and this must continue, provided they are conducted the right way and their limits are appreciated. For instance, fewer wargames with the right participants is preferable to more wargames with the wrong (or insufficient) participants. Checks and balances must be built in to protect against confirmation bias because wargames are often cited as the justification for Service positions on warfighting concepts and budget decisions. There is real pressure to deliver—pressure that can stifle critical analysis. It is important to remember that EABO is merely one potential solution to the sea control/sea denial challenge. Congress will question, and the other Services will propose, alternative solutions, such as more ships, tankers, bombers, and long-range missiles. Navy and Marine Corps concepts will have to compete in this democracy of ideas. There has never been a better time for the employment of internally focused red teams, employed to provide opposing points of view and challenge bias, to ensure "blue" cells consider as many perspectives and contingencies as possible. Robust red cells, acting as enemy commanders and planners, too, must replicate thinking and uncooperative adversaries and their capabilities as closely as possible in order to challenge blue concepts and concepts of operation.

While the Service headquarters need not be entwined in tactical C2 negotiation, they can help ensure better outcomes in this area through training and education. All but a very few Marines have experience and knowledge in areas such as tactical data links and space systems, both of which are critical to fighting in a maritime space increasingly dominated by long-range precision strike systems. For this reason, the Marine Corps should strongly consider bringing back the C2 Systems Course for company-grade officers (an Expeditionary Warfare School [EWS] equivalent) and infuse it with a distinctly maritime fla-

vor, as well as expanding the number of master's degrees offered in disciplines such as systems and software engineering.

Organization, Personnel, and Policy

The naval Services should commit to standing up a Joint office dedicated to solving the technical challenges posed in operationalizing DMO and EABO and closing kill chains.³² This will involve solving hard engineering and software problems required for the Marine Corps to operate within the Navy's Cooperative Engagement Capability network—essential in a composite warfare structure—and for both Services to operate effectively within broader Joint command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) and fires networks.

In the name of naval integration, some have gone so far as to recommend a wholesale reorganization of Navy and Marine Corps headquarters staffs.³³ Others have argued for changes that would ultimately lead to a single naval representative on the Joint Chiefs of Staff (JCS) and a combined Service headquarters providing “common fiscal, acquisition, and technology policy and support to operating forces.”³⁴ However, a convincing case has not been made that these proposals would improve the Services' capability to conduct naval expeditionary operations together. From the perspective of influence within the Pentagon bureaucracy, combining Navy and Marine Corps staffs, and presumably Service chiefs, would eliminate one four-star, several subordinate flag officers, and numerous field-grade officers and have the effect of diminishing overall naval influence within the JCS and throughout the Pentagon, not to mention Capitol Hill. It also seems likely that such a massive reorganization would create churn that would distract institutional focus rather than concentrate it on the strategic problem set. Taking concrete steps to infuse more discipline into the planning, programming, budgeting, and execution process of each Service, like those referenced in the CPG, seem like a better and more realistic approach in this area.³⁵

One of the most positive developments over the past year has been the increase in coordination between MEFs and numbered fleets. Excluding U.S. Fleet Cyber Command, 10th Fleet, there are more numbered fleets (six) than MEFs (three). Despite the disparity, the level of operational and tactical planning between the MEFs and numbered fleets is unprecedented, at least in recent memory.

For example, at the direction of its commanding general, II MEF planners have spent most of 2020 working side-by-side with the 6th Fleet staff in Naples, Italy, discussing the conduct of naval integrated operations in the European theater. Their efforts have also contributed to detailed analysis of component-level command relationships, a topic briefly addressed in the CPG. Efforts such as

these, including the close and growing partnership between III MEF and the 7th Fleet, should be the priorities of naval integration. MEF commanding generals and Fleet commanders are ideally suited to lead this effort, positioned as they are between Service chiefs and component commanders on one side and tactical warfighters on the other. They have sufficient rank to push through initiatives and obtain necessary resources. When MEFs and Fleets work in close harmony, they improve the planning capability and capacity of both staffs. For example, generally speaking, Marines have more experience in staff planning than their Navy counterparts, while Navy officers have a far greater understanding of composite warfare and the workings of a Fleet Maritime Operations Center. MEF and Fleet commanders have sufficient maturity and experience to balance Service and operational priorities and are best positioned to ensure naval forces strike the right balance between being ready to fight tonight and conducting the experimentation needed to prepare for future fights. Finally, MEFs and Fleets have strong formal and informal connections to Service training and education organizations for reach back support. Habitual relationships with the Marine Air-Ground Task Force (MAGTF) Staff Training Program, the School of Advanced Warfighting, the College of Maritime Operational Warfare, and the Maritime Advanced Warfighting School all stand out in this regard.

While recent coordination between MEF and Fleet staffs is a solid beginning, they are limited by staff capacity. The naval Services would accelerate integration—and thus better prepare for future threats—by expanding Joint credit to Marines and sailors serving in one another's Service headquarters and senior staffs. While the Goldwater-Nichols Department of Defense Reorganization Act of 1986 was a boost for the Joint force, it has inadvertently weakened the bonds between the naval Services. Today, given a choice of billets, a competitive officer will choose a Joint billet, even if it involves a permanent change of station move, over service with their naval counterpart since Joint duty increases that officer's chances at promotion and is a prerequisite for consideration for selection to flag rank.³⁶ In light of the times, this needs to be remedied. Joint credit for intranaval service duty would be a small but powerful incentive in attracting the best officers to work on the challenges of naval integration while remaining competitive for promotion. Doing this will entail changes to Joint and Service policy and U.S. law, but it can be done and will certainly be less complicated than establishing a new branch of the U.S. armed forces as was recently accomplished with the stand-up of the Space Force.

Today's Navy and Marine Corps units are saturated with commitments around the globe in a way that was not conceivable during the interwar period. It is not that commanders and staffs are not keen on the idea of experimentation and innovation; it is simply a fact that jam-packed deployment schedules and Training Effectiveness Evaluation Plans leave little white space in their sched-

ules. As the Navy looks to revitalize Fleet Battle Problems and experimentation as it did between 1923 and 1940, naval integration should be a high priority.³⁷ It is imperative that both Service headquarters prioritize the commitment to dedicated experimentation forces and conduct exercises that test the latest Service concepts.³⁸ There are already clear signs that this is beginning to happen. For example, the recent memorandum of agreement, signed between the commander, 3d Fleet, and the commanding general, I Marine Expeditionary Force, describes in detail how these two commands will train and experiment together for the next several years. Efforts such as these may be the most important component of the transformation envisioned in recent doctrine, strategy, and concept documents.³⁹

Naval Integration: Never an End in Itself

Navy and Marine Corps efforts to more closely integrate must remain explicitly tied to the strategic imperative of deterring China and the naval functions of sea control and sea denial. As with the original FMF in 1933, the Marine Corps' commitment to a reinvigorated FME, together with the CNO's commitment to integrated American naval power, have the potential to lead to positive, long-term impacts.⁴⁰ However, for this to occur, there must be experimentation, wargaming, and exercises, similar to that accomplished during the interwar period.⁴¹ Supported by their Service headquarters and training and education commands, MEFs and Fleets are well positioned to do this, in part because they live in the world of operational problems. Their collaboration will reveal the potential of a truly integrated naval force and clarify its role in the nation's defense. As General Berger recently testified before Congress, "an integrated naval expeditionary force within contested areas provides the joint force with an asymmetric advantage, an edge that we must preserve and strengthen in this era of great power competition."⁴²

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the term *fleet warfare* later in this paragraph is referring to naval warfare or the war-fighting practices of the U.S. Navy. Finally, *Fleet* is sometimes used to refer to a naval organization such as numbered fleets (e.g., 7th Fleet). While it can be confusing for those outside the naval Services, most often the meaning of Fleet or fleet can be deduced from its context within a sentence or paragraph. That principle holds true in this article.

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The Joint Force Maritime Component Command and the Marine Corps Integrate to Win the Black Sea Fight

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Abstract: Marine integration with the Navy contributes to meeting vital U.S. naval operational requirements, especially when organized as a Joint Force Maritime Component Command (JFMCC) in the Black Sea against Russian threats. The global operating model addresses integration across escalating levels of competition and conflict called contact, blunt, and surge layers. In the contact layer, Marine integration allows the JFMCC to maintain regional access, assure allies, and counter expanding Russian influence. In the blunt layer, Marine integration supports the JFMCC's operational objectives of denying Russian sea control and freedom of movement. Finally, in the surge layer, a Navy and Marine integrated JFMCC gains a greater ability to project power against a robust antiaccess and area-denial network and decisively defeat Russian aggression. This article contends that naval integration is also an important component of defense against Russian expansion in the Black Sea region.

Keywords: Joint force maritime component command, JFMCC, Navy and Marine Corps integration, Black Sea, Russia, global operating model, antiaccess, area denial

Russian surface groups, sortied from their naval bases around the Black Sea, have been operating in the region with impunity for years. Russia's goals with these naval operations is to create space between the Black Sea North Atlantic Treaty Organization (NATO) member states, demonstrate

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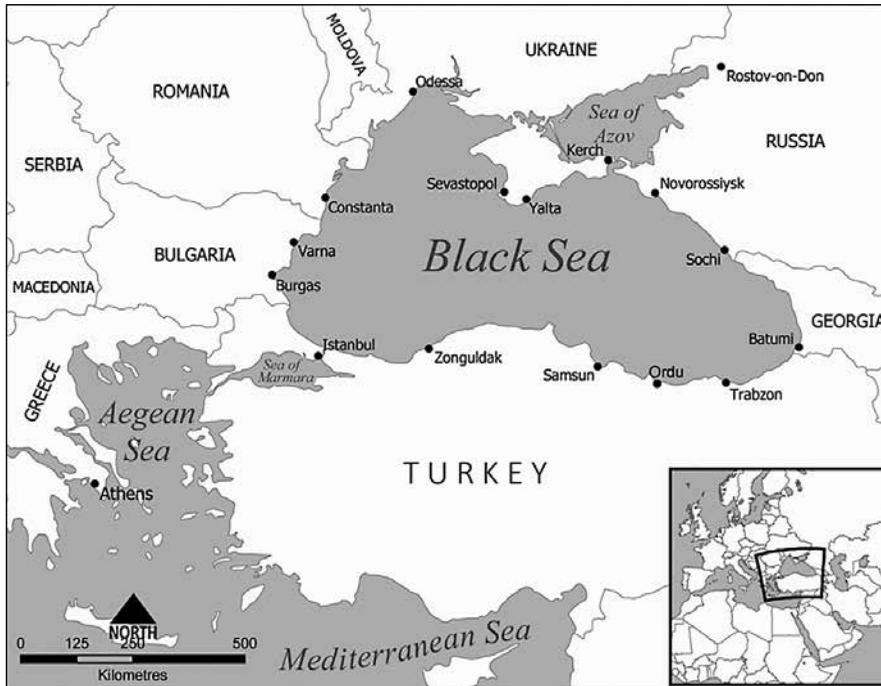
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Map 1. Black Sea region



Source: Courtesy of the author, adapted by MCUP.

overt control of the economic levers in the region, and maintain access to Syria through Tartus, Russia's only naval base in the Middle East.¹ These goals are a significant aspect of Russia's overall strategy to challenge the 70 years of U.S. dominance in the Mediterranean and expand its influence throughout the Black Sea and Eastern Mediterranean regions.

These Russian actions serve as a reminder that great power competition is not solely focused on China. Russia remains a strategic competitor and military threat. In turn, the U.S. Marine Corps is a valuable player, not just in the Pacific against China but also in the Black Sea against Russia. The global operating model (GOM) provides a cognitive and operational framework to explore the validity of Navy and Marine Corps integration in this region through the three of the four layers: contact, blunt, and surge.² For the Joint Force Maritime Component Command (JFMCC), the GOM also provides leaders an operational warfighting framework that doubles as a sea control and power-projection model.

Could the current initiative for naval integration in the Pacific also be the best way to win in competition and armed conflict against Russia in the Black Sea, especially when organized as an integral part of a JFMCC? In the contact

layer, Marine integration allows the JFMCC to compete against Russian influence despite limitations imposed by geography and international conventions while maintaining regional access. As a blunt layer force, Marine integration supports the JFMCC's operational objectives of denying Russian sea control and freedom of movement despite lacking a persistent force in the region. Finally, in the surge layer, a Navy and Marine integrated JFMCC gains a greater ability to project power against a robust antiaccess and area-denial (A2/AD) network and decisively defeat Russian aggression.

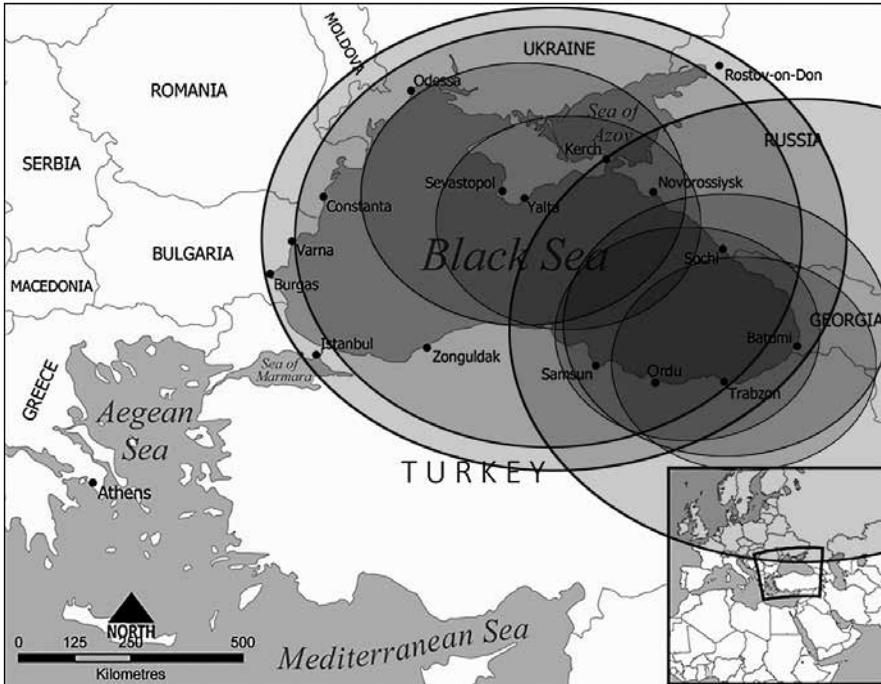
Why Does This Region Matter?

The geographic and economic importance of the Black Sea outweighs its relatively small size. First, sea routes across the Black Sea are the most efficient way for bulk commercial goods to move between dozens of countries. Each day, more than 450 bulk merchant ships transit into or out of the Black Sea. These ships are responsible for moving more than 500 million tons of goods per year.³ While trade in the Western Pacific dwarfs these numbers, the rate of trade in the Black Sea region is increasing significantly.⁴ As the rate of trade increases, the need for influence over and control of trade in the area will increase proportionally as well.

In addition to its increasingly powerful economic engine, the region also has significant geopolitical implications for the United States, a leading member of NATO. The Black Sea region is a contact point between NATO members and Russia. The proximity between NATO members and Russia results in a direct struggle for influence and strategic positioning. NATO's recent support to Ukraine and Georgia in their conflicts against Russia has highlighted this regional competition. Another primary reason the Black Sea remains of interest to NATO and the United States is that it provides a southern access point into Russia. These reasons make the entire region strategic key terrain for NATO should offensive action against Russia become necessary.⁵ The Black Sea will remain a strategically important region for the United States as competition continues or in the event of military escalations between Russia and NATO.

The Russian Problem

In both competition and armed conflict, the JFMCC faces a set of operational problems due to the strategic importance of the Black Sea. Russia is using the Black Sea as an operational hub to consolidate and project power into neighboring countries and the Eastern Mediterranean. To support power projection, Russia is developing a powerful Black Sea Fleet (BSF) and significant sea-denial capabilities in the region.⁶ Russia has implemented a modernization program for its BSF that includes six modern submarines, three guided-missile frigates, six missile corvettes, and dozens of smaller combatants. These vessels are spe-

Map 2. Russian weapons systems and ranges in the Black Sea

Source: Courtesy of the author, adapted by MCUP.

cially designed for the Black Sea littorals and are capable of carrying Russia's most advanced antiship and anti-air systems.⁷ Elements of this fleet are already projecting power into Syria from the Eastern Mediterranean, demonstrating Russia's ability and interest to expand its operational reach.⁸ The Black Sea Fleet has quickly become a modern and capable adversary in the region.

In addition to modernizing its fleet, Russia is developing an imposing set of sea-denial capabilities, which it calls its "counter-navy." This sea denial force, the BSF's operational center of gravity, blankets nearly the entire Black Sea region with antiship and anti-air missile systems, integrates capable land-based aircraft, and employs a robust electronic warfare capability (map 2).⁹ In previous decades, U.S. naval forces could project power to nearly anywhere in the world while its capital assets were safe from enemy action. Should conflict erupt in the Black Sea region, this may no longer prove true.

JFMCC Operational Goals and Shortfalls

The U.S. European Command has an opportunity to establish an enduring JFMCC to meet the challenges associated with competition and armed conflict against Russia in the Black Sea, rather than maintaining a peacetime Service component structure. This JFMCC will likely be assigned the objectives in the maritime domain around the Black Sea. These objectives align with the GOM's

layers found in the *2018 National Defense Strategy*.¹⁰ These layers also serve as an effective framework to examine JFMCC requirements and challenges as they pursue their objectives.

In the contact layer, the JFMCC must maintain access to the region, assure allies, and compete against Russian influence. International combined naval exercises, like the Sea Breeze iterations, contributed to these goals as a way to compete against Russia without armed conflict.¹¹ To continue to meet these goals, the JFMCC must overcome unique challenges presented by the Black Sea region. The Montreux Convention (1936) is one of these challenges. It is an international agreement that limits the size, number, and operational duration of ships in the Black Sea from nonlittoral Black Sea nations.¹² Adhering to this convention, as U.S. forces must, means that Russia, a Black Sea nation, will almost always have a numerical naval advantage within the Black Sea. The Montreux Convention, along with constrained geography, also prevents the JFMCC from moving anything more substantial than a cruiser into the Black Sea, significantly reducing potential U.S. military capabilities.

In the blunt layer, denying Russian sea control and preventing a *fait accompli* similar to their recent annexation of Crimea is a likely task the JFMCC must support. To do this, the JFMCC must maintain a persistent and credible presence in the region. This task is becoming increasingly difficult as U.S. defense priorities continue to shift to the Pacific. As a result of this shift, most of the Navy's assets are assigned to U.S. Indo-Pacific Command, with less than 40 percent left to distribute between the remaining five combatant commands.¹³ There simply is not enough Navy to always be in the Black Sea to counter Russian aggression.

In the surge layer, the JFMCC might be responsible for quickly projecting power into the Black Sea region and decisively defeating Russian aggression. Russian A2/AD systems, combined with the littoral geography of the region, make power projection a daunting task. The JFMCC must set conditions for power projection, sustain operational logistics, and support naval campaigns through combat force projection ashore.

As a result of the emerging global challenges, emphasis on competition, and directed missions described in the *2018 National Defense Strategy*, the Commandant of the Marine Corps released planning guidance for the next decade.¹⁴ In *Force Design 2030*, the Commandant made a case for enhanced naval integration. In the past, naval integration appeared as a one-way street. The Navy supported the Marines with transportation, logistics, and fires during land missions and campaigns. The Marine Corps did not, either by capability or will, provide significant support to the Navy's sea control and denial missions. By refining force design, warfighting concepts, education and training, core values, and command and leadership, the Marine Corps, focusing on likely JFMCC

tasks in conjunction with the Navy, is developing a force that will seamlessly shift between support to actions on land and campaigns for sea control. If done correctly, an integrated Navy and Marine JFMCC will provide a unity of effort across land and sea actions that will win in competition and armed conflict against Russia in the Black Sea region.

Even the smallest Marine Air-Ground Task Force (MAGTF) is capable of significantly enhancing the JFMCC's ability to meet its objectives in the Black Sea. The smallest MAGTF is generally a Marine Expeditionary Unit (MEU) numbering approximately 2,400 Marines. The MEU includes a battalion-size ground combat element, a robust aviation squadron of fixed- and rotary-wing aircraft, and a logistics battalion. All three elements work in conjunction under a common MAGTF headquarters to support a single battle, able to deploy to and from naval shipping and expeditionary land-based locations. Additionally, MAGTFs can be further task-organized and scaled in size to achieve specific mission sets both with and separate from naval shipping. These MAGTFs will provide the JFMCC with operational fires, scouting, command and control (C2), and other supporting functions to assist with sea control or sea denial mission sets by reinforcing aviation, long-range fires, and scouting capabilities.¹⁵ This will “[supply] the [JFMCC and] joint force with an ‘any sensor, any shooter’ capability that persists within an adversary’s threat rings.”¹⁶ Marine integration with the JFMCC in each of the layers will help to overcome regional challenges, leading to strategic and operational success in the region.

The Contact Layer

In the contact layer, defined as competition between nations below the level of armed conflict, Marine integration allows the JFMCC to maintain regional access, assure allies, and counter expanding Russian influence despite limitations imposed by geography and international conventions. Specifically, Marine integration increases the JFMCC's capability and capacity to meet these requirements through maritime interdiction operations and establishment of naval infrastructure across the Black Sea region. These actions align well within the contact layer because they serve to compete with Russia while also preventing potential escalation. Professor James Holmes of the U.S. Naval War College describes the contact layer as “armed competition that casts a shadow across an adversary’s decision-making process.”¹⁷ Integrating Marine capabilities into the JFMCC as part of the contact layer provides an opportunity to rebalance the factor of force while complicating Russia’s strategic thinking on how and where to compete or potentially escalate into conflict.

The JFMCC must integrate the Marine Corps into maritime interdiction operations (MIO) and visit, board, search, and seizure (VBSS) activities to compete in the Black Sea under Russian sea-denial umbrellas. Marine inte-

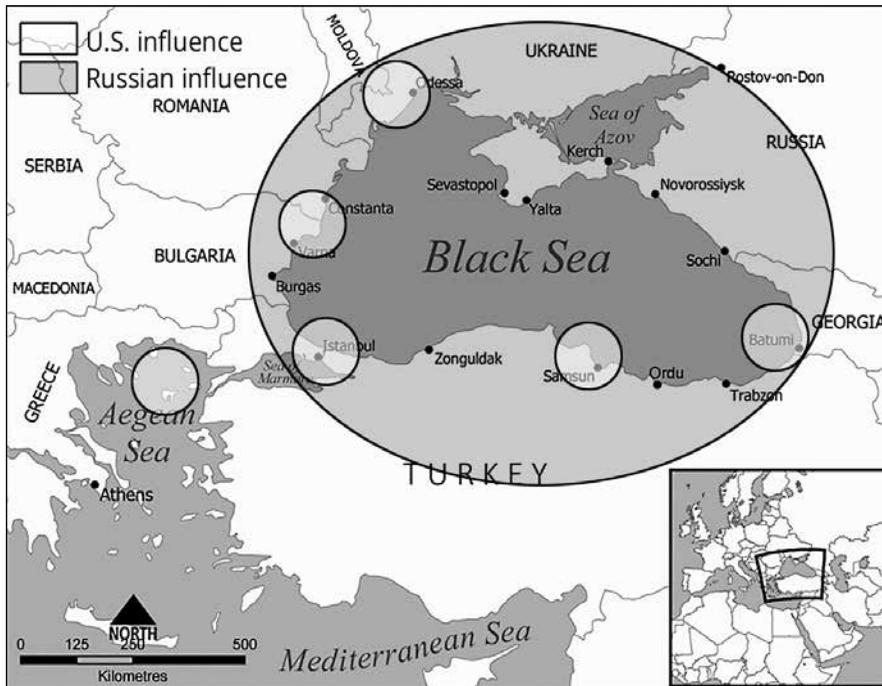
gration into MIO provides the JFMCC additional capacity and capability to compete against Russia while not directly challenging them. Using Marines to conduct MIO through VBSS missions frees up sailors to perform their primary ship-fighting duties. This reduces the risk to the mission a ship's commander takes by keeping sailors at their primary jobs and makes the JFMCC more capable.

At an operational level, a MAGTF task-organized for MIO uses its logistic and air assets to operate independently from the standard Navy Amphibious Readiness Group. Integrating in this manner frees up JFMCC shipping assets for other missions. As MAGTFs expand the locations they operate from, including allied countries and nontraditional shipping, it becomes more difficult for Russia to track and harder for malign actors to avoid interdiction. A MEU, integrated with the JFMCC in this manner, adds the ability to conduct up to six additional VBSS actions a day.¹⁸ This integration adds capacity and supplements the JFMCC's capability to compete with Russia in the contact layer.

In addition to MIO, Marine integration allows the JFMCC to prepare for armed conflict by using opportunities presented in the contact layer to set the theater should Russian forces escalate into armed conflict and assures regional allies by demonstrating U.S. commitment. *Setting the theater* is a term often used in the context of Army operations in support of land campaigns to create the logistical conditions for military operations before those operations are required.¹⁹ However, its principles also apply to naval operations. Setting the theater allows the JFMCC to prepare for potential armed conflict by establishing needed infrastructure across the region. This infrastructure needs to be in place before hostilities commence because Russian sea-denial systems will prevent additional development, and the Montreux Convention and the Black Sea geography will limit access by major naval assets.

To overcome this shortfall, integrating Marine infrastructure development as part of the contact layer allows the JFMCC to be ready should competition escalate into armed conflict. The Navy and Marine Corps' expeditionary advanced base operations (EABO) concept, while generally designed for the Pacific, describes JFMCC support requirements and how Marine integration can meet those requirements in the contact layer in other areas.²⁰ To do this in the Black Sea, Marines integrate into existing combatant command campaign plan exercises to build and leave behind completed infrastructure. Examples include Marine Wing Support and Air Control Squadrons, integrated with Navy Seabees, constructing and repairing runways in the Aegean Sea, building long-term aviation fuel storage containers on the east coast of Romania, and conducting partner training with Bulgarian allies to develop radar installations that cover the southern portion of the Black Sea. Marine Engineer Battalions also expand hasty port facilities capable of reloading of vertical launch systems and build

Map 3. Competition for influence in the contact layer



Source: Courtesy of the author, adapted by MCUP.

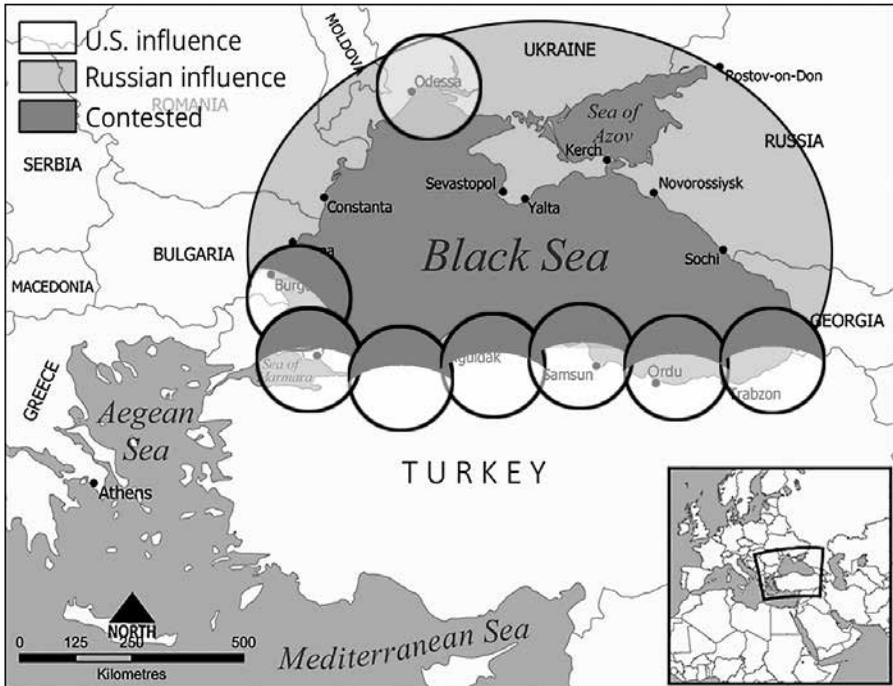
landing pads across the region (map 3). Marine integration in the contact layer complicates Russia's operational decision-making processes, assures allies, and maintains regional access without significantly increasing major assets in the region or provoking hostilities.

The Blunt Layer

In the blunt layer, defined as actions that stymie adversary aggression, Marine integration provides the JFMCC a persistent force that will contribute to denying Russia sea control and freedom of movement. Marine integration with the JFMCC in the blunt layer provides distributed and persistent operational fires and scouting capabilities for the force as a whole while remaining operationally relevant despite Russian targeting. The blunt layer potentially envisions a clash between JFMCC sea-denial efforts and Russian sea-control efforts around maritime key terrain to forcibly achieve Russian goals before the full might of the U.S. military and NATO can mobilize and respond. Operational fires, scouting, and C2 will be decisive in this struggle for sea control.

The JFMCC must fight with resources already in place at preselected locations. These locations are key maritime terrain Russia must control or pass by to project power, thereby localizing the struggle for sea control (map 4).

Map 4. Blunt layer actions



Source: Courtesy of the author, adapted by MCUP.

The Black Sea region has an exceptional amount of maritime key terrain to include the Kerch Strait, Bosphorus Strait, Sea of Marmara, and the Dardanelles Strait. Additional opportunities exist to use the 200 islands scattered throughout the Aegean Sea for land-based Marine units designed to counter Russian sea-control efforts. The Joint Concept for Access and Maneuver in the Global Commons (JAM-GC) describes these Marine units as an inside force; they are a force that provides a “persistent forward presence to achieve an advantage . . . that will blunt adversary interference and set the conditions to introduce additional combat power.”²¹ Marine integration in the Black Sea provides the JFMCC with a myriad of options to operationally employ land-based Marine Corps units to impede Russian aggression.

The first way an integrated Marine and Navy JFMCC meets Russian aggression in the blunt layer is by enhancing the firepower function of the JFMCC through operational fires. Recent Service, combatant, and Joint staff-level wargaming efforts prioritized gaining insights on the employment of fires inside Russian threat rings. The 2019 Globally Integrated Wargame revealed a decisive advantage to the force that can strike effectively first and remain “operationally relevant” inside Russia’s long-range weapons ranges.²² The Marine Corps is one option to be this force for the JFMCC. Supporting this are Marine efforts to develop a land-based naval strike missile system specifically designed

to strike enemy naval vessels from hard to find littoral locations.²³ Also, a recent order from the Commandant of the Marine Corps directed the tripling of precision-guided, long-range rocket artillery units while eliminating all main battle tank units.²⁴ This demonstrates the Marines are serious about integration with the JFMCC by investing in platforms that contribute to sea control and divesting from those that do not. Marine integration of maritime fires gives the JFMCC a decisive advantage with a persistent, resilient, and operationally relevant force.

The second way Marine integration can prevent Russian aggression is through C2 and sensor support to the JFMCC. Given the robustness of Russia's sea-denial assets in the Black Sea, Navy ships are generally not able to use their shipboard sensors to achieve their own targeting data prior to a strike. Marine units, acting as the JFMCC's inside force, cover this gap by increasing the JFMCC's scouting ability and improving operational, tactical, and technical C2 at the point of contact or conflict. Like land-based fires, small Marine units with drones, radars, and electronic-warfare capabilities distributed near maritime key terrain enhance the overall scouting capabilities of the JFMCC in denied areas. A key finding in a series of Marine Corps Warfighting Laboratory, Naval Services, U.S. Indo-Pacific Command, and Joint Staff war games in 2019 recognized the importance of sensing and targeting Russian assets while remaining undetected. It claimed that

the hider-versus finder competition is real. Losing this competition has enormous and potentially catastrophic consequences. This makes success in the reconnaissance/counter-reconnaissance mission an imperative for success.²⁵

Small, distributed Marine units will pass targeting data to Navy ships and aircraft to appropriately address those targets. Those Marine units assist with the close-in coordination of those strikes through networked C2 functions. The high-value naval ship or expensive aircraft remains relatively safe outside of Russian threat rings. Marine integration helps the JFMCC win the hider-finder competition.

Distributed Marine units remain operationally relevant because they are more survivable, cost-effective, and are more risk worthy than the other options available to the JFMCC commander. These land-based Marine units will number approximately a dozen troops and a few vehicles, taking up less area than two basketball courts. Table 1 illustrates that small-size units reduce the probability of detection and their chances of being successfully targeted by enemy weapon systems by a factor of 5 to 12 times when compared to Navy capital ships.

Dozens of these small units, simultaneously employed across hundreds of

Table 1. Hit probability

Missile salvo size needed to generate a 95 percent probability of hit (PH)			
CVN 78	LHA 6	LPD 17	Marine NSM Firing Unit
5	8	12	60

Calculations used a circular error probability (CEP) of 50 percent common to standard, modern long-range ballistic missiles found in Russian inventories. Calculated CEP to the radius of the potential targets in the table based on half the lengths of the assets. Estimated a Marine, land-based unit firing a naval strike missile would occupy an area 56m by 30m based on current High Mobility Artillery Rocket System (HIMARS) and Army Tactical Missile System (ATACMS) doctrine. Half lengths: CVN at 169m, LHA at 128m, and LPD at 104m. *Maj Leo Spaeder, "Get Small or Get Shot," Marine Corps Gazette 103, no. 12 (December 2019), adapted by MCUP.*

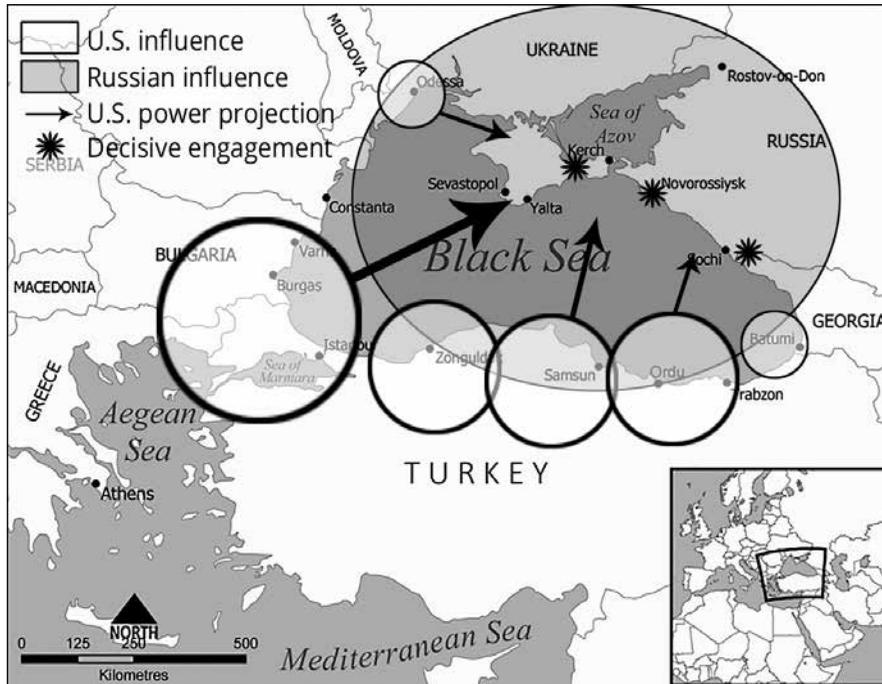
potential locations in the region, survive in more places, for longer, and may retain more capability than Navy ships and aircraft after an initial outbreak of hostilities. Since they are also cheaper to replace and less impactful if lost than warships or aircraft, the JFMCC commander may accept higher risk in their employment. These options do not exist in the JFMCC without Marine integration.

Marine integration also increases the capacity and enhances the capabilities of the JFMCC for sea denial. One battalion-size MAGTF, task-organized for sea denial, can deny sea control around six separate locations on key maritime terrain out to a radius of hundreds of nautical miles. It also doubles existing JFMCC sea-denial zones by using its sensor and C2 assets for a total of nearly 80,000 and 40,000 square miles in the Black Sea and Eastern Mediterranean, respectively.²⁶ This type of integration in the blunt layer provides an opportunity for the JFMCC to rebalance the factor of force and time against Russia. Buying time and conducting a credible economy of force mission “prevents Russia from achieving a *fait accompli*” and gives the JFMCC commander more options while preventing Russia from achieving its operational goals before the United States can respond.²⁷

The Surge Layer

Should blunt layer actions fail to deter or defeat Russian escalation, Marine integration in the surge layer allows the JFMCC to project power into a robust A2/AD network and decisively defeat Russian aggression in the Black Sea. Marine integration in this layer sets the conditions for naval power projection into the theater, secures sea lines of communication (SLOC) for operational logistics, and supports naval campaigns by projecting force ashore (map 5). In the surge layer, defined as actions that end a conflict on favorable terms, the JFMCC shifts from sea denial to sea control efforts as forces arrive from outside

Map 5. Decisive action in the surge layer



Source: Courtesy of the author, adapted by MCUP.

the theater. These surge forces “project power deep inland to disrupt the enemy, destroy enemy forces, and seize terrain in support of a joint campaign.”²⁸ Marine units, already in place in the contact and blunt layers, and operating inside Russian threat rings, are in an ideal position to support the introduction of JFMCC surge forces. Marine integration sets the conditions for the war-winning forces that must come from outside the Black Sea region to defeat Russia.

The first and most significant way Marine integration enables the JFMCC in this layer is to set the conditions for naval power projection by naval expeditionary surge forces. Given Russian sea-denial threats and geographic limitations in the Black Sea, the decisive “war-winning” forces needed will primarily be naval aircraft, guided-missile capable naval vessels, and amphibious ground forces.²⁹ Marine integration leverages infrastructure developed in the contact layer to support this massive inflow of additional naval forces. In a decisive fight, Russian firepower, maritime choke points, and water depth will force U.S. carriers to remain well south of the Black Sea. Additionally, as surge forces become necessary, naval-air assets will arrive and fight without being embarked on a carrier. Simply put, it is likely that the JFMCC will have more aircraft than the carriers available to support them, and the carriers they do have will have to maintain significant standoff from the conflict areas.

The dozens of potential airfields, pads, and resupply points that were either built or surveyed in the previous layers should now be used to support naval airpower. Recent Joint training events with the 31st Marine Expeditionary Unit in the Pacific validated a Navy and Marine concept that “envisions employing [Lockheed Martin Lightning II] F-35Bs [across] a shifting network of expeditionary airfields, tactical landing zones, and forward arming and refueling points.”³⁰ In addition to this concept of logistical support, Marine units already in place before surge layer activities will continue to provide land-based fire-power, sensor, and C2 support to JFMCC forces outside threat rings. These distributed Marine units act as a breach into denied areas for naval surge forces.³¹ Integrating multiple domains through a combined Marine and Navy JFMCC potentially triples the number of F-35B Lightning II sorties available, increases their survivability, and reduces their rearming and refueling times. These distributed units are difficult to detect and target, especially when used only as needed and for short durations. Integrating Marine support for naval airpower will significantly increase the combat power and potential available to the JFMCC commander.

Another critical capability Marine integration provides the JFMCC in the surge layer is protecting SLOCs used by vulnerable Military Sealift Command (MSC) shipping to move supplies needed by war-winning forces into the region. In the surge layer, the JFMCC will rely heavily on MSC shipping for its operational-level logistics. Despite its unorthodoxy, the JFMCC should task MAGTFs, designed to support sea control, to secure portions of designated SLOCs, especially those approaching the Black Sea through the Mediterranean. Using distributed Bell Boeing MV-22 Ospreys, F-35Bs, and long-range precision fires, a MAGTF task-organized for sea control can secure up to 800 km of SLOCs in critical areas.³² The Navy does not have enough ships to escort MSC shipping at the level of surge-layer conflict. Integrating Marines to secure SLOCs is a better option than telling the MSC that “you’re on your own. Go fast, stay quiet.”³³ Marine integration provides the JFMCC an opportunity to rebalance the factors of time, space, and force along these SLOCs.

In addition to maintaining distributed units across the Black Sea, Marine integration allows the JFMCC to project force ashore in amphibious operations as part of naval campaigns. This capability is especially relevant in the Black Sea should NATO require action against Russia’s southern flank for a decisive action.³⁴ Aggregating distributed Marine units to provide a credible amphibious assault capability in the JFMCC will be a critical enabling operation for this potential NATO offensive. The JFMCC must enable “the decisive force that can arrive later, exploiting the operational and political leverage created by the blunt layer . . . to end the conflict on terms we prefer.”³⁵ Marine integration with the JFMCC is key to defeating Russian aggression in the Black Sea.

Alternatives to Marine Integration in the Black Sea

Marine integration with the JFMCC in the Black Sea could be seen as short-sighted. This concept potentially creates redundant capabilities based on current Army initiatives. Additionally, this concept may also focus only on one component of JFMCC at the expense of the Joint force. Finally, Marine integration in this manner may falsely assume the combatant and Joint force commander will always direct the proper command authorities and relationships necessary for this concept to work.

This proposed operational construct of Marine integration may create redundancies to the Army's Multi-Domain Task Forces, designed to address the Joint concept of multidomain operations (MDO). The MDO concept is undeniably similar to the general idea behind Marine integration with the JFMCC and the EABO concept. It calls for "Army forces to penetrate and dis-integrate [*sic*] enemy anti-access and area denial systems and exploit the resultant freedom of maneuver to achieve strategic objectives."³⁶ With three Army MDO task forces created for the Pacific and another on its way to Europe to fight across all of the domains, detractors claim the Marine Corps may be selling a product no one needs.

Those arguing for a holistic approach to integration may claim Marine integration in this manner reduces the capacity of the Joint force by only focusing on the JFMCC at the expense of the other components and Services. It is possible that integrating the Marine Corps with the JFMCC limits the Marine Corps' ability to support the Air Force and Army across the GOM in the Black Sea. All the Services have a role in the contact, blunt, and surge layer against Russia. Former secretary of defense Mark T. Esper stressed his prioritization for cooperation during testimony to Congress, saying he will "ensure a mature joint concept of operations and the related capabilities [against Russian A2/AD capabilities] will be one of my top priorities."³⁷ Detractors believe that if a concept is not built from the ground up to support cooperation with every Service, then its value is questionable.

The greatest assumption associated with implementing this concept is that combatant and Joint force commanders will always direct the proper command authorities and relationships necessary for this concept to work. For Marine integration at this level to be feasible, the combatant commander must agree to place both Navy and Marine Corps forces under operational control of the JFMCC. It is unrealistic to assume that this relationship will always be established. Despite the apparent Marine and Navy Service-level alignment on integration, the Service chiefs have no direct control over command relationships.³⁸ Detractors believe assuming the Marine Corps will be integrated and always task-organized under the JFMCC in the Black Sea is a significant flaw in the argument.

While these discussions do present valid concerns, Marine integration with the JFMCC is not redundant. It prioritizes the fight for sea control as a specialized, complex task by itself. Planning for sea control must be deliberate. Units gaining or denying sea control must be specially equipped and trained for it. While the Army's MDO task forces do provide operational options for operating in contested environments, they are not designed to meet the same maritime requirements that Marine integration with the JFMCC does. The sum of Marine integration efforts is greater than its parts, allowing the JFMCC opportunities to systematically rebalance time, force, and space on an escalating spectrum. There is a requirement for both the Army's MDO forces and a Marine integrated JFMCC, as there is always a desire for more capabilities, especially in an operating environment as complex as the Black Sea. As the Department of Defense's priorities shift toward the Pacific, Marine integration with the JFMCC in the Black Sea provides more rebalancing opportunities and serves as a global operational economy of force task-organization.³⁹

Purposeful Marine integration with the JFMCC also does not imply exclusivity at the expense of the Joint force. Successful execution of the GOM requires coordination and mutual support between all Services and components. The entire Joint force will need to provide show of force exercises, air-to-air refueling, long-range fires, air defense, and assemble large ground combat formations around the Black Sea. Marine integration with the JFMCC does not preclude the Joint force commander's ability to direct supporting and supported relationships between components. Marine integration allows the JFMCC to pivot based on the type and scope of supporting or supported relationships, using the inherently scalable MEUs illustrated as baseline examples. As other components increase their forces in the region, the JFMCC has the option to scale down the size of its Marine integration. As those components' capabilities diminish, Marine integration scales up to brigade and larger sizes, providing the Joint force exactly what it needs. Marine integration allows the JFMCC to be exceptional at sea denial and control while still being able to support the rest of the Joint force.

The best and most effective use of the Marine Corps forces will be to integrate early with the JFMCC by establishing the proper command relationships under a functional component. Combatant commanders recognize they gain more value by purposely building Marine integration into the JFMCC from the ground up. They will establish the necessary command relationships to ensure success in the maritime domain and win the fight for sea control. Aligning on the most likely employment scenario in the Black Sea means the Marine Corps and Navy can now plan, train, and equip more efficiently and effectively with an objective focus. Combatant commanders will support Marine integration with the JFMCC by organizing their forces in a way that allows them the best

chance to strike effectively first, remain operationally relevant, and win in the Black Sea.

Conclusion

The JFMCC is the force that needs to be prepositioned in places most likely to see littoral competition and conflict. Gone are the days when the U.S. military could move from their point of departure, arrive on the outskirts of a theater of operations, and then begin their fight. Now, the fight will begin long before our country even realizes it is in one. Marine integration enables the JFMCC to compete in the contact layer more effectively. It increases the JFMCC's capacity to roll back Russian aggression in the blunt layer by striking effectively first and winning the hide-finder competition. It allows the JFMCC to project power to decisively defeat Russian aggression against the BSF and capable A2/AD networks in the surge layer.

The push for greater Marine integration with the Navy under a JFMCC construct must continue, not just in the Pacific but across the globe. Both the Navy and Marine Corps should seek opportunities to test emerging concepts with a united effort and an integrated command structure. The Black Sea is an ideal venue to see these concepts in action and meet the directives laid out in the *2018 National Defense Strategy*. A Navy and Marine team, under the JFMCC, is the most efficient and effective way for the United States to support its national interests against the current Russian threat in the Black Sea.

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Carriers and Amphibs Shibboleths of Sea Power

John T. Kuehn, PhD

Abstract: This article argues that American naval force packages built around aircraft carriers and amphibious assault ships no longer serve maritime security interests as effectively as in the past. It further claims that the current commitment in the published maritime strategy of the United States to the twin shibboleths of “carriers and amphibs” comes from a variety of attitudes held by senior decision makers and military leaders. This commitment betrays both cultural misunderstanding or even ignorance of seapower—“sea blindness”—as well as less than rational attachments to two operational capabilities that served the United States well in the past, but in doing so engendered emotional commitments that are little grounded in the facts.

Keywords: aircraft carrier, amphibious readiness group, U.S. Navy, U.S. Marine Corps, sea blindness, maritime security

*Shibboleth—A catchword, slogan*¹

When typing “U.S. Navy status” into a search engine these days, one quickly learns that only two specific ship types are tracked on this site and characterized as underway—“carriers” and “amphibs.” There are no submarines listed in this overview, no destroyers, no littoral com-

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bat ships, nothing but aircraft carriers and amphibious ships (hereafter amphibis) that normally embark U.S. Marines. This site previously listed which amphibis, but it is understood the ships discussed are those built around a large assault vessel with air capability such as the landing helicopter dock (LHD) or landing helicopter assault (LHA) ship classes.² If one searches about the website, two acronyms are presented that give more specificity about carriers and amphibis. According to the website, a CSG is an aircraft “carrier strike group” and ARG stands for an “amphibious readiness group.”³ When one reads Department of Defense news releases under Navy and Marine Corps subheadings, one finds these forces scattered about the globe.⁴

The move toward more operational security (OPSEC) on the U.S. Navy public website is laudable, but it is not applied uniformly. Does the United States really want its adversaries to know how many nuclear-powered ballistic missile submarines (SSBNs) it has deployed?⁵ Of course not, but why does that logic not apply to carriers and amphibis? It does not pertain because the strategic leadership of the Navy, perhaps of the nation, wants it known that these standard coins of naval power are out there protecting U.S. interests. Carriers and amphibis send a message of power and presence, in addition to providing support to allies and partners. They also inform deterrence. One cannot deter or send strategic signals using naval force packages unless one is transparent, to some degree, about what these naval force packages are doing.

CSGs and ARGs provide decision makers forward presence by naval forces in the global oceanic commons. The maritime strategy, *A Cooperative Strategy for 21st Century Sea Power* (hereafter CS-21R) states in the foreword:

Forward naval presence is essential to strengthening alliances and partnerships, providing the secure environment necessary for an open economic system based on the free flow of goods, protecting U.S. natural resources, promoting stability, deterring conflict, and responding to aggression.⁶

Undergirding this “forward naval presence” are carriers and amphibis; they are the accepted basis as the pillars of American seapower.

The problem is that this force structure and its attendant deployment model are now perhaps 30 years out of date. Yet, they linger on, defining for most American strategists (and probably plenty of non-American strategists) what seapower in today’s world means, just as seen in films, television, and on social media in trailers for films like the *Midway* and *Top Gun* remakes or the recent *The Pacific* series on HBO that dramatized Marine amphibious operations in World War II.⁷ This article argues that aircraft carriers and ARGs with an embarked Marine Expeditionary Unit (MEU) are shibboleths of seapower. They

represent catchphrases that belie or conflate a deeper understanding of where today's U.S. fleet is at and where it needs to go in order to face the challenges of the twenty-first century.⁸

What *Is* Seapower?

Recently a retired U.S. Navy captain, Sam J. Tangredi, wrote about the persistent misunderstanding of seapower inside the U.S. Department of Defense (DOD). He made the argument that “the current [Office of the Secretary of Defense] OSD leadership is Army-centric (which it is), but that it appears not to understand that armies and navies are vastly . . . different tools with much different long-term roles in U.S. territorial and economic security.”⁹ This has a lot to do with the fact that the United States has not been challenged by a peer competitor at sea since the mid- to late-Cold War period. One must go even further back to find the United States Navy actually fighting another fleet of warships for command of the sea at Leyte Gulf in 1944 and against an asymmetric, antiaccess threat by kamikaze aircraft at Okinawa in 1945.¹⁰

As mentioned, part of the staying power of the carrier-amphib seapower paradigm has to do with Tangredi's complaint about a poor understanding of it inside the DOD, especially at the senior levels. Carriers and amphibians are a default setting for decision makers who are not well-schooled in seapower. Additionally, these same leaders can find all the support they want for their confirmation bias for the duo by cherry-picking articles by reputed subject matter experts in seapower from any number of sources, principally from the premier journal for contemporary maritime issues, the U.S. Naval Institute *Proceedings*. In May 2020, a relatively junior officer, Lieutenant Commander Jeff Vandenberg won the prestigious Naval Institute General Essay Prize for modestly arguing that aircraft carrier construction has caused budget dysfunction for the Navy. He was roundly taken to task by a retired Navy captain (the equivalent of a colonel in the Marines or Army) for daring to criticize the aircraft carrier as one of the centerpieces of naval operations and strategy. This same captain is not some irate naval aviator worried about parochial interests of their community, but rather a former submariner. Those with a poor understanding of seapower who rely on those who presumably have it can find any number of arguments to retain the carrier-amphib paradigm of seapower.¹¹

Another area of concern in understanding seapower is the importance of the maritime domain to the security and economic well-being of the United States. Widespread misunderstanding of this issue is another facet of sea blindness.¹² A. T. Mahan's *The Influence of Sea Power Upon History* provides a useful place to start for a description of this aspect of seapower. Mahan described seapower as a form of national power that leverages the maritime domain for its application. He outlined six “principal conditions affecting the sea power of

nations.”¹³ Mahan introduced the six principal conditions with the following narrative:

In these three things—protection, with the necessity of exchanging products, shipping, whereby the exchange is carried on, and colonies, which facilitate and enlarge the operations of shipping and tend to protect it by multiplying points of safety—is to be found the key to much of the history, as well as of the policy, of nations bordering upon the sea. The policy has varied both with the spirit of the age and with the character and clear-sightedness of the rulers; but the history of the seaboard nations has been less determined by the shrewdness and foresight of governments than by conditions of position, extent, configuration, number and character of their people—by what are called, in a word, natural conditions.¹⁴

Three geographic and three social elements comprise these six conditions—making Mahan an advocate of both geographical and socioeconomic determinism when it came to the tendencies of nations to develop and employ seapower, especially as relates to what he called “trade.” The geographic elements encompass where, what, and how much? The social elements have to do with the society, both maritime and economic, and, thirdly, the form of government.¹⁵ In other words, seapower is not just about fleets of armed warships; it encompasses the range of factors involved with how the maritime environment interacts with the political economy of a nation.

Seapower Today

In today’s world, where globalism and information technology have both shrunk the maritime environment as well as paradoxically expanded its importance, Mahan’s approach retains value as a starting point. When examining the *National Security Strategy* (NSS) and subordinate strategies of the United States, one finds that the maritime domain is of great importance—at least on paper. Thus, the application of seapower in all its forms—economic, informational, military, and diplomatic, to say nothing of cultural or social—have clear relevance and even criticality to national security.¹⁶ The military component of the American NSS is often termed the “2 + 3” strategy, which stands for Russia and China and the lesser threats of North Korea, Iran, and extremist terrorist threats.¹⁷ Most of these threats have coastlines or maritime components, so they lend themselves well to military applications of seapower. However, for many of them, if not all, the problem of antiaccess measures such as mines and shore-based antiship missiles, to say nothing of actual navies, present real challenges to the United States’ traditional approach to power

projection via the sea to influence their behavior and adherence to the international rules-based system.¹⁸

Simply put, carrier and amphib power projection operations no longer operate in a benign or low-threat environment of assured access. But major components of the U.S. fleet structure revolve around these two approaches to applying naval power. Assumed, but often unexamined seriously until recently, is that “command of the commons” was assured.¹⁹ This is no longer the case. The Navy’s maritime strategy—*A Cooperative Strategy for 21st Century Seapower*—recognizes that command of the commons—maritime, air, cyber, and space—is no longer a given, especially in close proximity to the littorals of four of the five threats in the current strategy.²⁰ To combat this problem, the Navy has made something called “all domain access” a priority in CS-21R as discussed here:

All domain access is the ability to project military force in contested areas with sufficient freedom of action to operate effectively. In today’s security environment, *that access is increasingly contested by state and non-state actors* that can hold even our most advanced forces and weapon systems at risk with their own sophisticated anti-access/area denial strategies.²¹

It is against this backdrop of challenges to all-domain access that the twin shibboleths—carriers and amphib—must be examined.

Aircraft Carriers—Once a Battlecruiser, Again a Battlecruiser

The first substantial aircraft carriers the United States acquired came as a result of the Washington Naval Conference (or Five-Power Naval Limitation Treaty) of 1922. The Washington Conference allowed the United States to convert two unfinished battlecruisers—the USS *Lexington* (CV 2) and *Saratoga* (CV 3)—into aircraft carriers.²² Battlecruisers have often been criticized because their original purpose has been misunderstood by scholars and sailors alike. Admiral John A. Fisher created them to protect British imperial sea lines of communication (SLOC) against commerce raiders, principally those of Germany in the early twentieth century.²³ They did that job well in World War I—two British battlecruisers destroyed the commerce raiding squadron of Admiral Graf von Spee off the Falkland Islands in 1914, just as advertised.²⁴

Once *Lexington* and *Saratoga* joined the U.S. Navy in 1928, they became a part of the scouting fleet, that portion of the U.S. Fleet dedicated to battlecruiser-type missions, securing and scouting the sea lanes. But their purpose was less an anticommerce raiding countermeasure (*guerre de course*) and focused mainly on finding the main enemy fleet. Their primary role once a fleet action was

initiated was to provide air protection for the battle fleet (i.e., the battleships of the battle line) against enemy land or carrier based aircraft. During the fleet wargames, both at sea and in gaming at the Naval War College, in the period between the world wars, the value of carriers and their increasingly capable embarked aircraft became apparent and their employment to strike the enemy fleet or even attack its logistics bases emerged. However, it was only during World War II that the aircraft carrier emerged as a capital ship in its own right, which was able to not only scout and provide air defense but to defeat an enemy fleet in a main battle.²⁵

The aircraft carrier's capability to defeat fleets without attendant submarines, battleships, and cruisers (but not destroyers) in World War II and after has perhaps been overrated throughout the years.²⁶ However, there is no question that it became the premier naval platform around which to build force packages to project naval power. This was principally via projection of airpower over the shore, as seen in operations from late in World War II to those recently over Libya, Iraq, Syria, and landlocked Afghanistan. This was because there was little blue water challenge to the United States' *de facto* command of the sea commons until the Soviet Union built a blue water fleet to challenge U.S. maritime supremacy after the 1962 Cuban missile crisis. But no fleet engagement ever took place and U.S. maritime dominance was absolute after the Soviet Union collapsed in the early 1990s.²⁷ The U.S. Navy has not had to fight another major fleet action since the Battle of Leyte Gulf more than 75 years ago. This means the aircraft carrier as a fleet-defeating centerpiece has not been actively tested in more than 75 years. Conversely, its ability to project power was challenged, rather bloodily, by antiaccess countermeasures—the infamous kamikaze attacks of the Ketsu-Go campaign—off of Okinawa in 1945. The U.S. Navy and the Joint force it supported prevailed, but at a horrific cost. Okinawa was the bloodiest naval campaign of World War II, with the Guadalcanal campaign a close second. In both campaigns, carriers suffered horribly in the littoral environment against a peer competitor. And in both, carriers proved highly vulnerable, so much so that at Guadalcanal the final desperate sea battles involved no carriers at all because they had all been sunk or damaged between August and early November 1942.²⁸

This brings us to the current operating environment for seapower. Where do aircraft carriers fit in if power projection operations where carriers normally operate become contested environments as seen in the Baltic Sea, Persian Gulf, South China Sea, and East China Sea, to say nothing of the slightly less contested environments in the Sea of Japan and Eastern Mediterranean?²⁹ Can the United States sustain the loss of even one of these behemoths fighting a war to enforce the “international maritime rules-based order” as opposed to defending sea lines farther afield or the American homeland?³⁰ Or will such

a loss drag the United States into a major war of attrition with a continental power like China, an away game that will contribute to the unraveling of the post–Cold War order?³¹ Carriers have essentially become battlecruisers again in the early phases of a conflict with maritime dimensions. They are instruments for defending the sea lanes and policing the world’s oceans in a lower threat environment.

This very question was addressed recently in 2016–17 by Chief of Naval Operations (CNO) Admiral John M. Richardson. Richardson reached out to the former dean of the Naval Warfare Department at the Naval War College, retired naval aviator Captain Robert C. Rubel. Rubel gathered a team of six additional subject matter experts in naval history, wargaming, economics, and naval warfare tactics and operations.³² The team looked at three congressionally mandated studies conducted by the MITRE Corporation, the Center for Strategic and Budgetary Assessments, and an in-house assessment of fleet architecture by the CNOs’ staff (OpNav). The overall findings addressed the entire fleet, but the points made about aircraft carriers bear highlighting. In his report, Rubel wrote:

In the past, the pivot point for naval power has been the *capital ship*; that ship type that could deliver a greater weight of fire at a greater distance than any other type. While our aircraft carriers possess great capability in this respect, the limited range of tactical aircraft in comparison to missiles such as Tomahawk and *the increasing lethality of modern air defenses as well as missile and other threats to the carrier itself, call into question whether it should continue to be regarded as the capital ship for fleet design purposes.*³³

Recall that Rubel is a naval aviator from the strike community who flew the LTV A-7 Corsair II and McDonnell Douglas F/A-18 Hornet aircraft during his career. Another of the Fleet Design Advisory Panel members wrote:

Advances in nuclear propulsion and ballistic missile technology in the second half of the 20th century led to a new way to offer more secure nuclear deterrence from the sea depths. Parallel examples can be made for missile carrying aircraft and the guided torpedo. Future fleet architectures *that responsibly emphasize more, less expensive platforms that deliver kinetic and non-kinetic combat power* recognize the change in maritime warfare.³⁴

“Less expensive” cannot be extrapolated to refer to the \$13 billion and counting price tag of a nuclear-powered aircraft carrier today.³⁵ The evidence presented

suggests that this icon of naval power is costing more but delivering less in terms of capability.

Amphibs

Many of the same arguments about carriers above also apply to amphibs. In review, an ARG is composed normally of three amphibious assault ships, the largest of which looks like an aircraft carrier. They are designated as amphibious assault ships or amphibious assault docks (LHA/LHD). They normally embark a Marine Expeditionary Unit, which is built around a Marine infantry battalion with aviation and logistics support.³⁶ The ARG/MEU has tended to be most useful in the lower spectrum of conflict, particularly as a premier force package in low-threat environments to perform operations like noncombatant evacuations (NEOs), which they are quite accomplished at executing.³⁷ They have also performed well, again in benign maritime environments, in the opening phases of Operation Enduring Freedom (Afghanistan) as well as humanitarian assistance operations in the Indian Ocean and for Hurricane Katrina in 2005 off New Orleans.

Interestingly, the ARG has been reconceptualized through various organizational reevaluations as a beefed-up expeditionary strike group (ESG), an ARG-plus if you will. In that version of seapower, the ARG included its own surface ships, usually destroyers or cruisers, to perform and support this form of naval-power projection. But the current low numbers of U.S. Navy surface warships, and the high costs of replacements, has seemed to have removed the use of ESG on the Navy website. Therefore, those very platforms that might have made the ARG more survivable in high-threat, antiaccess environments are no longer routinely deployed with them. Instead, ESG is now the name for what was formerly known as an Amphibious Group, not a collection of amphib ships but a staff. Additionally, some of the newer Navy ships, such as the littoral combat ship (LCS), did not fit well into the ESG concept—but they were not designed for that role.³⁸

The last large-scale amphibious landings against defended beaches occurred in the Korean War (1950–53). The Inchon landing was justly famous, but after action analysis indicated that the risks associated with it would never be accepted today. Inchon was also part of Operation Chromite, which included a second landing at Wonsan on Korea's east coast. That landing was not conducted due to the presence of mines and an opposed landing delayed by weeks.³⁹ There was the threat to conduct an amphibious assault in Operation Desert Storm (First Gulf War), but that was a deception operation. Even so, mine damage to two major warships of that force, one of them a big deck amphib, only reinforces the threat of today's antiaccess environment to the ARG.⁴⁰ The viability of an opposed landing in an antiaccess environment has never been tested since Korea.

Returning to the *Fleet Design Advisory Panel Report*, one finds the discussion of amphibious shipping almost exclusively in areas not considered part of its primary mission. For example,

Each of the reports recommends the development of a light conventionally-powered aircraft carrier (CVL) evolved from an amphibious assault ship design. This is an innovative approach to providing additional tactical aviation into a sea control or power projection operation. *The [OpNav] report, however, essentially recommends the reduction of amphibious/expeditionary warship capabilities in order to fund other combatants (as well as the CVL).* In further briefings, the Navy report writers have suggested that well decks be removed from “large-deck amphibs” and LPDs/LSDs be utilized almost exclusively for the deployment of unmanned surface, air, and undersea vehicles. Obviously this is an approach that entails cultural/political/joint risk, particularly as the Navy report postulates an increase in the overall fleet, but an effective decrease in the amphibious force. . . . The MITRE report does not examine the amphibious force in detail (although it recommends ending the current LPD program and examining cheaper platforms for disaggregated operations).⁴¹

Inside the Navy, the owner of the ARG shipping it seems is trying to repurpose amphibs in its quest to find efficiencies to address the antiaccess/area-denial (A2/AD) threat. This is why the recent fire aboard the USS *Bonhomme Richard* (LHD 6) is so significant. That ship and its ARG were due to cover a “gapped” carrier presence in the Indo-Pacific region using the new Lockheed Martin F-35B Lightning II.⁴² The *Bonhomme Richard* tragedy also highlights how closely related amphibs and carriers have become over the years in force posture work arounds.

Shibboleths?

Obviously, no one is going to be laying up these two symbols of seapower just yet. The United States is stuck with them for decades. After all, the battleships that were reputedly obsolete in 1945 were around for one final war in 1991. However, the sooner the leadership of the Navy and the Department of Defense get serious about coming up with new, realistic solutions, the better. The congressionally mandated studies and the Fleet Design Advisory Panel were an attempt to do that, but the institutional inertia conferred by these icons, as Lieutenant Commander Vandenberg argued, seems almost insurmountable. Another issue is that there is always the problem of making what might be

called the *Billy Mitchell error*, replacing a proven something, with an unproven something. After bombing and sinking an already sinking, damaged, German battleship anchored and unmanned on a clear day in Hampton Roads, Virginia, Mitchell proceeded to proclaim that battleships, and navies “were almost obsolete.”⁴³ But Americans seem to favor these sorts of all-or-none solutions. After all, carriers and amphibs were nearly red-lined in 1949 by none other than the Secretary of Defense Louis Johnson:

Admiral, the Navy is on its way out. Now, take amphibious operations. There’s no reason for having a Navy and a Marine Corps. General [Omar N.] Bradley . . . tells me that amphibious operations are a thing of the past. We’ll never have any more amphibious operations. That does away with the Marine Corps. And the Air Force can do anything the Navy can do nowadays, so that does away with the Navy.⁴⁴

Johnson wanted to replace the shibboleths of the aircraft carrier and amphibious operations with the shibboleth of the atomic bomber.

So, what does that leave us with for today as alternative forms of seapower? Submarines will play a major role in any major maritime conflict. The “silent service” is a deadly and capable tool of seapower. The same might be said of the current crop of multimission Aegis-equipped ships, immensely capable, but very expensive—a \$1 billion platform for 96 missile tubes. Cheaper alternatives are available. It is time for the U.S. defense leadership to apply the tools of seapower more broadly and quit putting all of its resources into one or two options—carriers and amphibs in particular. Unmanned aerial systems (UAS) offer solutions, especially longer-range ones that authors like Rubel have written about, and not just the air systems, but submarine and surface ones as well.⁴⁵ One might see flotillas of unmanned and manned surface groups. Similarly, smaller, cheaper ships can be used as bases for these unmanned flotillas or even swarms of unmanned systems. Finally, a capability that often gets little mention in larger arenas of public debate, especially those outside the Navy, is that of the complicated space and terrestrial network that will support all these advanced tools of seapower. Rubel has proposed that perhaps the next capital ship is in fact the network that will tie all the tools of modern sea power together in the antiaccess as well as blue water environments.⁴⁶

In summary, carriers and amphibs are shibboleths in that they encourage a slogan approach to naval strategy built around two concepts that deliver much less capability than that perceived by U.S. decision makers for power projection in antiaccess environments overseas. Carriers are useful for patrolling the sea lanes or even power projection in the absence of antiaccess measures. They also still have value if a major blue water war occurs—that is a war at sea that is not

close to the littorals, oftentimes this means beyond the 100 fathom curve on maritime charts.⁴⁷ ARGs remain useful for low-intensity conflict and operations like NEOs. But for a real challenge in the Persian Gulf, Baltic, Taiwan Strait, and other antiaccess environments, both are not only of little value, but they also risk lives and national prestige when used carelessly. Tactical mistakes with these platforms mean thousands of lives lost in minutes, as at Pearl Harbor in 1941, but without the resilience the United States had back then to repair and replace its losses.

The uniformed and civilian leaders of the Department of Defense and in the Navy must be careful not to discard completely one capability—such as that conferred by aircraft carriers—for platforms and capabilities that serve a different function and in different scenarios, such as maritime conflict in a littoral environment. Recall that battleships lasted a very long time, until 1991, when they were finally deemed obsolete. But they were no longer the centerpiece of the fleet. However, these same leaders and their successors must be realistic about what aircraft carriers and ARGs bring to the fight—and also clearheaded about what they *do not* bring. Seapower for the twenty-first century must be built on more than these two aging coins of naval power.

To that end, the maritime security of the United States, when it comes to warship design, would do well to heed the old, but wise, words of Alfred Thayer Mahan: “In every class of naval vessel there should first of all, and first and last, throughout her design, be the recognition of her purpose in war.”⁴⁸

Endnotes

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First to Fight

Advanced Force Operations and the Future of the Marine Corps

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Abstract: General David H. Berger's tenure as Commandant of the Marine Corps has set the stage for drastic change toward a Marine Corps more focused on maritime operations. The Commandant has called on these changes to be concept driven and capabilities tested, driving experimentation, wargaming, analysis, research and development, and acquisitions. The Marine Corps is pursuing or developing a number of concepts but lacks an overarching concept that provides context and coherence for conceptual exploration. The author proposes advanced force operations, a concept designed to be broad enough to link together modern concepts like expeditionary advanced base operations and distributed operations, while building on the Marine Corps' traditions and strengths. Advanced force operations envision Marine Corps forces acting as a vanguard force, competing for maritime access, shaping naval campaigns, and enabling the introduction of Joint forces.

Keywords: amphibious operations, expeditionary advanced base operations, *National Defense Strategy*, Marine Corps concepts

The Marine Corps is in the process of its most drastic reform since the publication of *Warfighting*, Fleet Marine Force Manual (FMFM) 1, in 1989.¹ Commandant of the Marine Corps General David H. Berger's

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vision, captured in the *Commandant's Planning Guidance and Force Design 2030*, is in response to the 2018 *National Defense Strategy* (NDS) and 2019 *Defense Planning Guidance*, both overseen by then-secretary of defense James N. Mattis.² These documents reshaped Marine Corps priorities, clarified the Marine Corps' role regarding the Joint force, and aimed the Service at a specific threat: the People's Republic of China (PRC). These priorities, the majority of which are classified, require a forward-deployed, highly mobile, highly distributed, combat-credible force able to integrate with and fight alongside the Navy during naval campaigns. After extensive research, experimentation, wargaming, and analysis, the *Commandant's Planning Guidance and Force Design 2030* have begun the process of creating just such a force to meet the expectations set by former secretary of defense Mattis, while ensuring that it can still address other potential adversaries mentioned by the NDS: the Russian Federation, the Islamic Republic of Iran, and the Democratic People's Republic of Korea.

In his planning guidance, General Berger has also set the conceptual foundation of the Marine Corps in the form of six current and future concepts: the Navy's distributed maritime operations (DMO); the Navy/Marine Corps concepts littoral operations in a contested environment (LOCE) and expeditionary advance base operations (EABO); and three pending concepts: stand-in forces (a concept for Marine Corps forces operating within the range of enemy stand-off capabilities), crisis response, and a Navy/Marine Corps/Coast Guard capstone concept.³

While the force design efforts have received most of the attention, the establishment of these six concepts as a conceptual foundation is just as important. Concepts are theories of innovation. A military force can never know with certainty exactly what tactics, capabilities, and platforms it will need in the future. Conceptualizing that future is a form of intellectual reconnaissance, driving experiments, wargames, prototyping, analysis, and assessments. The lessons and conclusions of concept-driven analysis can then inform doctrine, structure, and acquisition.

While these concepts cover various important aspects of Marine Corps operations, what is still missing is an overarching Marine Corps Service concept. The six concepts mentioned above all address aspects of Marine Corps operations, or how Marine Corps forces will fight in certain situations. *Warfighting*, Marine Corps Doctrinal Publication (MCDP) 1, remains the Corps' philosophy, but it is not an operating concept. The tri-Service capstone concept will cover the maritime Services but not provide the Marine Corps with such an overarching concept. The Corps needs a true Marine operating concept: one that provides context for these six concepts, links them together, and demonstrates how they can work together. Such a concept should provide a vision of how the Marine Corps will contribute to the Joint force that simultaneously

contextualizes the six concepts identified in the *Commandant's Planning Guidance*, the Service's traditional missions of amphibious operations, and its leading role in Joint force entry operations (JFEO) through its philosophy of maneuver warfare.⁵ Any such concept must build on the past, integrate the present, and prepare for the future. It must be of value to the Navy and the Joint force, while playing to the Marine Corps' strengths, traditions, and its responsibilities to the United States. In short, when it comes to concepts, the Marine Corps needs one concept to rule them all.

This seems a daunting task, but the Service has done this before. It is common to refer to the interwar period, the visionary *Advanced Base Operations in Micronesia*, and the drafting of the *Tentative Manual for Landing Operations* in 1934.⁶ But the conceptual vision of Lieutenant Colonel Earl Hancock Ellis and the codification thereof in the later *Tentative Manual for Landing Operations* (1935) was the first Joint, multidomain doctrine in American history. Ellis provided the concept that General John A. Lejeune would later, as Commandant, begin to make reality. By World War II, the Marine Corps was ready and secured advanced bases in both theaters of war well in advance of other Services—in Iceland for the European theater and at Guadalcanal in the Pacific theater.⁷ Then, as now, the U.S. military found itself in a transitory and rapid state of change. Now, as then, the Marine Corps as the nation's forward-deployed, rapid-response force is best positioned to lead it forward as the vanguard of the Joint force. Amphibious forces operating well ahead of other U.S. forces as a crisis develops can both frustrate adversary plans and provide value to the Joint force through real-time information and intelligence, on-site command and control, and distributed support.

What follows is a proposal for the Marine Corps' Service-level concept to operate as a vanguard again: advanced force operations. The concept builds on advanced base operations, bringing forward some of its key ideas such as the advanced forces in support of naval campaigns and its inherent multidomain nature: the DNA of the modern Marine Air-Ground Task Force. It integrates present Department of Defense-level guidance such as the 2018 *National Defense Strategy*, the *Commandant's Planning Guidance*, and the six concepts that General Berger has designated as the conceptual foundation of the Marine Corps. Lastly, it shapes the future for the Marine Corps, rather than allowing the Marine Corps to be shaped by it, by ensuring a viable, lethal, and valuable mission led by the Marine Corps for decades to come.

Amphibious Operations and Naval Strategy

To understand how to generate and employ advanced amphibious forces in support of naval campaigns, it is first necessary to establish the role of amphibious operations in naval strategy. While amphibious operations are not exclusive

to naval strategy, as they can be a potent contributor to land campaigns as well, the focus of the Marine Corps is naval campaigns and thus naval strategy.

In his book, *The Leverage of Sea Power*, strategic theorist Colin S. Gray examines the use of naval strategy by both “sea powers,” states with a maritime focus, culture, and naval capability and “continental powers,” states with a landward focus. Gray states that:

Continental Powers can win wars against sea powers if they are able to deny a tolerable level of sea control to their maritime-dependent enemies; that has not been accomplished in modern times, but there have been some close calls. Next, it becomes clear that although sea powers cannot win wars at sea against land powers, command of the relevant sea areas, at least a working control, is an indispensable enabler for eventual victory in war as a whole.⁸

While the United States can be viewed as a hybrid power—one with both sea and continental power, because it is distant from its potential adversaries, separated by vast oceans and seas in nearly every case—naval strategy is vital to both American naval and land campaigns.

Naval strategy revolves around the establishment and maintenance of sea control: the ability of a naval force to “destroy enemy naval forces, suppress enemy sea commerce, protect vital sea lanes, and establish local military superiority” in a given region.⁹ No foreign war in American history could have occurred without sea control, whether provided by allies or fought for and achieved by the United States Navy. Even the Mexican-American War (1846–48) featured naval components in the Gulf of Mexico and the Pacific Ocean.¹⁰ The advent of airpower in the mid-twentieth century has not changed this requirement. Strategic bombing made possible by airpower is only transient, whereas sea control can be maintained over a longer period of time and enhances and sustains airpower.

Sea control, or command of the sea, must be recognized as a means to an end. The only purpose of achieving it is to use it for some strategic effect. That strategic effect could be the introduction of land forces to a land campaign, such as the amphibious assaults in the European theater of World War II. Or, it could be the achievement of sea control to support naval campaigns, such as the Pacific theater of World War II. As the Fleet Marine Force revitalizes its ability to contribute to sea control, it must do so with an eye on the intended strategic effect for which sea control must be established.

The purpose of sea control is to exploit it for strategic effect on land, specifically strategic effect on the adversary’s territory.¹¹ The purpose of an amphibious force is to exploit sea control for power projection ashore through amphibious

operations. Amphibious operations in support of both types of campaigns simultaneously require and can contribute to sea control. This has been true since the dawn of military history. For example, the attempted Persian invasion of Greece that culminated in the Athenian victory at the Battle of Marathon in 490 BCE depended on the Persian establishment of naval bases in the Aegean Sea. These islands, Naxos and Delos among others, were invaded by seaborne Persian troops prior to their invasion of the Greek mainland. There, they filled up on water and food and conscripted recruits to support the eventual invasion of Attica. This early example of the use of advanced bases to achieve and then exploit sea control exemplifies the enduring nature of naval strategy.¹² There are many other examples across history, including Marine Corps history. Walker D. Mills has shown that the Marine Corps established advanced bases for other Services as early as the Spanish-American War (1898).¹³

A more modern example is Operation Corporate, better known as the Falklands War in 1982. After the seizure of the Falkland Islands by an Argentinian amphibious task force, the United Kingdom (UK) had to organize and deploy a naval task force to retake them. Since the Falklands are more than 12,875 km from the UK, the Royal Navy task force used Ascension Island in the mid-Atlantic as an advanced base to support the amphibious assault of the Falklands. Ascension Island significantly extended the operational reach of the Royal Navy and Royal Marines. Although Ascension Island was already British territory and did not have to be seized, it demonstrates the modern need for advanced bases.¹⁴

This is no less true today. The proliferation of precision-guided munitions employed in anti-air and anti-ship roles threatens the sea and air control necessary to execute large-scale amphibious operations. However, many of these threats are land-based or depend on shore-based installations and command and control to operate. Amphibious operations can contribute to their reduction and destruction, the control of land where they could be employed, and the use of shore-based positions for friendly anti-air and anti-ship platforms. Therefore, the overarching concept for how the Marine Corps can contribute to naval campaigns through amphibious operations must account for environments where sea control is absent, contested, and assured, examine how Marine Corps forces help to achieve sea control, defend and consolidate sea control, and then exploit sea control to enable the Joint force to execute surge layer operations. More specifically, it must build on the Marine Corps' first to fight tradition and legacy concepts like advanced base operations by establishing the conceptual ways in which Marine Corps forces will operate in advance of other Joint forces where adversaries have established control, deplete that control to contest it, and then consolidate the control to support the introduction of the Joint force.

Advanced Force Operations

Advanced force operations are an evolution of advanced base operations. When Ellis conceived of the latter, the U.S. Navy needed forward, permanent coaling stations and harbors to support naval campaigns, in addition to forward airfields to support naval aviation, most of which would end up being semipermanent. It would be the Marine Corps that would have to seize and hold the land necessary for such bases, and the Marine Corps would need to be a combined arms, air, and ground force to do so. Ellis conceived of these concepts as a Naval War College student and instructor, refined them in early experiments during Lieutenant General John A. Lejeune's commandancy, and then applied them to the specific problem of Imperial Japan in *Advanced Base Operations in Micronesia*.¹⁵

Technology and other things have obviously changed since Ellis completed his work in 1921. The Navy no longer requires coaling stations. However, the role of naval aviation has only increased; forward airfields are even more important. Nor can the Navy ignore ports as they are still required for maintenance and other reasons; they are just less necessary for fueling, as that can be accomplished at sea. The landward side of the littorals is now more valuable for anti-air and antiship platforms. During World War II, these latter two capabilities were powerful, but not to the degree they are today given the combination of precision-guided munitions and information technology.

The maturation of missiles of all varieties, including surface-to-air, air-to-air, rocket and missile artillery, antiship cruise missiles, and ballistic missiles means that it is the missile, not the machine gun, that will characterize warfare in the decades to come. These capabilities have enabled potential adversaries to construct so-called antiaccess/area-denial (A2/AD) networks. More accurately called integrated coastal defense networks, they are purpose-designed to keep U.S. forces—especially naval forces—at bay. This antiaccess warfare is not new, but it is now a key component of adversary defensive plans, including the Islamic Republic of Iran, the Russian Federation, and especially the People's Republic of China.

Naval War College Professor Sam Tangredi defines *antiaccess warfare* as “warfighting strategies focused on preventing an opponent from operating military forces near, into, or within a contested region.”¹⁶ Just as antiaccess warfare has been used before, it has been overcome before. It is always desirable to bypass antiaccess measures, such as the Germans did for the French Maginot Line during World War II. In some cases, amphibious operations are the best option to bypass coastal defenses. In the case of modern, integrated coastal defense systems, however, there may be no uncontested naval maneuver space. Antiaccess warfare has one goal: prevent the adversary from accessing maneuver space, thus forcing costly, frontal offensives against strong defensive positions.

The most successful example in history is the western front of World War

I, where both sides succeeded in fortifying all available maneuver space across most of Europe. But even there, a way was found to restore it: infiltration tactics. Infiltration tactics were pioneered as early as the American Civil War, but most famously by the German Army during World War I. By 1918, the Germans had developed the tactics necessary to infiltrate and then reduce antiaccess measures of the western and eastern fronts, thereby gaining access to the opponent's operating area. The goal of infiltration tactics was to restore mobility, and hence maneuver space, to a battlefield where the opponent had closed off all avenues of approach. These infiltration forces succeeded in the eastern, but on the western front the Germans failed to expand on that access and exploit it via follow-on assault forces.¹⁷ The infiltration tactics were only the first step; the infiltration would need to be expanded and then follow-on assault forces would need to flow through. Although these examples occurred during land campaigns, the purpose of antiaccess warfare is the same on land and sea, and lessons learned in how to reduce them on land can also be applied at sea.

The express purpose of antiaccess/area-denial networks is to close off maneuver space to the opponent by threat of attrition (i.e., antiaccess warfare). Therefore, something like infiltration tactics will be necessary to restore maneuver space. The 2018 *National Defense Strategy* addresses this need to fight for access through the concepts of contact, blunt, and surge forces as well as the need for an inside force. Instead of initiating contact through infiltration, expanding access, then exploiting access through an assault, former secretary of defense Mattis envisioned maintaining access through contact forces, depleting an opponent's momentum through blunt forces, then gaining the initiative through surge forces. To do so, however, the surge forces will need to overcome antiaccess measures that cannot be assumed to have been entirely destroyed by contact and blunt forces. Such surge forces, akin to the follow-on assault forces of infiltration tactics, will need to be supported by contact forces (akin to the infiltration force itself) and forces designed to expand the access gained.¹⁸

Regardless of whether Marine Corps contact forces maintain access against a strategic offensive initiated by an opponent or whether U.S. forces are on the strategic offensive and must gain access, the Marine Corps—traditionally stationed abroad—will be the vanguard of the Joint force. To overcome antiaccess warfare and execute infiltration tactics on a vast scale, the Marine Corps will need a tripartite concept applying the principles to the new operating environment. This will involve the coordinated use of three types or forms of forces: infiltration forces, expansion forces, and assault forces.¹⁹ Each of these components performs a different function. Infiltration forces gain or maintain maritime access, expansion forces expand and consolidate that access and deny it to the adversary, and assault forces exploit that access to achieve larger objectives. The combination can be called *advanced force operations*.

Infiltration Forces

The role of the infiltration forces is to contest maneuver space. The infiltration forces will operate within the adversary's antiaccess network, either by entering it from outside or maintaining position within it as it expands if they are already in theater. These are contact-layer forces with a specific mission: persist within the weapons engagement zone of the adversary. Whereas advanced base operations during World War II was the establishment of bases to push the Navy forward, infiltration forces act as forward and screening forces to pull the Navy and Joint force enablers forward, similar to reconnaissance pull.²⁰

Key Concepts

The concepts most relevant to the infiltration forces will be distributed operations, reconnaissance/counterreconnaissance, operations in the information environment, and the forthcoming stand-in forces concept called for in the *Commandant's Planning Guidance*.²¹ In order to survive within the range of threat weapon systems, infiltration forces will necessarily be composed of small, networked teams. They will have to conduct both reconnaissance and counterreconnaissance, identifying threat positions, actions, surfaces, and gaps as well as preventing the adversary's attempts to do the same. Lastly, the infiltration forces will need to begin the process of attrition where opportunities appear to reduce the antiaccess system through lethal means. Infiltration forces will need to favor guerrilla-like tactics, avoiding contact with enemy forces but employing supporting arms whenever possible.

Key Tasks

The key tasks for the infiltration forces are threefold. First, infiltration forces must identify, track, and report adversary actions, positions, and posture. Second, infiltration forces must disrupt and delay adversary actions where possible, through the application of Joint fires and other stand-off capabilities, such as long range precision antiship and antiair missiles, when possible. Third, infiltration forces must establish and maintain contact with partnered forces in their operating area.

Key Capabilities

Infiltration forces will need to be stealthy; capabilities such as signature mitigation and multispectrum camouflage will be necessary for them to remain unseen while securely communicating with off-site forces. But they will also need to shoot. Infiltration teams will need the organic firepower to overmatch like-size forces and access to supporting arms for larger targets, especially adversaries' ships. When it comes to the fire support coordination required to work with Navy fires to destroy ships, Marine Corps forces are not generally

well-versed. Forces that will compose infiltration forces will be reconnaissance units, light armored reconnaissance, and Air-Naval Gunfire Liaison Company (ANGLICO) teams. Marine Expeditionary Force Information Groups (MIG) will be a critical enabler and will need to use military deception to protect infiltration forces but without a lot of capability on the ground. Aspects of operations in the information environment will be necessary to maintain the situational awareness of Marine and Joint forces.

Key Platforms

Platforms for the infiltration forces will necessarily be small, swift, stealthy, and difficult to detect. The light amphibious warship, once procured, will be the main maritime transportation vehicle, and the Marine Corps should investigate the use of submarines for both insertion and sustainment.²² The infiltration force will be limited to the High Mobility Artillery Rocket System (HIMARS) and/or the Remotely Operated Ground Unit Expeditionary (ROGUE) launcher for fire support, especially against adversaries' ships. These systems will need to employ both concealed firing positions and deception measures to remain hidden until firing. On land, infiltration forces will need to be foot-mobile or equipped with all-terrain vehicles or similar systems for mobility, including the use of local, purchased civilian vehicles.

Infiltration forces can also be supported by a range of autonomous systems to augment their own capabilities, including autonomous mortar boats, autonomous load-bearing ground vehicles, and a range of unmanned aerial systems.²³ Lastly, the use of seaplanes for insertions, exfiltrations, and sustainment would be a useful augmentation to existing platforms, especially in Indo-Pacific Command. The Lockheed Martin F-35 B/C Lightning II and the Bell Boeing V-22 Osprey will be critical aviation platforms, the former due to its stealth capabilities and the latter due to its range. Not all of these will be undetected but many will, and their smaller size and diversity will complicate an adversary's targeting processes.

Key Partners

While advanced force operations are a Marine Corps concept, it would rarely if ever occur without the presence of Joint partners. Therefore, it should address where Marine forces will interface with, cooperate with, and enable other Services. Infiltration forces will have to be able to communicate with command and control nodes in the rear to pass and receive information, enabling Navy and Air Force fires, information warfare, and electronic warfare. They will also need to be tied to adjacent Special Operations Forces if they are operating in the same area. Finally, the most important partners will be local allied security forces. Security cooperation and partnering with allied forces is inherent for

contact layer forces; U.S. forces will not be able to operate forward without local government permission and may be tied in with local military forces. These relationships must be fostered during peacetime to ensure the necessary relationships and liaison procedures carry over into conflict.

Amphibious Operations

Amphibious operations will be the key to advanced force operations. Every potential adversary named in the NDS has key maritime terrain in the near-abroad, and no Joint force action can occur unless access to that key maritime terrain is assured.²⁴ Not all of the five forms of amphibious operations will play equally in all three components of advanced force operations, however.²⁵ Since infiltration forces will rarely, if ever, permanently occupy terrain, they will need to be well-versed in amphibious raids and amphibious withdrawals, able to infiltrate key maritime terrain, accomplish their mission, and then move to another location.

Once infiltration forces successfully persist within the adversary's antiaccess system and have disrupted it enough for more forces to be introduced into the area, expansion forces begin to flow in to shape the maneuver space.

Expansion Forces

The role of expansion forces is to shape the maneuver space. Once the infiltration forces have successfully gained access, or identified areas where the adversary cannot contest it, expansion forces should be committed to ensure that access is held against counterattack. Expansion forces will fight for and gain sea control, exploiting the disruption created by infiltration forces. Those infiltration forces may not be withdrawn but instead just take a more static posture and act in support of expansion forces as they move from contesting sea control to achieving it. In key littoral areas where the adversary has not yet established sea control, expansion forces may be committed without the prior commitment of infiltration forces.

Key Concepts

The key concepts for the expansion forces are littoral operations for a contested environment and expeditionary advanced base operations. LOCE describes the naval integration necessary for naval task forces and Marine forces to move into an area of key maritime terrain, contested by stand-in forces, and tip the scale toward friendly sea control.²⁶ EABO begins to create a limited network of infrastructure to achieve sea control, contest air control, and establish the logistics and command and control necessary for Joint forces to operate in the area of operations. Expeditionary advanced bases (EABs) solidify air control and extend the reach of naval aviation. Antiship EABs solidify sea control while

antiair EABs and forward arming and refueling points contribute to air control and antisubmarine warfare EABs detect adversary submarines. These bases are still far from permanent and static. Rather, they are difficult to detect, mobile, and frequently moved. The Marine Littoral Regiment (MLR), currently an experimental force, will be a main effort for the expansion force.²⁷ Finally, the Air Force's adaptive basing concept seeks to address some of the same issues as EABO.²⁸ The two Services should seek commonalities in these concepts and ensure mutual support.

Key Tasks

The key task for expansion forces is to turn antiaccess warfare against the adversary, creating pockets of antiaccess around infiltrated key maritime terrain where enemy forces cannot achieve freedom of action. This allows friendly naval task forces and air forces freedom of action at a key point to increase the attrition and disaggregation of the enemy's A2/AD system. Lastly, littoral forces and EABs enable other Joint forces through sustainment, fire support, command and control, and information-related capabilities in the absence of Army theater logistics networks.

Key Capabilities

The key to the expansion force is a symbiotic relationship between Marine and Navy forces to establish sea control and contest air control. Antiship capabilities and air and missile defense capabilities will need to increase in this phase. Another key is Marine forces integration with the Navy's component warfare command concept, especially fire support and information systems, to establish a common operating picture. Fire support capabilities will expand and diversify. Lastly, the EABO network's ability to act as an expeditionary sustainment infrastructure requires the ability to stand-up, sustain, and displace EABs. Logistics capabilities may well be strained during this phase, and MIG enablers will still be key, but may not have adequate assets forward except where they are integrated with the MLR.

Key Platforms

As naval task forces begin to operate and dominate in the area, at least intermittently, maritime vessels like the offshore support vessel, expeditionary fast transport, and expeditionary mobile base (ESB) ships will be the most vital ships, along with connectors like the ship-to-shore connector, landing craft utility vessels, and limited use of the amphibious combat vehicle.²⁹ Although an adversary's A2/AD capabilities will not be entirely defeated by this point, smaller vessels are much more difficult to find, track, and target. These platforms will allow the littoral maneuver and logistics necessary to expand the access gained

by infiltration forces. At this point, landward forces can begin to be augmented by heavier forces to hold key maritime terrain against counterattack. Lift platforms such as the Sikorsky CH-53K King Stallion will offer key advantages for expansion forces, along with rotary-wing attack aviation squadrons.

Key Partners

While partnering with local forces will again be a major focus, liaison and coordination with Navy and Air Force components will greatly increase. Coast Guard forces are another likely partner to perform maritime patrolling and maritime security tasks. Marine expansion forces continue to provide key intelligence and data, acting as forward intelligence, surveillance, and reconnaissance for the Joint force.

Amphibious Operations

The amphibious operations component of the expansion force will expand, but both amphibious raids and amphibious withdrawals will still feature heavily as EABs are inserted, moved, and exfiltrated. There will also be a role for small-scale amphibious assaults against adversary strongpoints and possibly amphibious demonstrations.

Once access is assured and the expansion forces have set a foundation of support to enable forces to be introduced at will, assault forces move in to exploit the maneuver space thus created.

Assault Forces

The role of assault forces is to exploit maneuver space gained by the infiltration forces and consolidated by the expansion forces. This exploitation involves either expanding it further, using it as a movement corridor toward a key objective, or beginning the process of seizing additional terrain. This is a shift from achieving sea control to using it, assaulting through and contesting more terrain, and repeating the process from infiltration to expansion to assault if necessary. Assault forces seize or achieve larger objectives. If the infiltration and expansion forces are left jabs to reduce the adversary's defenses, the assault force is the right hook that does real damage.

Key Concepts

Distributed maritime operations (DMO) is the key concept here as the Navy exploits the access maintained by Marine forces to maneuver against adversary naval formations. The Marine assault forces will be more traditional, featuring full Marine Air-Ground Task Forces (MAGTF) tailored to the objective and acting in support of naval task forces and the Joint Forces Maritime Compo-

ment Commander (JFMCC). These may be blunt forces or may be the vanguard of surge forces.

Key Tasks

The main objectives for the assault force are to capture key maritime terrain, attack and destroy key adversary forces, or otherwise push the access already gained into new areas. Where infiltration forces contest antiaccess warfare and expansion forces solidify the breach, assault forces penetrate adversary defenses and exploit maneuver space beyond.

Key Capabilities

The assault forces are composed of more traditional capabilities: combined arms formations of maneuver, fires, aviation, and information and logistics enablers. MIGs and the LCE will have more capability forward. The assault forces will be a Marine Expeditionary Brigade (MEB) or Marine Expeditionary Force (MEF) level operation.

Key Platforms

Amphibious warships will be the key platform to enable assault forces. The actions of the infiltration and expansion forces will create windows of opportunity to exploit the unmatched capability of the amphibious warships to project power. Forces ashore will be heavier and able to employ larger platforms for both mobility and fire support. More aviation platforms will become viable for air assault, air mobility, and sustainment.

Key Partners

Partnering with local forces will continue to be a major concern for assault forces, as they will most likely need to initiate linkup with partner forces that were already operating in the area, or provide further support such as sea and airlift. Joint partners that may also participate in this phase include U.S. Army Airborne and Air Assault units, Navy expeditionary strike groups (ESG), and Navy carrier strike groups (CSG).

Amphibious Operations

Although the amphibious assault will take center stage for this phase, they will not resemble traditional World War II-era amphibious assaults such as Iwo Jima or Okinawa in scope, scale, or tactics. Amphibious warships will be able to rapidly move into and out of an area for short periods, or raid into an area of operations to support landings but will probably still be threatened enough to then have to withdraw. These assaults will most likely be limited to brigade-size

assaults or smaller, initially supported by an amphibious task force but then supported by nearby expansion forces, MLRs, or other similar forces. There is, however, one World War II-era campaign that will have a resemblance: Operation Watchtower, where key maritime terrain in the form of Henderson Field on the island of Guadalcanal was seized by the 1st Marine Division in 1942. Thereafter, they were intermittently supplied and reinforced by naval forces. Once the security of the positions ashore were assured and Henderson Field was secure, control was transitioned to Army forces.³⁰

The Surge: Joint Follow-on Forces

Consequently, advanced force operations can set the stage for the surge layer. Once assault forces have disaggregated or rolled back adversary antiaccess platforms in a large enough area or enough areas, the surge forces composed of Joint forces have assured access to the operating area, enabling Joint forcible entry operations (JFEO), air, naval, or ground offensives, or other Joint task force missions. As surge forces move into the area, they are supported with command and control, intelligence, surveillance, and reconnaissance, logistics, and fires from the EABO network.

Advanced force operations find, create, and shape opportunities for the rest of the Joint force, keeping the adversary off-balance and short-circuiting their ability to prepare for the arrival of the full weight of the U.S. military. Marine Corps infiltration forces may be operating in multiple areas at once and indeed may have to withdraw if adversary forces prove too strong. Some infiltration forces may contest an area as a feint to support other infiltration forces. But where they successfully contest an area, or where the adversary fails to eject them, expansion and assault forces are committed and breaches are expanded on. Importantly, advanced force operations build on and modernize traditional Marine Corps strengths, traditions, and tested operational concepts to address contemporary adversaries and requirements to support the Joint force.

Back to the Future: Advanced Base Operations

In 1920, Lieutenant Colonel Ellis composed what we would today call an operational concept for then-Commandant of the Marine Corps, General John A. Lejeune. The concept was based on exhaustive study of the southern Pacific region, Marine Corps experiments with ship-to-shore operations, and papers on amphibious operations Ellis had completed as a student at the Naval War College. The paper was called *Advanced Base Operations in Micronesia*.³¹

The concept was built around the U.S. Navy's need for coaling stations forward to cross the Pacific. Since the Imperial Japanese Navy also needed these stations, they would need to be seized and held against counterattack, and the Marine Corps would perform that role. To do so, they would need a balanced

force composed of ground troops and aircraft trained for amphibious operations. This symbiotic relationship between the Navy and the Marine Corps and the force design changes it required were formative in the creation of the modern Marine Corps.³²

However, the Navy did not always need coaling stations; by World War II, coal had been replaced by oil. What the Navy did need, however, were airstrips to increase the range and striking power of naval- and land-based aviation, which had become the major offensive weapon of both the U.S. and Imperial Japanese navies. It would be these advance bases that won the war, enabling both the strangling of Japanese shipping—cutting the home islands off from the outside world—and airstrikes on Japan, to include the use of two nuclear bombs.

Further experimentation and development after Ellis's death led to the publication of the *Tentative Manual for Landing Operations* in 1934 and an update in 1938. The manual was the doctrinal expression of Ellis's conceptual breakthrough and would be used by Marine, Navy, and Army forces in both theaters of the war, from Guadalcanal against the Japanese in 1942 to Normandy against the Germans in 1944.³³

Both the concept of advance base operations and the *Tentative Manual* called for force design changes overseen by Commandant of the Marine Corps General Thomas Holcomb. Although not all of the required changes were completed prior to Pearl Harbor, the intent was to create a dual composition. First, the Marine Corps would employ assault forces, organized in battalions, regiments, and two divisions, the 1st and 2d Marine Divisions. Secondly, the Marine Corps would employ independent defense battalions, stationed at key maritime terrain. Assault forces would seize advanced bases and defense battalions would hold them. If a forward base was designated as permanent, it would be turned over to Army forces. Essentially, Marine Corps assault forces and defense forces would leapfrog across island chains, seizing and then assuring access for naval forces. Importantly, assault forces and defense forces were manned, trained, and equipped for their role rather than being standardized as generic infantry units.³⁴

The concept of advanced base operations was well-suited to the industrialized warfare of World War II. Today's Information Revolution-era warfare will be different, but some foundational commonalities remain. First, the Navy will still require advanced bases, not only for airfields but for additional reasons, especially air and missile defense. Whereas aircraft were the most potent naval weapon during World War II, precision-guided missiles now characterize naval warfare.³⁵ These can be launched from land, sea, and air against land, sea, and air targets, making shore-based threats more potent than ever. U.S. Navy ships have already been attacked by nonstate actors employing such weapons.³⁶

Indeed, precision-guided missiles are the foundation of modern antiaccess warfare. Due to the range of modern missiles, naval campaigns can no longer bypass islands and other key maritime terrain; forces must be projected ashore to protect fleets and ships from shore-based threats if they cannot be neutralized. Additionally, airfields are just as important as they were during World War II and will either need to be used by Joint forces or seized to prevent their use by adversary forces. Advanced forces will be key to locate, identify, and neutralize such threats and assure Joint access.

There are major differences as well. The vast naval task forces that accomplished the large-scale amphibious operations of World War II are not survivable due to the proliferation of precision-guided munitions; at least, they are not survivable until advanced forces are able to mitigate shore-based antiaccess networks and create windows of opportunity. Information warfare and intelligence, surveillance, and reconnaissance platforms are now ubiquitous and will require shore-based infrastructure. Most, if not all, of the shore-based positions necessary to protect and enable the fleet will be more temporary in nature than they were during World War II, hence the change from advanced base operations to advanced force operations.

Advanced force operations build on these commonalities and accounts for the differences. The tripartite employment of forces ensures that whatever the state of the adversary's antiaccess efforts, the Marine Corps has the ability to contest it. First, it accounts for changes in warfare by adopting a three-part formulation rather than a two-part formulation, each tailored to a different level of access and sea control. Second, it meshes well with the Marine Corps' maneuver warfare philosophy and applies it to contemporary problems: searching for and creating gaps in an adversary's antiaccess/area-denial network to enable maneuver, rather than just seeking mere attrition. Third, it contextualizes Department of Defense guidance and traditional Marine Corps strengths such as amphibious operations and security cooperation in a mutually reinforcing manner. Fourth, it links current Marine Corps and Navy concepts such as DMO and EABO together as a family of concepts for specific situations. Lastly, by establishing a network of advanced bases for sea control, air control, command and control, sustainment, and information warfare, the Marine Corps can extend its vital function of supporting the Navy in naval campaigns to the rest of the Joint force, ensuring that it is a Joint enabler. In this way, advanced force operations reestablish the Marine Corps as the vanguard of the Joint force.

Operation Watchtower, the amphibious invasion of Guadalcanal in 1942, demonstrates many of the concepts necessary for advanced force operations. Imperial Japanese controlled the Solomon Islands and had forces on a number of islands, of which Guadalcanal was one. The initial infiltration forces were the Australian coastwatchers, who had either infiltrated Japanese territory or

maintained their positions as the Japanese advanced, presaging the concept of stand-in forces. Well-informed by the coastwatchers, the Solomon Island chain was then assaulted by the landing of the 1st Marine Division on Guadalcanal to seize the airfield, renamed Henderson Field. The 1st Marine Division maintained its position against attack by both land forces and air forces from the Japanese airbase at Rabaul on the island of New Britain, and the Navy had to withdraw from the area due to heavy Japanese naval attacks.³⁷

Once the Marines' position on Guadalcanal was secure and the Navy could logistically support it, an expansion of forces phase began. Henderson Field was expanded, two more airstrips were built, and more air squadrons were based on the island itself. Marine defense battalions and Navy engineer units arrived to improve the position. Eventually, Navy patrol torpedo boats plied the waters offshore to contest and consolidate sea control.³⁸

Upon achieving reliable air and sea control around Guadalcanal after a number of hard-fought naval engagements, an exploitation phase began. Control of Guadalcanal itself was slowly passed to U.S. Army units as Marine forces prepared for further assault operations in the Solomons, which later occurred at Bougainville Island in 1943. Accordingly, the infiltration and expansion of sea and air control in the Solomons acted as a springboard to achieve control of the entire island chain.³⁹

To be clear, this is not to say that Navy and Marine Corps planners viewed Operation Watchtower in terms of infiltration forces, expansion forces, and assault forces. They did not. However, the campaign did unfold along those lines, demonstrating the efficacy and applicability of advanced forces operations. The Japanese controlled the entirety of the Solomon Islands; the United States had no assured access there whatsoever. By infiltrating the Solomon Islands at a single key point, expanding and consolidating that access, and then exploiting it for follow-on amphibious assaults elsewhere in the Solomon Islands, the United States first reduced Japanese control in the area and then achieved it themselves.

Implications

Advanced force operations is not just a rehash of advanced base operations, but it is also not just an update. It is a modernization that takes contemporary trends into account without scuttling proven principles. It reflects the 2018 NDS Global Operating Model without abandoning Marine Corps strengths and advantages: infiltration forces are suited to the contact layer, expansion forces to the blunt layer, and assault forces to the blunt and surge layers.⁴⁰

While the Marine Corps is primarily focused on operations in Indo-Pacific Command against the People's Republic of China, advanced force operations ensures that the Marine Corps is well-suited to assure Joint force access against a variety of potential opponents. The Russian Federation also employs antiac-

cess warfare and may indeed be able to prevent the build-up of North Atlantic Treaty Organization (NATO) land forces in Eastern Europe.⁴¹ Even if it cannot, naval access to the North Sea, the Norwegian Sea, and the Baltic Sea will be necessary to sustain NATO against Russian aggression. Advanced force operations are ideally suited to achieving and assuring that access. The Islamic Republic of Iran is another threat that is seeking to employ antiaccess warfare. Iran's A2/AD systems are focused on the Persian Gulf, another region of key maritime terrain that also features islands.⁴² In recent years, the Democratic People's Republic of Korea has accelerated its acquisition and production of antiaccess weapons.⁴³ Lastly, the Bolivarian Republic of Venezuela is well behind these other threats in antiaccess systems, but it has recently purchased anti-air components of such a system from Russia.⁴⁴ These adversaries are united by more than just the anti-access weapons they have succeeded in acquiring but also by their proximity to key maritime terrain. The oceans offer access to these threats; offshore islands will either need to be used to support Joint force operations or seized to prevent their use by the adversary. Naval expeditionary forces are required for all of these areas, and advanced force operations can be applied to any of these potential threats. To return to Colin S. Gray's leverage of seapower, establishing sea control in the waters near these adversaries is an essential prerequisite to victory for both naval and land campaigns against these adversaries.

Another implication of advanced force operations is the vital importance of security cooperation for Marine Corps operations. As a small force operating ahead of many Joint enablers and support systems, security cooperation and partnering will have to be inherent in everything the Marine Corps does. Nor can Marine Corps forces access many forward positions without host nation support and permissions. The Marine Corps will not just have to fight for access, but it will simultaneously have to partner for access. This will place a heavy burden on units that already have security cooperation tasks, such as ANGLICO units and Marine Corps Advisor Companies, the latter of which only exist in the Select Marine Corps Reserve (SMCR). Security cooperation activities will have to expand beyond such units to become inherent across the Fleet Marine Force. Its practice has to be continuous, not intermittent. The Marine Corps should also explore increasing ties and integration with the Department of State.

Importantly, advanced force operations are not strictly focused on islands. Although islands offer convenient ways for amphibious forces to project power against sea and air forces, other types of terrain offer opportunities as well. Straits, canals, rivers, and deltas all offer opportunities for amphibious forces equipped with the right mix of platforms. The PRC's Belt and Road Initiative is, in large part, a global maritime network linking key maritime terrain

from China as far away as the Mediterranean Sea.⁴⁵ Should conflict between the United States and China occur, the role of the Fleet Marine Force will be global in scope, potentially operating in the South Pacific and other areas where there are sea lines of communication important to China. Examples of these sea lines of communication important to China include the Indian Ocean and the Gulf of Aden near Djibouti, where the People's Liberation Army (PLA) has its sole foreign base manned by its marine corps.

Advanced force operations have yet another application: the protection of sea lines of communication. The capabilities and forces necessary to gain, maintain, and exploit naval access in a wartime scenario are the same as those required should potential adversaries attempt to close off merchant shipping in their near abroad without escalating to open conflict. All of the potential adversaries mentioned above sit astride or near key sea lines of communication required for the transit of goods, people, and information throughout the global economy. Should they attempt to exploit that proximity through economic blockade of those lines of communication, advanced force operations enable the Marine Corps to provide policy makers with a range of options short of open conflict to maintain open waterways around the globe.

Such forces can also contribute to land campaigns. In land campaigns as diverse as the American Civil War, World War II, and Vietnam, riverine warfare—including amphibious operations using rivers as maneuver space—played key roles. Even beyond riverine warfare, most land campaigns that the U.S. military may face in the future will have an amphibious component. Additionally, both infiltration and expansion forces are well-suited to act in support of Special Operations Forces against any range of potential threats.

Lastly, advanced force operations do not account for the Marine Corps statutory crisis response role, which should remain the focus of Marine Expeditionary Units (MEU). The Marine Corps' crisis response role was written into law in 1952, and the Service remains the nation's force-in-readiness.⁴⁶ The primary means to perform this mission are MEUs. Lastly, advanced force operations offer an opportunity for the Marine Corps to design a force able to accomplish the goals set forth in the 2018 NDS and maintain its crisis response missions without assuming a great deal of risk. The mission of infiltration forces is more appropriate to company-size units and below, the mission of expansion forces is more appropriate for the Marine Littoral Regiment, and the mission of assault forces will require Marines forces of brigade or Marine Expeditionary Force size. These forces can be optimized for their role in advanced force operations while the MEUs are optimized for crisis response. Adopting this concept allows the Marine Corps to safely optimize, train, and structure them for crisis response missions.

Conclusion

No concept offers all the right answers, nor will every aspect of a concept make it through experimentation, wargaming, and analysis. But intellectual reconnaissance is valuable for the same reasons military reconnaissance is valuable: to find routes and pathways that will work, that will not work, and to find the right place to proceed. The concepts already identified by General Berger all address specific roles and situations. What remains is the need for a big-picture concept to tie them together.

First to fight must be more than just a recruiting slogan and an honored tradition. The Continental Navy and Marines were the first to take the fight to the enemy overseas in 1776 and the first American force to raise the flag over foreign shores during the Barbary Wars (1801–5). But these facts are just fading history if the Marine Corps cannot perform the same feats today. For the Joint force to send Marines first, or station them forward, Marines must provide value for being there first. As valuable as the Marine Corps has proven for the United States, it must also provide value for the Joint force. Advanced force operations is a concept that ensures a Marine Corps that can do both as the vanguard of the Joint force. It is founded on the timeless dynamic of offense and defense and the tested methods of antiaccess warfare and infiltration tactics, updated for the future operating environment to ensure access to maneuver space in the face of integrated antiaccess systems.

Access to both the Atlantic and Pacific Oceans does not inherently grant the United States the advantages of seapower. They must be defended and exploited by lethal maritime forces; that is, the Navy and the Marine Corps. The naval strategy necessary to prosecute both naval and land campaigns abroad rests on the acquisition, maintenance, and exploitation of sea control for which amphibious forces are a key component.

The 2018 NDS has refocused the Marine Corps on naval campaigns, and General Berger has the right vision at the right time to recalibrate the Fleet Marine Force for the future operating environment. Now, as during World War II, the role of amphibious forces in naval campaigns will be as a forward-deployed force to ensure access for the Navy. To do so in the face of adversary antiaccess warfare networks, amphibious forces will need to infiltrate them, expand the breach, and then assault through. The advanced force operations concept will require further testing, doctrinal development, and eventually force design, but it can help the Marine Corps achieve former secretary Mattis's vision, General Berger's goals, and meet the demands to become an effective force of the future operating environment.

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The Problems Facing United States Marine Corps Amphibious Assaults

Steven A. Yeadon

Abstract: There are calls by some experts to accept that an amphibious assault of coastline is simply too risky to attempt due to current threats. So, what are the challenges facing amphibious assaults? Is the amphibious assault still a viable type of military operation in the current threat environment? These questions are at the heart of the mission and role of the United States Marine Corps. This analysis delves deep into the problems facing amphibious assaults, and it serves as a primer for future discussions pertaining to improving amphibious assault capabilities.

Keywords: amphibious operations, amphibious assault, antiaccess/area-denial, A2/AD, near-peer competitors, threats, vulnerability

This analysis highlights areas of concern for modern United States Marine Corps amphibious assaults. The goal of this analysis is to show that current amphibious assault capabilities carry enormous risk against major powers and potentially all powers possessing near-peer weaponry, unless a landing is unopposed. This analysis will explore numerous reasons for this, and it will bring greater attention to key issues that affect capabilities. This analysis is meant to be actionable information on current limitations and vulnerabilities of U.S. amphibious forces, in order to chart a way forward for a robust forcible entry capability from the sea.

First, it is necessary to define the terminology concerning amphibious op-

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erations. An *amphibious operation* is a military operation launched from the sea by an amphibious force to conduct landing force operations within the littorals. The littorals include any land areas (and their adjacent sea and associated air space) that are primarily susceptible to engagement and influence from the sea and may reach far inland.¹ Additionally, “amphibious operations require the unique ability to operate across air, land, and sea. Amphibious operations, also, require integrated command and control to achieve unity of effort, increased speed of action, and coordinated application of sea control and power projection capabilities.”²

There are a few types of amphibious operations. This analysis concentrates on the amphibious assault. The following excerpt explains this type of amphibious operation:

An amphibious assault is launched from the sea by an [amphibious force], embarked in ships or crafts, to land the [landing force] and establish it on a hostile or potentially hostile shore. The salient requirement of an amphibious assault is the necessity for rapid build-up of combat power ashore to full coordinated striking power as the attack progresses toward [amphibious force] objectives. The organic capabilities of [amphibious forces], including air and fire support, logistics, and mobility, enable them to gain access to an area by forcible entry.³

Additionally, amphibious assaults are some of the most difficult operations due to their complexity, and they are the most difficult type of amphibious operation.⁴ An amphibious assault has the following phases:

1. Forces arrive in the operational area.
2. Preparation of the landing area by supporting arms.
3. Ship-to-shore movement of the landing force.
4. Air and surface assault landings.
5. Linkup operations between surface and air landed forces.
6. Provision of supporting arms and logistics and/or combat service support.
7. Landing of remaining required landing force elements.
8. Mission accomplishment.⁵

American history will remember the first half of the twenty-first century as a perilous era for U.S. national security. The threats of nonstate actors, rogue regimes, and near-peer powers create a pool of potential enemies that may seek a military confrontation with the United States and its allies to accomplish their strategic objectives. These threats include islands in the Western Pacific

contested by China, a potential Russian invasion of Eastern or Northern Europe, the ever-present threat of North Korea, the threat of a Chinese invasion of Taiwan, Iran's operations in the Persian Gulf, and nonstate actors across the world. There are several potential theaters of action that may demand the use of U.S. military forces against major powers, rogue regimes, or nonstate actors. The Marine Corps should not expect any single potential enemy to go to war with the United States and its allies. This means the Marine Corps must be able to win in a variety of wars against a multitude of actors that will contest all domains and use increasingly potent antiaccess/area-denial (A2/AD) weaponry. In such a threat environment, the amphibious assaulter must be able to win in a variety of operations, including a variety of tactical situations against potential enemy militaries or irregular forces. Because of the breadth of this security situation, this analysis will concentrate on general threats facing amphibious assaults, rather than concentrating on any one geopolitical situation.

This article will address several limitations and vulnerabilities one phase of an amphibious assault at a time, with specific concerns in each of these phases. This analysis gives special attention to the advanced military forces currently employed by major powers, since they represent the greatest threat to Marines.

Problems with Movement to the Area of Operations Limited Protection for Amphibious Warfare Ships against Near-Peer Attempts at Sea Denial

Amphibious task forces (ATFs) transiting from U.S. bases to the theater of operations will face grave risk due to enemy sea-denial capabilities able to project power into open ocean. These capabilities are possessed primarily by China and Russia, such as sophisticated surveillance systems hunting for the ATF, attack submarines armed with torpedoes and antiship missiles, long-range bombers able to launch antiship missiles, carrier-based aircraft, land-based long-range precision fires, or surface combatants. These assets can threaten the ATF in the open ocean while it transits to the battle zone.⁶

An amphibious Ready Group (ARG) consists of a Marine Expeditionary Unit (MEU) and at least three amphibs, allowing for a flexible and a capable force able to accomplish a variety of amphibious operations. Currently, an ARG consists of an amphibious assault ship, an amphibious transport dock, and a dock landing ship.⁷ Amphibious assault ships are effectively small aircraft carriers, often with well deck capability for the deployment of surface connectors. Amphibious transport docks are another hybrid-style vessel with a well deck for surface connectors and a much smaller flight deck that supports only vertical aircraft. Dock landing ships have extensive well deck space for more surface connectors or more room for cargo. The trade-off for a dock landing ship versus amphibious transport dock is the loss of a hangar for aircraft maintenance,

which reduces the ability to support aircraft compared to the amphibious transport dock.

In relation to the threat of enemy naval assets while transiting in open ocean, amphibis lack the antisubmarine warfare, antisurface warfare, and antiair warfare capabilities of surface combatants, aircraft carriers, and attack submarines. This means an ATF will need to be composited with escorts to protect it in open ocean, especially against a blue-water naval power like the People's Republic of China. A carrier strike group (CSG) escort will likely be a key part of giving amphibis the most protection from a panoply of surface, aerial, and subsurface threats in blue-water environments and the littorals. A CSG is an obvious choice given its offensive and defensive capabilities, coupled with the command and control necessary to integrate a multimission fleet.

Such a command and control capability is needed to support a Marine Expeditionary Brigade (MEB) of multiple ARGs, because amphibis do not currently possess the ability to integrate with multimission ships like destroyers or cruisers. This capability is in development with the up-gunned Expeditionary Strike Group (ESG) concept. The up-gunned ESG is a concept that aims to defend against adversarial threats in the undersea, surface, and air domains as well as provide offensive firepower to strike from the sea to a traditional ARG. This is done by adding surface combatants to the ESG and incorporating the Lockheed Martin F-35B Lightning II joint strike fighter aircraft.⁸

Additionally, potential enemies can detect an ATF over-the-horizon (OTH) from their shoreline and deploy tactical aircraft against the ATF and launch many antiship missiles over-the-horizon from aircraft, submarines, and ships operating in the littorals or from land-based launchers as the ATF comes closer to contested shoreline. While an ATF has several options for missile defense, including point defense on amphibis, escorts providing area missile defense, and F-35B aircraft, the closer the ships of the ATF come to shore, the less effective these defenses become. This is because it is easier to detect a task force the closer it is to shore, because the reaction time of an ATF to aircraft and missiles decreases the closer to shore it is and the number of weapons an enemy may use increases the closer to shore an ATF comes. These same issues are also true of ships performing fire support for the task force, since they must come within range of using naval guns.⁹

Furthermore, a key aspect of modern attempts at sea denial by near-peer adversaries, such as Russia and China, is the concept of A2/AD military capabilities. These are the "family of military capabilities used to prevent or constrain the deployment of opposing forces into a given theater of operations and reduce . . . [the opposing force's] freedom of maneuver once in a theater."¹⁰ These capabilities limit the projection of power by the United States and its allies, and this includes naval power projection such as amphibious operations.¹¹

These defenses encompass threats from enemy aircraft, submarines, ships, and missiles.¹² The threat of antiship missiles constrain the deployment of an ATF or CSG into a theater, such as the Western Pacific, and makes them vulnerable to attack.¹³ Another threat to amphibians are antiship missiles, since such missiles pose a threat to CSG escorts.

Currently, there are three broad types of antiship missiles. These types of missiles include antiship cruise missiles, hypersonic weapons, and antiship ballistic missiles. First, there are cruise missiles, which are unmanned, self-propelled, self-guided missiles that use aerodynamic lift during most of their flight path and which are designed to deliver a payload to a target. Antiship cruise missiles (ASCMs) are designed to strike ships and can be launched from submarines, ships, aircraft, or land-based launchers.¹⁴ ASCMs traveling at supersonic speeds and launched from a coastline will allow around 47 seconds to reach an ATF 30 nautical miles (nm) away; 30 nm is over-the-horizon from a shoreline. Slower ASCMs may stay at low altitude and skim the ocean's surface to avoid radar detection, resulting in the ability to detect them 18 nms from a ship, reaching an ATF in two minutes.¹⁶

New hypersonic weapons, which could be deployed by both China and Russia by 2020, pose a major threat to amphibians.¹⁷ Hypersonic weapons can be maneuverable, travel at speeds in excess of 5,000–25,000 km per hour, can fly at unusual altitudes—between a few tens of kilometers and 100 km—and hypersonic weapons are difficult to detect with radar until late in the weapon's flight. The combination of high speed, maneuverability, and unusual altitudes make hypersonic weapons difficult to counter using current missile-defense technologies, and it makes them unpredictable as to their targets until the last minutes of flight.¹⁸ The delay in detection for hypersonic weapons means decision makers will have less time to respond and may allow only one intercept attempt.¹⁹

Another emerging threat to amphibians is the development of antiship ballistic missiles (ASBMs), which are ballistic missiles designed to strike a warship at sea. Ballistic missiles are a rocket-propelled, self-guided weapon system that follows a ballistic trajectory to deliver a payload from its launch site to a predetermined target.²⁰ ASBMs include the Chinese Dong Feng-21D and Dong Feng-26, the Russian Kh-47M2 Kinzhal, and the Iranian Khalij Fars ballistic missiles.²¹ Chinese and Russian ASBMs possess enormous range and can strike targets hundreds of nautical miles away.²² Additionally, ASBMs require ballistic-missile defenses to counter, which amphibians, and even many large surface combatants, lack.

How dangerous this antiship missile environment is becoming is clearer given the lengths the U.S. Navy has gone to defend its aircraft carriers. Due to the long ranges of ASBMs, the U.S. Navy has proposed a drone aerial refueler

called the Boeing MQ-25 Stingray to almost double the ranges of an aircraft carrier's current aircraft. The goal of the program is to allow aircraft carriers to strike targets 700 or more nautical miles away.²⁴

The enormous threat of antiship missiles to amphibians has influenced the doctrine and tactics of the Marine Corps as well. The Marine Corps developed a new military concept proposed to protect amphibians from antiship missiles. This concept calls for OTH amphibious operations beyond radar and visual range of shore. The decision to conduct OTH operations may principally be a force protection decision to mitigate threats such as antiship missiles.²⁵ As for amphibious operations that take place within radar and visual range of shore, this article will refer to them as conventional amphibious operations.

Conventional amphibious operations are not a feasible option against a defended shoreline, because of the need to put amphibians within 3,000–4,000 yards of shore. Thus, a broad range of weapons can target amphibians, including, potentially, small arms and enemy vehicles armed with large caliber guns or antitank guided missiles (ATGMs). The reason for coming so close to shore is that a realistic distance for the amphibious assault vehicle (AAV) to swim to shore is only 3,000–4,000 yards. This necessitates OTH amphibious operations in the current threat environment.

However, a technological solution to enemy A2/AD precision-guided fires is elusive. Even the planned replacement for the AAV, the proposed BAE Systems Amphibious Combat Vehicle (ACV), will be incapable of swimming to shore over-the-horizon in the early phases of the program. The proposed 1.2 phase of the ACV program will only have a realistic distance to swim to shore of 12 nm and have 250 statute miles to work with on land. Even disembarking landing craft at a distance of 12 nm from shore, precision-guided fires, such as ASCMs, will allow little time to react. Thus, for a conventional amphibious operation to succeed, with little risk of incurring losses of amphibians, it will need to be unopposed. This analysis will later revisit a lack of surface forcible entry capability concerning OTH amphibious operations. The vulnerability of amphibians to near-peer fires is perhaps the most pressing problem there is to the amphibious assault.

Furthermore, the proliferation of antiship missiles to nonstate actors is an enormous threat to open sea lanes, commercial vessels, U.S. ships, and allied ships all over the world. The threat of antiship missile proliferation is underscored by a recent event in which Iranian-backed Houthi rebels in Yemen launched two cruise missiles at targets in the Red Sea. The guided-missile destroyer USS *Mason* (DDG 87) launched three interceptors and neither cruise missile hit their targets, but while unsuccessful, this event shows that a nonstate actor can acquire weapons that may threaten U.S. surface vessels, including amphibians. This creates an environment where nonstate actors could possess weap-

ons able to inflict significant losses against a U.S. or allied amphibious assault.

The Threat of Naval Mines Laid in Approaches, in Shallow Water, or in the Surf Zone

Naval mines are easy to emplace by ship, aircraft, or submarine, and they present a valid threat to a commander, who must rely on naval support or on sea-borne reinforcement and resupply. During amphibious operations, assault and assault follow-on shipping must transit narrows and operate in shallow waters. This allows an enemy to place these forces at risk, with little cost to its own forces, by emplacing only a few mines.²⁹ Naval mines can threaten amphibious shipping, surface connectors carrying the larger and heavier elements of the assault force, and the landing force equipment and personnel as they move ashore. Naval mines are also a relatively low-cost way to stop an amphibious assault.³⁰ Naval mines also represent a way for less advanced forces to limit the amphibious capabilities of more advanced navies. This is evident by the failure to prosecute an amphibious assault in the Korean War at Wonsan (1950) and by the decision not to carry out an amphibious assault in the Persian Gulf during the First Gulf War (1990–91).³¹

Naval mine warfare consists of the strategic, operational, and tactical employment of sea mines and mine countermeasures (MCM). Mine warfare divides into two categories: the emplacement of mines by friendly forces to degrade the enemy's capabilities to wage land, air, and maritime warfare, and the countering of enemy mining capability or emplaced mines in order to permit friendly maneuver. Naval mine warfare played a significant role in every major armed conflict involving the United States since the Revolutionary War. Mines can be inexpensive, easy to procure, reliable, effective, and difficult for intelligence agencies to track. More than 50 of the world's navies have mine-emplacing capability, and a considerable number of countries, many of which are known mine exporters, actively engage in the development and manufacture of new models. While relatively old, mine stockpiles remain lethal and often upgradable.³²

Current Chinese- and Soviet-era mines include a variety of mines detonated by contact, such as magnetic signature of a ship or submarine, acoustic signature, water pressure, and multiple-influence (e.g., acoustic or magnetic sensor). These mines include remote-controlled mines that can be deactivated when friendly ships or submarines are nearby and then reactivated, rocket-propelled mines that rise from deep underwater and can be emplaced in choke points and open ocean, and mobile mines that possess the ability to maneuver along a predetermined path for a set period of time before reaching a destination, shutting off its engine, and sinking to the bottom.³³

MCM includes all actions to prevent enemy mines from altering friendly

forces' maritime plans, operations, or maneuver. MCM reduces the threat of mines and the effects they have on friendly naval force and seaborne logistics force by granting access to and transit of selected waterways. MCM divides into offensive MCM and defensive MCM. The best method to ensure mobility and counter naval mines is offensive MCM, which is the destruction or deterrent of enemy assets and capabilities responsible for the production and employment of sea mines early in a conflict. Offensive MCM deters or destroys enemy mining capability before the mines are emplaced, with capabilities that include enemy mine layer, mine storage, and, ultimately, mine production facilities and assets.³⁵

Defensive MCM, on the contrary, is countering naval mines after they are emplaced.³⁶ Defensive MCM further divides into passive and active. Passive MCM reduces the threat from emplaced sea mines without physically attacking the mines by reducing the ship susceptibility to mine actuation. There are three methods to passive MCM. These methods include localization of the threat by establishing a system of transit routes to minimize exposure to potentially mined waters, detection and avoidance of mine fields using intelligence that allows friendly shipping to route around the mined area, and risk reduction by limiting contact with mine sensors. Risk reduction can be accomplished by reducing the magnetic signature of a ship, reducing a ship's radiated noise, reducing a ship's emissions, avoiding contact mines through more lookouts and shallower draft, reducing a ship's speed to avoid triggering pressure sensors, and enhancing a ship's survivability if a mine detonates.³⁷

Active MCM, on the other hand, includes minesweeping and minehunting. Minesweeping entails either the towing of specially equipped mechanical cables to sever moored mines so that they float to the surface or towing devices that emulate the signatures of target ships to trigger explosive mines. This is conducted by either surface craft or helicopters with explosive ordnance disposal divers destroying mines that float to the surface. Minehunting is the use of sensors and neutralization systems, whether surface, aerial, or subsurface, to dispose of individual mines. When mines are located, they are disposed of by remote-controlled vehicles, explosive ordnance disposal divers, or marine mammals. Minehunting occurs to verify the presence or absence of mines in a given area, or it is used to eliminate mines in a known field when minesweeping is not desirable or feasible. Minehunting poses less risk to MCM forces, covers an area more thoroughly, and provides a higher probability of mine detection than minesweeping.³⁸

However, breaching operations against enemy minefields with MCM assets providing minesweeping or minehunting are a poor option for an amphibious assault because they require air superiority and littoral sea control and can last for days, giving enemy forces time to mass.³⁹ Additionally, once detected, the

MCM force could compromise the location of the landing. Therefore, breaching operations may void the possibility of a landing or force a landing to occur against a well-defended shoreline.

This highlights the reality that the prevention of minefields is of the utmost importance to secure friendly maneuver from the sea for amphibious operations. An enemy's mine warfare assets and capabilities must be high-value targets and thus eliminated early in a war. Otherwise, the alternatives to breaching operations will be a combination of using transit routes for the amphibious force that avoid potential minefields, likely found in predictable approaches from the sea and reconnaissance and intelligence gathered by MCM assets on where mines are located, so the landing force can avoid mines while swiftly making their way to shore from over-the-horizon. Additionally, ships of the ATF and surface connectors will need reduced signatures against sensors on sea mines. However, outmaneuvering enemy naval mines may not always be possible, due to geography or political considerations in neighboring nations' waters. This only adds emphasis to the mission of offensive MCM.

If a large minefield separates Marines from an objective, as would happen in a geological choke point like the Strait of Hormuz, one option may be to rely more on the aviation combat element to transport Marines to their objectives for an amphibious assault or amphibious raid. This could occur while mine-breaching operations open the way for surface connectors, armor, and heavy logistic support to eventually reach Marines assaulting key positions.

The problem of naval mine warfare may get even worse as the mine warfare capabilities of the Russian Federation and China modernize and client states like Iran, Syria, and North Korea procure more advanced naval mines. Some advancements in mine technology include the development of smart mines that can distinguish between the signatures of friendly and nonfriendly ships and submarines. These mines will not activate in the presence of a friendly ship or submarine. Another advancement in development is a universal mine that can be emplaced from a wide variety of ships, submarines, and aircraft. This advancement could be a game changer by allowing a plethora of enemy assets to lay minefields of advanced mines rapidly in place of more specially built minelayers.⁴¹

In response, the U.S. Navy is developing a variety of new MCM technologies and methods to allow the massing of MCM assets in a war. This involves a current effort of using a variety of friendly ships to house MCM assets, such as explosive ordnance disposal divers, and the commissioning of littoral combat ships with the MCM mission module.⁴² Littoral combat ships will need to replace aging *Avenger*-class MCM ships, some of which are already decommissioned.⁴³ However, there are still significant issues with breaching operations during a war, even with the best that technology can so far provide. These MCM

assets will still need air superiority and littoral sea control to carry out breaching operations safely. There is also the potential for the littoral combat ships with the MCM mission module to not be any faster at breaching minefields than the *Avenger*-class MCM ships and will require their unmanned vehicles to have line-of-sight communications to the littoral combat ship.⁴⁴

Problems with Preparation of the Landing Area by Supporting Arms Difficulty Securing Air Superiority

According to Joint doctrine, air superiority is control of the air by a military force that permits that force to conduct its military operations at a time and place without prohibitive interference from air and missile threats. These missile threats include enemy cruise missiles, ballistic missiles, and hypersonic weapons. Air threats include helicopters, tiltrotors, and fixed-wing aircraft, including unmanned aircraft systems (UAS), fighters, attack aircraft, gunships, bombers, electronic warfare aircraft, airborne early warning aircraft, transport aircraft, air refueling aircraft, and intelligence, surveillance, and reconnaissance aircraft. Historically, air superiority is essential to the success of an operation or campaign because it prevents enemy air and missile threats from interfering with friendly air, land, maritime, space, and special operations forces. This gives these friendly forces both freedom of movement and freedom of action in the operational area.⁴⁵ Air superiority is vital to amphibious assaults in modern times, since only 14 percent of modern amphibious operations have been successful with a lack of air superiority.⁴⁶

Additionally, the lethality of air and missile threats, such as enemy cruise missiles, ballistic missiles, hypersonic weapons, fixed-wing aircraft, and rotary-wing aircraft makes it imperative to keep them from targeting the ATF and its surface connectors. This is because the loss of a few critical ships can hamper or doom a landing. An example of this is the Falklands War where a British amphibious force lost much of its rotary-wing aviation when an Exocet missile sank a British ship carrying Boeing CH-47 Chinook helicopters. However, this did not doom an eventual landing, but it did force the British troops to march dozens of kilometers to their ultimate objective after an amphibious landing.⁴⁷ However, if the Argentines had targeted more valuable ships such as British aircraft carriers, then the Argentines may have contested British air superiority and prevented a landing and ultimate victory.

At the theater level, integrated air and missile defense consists of defensive counterair (DCA) supported by offensive counterair (OCA) attack operations.⁴⁹ *Countering Air and Missile Threats*, Joint Publication (JP) 3-01 describes these concepts. The counterair mission is an inherently Joint and interdependent endeavor. This is because the capabilities and force structure of each of

the armed Services reflects an increasing reliance on all components across all Services to leverage complementary and reinforcing effects while minimizing relative vulnerabilities.⁵⁰

Next, the counterair framework is based on the integration of offensive counterair and defensive counterair operations by all capable Joint force components, against both air and missile threats. Generally, OCA operations seek to dominate enemy airspace and prevent the launch of threats, while DCA operations defeat or reduce the effectiveness of enemy air and missile threats attempting to penetrate or attack through friendly airspace.⁵¹

OCA operations destroy or neutralize enemy aircraft, missiles, launch platforms, and their supporting structures and systems both before and after launch and as close to their source as possible. Assets and capabilities used to support OCA include aircraft (e.g., manned and unmanned, fixed wing, tiltrotor, and rotary wing), air-to-air missiles, air-to-surface missiles, cruise missiles, Special Operations Forces, surface-to-surface fires, ground maneuver forces, electronic warfare, cyber operations, and intelligence collection systems. OCA operations also include targeting assets that enable enemy air and missile capabilities, such as petroleum, oils, and lubricant facilities; airfield facilities; missile reload and storage facilities; aircraft repair structures; and command and control (C2) facilities.

OCA includes four types of operations:

1. Attack operations. OCA attack operations include offensive action by any part of the Joint force against targets that contribute to the enemy's air and missile capabilities.
2. Suppression of enemy air defenses (SEAD). These types of operations neutralize, destroy, or degrade surface-based enemy air defenses by destructive and/or disruptive means.
3. Fighter escort. Fighter escort provides dedicated protection sorties by air-to-air capable fighters in support of other offensive air and air support operations over enemy territory. Fighter escort can contribute to DCA by protecting aircraft such as high-value airborne assets.
4. Fighter sweep. Fighter sweep is an offensive mission by fighter aircraft to seek out and destroy enemy aircraft or targets of opportunity in a designated area.

DCA includes all defensive measures within the theater of operations designed to neutralize or destroy enemy forces attempting to penetrate or attack through friendly airspace. The goal of DCA operations, in concert with OCA operations, is to provide an area from which friendly forces can operate while protected from air and missile threats.

DCAs include active air and missile defense, which are direct defensive actions taken to destroy, nullify, or reduce the effectiveness of hostile air and ballistic missile threats against friendly forces and assets. Active air and missile defense includes both air defense and ballistic missile defense (BMD). First, air defenses are defensive measures designed to destroy attacking aircraft and aerodynamic missiles, or to nullify or reduce the effectiveness of such attacks. It includes the use of aircraft, surface-to-air missiles, anti-aircraft artillery, cyber operations, electronic warfare (including directed energy), multiple sensors, and other available weapons/capabilities. Air defense also includes defense against cruise missiles and UAS. Second, BMDs are defensive measures designed to destroy attacking enemy ballistic missiles, or to nullify or reduce the effectiveness of such attack.

Passive air and missile defenses are all measures, other than active air and missile defense, taken to minimize the effectiveness of hostile air and ballistic missile threats against friendly forces and assets. These measures include detection, warning, camouflage, concealment, deception, dispersion, hardening, and the use of protective construction.⁵²

It is vital to restate how complex and Joint the endeavor of acquiring air superiority is. A Western Pacific theater under attack or threat from thousands of Chinese ballistic missiles and cruise missiles and Japanese possessions in the Pacific and a European theater facing the same threat from Russian ballistic and cruise missiles will complicate achieving air superiority by delaying, disrupting, or destroying Joint forces needed to achieve air superiority.⁵³

In addition, in such a threat environment CSGs may not venture within 700 nms of shore due to the threat of ASBMs. This will greatly affect the availability of aircraft at any given time due to the distances involved for aircraft to travel. This begs the question: Why risk highly valuable amphibians in a way that aircraft carriers will not be risked?

Another factor is that amphibious assault ships lack the ability to accommodate aircraft that do not possess vertical/short take-off and landing (V/STOL), short take-off vertical landing (STOVL), or vertical take-off and landing (VTOL) capabilities.⁵⁴ As a result, ATFs will need to rely on CSGs or nearby airfields for airborne early warning and airborne electronic warfare through Northrop Grumman E-2 Hawkeye and Boeing EA-18G Growler aircraft, respectively. These two aircraft require catapult assisted take-off but arrested recovery systems to function from naval ships, which is a capability provided by aircraft carriers.⁵⁵

The MAGTF Unmanned Aircraft System Expeditionary or MUX drone may provide a solution to the problem of Marine amphibious units lacking both organic airborne early warning and airborne electronic warfare capabilities. It is also being assessed whether F-35Bs could be adapted for electronic

warfare. However, even if the programs for the MUX and an electronic warfare F-35B go as planned, then an MEB will still be dependent on the Joint force to achieve air superiority.

Another issue with achieving air superiority during an amphibious assault is the breadth of the threats to the landing force. This includes enemy assets such as aircraft, ships, land-based launchers employing precision-guided weapons, bombs dropped by aircraft, artillery projectiles, rocket artillery, cruise missiles, ATGMs, ballistic missiles, hypersonic weapons, and armed drones.

Compounding these threats is that a landing force with low altitude air defense (LAAD) units possesses the ground-based air defense system providing short range air defense capabilities to shoot down threats using FIM-92 Stinger missiles and direct-fire machine guns. This capability is augmented by the Air Combat Element's and Ground Combat Element's Ground/Air Task-Oriented Radar (G/ATOR) to detect threats, including cruise missiles, UAS, aircraft, rockets, artillery, and mortars.⁵⁸ However, given the panoply of aerial threats to the landing force in a near-peer fight, there is added emphasis on the need for counter rocket, artillery, and mortar capabilities; counter unmanned aircraft systems capabilities; and high to medium air defense capabilities, including cruise missile defense, for Marine ground units. This is especially true of static forces such as those stationed in forward military bases or airfields. These threats are all on top of the need for passive air and missile defense and for Joint assets to provide ballistic missile defense and offensive counterair to protect the landing force.

The threat of armed drones is worthy of special mention, since it was the most daunting problem to special operators in 2016, according to the head of U.S. Special Operations Command.⁵⁹ Swarms of armed drones are especially difficult to counter. Since conventional air defenses are unlikely to successfully defeat hundreds of drones, dedicated counter-UAS weapon systems are in development.⁶⁰ Additionally, the Marine Corps faces a capability gap with detecting the threat of small UAS. To fill this gap in capabilities, the Marine Corps is purchasing more G/ATORs to detect these threats and is also acquisitioning air defense joint light tactical vehicles (JLTV) variants to modernize LAAD units. These JLTVs of the Marine Air Defense Integrated Future Weapons System program will have Stinger missiles, electronic warfare capability, advanced optics, and direct-fire weapons, including the potential for a high-energy laser. A second C-UAS variant will sport a 360-degree radar, direct-fire weapon, advanced optics, and a command and control communications suite.⁶¹

The Potential of Insufficient Fire Support for Amphibious Assaults

One aspect of fire support for amphibious assaults is naval surface fire support (NSFS), which is fire support by naval surface guns, missiles, and electronic

warfare systems in support of a unit or units tasked with achieving the commander of the amphibious operation's objectives. In general, the mission of NSFS units in an amphibious assault is to support the assault by destroying or neutralizing shore installations that oppose the approach of ships and aircraft and to deliver fires against enemy forces that may oppose the landing force, including its post-landing advance.⁶² The most common naval surface guns on U.S. Navy vessels are 5-inch/54-caliber (Mk 45) lightweight guns on current *Ticonderoga*-class cruisers and *Arleigh Burke*-class destroyers. These 5-inch guns have a maximum range of 13 nms.⁶³ The only land-attack missiles used by the Navy are the Tomahawk cruise missiles, an extremely expensive theater-level weapon that needs significant launch preparation time.⁶⁴

In addition to NSFS, amphibious assault fire support includes both Joint surface-to-surface fires assets, originating within range of the amphibious objective area, and aircraft, whether fixed-wing, helicopters, tiltrotors, or unmanned. Surface-to-surface fires include ballistic missiles like the Army Tactical Missile System (ATACMS), guided rockets such as those used by the M142 High Mobility Artillery Rocket System, and cannon artillery such as the M777A2 155mm towed howitzer.

Fire support from Joint fires is so important because the initial landing, one of the most dangerous parts of an amphibious assault, leaves Marines without the ability to employ field artillery, such as mortars and howitzers.⁶⁵ Without field artillery or Joint fires, an entire arm of the combined arms team is missing, giving the enemy a distinct advantage. Additionally, due to the possibility that close air support alone will be insufficient fire support for an amphibious assault and the enormous expense of cruise missiles, it is of great importance to possess cost-effective NSFS or sufficiently long-range, surface-based fires.

Currently, General David H. Berger is moving the Marine Corps to drastically reduce its number of artillery battalions using the M777A2 to triple its number of rocket-artillery units.⁶⁶ An increase of rocket-artillery units will offer the opportunity to deploy the in-development precision strike missile (PrSM) in support of future amphibious assaults. PrSM has a range of 500 km, which may be enough to support amphibious assaults. The end of the Intermediate-range Nuclear Forces Treaty now allows for longer-ranged, land-based missiles, such as an even longer-ranged PrSM.⁶⁷

Additionally, the U.S. Army is developing surface-launched hypersonic cruise missiles for deployment in 2023.⁶⁸ These missiles will travel at more than five times the speed of sound and will be able to strike targets hundreds of kilometers away.⁶⁹ There is also a strategic long-range cannon in development by the Army that will have a range of more than 1,610 km.⁷⁰ With their impressive ranges, the Army's strategic long-range cannon and land-based hypersonic

weapons could be extraordinarily useful for landing forces, since they can target enemy units from distant islands or land masses.

U.S. Navy ships will have difficulty providing the necessary fire support using deck guns unless ships with naval guns are very close to defended shoreline, due to the limited range of the Mk 45. This makes ships providing NSFS extremely vulnerable to a multitude of threats in the littorals, which puts large surface combatants at risk. Large surface combatants also excel at multiple missions, and the *Arleigh Burke*-class destroyers are expensive ships at \$1,918.5 million on average as of fiscal year 2020.⁷¹ The costs, along with the risks involved, mean that the risks of involving a destroyer or cruiser on NSFS exceed the benefits.

That said, electromagnetic rail guns, if fielded, will have a range of 100 nms or more.⁷² The distance of 100 nms from shore will lend more protection to large surface combatants. However, the electromagnetic railgun is years away from implementation on naval ships.⁷³ In addition, only the *Zumwalt*-class ships currently provide the power generation capability to use the weapon.⁷⁴ It is hoped that battery packs may allow the weapon to function on naval vessels other than the *Zumwalt*-class such as the *Arleigh Burke*-class of guided missile destroyers.⁷⁵ However, this is speculation on deploying a new technology, and it is unlikely that the electromagnetic railgun will revolutionize NSFS in the next 10–15 years.

Finally, within the next 10–15 years, this means the use of either Excalibur N5 projectiles or hypervelocity projectiles (HVPs) by Mk 45 guns represent the obvious ways forward. Excalibur N5 projectiles are a precision-guided artillery projectile designed to shoot from naval 5-inch guns that more than doubles the range of conventional 5-inch munitions.⁷⁶ The HVPs are another precision-guided munition designed for use from naval 5-inch guns. HVPs will be able to fire up to 40 nm at a cost of \$85,000 per projectile. However, even at these increased ranges, this still requires that a fleet composed of several large surface combatants capable of missile defense will be relatively close to shore to provide NSFS. Such ships would exclusively use Excalibur N5 projectiles or HVPs.

Still, these surface-based and NSFS solutions have significant problems. Even a large surface combatant using HVP rounds 40 nms from shore will have little time to react to aerial threats originating from the coastline. Large surface combatants are still expensive, strategically important, and are not risk-worthy vessels. The HVP ammunition is expensive, and given the cost of HVP ammunition, it is logical to extrapolate precision-guided artillery projectiles from a larger strategic cannon will not cost less. Additionally, the PrSM is likely to be very expensive, given the unit cost of ATACMS at \$1,252,500 as of fiscal year 2020.

For instance, if 5-inch guns must use HVP ammunition exclusively, let alone more expensive ordnance, this means that the NSFS will add considerable expense to amphibious assaults. Assuming the fleet providing NSFS fires an estimate of 24,000 projectiles, which is the same number used during the amphibious assault against Tarawa in World War II, then the cost of the projectiles alone would be around \$2 billion.⁷⁹

Still, for the next several years, NSFS will likely rely on close-air support heavily for its fire support, unless large surface combatants venture perilously close to shore.

Problems with Ship-to-Shore Movement of the Landing Force

A Shortage of Amphibs

There are two types of modern amphib in production for the U.S. Navy: amphibious assault ships and amphibious transport docks. The classes of amphib currently constructed are the newer *America*-class amphibious assault ships and the *San Antonio*-class amphibious transport docks. The other classes in service are the older *Wasp*-class amphibious assault ships, *Whidbey Island*-class dock landing ships, and *Harpers Ferry*-class dock landing ships.

Previously, the goal for amphib shipbuilding was 38 amphib, enough to support two MEBs, training and readiness for amphibious operations, and the ability to provide MEUs and Special Purpose MAGTF with enduring forward presence and capable crisis response. This force of 38 amphib would eventually include 12 amphibious assault ships and 26 amphibious transport docks.

However, this model for amphib shipbuilding ended recently. Berger has issued a *Commandant's Planning Guidance* that emphasizes the need for the U.S. Navy and Marine Corps to integrate their operations jointly to enable sea-control and sea-denial operations in the presence of long-range, precision-guided fires. This contrasts with the current emphasis on naval power projection.⁸³

General Berger anticipates that this will require a new type of amphib that is more numerous, less expensive, more lethal, and more risk worthy. Larger vessels will need mission agility to contribute to sea control, littoral operations, and amphibious operations. The reason for this change is that Marines must now distribute forces ashore for safety from precision-guided strike capability. This means that possessing only a few large ships to deploy from is illogical, since it will convince an enemy to strike while forces concentrate on their ships.⁸⁴ Given the issues already explored on the lack of protection for amphib against near-peer threats, this is especially salient. There is an Integrated Naval Force Structure Assessment currently underway to understand what options will be best going forward.⁸⁵

For now, amphib consist of large, exquisite vessels. As stated in an earlier

section, this means that such ships are of strategic value, are high cost, and difficult to replace. There are other key issues facing the current amphib force due to a lack of ships. Amphibs currently have an absence of adequate specialized training for MEB amphibious assaults due to a lack of amphibians to train an MEB or Marine Expeditionary Force (MEF) landing.⁸⁶ This makes it difficult to train for high-intensity warfare with a near-peer competitor.

Second, the attrition of amphibians presents another problem. From the time the USS *America* (LHA 6), an *America*-class amphibious assault ship, had its keel laid down until its launch, it took around 39 months.⁸⁷ In the case of the *San Antonio*-class amphibious transport dock USS *Somerset* (LPD 25), it took about 28 months to construct the vessel from laying its keel down to launch.⁸⁸ However, these estimates of 39 months and 28 months are still too short. It took almost two years to commission the *America* after sea trials concluded, and it took the *Somerset* almost 23 months to commission after sea trials concluded.⁸⁹ This means that the *America* took 63 months from the time its keel was laid down until it was commissioned, and the *Somerset* took 51 months to do the same. However, there is a final problem to consider. These estimates of 63 months and 51 months, respectively, assume that shipyards and suppliers can accommodate extra construction, which is a reality that may not be possible with the current industrial base. In a war with a major power like Russia or China, it will take multiple years before new amphibians will be ready for service.

Third, in testimony before Congress in 2015, Marine Corps Lieutenant General Kenneth J. Glueck Jr. testified that the demand set by the combatant commanders was for around 54 amphibians of current design.⁹⁰ How to better meet combatant commander demands with new types of vessels without spending far more than currently on amphib shipbuilding will be an important issue.

However, new shipbuilding funds to build more amphibians may be difficult to materialize with so many pressing shipbuilding needs for a 355-ship U.S. Navy. Competitors for acquisition dollars include the *Columbia*-class ballistic missile submarines that must replace the aging *Ohio*-class submarines, the new FFG(X) frigates, nuclear attack submarines that face a critical shortage, and the upcoming large surface combatant destroyers.

A Lack of Protection for Surface Connectors against Littoral Defenses

The *Marine Corps Operating Concept* states that the future of warfare will exhibit a “battle of signatures”:

Tomorrow’s fights will involve conditions in which “to be detected is to be targeted is to be killed.” Adversaries will routinely net together sensors, spies, UAS, and space imagery to form sophisticated “[Intelligence, Surveillance, and Recon-

naissance] (ISR)-strike systems” that are able to locate, track, target, and attack an opposing force. In complex terrain, adversaries will collect targeting information through eyes and ears and spread it through social media. No matter the means of detection, unmanaged signatures will increasingly become a critical vulnerability.

This means that a decisive factor for land and amphibious warfare is to stay undetected, because detected forces face swift destruction by enemy fires.

A battle of signatures affects landing craft, and a key issue is that surface connectors are vulnerable to enemy attack when away from their amphibious ships and possess little ability to defend themselves against a wide range of precision-guided threats. This threat can come from enemy coastal defenses, armed drones, diesel submarines, tactical aircraft, and littoral vessels, including fast-attack craft. These enemy assets will be hunting surface connectors, which lack air defenses against enemy precision-guided rockets, artillery shells, mortars, antitank guided missiles, antiship cruise missiles, bombs, and armed drones. Surface connectors are also vulnerable against enemy torpedoes and naval mines. Although hovercraft are less susceptible to them, naval mines will hold some threat even for them.⁹²

Additionally, hovercraft such as the landing craft, air cushion (LCAC) and the ship-to-shore connector (SSC) are fragile, having complex and vulnerable engines small-arms fire can disable.⁹³ Massed area fires by enemy field artillery may also prove effective against surface connectors approaching shore or that have just arrived on a beach.

Surface connectors are currently armed with two gun mounts able to support a heavy machine gun, machine gun, or automatic grenade launcher.⁹⁴ These weapons lack the ability to engage subsurface targets such as submarines; are shorter ranged than medium and large caliber naval guns, making them more useful against smaller boats; and they can be useful against low-altitude aircraft, but these threats may have stand-off weapons like medium caliber guns, rockets, or missiles. The detection of surface connectors in transit to the amphibious objective area carries great risk.

The lack of defenses for surface connectors is a far greater problem in OTH amphibious operations for two reasons. First, there is the extended length of time for ship-to-shore movement, which means longer vulnerability.⁹⁵ Second, LCACs and new SSCs are the only surface connectors that can carry heavy equipment with high water speed. This is problematic since hovercraft produce enormous noise, which is apparent from kilometers away. Hovercraft also create a plume of water behind them. Both the noise and plume of water make hovercraft easier to detect than slower surface connectors.

All these points emphasize the need for greater protection for surface connectors as they transit from an ATF to shore and back. This is especially true as surface connectors become more vulnerable by having to transit farther from shore in OTH amphibious operations. An alternative is to design ships, such as a new class of medium amphibious ships, that are able to disembark Marines directly onto a beach.⁹⁷ These will need low observability and adequate defenses to survive a battle of signatures.

Attrition of Surface Connectors during an Amphibious Assault

Currently, a MEB composited for high-intensity operations with a maximum number of LCAC hovercrafts can support 34–45 LCACs. The reason for this variance, per MEB, is because older ship classes have more well deck space than newer classes.

A *Wasp*-class amphibious assault ship can support three hovercraft, a *San Antonio*-class Flight I ship can support two hovercraft, and a dock landing ship can support three or five hovercraft, depending on class. Additionally, according to the fiscal year 2020 30-year shipbuilding plan, *San Antonio*-class Flight II vessels, which can support up to two hovercrafts, will replace all dock landing ships. The last purchase of a *San Antonio*-class Flight II vessel will occur in 2034. Using the math associated with the acquisition of the *Somerset* earlier in this analysis, which was 51 months from laying the keel down to commissioning, these new amphibious transport docks will join the Navy's fleet by the end of 2039. It is also important to note that, according to the fiscal year 2020 30-year shipbuilding plan, *America*-class amphibious assault ships will eventually replace *Wasp*-class amphibious assault ships at some point after 2050. The first two vessels of the *America* class, called Flight 0, lack a well deck entirely. However, future vessels, called Flight I, will be capable of supporting two hovercraft.⁹⁸

That said, as older ships retire, especially the dock landing ships, the maximum number of hovercrafts per MEB composited for high-intensity operations could drop from 34–45 of the in production SSC hovercraft to 26–30 hovercraft. This assumes 10 *San Antonio*-class Flight I or II amphibious transport docks and five *America*-class Flight 0 or Flight I amphibious assault ships.

This is the inverse of what to expect if OTH amphibious operations are to become standard for amphibious assaults and amphibious raids. This is because AAVs and ACVs cannot swim to shore from ships in an OTH amphibious operation. Instead, large surface connectors with high water speed, such as hovercraft, will be relied on more, not less, in an amphibious assault to deliver heavy equipment as well as light armored vehicles (LAVs), JLTVs, AAVs, and ACVs to shore.

This creates a simple problem. An enemy can attrite surface connectors to

potentially significantly reduce the amount of equipment and supplies that can be delivered to shore in a given time period. With a future maximum of 30 connectors for an entire MEB, and far fewer connectors if using the larger but slower landing craft utility (LCU), it may become all too easy for an enemy to hunt and destroy enough surface connectors to significantly affect the MEB's amphibious operations. That said, new medium amphibians will help alleviate this problem, depending on the number available for use by an MEB assault amphibious task force.

Problems with Air and Surface Assault Landings Enemy Armor and Other Land Forces in the Amphibious Objective Area

Even if there is relatively light opposition to movement ashore, adversary land forces can pose significant opposition to the landing force once it arrives.⁹⁹ This is not just enemy forces on the shoreline waiting for landing vehicles. There is the real threat of rapidly deployed forces that can mass against the landing force before the seizure of a lodgment.

Marines are an infantry-centric force and lack the focus on heavy armored vehicles of a U.S. Army armored brigade combat team. This leaves Marines at a disadvantage compared to a heavier armored formation against enemy armor, due to Marines possessing reduced mobility, firepower, and protection than a heavier force. Additionally, LCACs and LCUs lack the capability for forcible entry of defended beaches, which is the domain of AAVs and, in time, ACVs.

Furthermore, AAVs are not armed with antitank weapons and are not to be treated as infantry fighting vehicles. This is because "it lacks the armor protection, stabilized weapons station, low silhouette, and means for the infantry to fight from the vehicle without exposing themselves to direct fire," as compared to infantry fighting vehicles. As noted earlier, some ACVs will have 30mm autocannons, which should be lethal against enemy armored personnel carriers and infantry fighting vehicles. However, 30mm rounds will not be effective against most main battle tanks or similarly heavy armored vehicles, if their performance is like the 25mm rounds used by M2 and M3 Bradley Fighting Vehicles.¹⁰³

Massed enemy forces with the mobility to rapidly respond to a landing in the amphibious objective area, especially massed armored vehicles, are a significant threat to the landing force. Should an enemy have well-armed forces in the amphibious objective area, then there may be little chance for a landing to succeed. Near-peer competitors have numerous battle tanks and infantry fighting vehicles at their disposal. Additionally, even if an amphibious landing has succeeded, it may not be able to defend a lodgment against massing reinforcements, to include enemy armor.

Such could be the case if the Russian Federation invaded Norway's northern coastline to seize strategic territory in the Arctic. The lightest Russian combined arms formations are entirely mechanized.¹⁰⁴ As a result, Marines can expect to find themselves opposed by numerous infantry fighting vehicles supported by Russian main battle tanks.

Another key problem facing Marines storming a defended beach is a need for Marines to operate in waves. Each wave of connectors can only transport a fraction of a MAGTF's forces. This is due to the current inventory of surface connectors and aircraft per ship and the limited number of ships to place them on.

It is also difficult to transport an effective combined arms force to shore, because the only connectors with forcible entry capability are aircraft with armed escorts, AAVs, and the new ACV. This immediately creates a deployment of assets starting with, primarily, infantry. Thus, aircraft, AAVs, and ACVs will need to clear the way for vulnerable surface connectors carrying JLTVs, medium tactical vehicle replacements, LAVs, artillery, and other equipment. Aircraft will also lack armor and will be vulnerable to small-arms fire.

A target such as a small island in the South China Sea or the Arctic Ocean may require not only a capability to assault a defended beach but also a diverse combined-arms team. Unless any action the enemy takes to avoid one threat makes them more vulnerable to another, an amphibious assault may fail to achieve overmatch and suffer defeat. Additionally, an amphibious assault should take advantage of the element of surprise as much and as early as possible by employing a diverse combined-arms force from the start.

A last looming threat to the landing force worth mentioning is the surging size of the Chinese amphibious fleet. By 2025, China will possess 3 amphibious assault ships, 4 aircraft carriers, at least 8 amphibious transport docks, and around 60 landing ship, tanks.¹⁰⁵ Such a force will be able to threaten an amphibious assault against Marines that seized a lodgment in the South China Sea, the East China Sea, or on islands around Taiwan. However, to not overstate matters, an intelligence estimate by the Defense Intelligence Agency indicates that the Chinese People's Liberation Army-Navy Marine Corps are not currently able to defeat U.S. Marines or Army soldiers in amphibious or ground operations.¹⁰⁶ However, as China reforms its military, this situation may change with significant effect on the ability of Marines to hold a lodgment against a Chinese amphibious assault.

Massed Enemy Fires against the Landing Force

The earlier concept of a battle of signatures affects Marine Corps ground forces. Again, a decisive factor for land and amphibious warfare is to stay undetected, because detected forces face swift destruction by enemy fires.

The Russian Federation has begun to use a tactic of massing area-effect fires in Ukraine, as evidenced by the Zelenopillya, Ukraine, rocket attack. The increased availability of overhead surveillance combined with fires able to affect a large area, such as through the use of cluster munitions, have produced a new level of intensity in modern conventional combat.¹⁰⁸ Data from the Ukraine conflict show that artillery is producing approximately 80 percent of all casualties, and because of high troop losses Ukrainian soldiers prefer to ride on top of armored vehicles and assault while dismounted.

The superior range for Russian and Chinese artillery, combined with massed-area fires and aided by overhead surveillance, mean present or future amphibious assaults or land battles against China or the Russian Federation will have to contend with a battle of signatures immediately. The superior ranges of Chinese and Russian artillery mean that Marines may lack the capability to wage a deep fight against Russian and Chinese assets and counterbattery fires against Russian and Chinese artillery with their own shorter-range artillery assets. Weapons in development to meet or beat Russian or Chinese artillery ranges, such as the PrSM, the Tail Controlled Guided Multiple Launch Rocket System, and the Extended Range Cannon Artillery programs hold the promise to defeat Chinese and Russian capabilities. The programs to acquire these weapon systems are a high priority for amphibious assaults.

Russia's intelligence, surveillance, and reconnaissance (ISR)-strike model leads to a few key conclusions concerning future battlefields with near-peer powers. First, opposing ISR units, including aircraft and surface units, now present an enormous and immediate threat from both the information they gather for fires units and from their ability to directly engage Marines. Aerial assets can provide close-air support or close-combat attacks and include helicopters, fixed-wing aircraft, tiltrotors, UAS, and small UAS. Surface assets include enemy ships operating in the littorals, unmanned surface vehicles, unmanned ground vehicles, both mounted and dismounted scouts, special operators, intelligence collectors, and paramilitary forces. The detection and destruction of opposing reconnaissance units has become vital to the survival and success of Marines in an era of proliferating area-effect munitions and precision-guided munitions.

This increases the need to locate and destroy enemy ground-reconnaissance units, especially those disguising the fact they are opposing military forces. It also necessitates a robust air-defense capability for Marines that can tackle all aerial threats economically, especially proliferating drones such as quadcopters.

A second consequence of this ISR-strike model, which combines massed-area fires with overhead surveillance, is that there is further emphasis on efforts to actively counter enemy rockets, artillery, mortars, cruise missiles, and UAS on near-peer battlefields. To survive detection by an enemy, Marine ground

units may have to become reliant on a Marine version of the U.S. Army's indirect fire protection capabilities (IFPC). The Army's IFPC rely on interceptors or directed energy to destroy enemy rockets, artillery, mortars, cruise missiles, and UAS.¹¹² This will potentially protect detected Marines from an artillery barrage as they attempt to disrupt an enemy's ability to target them.

Third, the increasing ranges of field artillery may limit a rapid response to an enemy artillery attack on U.S. ground forces to friendly counterbattery fires, fixed-wing aircraft, helicopters, and tiltrotors. This is due to the extremely slow speeds of maneuver that ground vehicles have in relation to the increasing ranges of fires. Simply put, enemy fires originating dozens of kilometers away will only face destruction by platforms or weapons with enough speed or reach to threaten enemy artillery. The speed of aircraft mitigates this effect. The suppression or destruction of opposing air defense artillery assets is of high importance, so that friendly aircraft have the freedom of maneuver to destroy enemy fire units that have revealed themselves by firing on friendly forces.

Fourth, current and future armored vehicles and armored units will need to change in response to these emerging threats. To remain effective, ground vehicles will likely require active protection systems to protect them from top-attack mines and antitank submunitions. Active protection systems employ kinetic means of intercepting incoming antitank threats, such as ATGMs, or nonkinetic methods of neutralizing incoming antitank threats, such as through jamming infrared, radar, or laser sensors.¹¹³ Ground vehicles will likely have to rely far more on low observable technologies than they currently do for their survival, since detection may lead to swift destruction. Armored vehicles will likely need laser-detection capabilities that warn the crew when an enemy laser targets them. Ground vehicles may need increased speed of maneuver to close with enemy forces more quickly and reduce their vulnerability to artillery attacks. That is, if such mobility does not sacrifice low observability. This is because increased mobility will give an enemy a shorter window of opportunity to detect and orchestrate fires against U.S. forces before an engagement. These considerations will need to impact the purchase of future ACV variants, future JLTVs, and the in-development advanced reconnaissance vehicles meant to replace the LAVs.¹¹⁴

Fifth, against a near-peer competitor, a greatly reduced sensor-to-shooter time cycle will present challenges to a slow or immobile force. This includes command posts and command, control, communications, computers, and intelligence (C4I) infrastructure. This demonstrates the need for all military assets to be mobile within a few minutes. In addition, towed artillery faces a severe threat due to their slow or immobile nature. Through radar tracking of projectiles back to their source; the use of advanced command, control, communications, and intelligence (C3I) assets; drones; and counterbattery fires, an enemy could force the need for artillery units to almost constantly maneuver.

Consequently, fires units will need to keep mobile by using “shoot and scoot” maneuvers before counterbattery fires destroy them, particularly counterbattery fires using massed area effect munitions. This will present enormous challenges to towed artillery, which may have to rely on actively countering rockets, artillery, mortars, and cruise missiles to survive.

A Lack of Surface Forcible Entry Capability for OTH Amphibious Operations

Conventional amphibious operations need to be unopposed because of the proliferation of weapons able to destroy amphibians to even nonstate actors. However, for now, even an OTH amphibious operation lacks surface connectors that can assault a defended beach. This is because the only forcible entry surface connectors are the AAV and its successor—the ACV. LCUs and LCACs are incapable of assaulting defended beaches. The reason for this is that the LCAC has complex and vulnerable engines, and both the LCAC and LCU lack the mobile protection for Marines given by the AAV or ACV. The new SSC hovercraft has the same problems assaulting a beach as the LCAC, because like the LCAC, it has complex and vulnerable engines. Additionally, the Ultra Heavy-lift Amphibious Connector (UHAC) in development will not solve this lack of surface forcible entry capability, because it is not meant to assault defended beaches. This leaves the Marine Corps dependent on vertical aircraft with armed escorts as its primary OTH forcible entry capability.

The Corps is assessing whether to upgrade LCACs with ramps that will allow AAVs and ACVs to deploy from them within swimming range of shore. Additionally, the UHAC should have the ability to deploy AAVs and ACVs from a ramp into the ocean. This will allow forcible entry to occur using AAVs and ACVs to swim to shore from LCACs, SSCs, and UHACs. AAVs and/or ACVs combined with vertical aircraft with armed escorts could transport Marines in a first wave.

Therefore, high water speed surface connectors with the protection and firepower to assault a defended beach, such as a small island held by Chinese forces in the South China Sea, are of prime importance for forcible entry in OTH amphibious operations. This also means that the cancellation of the expeditionary fighting vehicle without a clear alternative was a major blow to OTH amphibious operations until an alternative materializes.

The Center for Strategic and Budgetary Assessments proposed turning current *Spearhead*-class vessels into surface connectors able to transport AAVs and ACVs within sight of shore, so that they can deploy from a reinforced ramp and then swim to shore. However, this may be impractical for a few reasons. The *Spearhead*-class is incompatible with Marine Corps assault aircraft like the Bell Boeing V-22 Osprey, and its ramp will need to be replaced to launch AAVs or

ACVs into the ocean outside of an enclosed harbor. Such a ramp may become a reality if the interface ramp technology, being developed for the *Spearhead*-class, possesses this capability.¹²¹ The littoral combat ship (LCS) is not an alternative to amphibis because of limited flight deck space, limited command and control capabilities, and limited room for embarked Marines.

Problems with Sustainment and the Introduction of Follow-on Forces

Lack of Protection for Maritime Prepositioning Force Ships and Connectors Delivering Logistic Supplies

An amphibious assault is beholden to a logistic line of supply from the ATF to shore through surface connectors and aircraft delivering logistic supplies and vehicles. This means that surface connectors and aircraft will play a vital role throughout the entire process of an amphibious operation, including in daylight and when an enemy has discovered an ATF is near contested coastline. The adversary will begin amassing air, naval, and land forces to counter any forcible entry operation and destroy a lodgment. These massing forces will represent a significant threat to an ATF, its surface connectors, and aircraft. Particular threats include an adversary's low-observable assets such as attack submarines and stealth aircraft as well as long-range precision-guided weapons that can target vessels, surface connectors, and aircraft many nautical miles distant.

The threat of long-range precision-guided fires, submarines, and stealth aircraft are also enormous threats to ships in the Maritime Prepositioning Force (MPF), which are cargo ships designed for military use, crewed primarily by civilians, and lacking both weapon systems countermeasures.¹²³

Current methods to enhance protection against these surface, submersible, aerial, and land-based threats include a combination of seizing air superiority, gaining sea control in the littoral environment, eliminating enemy strike platforms on land, and providing area air defense, including ballistic missile defense. However, hypersonic weapons and stealth aircraft can defeat current air defenses. To counter these threats, an amphibious assault will require OCA aimed at destroying hypersonic weapons and stealth aircraft before their use.

Conclusions and Key Findings

This analysis looked at key problems and issues facing modern amphibious assault capabilities one phase of operations at a time and then one issue at a time, especially during major combat operations against near-peer powers. These problems include issues with movement to the area of operations, such as limited protection for amphibious ships against near-peer threats and the threat of naval mines laid in approaches, in shallow water, or in the surf zone.

Second, there are problems with preparation of the landing area by supporting arms (e.g., difficulties securing air superiority and the potential for insufficient fire support for amphibious landings). Third, there are problems with ship-to-shore movement of the landing force: a shortage of amphibians, a lack of protection for surface connectors against littoral threats, and the attrition of surface connectors during an amphibious assault. Fourth, there are difficulties with air and surface assault landings, including enemy armor and other land forces in the amphibious objective area, the threat of massed enemy fires against the landing force, and a lack of surface means of forcible entry for OTH amphibious operations. Fifth, and lastly, there are problems with sustainment and the introduction of follow-on forces. This includes a lack of protection for MPF ships and connectors.

There are a few common aspects shared by many vulnerabilities found in this analysis. Common vulnerabilities include a rapid growth in lethality for potential enemies, combined with a lack of protection for amphibious forces and landing forces, a lack of investment in amphibious equipment, and a lack of multimission capabilities for amphibians. Finally, the military needs to outmaneuver any adversaries due to fragile surface connectors.

The first of these commonalities is the rapid growth in the lethality possessed by potential enemies. Increasingly common assets that are proliferating are giving developing nations and even nonstate actors powerful military capabilities, such as A2/AD weapons. These proliferating technologies are changing the face of nation-state warfare and even wars with nonstate actors. These technologies include naval mines, landmines, improvised explosive devices; chemical, biological, and radiological weapons; cluster munitions; precision-guided munitions; information operations including internet propaganda, cyberattacks, drones (quadcopters and kamikaze aircraft); integrated air defenses; diesel submarines; tactical fixed-wing and rotary-wing aircraft; swarms of coastal patrol vessels and fast attack craft; and ASCMs.

Furthermore, near-peer competitors possess new and potentially warfare-changing weapons, such as ASBMs and hypersonic weapons. This is on top of advanced military technologies, such as stealth aircraft, nuclear attack submarines, and ballistic missile submarines possessed by near-peer competitors. These weapons lag behind U.S. counterparts but represent significant threats from rival militaries.

As a result, U.S. amphibious forces will need to mitigate the threat of enemy weapon systems using means such as superior protection, including active defenses; dispersion; superior lethality at increasingly long ranges; superior training; reduced signatures; information dominance; adaptation, especially when technology fails due to enemy action; suppression or destruction of enemy defensive capabilities, including the destruction of the most dangerous en-

emy assets before they are employed; and effective military deception. Another consequence of increasing enemy lethality is that ATFs face a reliance on naval escorts, including aircraft carriers, for most of their antisubmarine warfare, mine countermeasures, antisurface warfare, and antiair warfare capabilities.

A second commonality of the vulnerabilities in this analysis is a lack of necessary investment in amphibious equipment. Apart from the need for more and different amphibs, four key amphibious equipment issues face the Marine Corps in the next 10 years. First, the need for high water speed forcible entry surface connectors, without which amphibious assaults using surface means of deployment lack the means for forcible entry. Second, the need for effective surface fire support for the initial wave of landing forces, without which amphibious assaults must depend on close-air support for a large part of their fire support. Third, the need for ATFs and landing forces to better counter proliferating technologies and new technologies that could inflict grave losses in an amphibious assault. Without giving amphibs, surface connectors, and landing forces effective counters to proliferating technologies, the continuing risk of high casualties could put the amphibious assault enterprise at risk. Fourth, the need to fill gaps in Marine aviation capabilities such as airborne early warning, long-range, and persistent surveillance and airborne electronic warfare so that ATFs are not so dependent on CSGs.

A third commonality to the vulnerabilities presented in this analysis is the current nature of amphibs, which have little utility to sea control, sea denial, and land attack except for using their embarked Marines, aircraft, and ground vehicles. This reality calls into question the design of current amphibs because expensive, large, and exquisite vessels should be capable of contributing more to sea control, sea denial, and land-attack capabilities.

There is advocacy and experimentation on upgrading the lethality, defenses, and flexibility of current amphibs to increase their utility. This could include giving amphibious transport docks missile cells.¹²⁴ Previously mentioned medium amphibious ships are themselves a novel idea in the current environment of large, expensive vessels.

In the current fiscal environment, the future of amphibs may rest on more economical means of improving capabilities than building more amphibs. Such economical means may include new concepts, better training, and novel tactics and strategies for existing or soon to be acquisitioned equipment. The expeditionary advanced base operations (EABO) concept is in part a way to use current Marine Corps forces in a novel way that enhances their capabilities.

A fourth common aspect to the vulnerabilities listed in this analysis is a reliance on outmaneuvering an enemy due to the fragility of surface connectors. If Marines do not outmaneuver an enemy from the sea, then a landing is most likely not an option. A lack of surface OTH forcible entry capability and the

fragility of current amphibs against modern threats underscores this problem.

This analysis casts doubt on the effectiveness of Marine amphibious assaults against a defended coastline with a modern military. Because of the need to outmaneuver an enemy so that Marines do not assault a defended beach, any amphibious assault carries significant risk—intelligence can be wrong, enemies can fool commanders with military deception, and not all coastlines are lengthy enough to have significant cracks in their defenses.

Likely crises envision limited wars for islands in the Western Pacific, stretches of coastline in the Strait of Hormuz and the Gulf of Oman, a war covering roughly half of the Korean Peninsula, and limited stretches of coastline in the Baltic, Black, and Barents Seas. The reality is that an aggressor may not need to secure vast amounts of shoreline should they take territory and then fortify their position. It may therefore be necessary to penetrate defended coastline at an adversary's weakest points, but with current amphibious forces this is a risky operation.

Currently, in any operation against an enemy that cannot be outmaneuvered, it may be necessary to suppress coastal air and surface defenses in the amphibious objective area, gain sea control around the amphibious objective area in a contested littoral environment, perform MCM breaching operations against naval mines over an extended time, gain air superiority over the amphibious objective area for an extended time, and eliminate an enemy's use of long-range weapons. Otherwise, an amphibious assault may carry great risk due to a chance of high casualties. It becomes imperative to engage enemy forces in what may be a series of battles to prepare for an amphibious assault.

As for where to go from here, it is imperative to have a broad and deep discussion on the future of the amphibious assault that continues well into the future. This is a discussion that must include a wide range of active and retired military personnel, scholars, civilian Marines, and other experts. There is a strategic need to nurture innovation with respect to amphibious assaults. This innovation must be more than merely technological—it must address issues facing the amphibious assault with respect to doctrine, organization, training, materiel, leadership, personnel, facilities, or policy (DOTMLPF-P).

Additionally, the role of Marine Corps University Press in advancing these discussions—as well as other scholarly publishers like them—will be important. It is the Marine Corps' premier open access asset to vet ideas and marshal expert opinion regarding the DOTMLPF-P pertaining to amphibious assaults. Therefore, there should be a continuous discussion within the Marine Corps on how these presses can best foster innovation in the DOTMLPF-P, tactics, campaigning, and strategy for amphibious assaults.

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Losing the Initiative in the First Island Chain

How Organizational Inefficiencies Can Yield Mismatched Arsenals

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Abstract: Much has been written of renewed great power competition and the characteristics of a potential armed conflict with the People's Republic of China. This article surveys the strategic environment and the features of the current military strategies, detailing how such a conflict might be waged. In preparation for a potential conflict with China in which defense of the first island chain is required, the Joint force, and in particular the U.S. Navy and Marine Corps, have invested heavily in technology intended for amphibious expeditionary operations. However, most of the investment has centered on intricate and expensive aviation technology. Meanwhile, surface expeditionary technology has continued to age and now significantly lags its aviation counterparts such as the MV-22 Osprey and Lockheed Martin F-35 Lightning II. As a result, a strategic gap in capabilities has emerged that could dramatically impact the ability to execute an island-defense strategy.

Keywords: Bell Boeing MV-22 Osprey, Marine Corps organization, Marine Corps Requirements Oversight Council, MROC, deputy commandant for aviation

Using the iron triangle and sub-bureaucratic models of analysis, a case study method is offered to compare the acquisition of the Bell Boeing MV-22 Osprey and the Expeditionary Fighting Vehicles (EFV) to understand why the Department of Defense (DOD) and the Navy/Marine Corps

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in particular have successfully acquired next-generation aviation platforms but not surface amphibious platforms.

With the global pandemic exacerbating an already tense strategic environment in the Indo-Pacific region, now is the time for bold action to remake the Marine Corps in a way that will best prepare it for the coming conflict in that troubled region. The Commandant of the Marine Corps, General David H. Berger, has made commendable strides toward that end. These efforts should be augmented further. Title 10 of the United States Code defines the Marine Corps, in part, as a military Service

organized, trained, and equipped to provide fleet marine forces of combined arms, together with supporting air components, for service with the fleet in the seizure or defense of advanced naval bases and for the conduct of such land operations as may be essential to the prosecution of a naval campaign.¹

Additionally, in 2019, the Commandant provided the following additional guidance for force design: “The Marine Corps will be trained and equipped as a naval expeditionary force-in-readiness and prepared to operate inside actively contested maritime spaces in support of fleet operations.”² Despite laws and guidance that specify Marine Corps roles and responsibilities, which require a robust amphibious force for service with the fleet, during the last several decades the Marine Corps has successfully acquired next-generation aviation platforms (e.g., MV-22 Osprey and Lockheed Martin F-35 Lightning II) but not similarly cutting-edge amphibious surface platforms.

This examination contends that as a result of intra-Marine Corps structural barriers, a strategic gap has emerged that renders the Service less prepared to operate in a contested environment against an enemy with modern antiaccess/area-denial (A2/AD) capabilities. In a hypothetical conflict in the vast Pacific theater—a DOD priority region—a highly dispersed but interconnected island-chain defense strategy has emerged as a leading course of action to thwart an increasingly aggressive People’s Republic of China (PRC). In such a conflict, the aviation component would provide a high degree of mobility but cannot maintain a constant presence. Conversely, surface amphibious forces would be less mobile but capable of maintaining a more enduring presence in an operating area, operating simultaneously in multiple domains.

However, the platform-level disparities in great power amphibious and littoral warfare are simply a symptom of a larger problem. A breakdown in the strategic planning process has given way to a Marine Corps unable to adequately fulfill its Title 10-mandated amphibious mission in support of fleet operations across domains. There are intra-Marine Corps inefficiencies and structural barriers that have allowed the aviation component (and its civilian-contracted

manufacturers) to be overrepresented relative to other communities of interest, both in Congress and at Headquarters Marine Corps. This is not to say that a robust aviation component is not a critical necessity for successful amphibious operations—it clearly is. However, the way the modern Marine Corps has come to view aviation's role in the organizational structure is misplaced. The unintended consequence is an imbalance of focus and advocacy that has led to a gap in operational capability with strategic implications. This article explores these capability gaps by using a comparative case study analysis of the MV-22 Osprey and the Expeditionary Fighting Vehicle acquisition processes and outcomes. The tilt-rotor Osprey was successfully fielded in the early 2000s while the EFV program was canceled in 2011.

This analysis does not attempt to prescribe or argue the merits of one platform over another. It may well be the case that funding and producing the Osprey was a wise strategic decision while canceling the EFV was equally prudent. This exploration aims to be ambivalent on both points. In fact, given General Berger's recent commentary regarding the Marine Corps being overly invested in exquisite surge force technology and platforms, the Osprey and EFV may well have both been unwise ventures.³ The purpose of the analysis, however, is to show that both programs carried favor and scorn with threats of cancellation at various points in their history. Both programs were criticized for being niche capabilities that were too expensive, and both programs were—at certain points—defended by the Marine Corps as crucial investments for tomorrow's conflicts. Whether the specific platform is the right or wrong choice, the broad categories of capabilities that they represent have long been advocated for as necessary in any type of future island defense strategy.

Free and Open

The *2018 National Defense Strategy* describes a resurgent China as “the central challenge to U.S. prosperity and security.”⁴ This analysis by the Donald J. Trump administration echoes that of the previous administration, which began a rebalance to Asia in light of a growing concern with China's actions in the Western Pacific. The United States and allies in the region seek to keep the Indo-Pacific region free and open for all participants without undue influence from Beijing. However, the Chinese have “weaponized the global commons,” according to U.S. secretary of defense Mark T. Esper, making a free and open Indo-Pacific far less likely.⁵

Further, Beijing's land reclamation in the South China Sea has been used to house military equipment and personnel. At the same time, territorial claims in both the South and East China Seas are manifest encroachments on neighboring countries' exclusive economic zones. The South and East China Seas are home to several allies and partners who find themselves increasingly vulnerable

to the threat China poses. In recent years, the Chinese military, coast guard, and civilian mariners have continued to push the boundaries of international law and norms as they salami slice away small islands and maritime territorial boundaries in efforts to establish a new status quo and extend their influence. The strategy of using salami slicing “involves the slow accumulation of small changes, none of which in isolation amounts to a *casus belli*, but which add up over time to a substantial change in the strategic picture.”⁶ Partner nations including Japan, South Korea, the Philippines, and Vietnam are engaged in continuous gray zone conflicts with China. Gray-zone conflicts involve “employing sequences of gradual steps to secure strategic leverage. The efforts remain below thresholds that would generate a powerful U.S. or international response, but nonetheless are forceful and deliberate, calculated to gain measurable traction over time.”⁷ As many commentators have acknowledged, these actions have endangered the rules-based international order and threaten to disrupt maritime trade in one of the world’s busiest sea lanes. Though China claims its actions are lawful and done without malice, the United States sees the potential for China to act as a revisionist nation set on regional hegemony attained by bullying and coercion.

China’s increasingly hostile actions are made more complicated by its robust antiarea, access-denial network of surface-to-air, surface-to-surface, and antiship missile and sensor systems. The People’s Liberation Army, Air Force, and Navy have strengthened their capabilities in recent years, as directed by their government, to “win command of the sea and command of the air, and [to conduct] strategic counterstrikes.”⁸ A mix of short-, medium-, and long-range ballistic missiles, cruise missiles, and precision-guided munitions have been stationed and oriented toward the South and East China Seas. These weapon systems extend well beyond the so-called first island chain which, as James R. Holmes has noted, “encloses the East Asian coastline.”⁹ Coupled with antisatellite technology and cyber/electronic warfare weapons, Beijing has “hoist[ed] a protective umbrella over the near seas, [allowing] PLA navy units to range freely within the waters deemed important without leaving the protective cover of shore defenses.”¹⁰

The Necessity of the Island-Chain Defense Strategy

The theoretical basis for pursuing amphibious weapons platform technology becomes apparent within the context of these threats. The United States has established a policy of competition intended to maintain the liberal, rules-based world order in which “air, sea, land, space, and cyber commons that form the current global system” are safeguarded along with “sovereignty, independence, and territorial integrity.”¹¹ The Indo-Pacific has been designated the primary strategic theater of concern and China as perhaps the most critical competitor

in this new era of great power competition.¹² The American strategy for competing and winning in this environment includes close cooperation with allies and significant forces forward deployed within the region.

In the initial stages of a conflict with the PRC, the United States and its allies would need to employ containing actions meant to counter China's sea-denial strategy such that follow-on forces can move into the theater. As former secretary of defense Robert M. Gates notes, "We should be less concerned with [China's] ability to challenge the U.S. symmetrically, and more with their ability to disrupt our freedom of movement."¹³ Several analysts have provided versions of a counter-A2/AD strategy that might collectively be called *island defense*. Andrew Krepinevich describes his method as "archipelagic defense"; T. X. Hammes describes a strategy of offshore control akin to a distant counter blockade.¹⁴ Elbridge Colby and Jonathan F. Solomon argue for well-dispersed "presence in the first layer" of a Corbettian disposal force able to absorb enemy strikes and then rally to prevent a *fait accompli*.¹⁵ Similarly, Holmes argues for a maritime perimeter defense in the first island chain that features "natural guard towers and narrow defiles—*islands and straits*."¹⁶

All the proposed island defense-like strategies have several things in common. First, in all cases, forces are forward based and well dispersed. This component of the strategy makes each target (an austere outpost with antiship weapons, for example) far less valuable. To destroy enough of these outposts to have operational or strategic effects, Beijing would be required to expend an exorbitant and perhaps prohibitive amount of resources. In this way, the cost imposition formula is reversed, as Hammes points out. The second point of commonality is the requirement for next-generation technology that allows forces to move at high rates of speed, employ unmanned and electronic warfare capable systems, and communicate in a degraded environment. In execution of an island-defense strategy, aviation assets provide much needed mobility and firepower, but aviation alone is "operationally insufficient," as current Marine Commandant Berger highlighted in 2020.¹⁷ In concert with naval assets that provide reconnaissance and surveillance, allied forces ashore—the guards in Holmes's watchtowers—must be able to quickly displace between and maneuver on islands—many of which do not provide space or terrain for airfields. In other words, the U.S. military inventory needs both aviation and highly capable surface amphibians (manned or otherwise) to successfully implement an island-defense strategy. Why, then, does the Marine Corps lack the sufficient hardware to conduct twenty-first century missions in support of sea denial and sea control fights? What has driven the acquisition outcomes of the last several decades of the twentieth century and beyond?

A Mismatched Arsenal

Since the end of Vietnam, the Marine Corps has pursued several high-end technologies capable of moving Marines over longer distances and at greater rates of speed. Aging platforms and increasingly capable coastal defenses of potential enemies animated the Marine Corps' pursuit of these capabilities. In the air, one preferred platform was the V-22 Osprey—a tilt-rotor aircraft capable of taking off and landing like a helicopter but flying like a fixed-wing airplane. Based on the assumption that future amphibious operations would need to be launched from beyond the horizon, the Marine Corps invested heavily in the Osprey as the replacement to its aging fleet of Vietnam-era helicopters. On the surface, for both land and sea, the over-the-horizon answer was to be the Expeditionary Fighting Vehicle, previously known as the Advanced Amphibious Assault Vehicle (AAAV). Designed to achieve high water speed and increased lethality with stabilized weapon systems, the AAAV/EFV was to replace the Vietnam-era landing vehicle, tracked, or LVT.

A cross-case analysis of the EFV and Osprey programs will draw out and highlight those key factors that lead to one program's survival and the other program's demise. Both are considered next-generation platforms, while one is a surface amphibian and the other a tilt-rotor airframe designed with amphibious operations in mind. Both programs represented capabilities that the Marines argued were necessary for high-end amphibious operations against a modern, twenty-first century enemy with ever-increasing A2/AD weapon systems capabilities. Both programs were opposed, at various points in time, by secretaries of defense.

The cross-case study analysis will draw on the iron triangle model and numerous other studies that have been based on that theoretical foundation. Coined by Gordon Adams in his book, *The Iron Triangle: The Politics of Defense Contracting*, the iron triangle model stipulates that policy decisions are the result of interactions and trade-offs between a federal bureaucracy, interest group(s), and congressional committees.¹⁸ The present analysis will consider the influence of the following stakeholders: industry (the manufacturers of the weapon systems), the administration including the Office of the Secretary of Defense (OSD), and Congress (particularly the armed service committees and subcommittees). Borrowing from the methodology of Christopher M. Jones and Kevin P. Marsh, this cross-case comparison will also include the unique position of the specific Service most affected by the platform—in this case, the Marine Corps.¹⁹ The intent of the analysis is to understand what factors and stakeholders most influenced these decisions within the context of the strategic gap in capability already identified. Including the Marine Corps as distinct from the secretary of defense will allow for a deeper, sub-bureaucratic analysis of the Marine Corps' role in policy creation.

As explained by Nikolas K. Gvosdev, Jessica D. Blankshain, and David A. Cooper, analyzing the sub-bureaucratic level—the levels below the main agency itself—provides a “more helpful perspective to see increasingly subordinate officials as proponents of increasingly narrow sub-agency interests that are sub-sets of overall core agency interests.”²⁰ In the iron triangle-based study, the analysis ends at the Service itself, but proponents of the sub-bureaucratic model argue that interest groups and sub-agencies within the Service would need to be analyzed to understand organizational behavior and its contribution to policy outcomes. To accomplish this, the analysis of sub-bureaucratic interactions will seek to understand how the Marine Corps and various intra-Service agencies contribute to organizational decision making.

Iron Triangle Analysis: Osprey and Expeditionary Fighting Vehicle Industry

The main contractors for the Osprey were Boeing and Bell Helicopter. Both companies showed a tremendous amount of political skill throughout the development process, as evidenced by three significant decisions: subcontractor locations, main production facility locations, and creation of the Tilt-Rotor Coalition in Congress.²¹ The Bell-Boeing team employed some 2,000 subcontractors, including major players in the defense industry from across the country, such as Grumman, Lockheed Martin, and IBM.²² With much of this work spread throughout the country, only eight states were not directly affected by Osprey work, which set the stage for a powerful political machine of support for the aircraft.²³

The manufacturing plan for the EFV was starkly different to that of the Osprey. The vast majority of the manufacturing work was to have been completed in General Dynamics’ Lima, Ohio, plant. Perhaps owing to the difference in technological complexity and size of the program in terms of costs, EFV simply could not employ as many subcontractors and spread the workload in as many state labor markets quite the way the Osprey could. According to a 2011 Congressional Research Service (CRS) report, the unit cost of the Osprey was \$93.4 million and a total contract cost of \$52.9 billion.²⁴ A CRS report from the same year cited the EFV’s unit cost at \$24 million and \$11.163 billion in total contract size. The size and scope of EFV relative to Osprey limited General Dynamics in creating the widespread—and potentially more politically powerful—network of subcontractors and manufacturing facilities.²⁵

Legislature

While the Marine Corps provided the most fervent special interest group for

the Osprey, Congress was its most potent and unwavering ally. The Tilt-Rotor Coalition was the name given to what was a powerful lobbying group in Congress made up of representatives from the states primarily benefiting from the program, such as Texas and Pennsylvania. As previously mentioned, the prime contractors were able to spread the manufacturing work, and thereby employment benefits, of the Osprey to many states. By the mid-1990s, Osprey subcontractors were working in 258 congressional districts with more than 10,000 jobs spread across those districts.²⁶

This is not to say that congressional support was altogether lacking for EFV, however. There was considerable backlash in the immediate aftermath of Secretary of Defense Robert Gates's announcement of cancellation. A spokesman for former California congressman Duncan Hunter, then a member of the House Armed Services Committee, told reporters in January 2011 that "[Mr. Hunter] 'is confident that the committee will reject the secretary's proposal to eliminate EFV'."²⁷ Furthermore, Hunter told reporters that he thought Gates is "trying to destroy the Marine Corps" with his decision to cancel the EFV.²⁸ Missouri congressman Todd Akin, then chair of the Subcommittee on Seapower and Projection Forces, made similar comments, calling canceling the EFV "a bad idea."²⁹ Three members of Ohio's congressional delegation wrote a letter to President Barack H. Obama highlighting the benefits of the vehicle and encouraging the administration to keep the program.³⁰

Despite the apparent flurry of support for the EFV and intentions to fight the secretary of defense on his proposals, by April 2011 much of that support was gone. Duncan Hunter, a former Marine and considered by General Dynamics and EFV advocates as one of the strongest EFV supporters in Congress, backed away from plans to lead a congressional effort in support of the EFV.³¹ One of the key reasons for the Congress's acquiescence may have been a keen political move made by Gates in testimony. Knowing that Republicans in the House of Representatives were pushing for more defense spending, Gates argued that passing an actual defense budget—instead of continuing to operate on continuing resolutions at previous year's levels—would indeed result in an increase in defense spending.³² Seeing the potential for more overall spending in a number of favored areas like missile defense, representatives like Hunter began issuing statements of regret about the EFV, saying that he supports the EFV but recognizes the reality of fiscal constraints.³³

Executive

The evaluation of the Executive Branch's position includes the Office of the Secretary of Defense but will not include the Marine Corps, as the Service vying for or defending a particular weapon system is a stakeholder with a different set of

goals relative to the Pentagon leadership. For example, the OSD is charged with “provid[ing] oversight to assure the effective allocation and efficient management of resources consistent with approved plans and programs.”³⁴ The Marine Corps, like other Services, has an incentive to ensure its survival. One method for doing so would be to develop or continue developing unique capability sets that carve out missions and roles for the future. In this sense, the goals of the OSD and the Service can be in opposition. In 1989, then-secretary of defense Richard B. “Dick” Cheney made it clear that he opposed the Marine Corps’ efforts to buy the Osprey, citing the programs exorbitant cost projections and lamenting the resources already consumed by the program.³⁵

Secretary Cheney argued that the Osprey was too expensive for such a narrow set of missions. Essentially, the Osprey filled a niche role that did not justify the cost. When Congress continued to fund the program, Cheney refused to spend the money—prompting a 1992 U.S. comptroller general’s ruling that Cheney’s actions violated the law, thereby forcing the administration to expend the funds allocated to the Osprey.³⁶ By August 1992, however, the administration gave up its efforts to kill the program when it became clear that Congress was intent on funding the program and seeing it through. As a recession had taken hold of the economy and with Osprey manufacturing spread throughout the country, especially in voter-rich Texas and Pennsylvania, it was becoming politically dangerous to oppose the program.

Regarding the EFV, both the William J. “Bill” Clinton and the George W. Bush administrations showed support for the vehicle in that they never directly opposed the Navy’s budget for the program. In the late 1990s, the program enjoyed success and was touted as a “model defense acquisition program” during the research and development phases.³⁷ However, by 2006, when major reliability concerns and test failures plagued the program, a scornful eye was turned on the EFV by both the administration and Congress. In a 2008 congressional report, the House Oversight Committee expressed frustration at a rushed and mismanaged program that was now “billions of dollars over budget and many years late.”³⁸

The Obama administration’s budget requests through fiscal year (FY) 2011 included funding the EFV. However, Secretary Gates, among others, repeatedly expressed frustration with the program; Gates publicly questioned whether the very requirement for a “niche capability” like the EFV made sense in an era when A2/AD systems can be launched many miles toward sea-based systems.³⁹ Driven by pressure to trim the enormous defense budget from both the White House and an economy still reeling from the financial crisis, Secretary Gates put the EFV, along with other programs, in his cross-hairs. While allowing further production efforts of both the Osprey and the F-35, the secretary put both programs similarly on notice. By 2011, Secretary of Defense Gates’s pa-

tience with the program appeared to have ended. The proposed FY 2012 budget requested termination efforts be funded for the EFV as Gates announced his intentions to cancel the program.

Service

The Marines' connection with each of the platforms in question provides the starkest difference in the analysis so far. Beginning with the EFV, the Marine Corps' relationship with its Service-defining platform has been a rocky one. Foregoing the history of amphibious tractors prior to the late 1970s, a post-Vietnam Navy and Marine Corps wrestled with the emerging challenges of ever-increasing A2/AD capabilities. Rightly spurred by the need to avoid or outmaneuver a sophisticated and capable enemy with advanced coastal defenses, the Marine Corps knew its surface amphibian—the LVT—was too slow and not lethal enough.

As a result, the Marine Corps sought to develop the landing vehicle, assault (LVA), which was to be a high-speed platform. However, by 1979, Marine Corps leadership was ready to close the door on the LVA. The driving factor for the Service's desire to cancel the LVA was, ostensibly, an assumption that the nature of the threat did not call for high water speed and over-the-horizon launches. In his memo to the under secretary of defense for research and engineering, then-Commandant General Louis H. Wilson wrote, "[based on discussion with the Chief of Naval Operations] I have concluded that initial assault waves . . . can be launched effectively from distances considerably less than 15 to 25 miles This eliminates the previous overriding requirement."⁴⁰

After arguing that the requirement had changed or been reinterpreted, the Commandant spent several more paragraphs (and subsequent testimony before Congress) lamenting the money the Marine Corps had spent on developing the technology. By January 1979, the Marine Corps had spent approximately \$20 million on researching and developing the necessary technology—a little more than \$71 million in current year dollars. After explaining that an emerging technology known as the landing craft, air cushioned (LCAC) would provide enough high-speed lift for amphibious assault, General Wilson concluded by saying, "The LVA was a vehicle that I am convinced the Marine Corps could not afford."⁴¹

Without a replacement in sight, the then 10-year-old LVT entered the 1980s as the Marine Corps' only answer to its requirement for an armored surface amphibian. Renamed the Amphibious Assault Vehicle, the platform unfortunately continued to suffer from the same speed and lethality shortfalls previously identified. After considerable intra-Marine Corps debate, the Service begrudgingly embarked on a concept exploration for an advanced amphibious assault vehicle.⁴² The high projected cost is often anecdotally referenced as a

source of a great deal of consternation for many in the highest echelons of Marine Corps leadership.⁴³

Though the program enjoyed success in the research and development phase, winning two DOD acquisitions awards during those years, the AAV began hitting major reliability problems in early testing.⁴⁴ Renamed the Expeditionary Fighting Vehicle (EFV) in 2003, a number of updates to the program's requirements and system redesigns after repeated poor showings during testing drew much criticism through the early 2000s. After experiencing a Nunn-McCurdy breach in 2007 and yet another baselining of the program, projected dates for initial capabilities were pushed to 2015.⁴⁵ By 2010, however, the Marine Corps' defense of the platform became lukewarm. Service officials began shifting their tone in the way they defended the budget—jockeying the Service to a political position where it might retain EFV-related funds in the event the program is canceled.⁴⁶ By August of that year, then-Commandant General James T. Conway, a longtime advocate for the vehicle, remarked publicly that the Marine Corps was very concerned about EFV affordability in an era of defense spending cuts.⁴⁷

Compounding the problems for the program was the counterinsurgency fight raging in Iraq by the late 2010s. The flat-bottom hull design of the EFV drew more criticism and concern. The House Armed Services Committee commented that the EFV is likely less survivable than the new Mine-Resistant Ambush Protected (MRAP) vehicle, whose V-shaped hull better protected occupants from improvised explosive device (IED) blasts.⁴⁸ Moreover, the Global War on Terrorism was focusing attention and resources away from conventional war and an even sharper eye was turned toward those programs that seemed to detract from the then-current efforts in Iraq and Afghanistan.

The Marine Corps' reaction to Secretary Gates's decision to recommend cancellation of the program was to capitulate. Then-Commandant of the Marine Corps General James F. Amos publicly supported Gates's decision. In response to directed questions about the need for the EFV from Congress, Marine Corps leaders including Amos but also his assistant commandant, future Joint Chiefs Chairman General Joseph F. Dunford, defended the decision to cut the program. Both generals spoke of yet another service life extension for the Amphibious Assault Vehicle, a platform that will turn 50 years old in 2022.

While the EFV did not enjoy continued support from the highest echelons of Marine Corps leadership, the Osprey's experience was decidedly different. After identifying the need for faster and more capable helicopters in the closing years of the Vietnam War, the Marine Corps spent the 1970s (as it did with the LVT) looking for a potential replacement option. In 1982, the Osprey program was authorized and a contract for full-scale development was awarded in

1986.⁴⁹ By 1989, then-Commandant General Alfred M. Gray told Congress that the Osprey “is the most important advance in military aviation since the helicopter. . . . It is my number one aviation priority.”⁵⁰

The domestic and geopolitical situation the Marine Corps found itself in by the late 1980s was considerably different than the situation 20 years later. In the late 1980s, with the Cold War coming to an end, each Service maneuvered to position itself for the next generation’s fight. The Marine Corps saw the Osprey as a critical piece in that effort. In attempts to make the Osprey’s high price tag more manageable, the Marines offered to scrap plans to buy the M1 Abrams tank (an offer that was ultimately rejected). Indeed, for most of the program’s history, the Marine Corps has been its biggest champion.⁵¹

In response to Secretary of Defense Dick Cheney’s push during multiple years to cancel the Osprey, Marine Corps officials did not publicly disagree with the secretary of defense, but they did use other opportunities to advocate for the aircraft. For example, in addition to conducting behind-the-scenes lobbying for the Osprey, Marine Corps officials would use opportunities in congressional testimony to defend the platform. For example, when questioned about affordability, Service officials would offer that the Osprey remained the most affordable option for a replacement helicopter, all while being careful not to refute Cheney publicly or directly. This oblique approach became so apparent that members of Congress began publicly admonishing the Pentagon for applying a gag order on the Marine Corps.⁵² As opposed to the EFV, the Marines made no public statements supporting the cancellation decision of the Osprey and instead chose to be very judicious in the way it provided ostensible support to OSD’s decisions.

Though barred from making overt statements condemning the secretary of defense’s position, Marine Corps leadership continued to provide testimony favorable to the Osprey in response to direct questioning from Congress. The Marines continued to show analysis that they contended showed the Osprey as the most cost-effective solution to the Service’s aging helicopter problem, providing evidence that it was most suitable for addressing the operational need for high-speed, long-distance amphibious transportation.⁵³

Analysis

The Expeditionary Fighting Vehicle died, not because it cost too much but because the Marine Corps stopped fighting for it. It may not have been possible to garner the same kind of broad congressional support for the EFV that the Osprey enjoyed, but the Marine Corps failed on a number of levels to shore up a strong political arm to support its next-generation surface amphibian. Both the EFV and Osprey were expensive and behind schedule based on original estimates—but the Marine Corps continued to fight for one and not the other.

Before determining why, we must first address a number of options Marine Corps leaders had at their disposal if they wanted the program to continue. This analysis counters the prevailing argument that cost overrun was the prime reason for the vehicle's demise and that there was nothing that could have been done. If cost overruns were the actual or most important reason, a great many more programs would have been canceled as well, including the Osprey.

Two potential options were available to the Marine Corps to garner more political support for the EFV. First, the Service could have appealed more vocally to its most frequent mission set across the globe—humanitarian assistance and disaster relief. The AAV is commonly used as a logistics vehicle in crisis both at home and abroad. For example, after Hurricane Katrina flooded and destroyed much of New Orleans in 2005, the AAV was used as one of the few vehicles capable of reaching beleaguered and trapped residents in that city. Essentially, there was too much emphasis on the EFV's high-end combat roles and too little on mission sets that would have appealed to a wider base of support. Because the EFV tripled the AAV's water speed and raised lethality exponentially with its stabilized 30mm cannon, it was natural for both the defense contractor and the Marines to want to demonstrate these capabilities and justify the money spent on them.

Second, the Marine Corps could have appealed to its prime contractor, General Dynamics, to adopt a subcontract model like that of Osprey. Undoubtedly, the power of the Tilt-Rotor Coalition in Congress was due to the great many constituent states positively affected by additional manufacturing and production jobs associated with Osprey. Granted, this critique is clearer in hindsight, given that the contract award of the EFV happened well before the IED became the insurgent weapon of choice, thereby weakening the political prospects of a flat-bottomed vehicle capable of overland movement.⁵⁴ Nevertheless, the Marine Corps' historic leeriness toward the pricey advanced amphibious vehicle project ought to have given its advocates within the Service pause and reason to build the most powerful political alliance possible. In other words, the political strategy for the EFV appears to have been something of an afterthought. That neither of these options was employed to the extent possible reflects the Marine Corps' unwillingness to continue the political fight for the vehicle.

A Sub-Bureaucratic Analysis of Acquisition Decision Making

The iron triangle model sufficiently explains the relationship between the primary stakeholders in defense acquisition decisions, and the preceding analysis has pinpointed the Marine Corps' role in one platform's success and the other's demise. However, this theoretical lens only demonstrates the Service's role in

that interaction but does not explain its rationale. Without such a rationale, it is difficult to highlight problems and recommended changes. Further analysis will be through the sub-bureaucratic analysis lens.

Two assumptions will be made to determine the organizational influences that have resulted in heavy investment in the aviation component of island defense while surface components have lagged. First, modern organizational history sets a contextual framework from within which any organization makes future decisions. This observation about the nature of organizations, particularly military ones, is borne out in the oft-cited criticism that the military is “always trying to fight the last war.” In other words, experiences in previous conflicts shape the way military organizations view future ones.

The Marine Corps came away from Vietnam with a clear idea about its aging fleet of helicopters and amphibious landing vehicles. Both were soon to be outdated, and growing concerns about A2/AD networks fueled decisions to pursue next-generation technologies for both. However, a historical analysis of the value of both airpower and surface amphibians in that conflict and future ones will shed light on the Service culture that remains today. Airpower was of high tactical, if not strategic, value in Vietnam. Unlike other tools of military power, airpower could deliver perhaps the closest thing to meaningful or decisive blows. Helicopters provided transport and close-air support while bombers struck interdiction targets and, toward the end of the war, targets in the capital of North Vietnam, Hanoi. While an analysis of the strategic value of bombing runs is not the intent here, airpower’s effect on the culture of the U.S. military continued on a trajectory established at its inception: with the right range, speed, ordnance, and targets, airpower can deliver a decisive blow.

The role of surface combatants—to say nothing of the strategic relevance of the U.S. Navy as a whole—was far less visible in Vietnam and played a much more minor role. Marine amphibious landing vehicles and Navy utility landing craft delivered thousands of Marines and their equipment ashore in unopposed landings in the early stages of the Vietnam War. Amphibious landing vehicles took part in several major battles such as Operation Starlite, a combined naval, air, and amphibious ground force attack on conventional Vietcong forces in August 1965 near the air base at Chu Lai. However, their role was generally minimized as tracked amphibious landing craft made for inefficient and cumbersome fighting vehicles in the dense jungles of Vietnam.

The strategic importance of airpower and its ability to deliver near-decisive results was demonstrated again during Operation Desert Storm (1990–91). Without question, the ground offensive was quicker and far less costly than it may have otherwise been because of the highly successful air campaign that preceded it. One need only reference the nickname given to the initial barrages of Operation Iraqi Freedom some 12 years later to understand what airpower’s

effects had come to symbolize: shock and awe.⁵⁵ Given airpower's ever-more visible accomplishments in modern warfare, it comes without surprise that military and civilian leaders are continually ready to invest heavily in these important and powerful platforms.

By contrast, surface amphibians have not played the same role, especially given the character of the conflicts dating back to the Vietnam War. Ill-suited for mobility in the jungle and highly susceptible to IEDs, the asymmetric weapon of choice, amphibious vehicles seem to occupy a diminishing role in potential mission sets the U.S. military may carry out. In the handful of years before the EFV was canceled in 2011, the U.S. military had spent more than \$50 billion to produce thousands of MRAP vehicles.⁵⁶ Embroiled in an IED-laden counterinsurgency conflict given the apt moniker "The Long War," any practical use for a vehicle designed for contested entry after high-speed water movement seemed long ago irrelevant.

Highlighting the relative importance and use of both air and surface amphibians since Vietnam is relevant to this discussion because it explains the historical context and organizational memory of key figures in the Marine Corps, especially around the time the EFV was canceled. In 2011, all four-star Marine generals (including Commandant General James Amos and Assistant Commandant General Joseph Dunford) each began their careers in the immediate aftermath of the Vietnam War. They were both mid-level officers during the tremendously successful air campaign that preceded the Gulf War.

Beyond the relevant organizational memory in the modern Marine Corps, it is important to analyze the method by which the Service defines and advocates for its requirements. The Marine Corps Requirements Oversight Council (MROC) is the primary body that culls and synthesizes inputs from assigned advocates across the Marine Corps. The intended results are recommendations to the Commandant of the Marine Corps for what the Service needs and what ought to be advocated for in the halls of Congress.

The MROC, as a formal advisory board to the Commandant, began in 1999 to integrate more diversified voices at the highest levels of the Service. As then-assistant commandant of the Marine Corps General Michael J. Williams noted in a 2001 *Marine Corps Gazette* article, "[The deputy commandant for aviation] has long played a very effective role in advocating the needs of Marine Corps aviation . . . CMC directed that the other elements of the MAGTF have similar representation."⁵⁷ Though successive Commandants have slightly altered the MROC's charter and added to its framework, the basic mission remains the same: advise and assist the Commandant in the execution of their Title 10 and Joint Chiefs of Staff responsibilities.⁵⁸

General Williams, also an aviator, makes an essential point about the nature of Marine Corps advocacy before the MROC's creation. The aviation commu-

nity has long had a powerful pair of advocates at Headquarters Marine Corps, given that at least one four-star and one three-star Marine general have always been naval aviators. The Assistant Commandant of the Marine Corps is customarily an aviator (except when General Amos, a McDonnell Douglas F/A-18 Hornet pilot, was Commandant), and the deputy commandant for aviation is a lieutenant general. The extent to which these high-ranking officials influenced previous acquisition decisions (the Osprey, for example) is unclear, but, as General Williams indicated, their voice has long been a powerful one.

The advent of the MROC did not eliminate the position of deputy commandant for aviation; instead, the council brought senior ground combat and logistics officers to serve as advocates for their respective slices of the Marine Air Ground Task Force (MAGTF). The purpose of the advocacy program is that “each element of the MAGTF and supporting establishment shall have an advocate at HQMC [Headquarters Marine Corps] who will represent them in various internal and external processes occurring within the National Capital Region.”⁵⁹

The MROC creation was a step in the right direction. Before the MROC, all elements of the MAGTF other than aviation had no formalized voice to the Commandant of the Marine Corps. It may be easy to understand why this gap in advocacy existed for so long. The Marine Corps, like the Army and the Navy, have long understood the value of aviation. They each fought tenaciously to maintain an organic aviation capability after the creation of the Air Force. Yet, each Service has struggled to determine the right organizational structure for aviation assets and aviators. For example, the U.S. Navy will not assign a surface warfare officer to be the commanding officer of an aircraft carrier, while an aviator can be assigned to command a surface ship. Likewise, the Marine Corps will only assign an aviator to command a Marine Aircraft Wing. However, an aviator may be assigned to command a Marine Expeditionary Force—though, on the whole, are provided with fewer opportunities to integrate and control other elements of the MAGTF compared with their infantry officer counterparts in today’s organizational construct.⁶⁰

The challenges of what to do organizationally with aviation is as old as the airplane. Writing in 1928 on the relationship of airpower to seapower, Lieutenant Commander Bruce G. Leighton discussed the pertinent questions of aviation with which naval leaders were wrestling: Do we have enough airpower, too much, are we using it correctly, are we spending enough or too much? Indeed, military leaders in all Services ask these questions today. However, Leighton goes on to say that these questions “are not *aviation* questions, they are *naval* questions.”⁶¹

Leighton concedes that the airplane is indeed a unique machine and requires highly trained and specialized skills. However, the wondrous appeal of

the flying machine and the challenging nature of its operation and the considerable expense of its maintenance may lead us to assume that basic warfighting considerations do not apply to it. In other words, separate, unique assumptions must apply to its application in combat or its place in our military organizations. This is a *false assumption*, Leighton argues: “To place aviation in a sort of separate niche in the scheme of war at sea, is supreme folly. One can no more separate air operations from general naval operations than one can separate gunnery from general naval operations.”⁶²

Leighton was not arguing, nor is this author, that the airplane and airpower have not radically transformed the character of war. Nevertheless, Leighton argues that airplanes have changed the character of war “not because airplanes are airplanes; but because by the use of airplanes, our fighting ships can see farther and shoot farther . . . because superiority in information and in effective hitting range spells superiority in battle.” The false assumption that Leighton attempted to point out in 1928 remains a valid critique in the way we handle airpower organizationally today. Leighton’s analysis is used here to highlight an inefficiency that remains in places like Headquarters Marine Corps, and he exposes potential lopsided advocacies that may result. It makes no more sense to have a deputy commandant for aviation than it does to have deputy commandants for artillery, armor, or cyber operations. The deputy commandant for aviation (in addition to the Assistant Commandant) gives one particular mode of delivering ordnance or supplies an imbalanced voice relative to all the other such delivery methods in the Marine Corps’ arsenal.

Intra-Marine Corps Changes: Deductively Producing the Right Force

A 2019 Rand study noted that the Marine Corps suffers far less than the other Services from intra-Service rivalry and unhelpful distinctions between intra-Service communities. The study points to the Service ethos of “every Marine a rifleman” and the organization of the Marine Corps as a combined arms Service as the likely reason for this phenomenon. “Relative to other services,” the study concludes, “the variance in prestige and legitimacy associated with different occupational specialties, and the sense of interbranch competition among them, is quite modest in the Marine Corps.”⁶³ Similarly, a 2015 quantitative analysis conducted at the Naval Postgraduate School noted that only a minor subculture exists between the various communities in the Marine Corps (ground, aviation, and support).⁶⁴

The unique multidomain, master-of-none nature of the Marine Corps has given way to what many observers have called an existential paranoia for Marines, a fact evidenced by the Marines’ fierce loyalty and coalescence around culture and lore. Given these characteristics, it appears all the more surprising

that the Marine Corps enters the third decade of the twenty-first century without next-generation capabilities to span its multidomain mission. However, the power of history and organizational structure, as discussed in the previous section, has given way to a Service that has, perhaps inadvertently, failed to acquire the necessary tools for that mission.

The iron triangle analysis noted that the Office of Secretary of Defense held similar positions in both cases. Attempting to provide oversight to resource management in both cases studied, the OSD downplayed the need to invest large sums of money into seemingly futuristic requirements. Further, congressional support is not as predictable as it once was for the Services. This is particularly true for the Marine Corps, once known for having the “Green Coalition” on Capitol Hill, as was the case in the late 1980s with the Osprey. Whether this is owing to a furthering of the trend to defer to the Executive Branch on matters of national defense, the fact seemingly remains that the most important job for the Services, beyond personnel management, is to properly analyze and advocate for its equipment needs with which it can train and provide the best possible force for the combatant commanders.

Given the MROC’s central role in validating requirements for and strategic direction of the Marine Corps, it is imperative that the Marine Corps make changes in its organizational structure if a more balanced advocacy effort is to be achieved. However, merely giving individual communities more or less of a voice at the table misses the point. If the purpose of the MROC is to advise and assist the Commandant in the execution of Title 10 responsibilities, then it is crucial that the form of the MROC supports that function. Title 10 tasks the Commandant to organize, train, and equip the Marine Corps. Title 10 also clearly stipulates the mission and purpose of the Marine Corps itself. What the MROC ought to do, therefore, is serve as a validating body that holds the Service accountable to its Title 10 responsibilities on behalf of the Commandant.

To anticipate the likely retort—this is not what is currently happening, despite the stated mission of the MROC. Despite the explicit Title 10 requirement for the Marine Corps to master amphibious operations and be a naval expeditionary force, there is no one focal point for this core competency. Naval integration is currently spread between several directorates. For example, the deputy commandant for combat development and integration is charged with Navy-Marine Corps capabilities integration, while the commander, Marine Corps Forces Command, is charged with integrating with the Navy for “operational initiatives.”⁶⁵

What the Marine Corps as an enterprise misses in this organizational structure is a focus on expeditionary and amphibious warfare as the prime mover of all other capabilities, which are the Service’s *raison d’être*. The current directorates and their constructs focus on all necessary warfighting capabilities

and all relevant functional areas but fail to coordinate their efforts toward the ultimate goal of creating and maintaining a seagoing expeditionary force. Instead, that end state comes into fruition by concurrent actions meant to build the individual capabilities and functions necessary for such a force. In other words, the Marine Corps inductively produces a seagoing expeditionary force. Instead, the Marine Corps ought to deductively produce and evaluate the force from the perspective of the prime reason for its existence.

To deductively produce a force in line with its Title 10 responsibilities—a naval expeditionary force-in-readiness—Headquarters Marine Corps and thus the MROC must restructure. The most important change begins with creating the position of the deputy commandant for naval integration and amphibious warfare. The new deputy commandant would advocate for and oversee the Service's core competency and be the Commandant's chief liaison for the employment of the Fleet Marine Force with the U.S. Navy. The deputy commandant, naval integration and amphibious warfare would replace the deputy commandant for aviation. Aviation, as one of the many critical domains during any amphibious operation, would be advocated for by the directorate that already integrates warfighting capabilities across domains: combat development and integration.

General Berger sent a clear message to the Service in his *Commandant's Planning Guidance*: "I intend to seek greater integration between the Navy and Marine Corps . . . with the rise of both land and sea-based threats to the global commons, there is a need to re-establish [*sic*] a more integrated approach to operations in the maritime domain."⁶⁶ Therefore, with a strategic basis for re-orienting toward amphibious operations, and a Service chief willing to assume risk to do so, now is the time to make bold changes to how the Service operates. The Marine Corps must not only say it is reinvigorating the notion of being an extension of the fleet, but it must also restructure its organizational construct at the highest echelons to ensure that goal is realized.

Beyond replacing the deputy commandant for aviation with naval integration and amphibious warfare, perhaps the most critical and needed change is how the Marine Corps organizes and thus promotes and retains its officers. If the adage "where you stand depends on where you sit" is a correct one, then simply rearranging organizational titles will hardly be enough to produce the desired outcomes in this case. Though additional analysis beyond the scope of this article will be required, it would seem most important to alter the career paths of Marine officers such that we integrate them across the MAGTF sooner than the Service currently does.

Additionally, it is worth noting that the new structure is in line with the Commandant's view of future employment considerations. While combined

arms employment will continue to be the Service's preferred method for employment, the Commandant envisions unprecedented levels of flexibility in Marine Corps deployment. Perhaps, in a not-so-distant future contingency, only a detachment of aviation assets is needed, or perhaps multiple batteries of the High Mobility Artillery Rocket System (HIMARS) ought to be the prime focus in some instances in support of U.S. Indo-Pacific Command. Moreover, because forthcoming conflicts will be far more multidimensional and interconnected than ever before, it will be more important in the future to have an officer corps with generalized and diverse experience across the MAGTF earlier and more often. There cannot be one or two communities that serve as the de facto center of gravity for the Marine Corps. The Commandant has made clear that the focus is, as it always should have been, on seagoing expeditionary warfare in support of sea control executable in a multitude of ways given the nature of the operating environment.

Finally, it should be noted that this article's discussion does not undermine the importance of any one community, least of all the infantry, heretofore the Service's center of gravity. As military strategist Joseph C. Wylie concluded, strategic victory comes not from our ability to destroy—but to control. Bombs and missiles were and will continue to be useful elements of military power, but those weapons can only destroy. "It is the man on the scene with a gun," he argued, that is the only thing capable of exercising control.⁶⁷ While combat enablers become more or less important depending on the character of the conflict, the delivery—or threat of delivery—of armed troops to effect control is a constant in the conduct of war. Transporting and supporting the fighter on the scene with the gun is the very purpose of aviation and surface amphibious weapons platforms. What the foregoing analysis has attempted to argue, however, is that as the specific character of war ebbs and flows toward and away from different methods of employing military power present organizational constructs that continue to stovepipe community-centric influence will continue to produce the antithesis of flexibility and adaptive thinking.

Conclusion: The ACV and Beyond

When the EFV was canceled in 2011, the Marine Corps was left with the AAV, a 40-year-old amphibious vehicle long obsolete and inadequate for tomorrow's fight. However, that was not the end of the story. To its credit, the Marine Corps began working in earnest to find a vehicle that would serve as a replacement for its aging craft and a stepping-stone to true next-generation technology. Toward that end, the Amphibious Combat Vehicle (ACV) was born and is currently in production and initial fielding. What the ACV and the herculean efforts the Marine Corps has employed to field it quickly shows is that the Service fully ap-

preciates the role surface amphibians play—today and tomorrow—presuming it does not suffer the same fate as the EFV.

Today's strategic environment is characterized by peer or near-peer competition in which the United States' ability to project power across the Pacific is once again central. In the last great war for control of the Pacific, the United States required an innovative strategy and creative, new equipment in all domains to see it through. The same is true for the next fight for the Pacific. In a potential conflict for sea control in the Pacific, the United States must not only project power into the Pacific but must hold it while under constant threat from land- and sea-based systems. High-speed maneuver, sensing, electronic warfare, and lethality will be a must.

Perhaps the Osprey and EFV (or ACV) are not the platforms needed to enact an island defense strategy, but they are a product of organizational construct that gives way to a potential over-investment in one particular domain's platforms, and this will only allow the gap in strategic capability to perpetuate. The Marine Corps provides the national security apparatus with a nimble force capable enough to provide decision space at the beginning of a conflict. However, as it stands today, that Service lacks the necessary equipment to gain and hold that space in contested littoral areas.

The existence of a capability gap created by the lack of credible surface amphibian platforms is not a point of contention—it is the prime reason for congressional pushback on the EFV cancellation, and it is the reason for the breakneck speed at which the ACV has made it through the acquisition process. No single official or set of officials is to be blamed in this case.

Deep-seated culture and the manner in which decision-making bodies within the Service were constructed unintentionally altered the resulting policy directions by overemphasizing the role air platforms needed to play in budgetary strategy. Given generally similar reactions by the other stakeholders in both instances (Congress and the Executive Branch), it is therefore the case that inter-Service bureaucracy contributed in large part to the existence of a national strategic level gap. Altering the nature of the bureaucracy is the most logical way to ensure the nation continues to receive what it pays for: a truly expeditionary force-in-readiness.

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Marine Corps Force Design 2030 and Implications for Allies and Partners Case Norway

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Abstract: *Force Design 2030* describes major organizational changes to the U.S. Marine Corps. Arguably, these changes will affect the Joint force, allies, and partners. The United States, and in particular the Marine Corps, is an important part of the deterrence and defense of many countries, especially Norway. Thus, the Norwegian Armed Forces should adapt to these changes to increase interoperability and strengthen the common warfighting capability. A comprehensive implementation plan, including allies and partners to operationalize the changes in the Marine Corps as well as the new U.S. Service and Joint concepts, is needed to succeed in creating an advantage over China and Russia.

Keywords: *Force Design 2030*, operating concept, expeditionary advanced base operations, EABO, distributed maritime operations, DMO, multidomain operations, MDO, great power competition, antiaccess and area-denial, A2/AD, China, Russia, United States, Norway

All U.S. Armed Forces Services are constructing new operating concepts to be relevant in a possible future fight with China and Russia.¹ There are an overwhelming number of concepts being developed in the U.S.

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armed forces that are very difficult for even close allies and partners to keep track of. For example, General David H. Berger, Commandant of the U.S. Marine Corps, published in March 2020 *Force Design 2030* (FD 2030), which describes the biggest organizational change for the Marine Corps in recent times.² FD 2030 is justified by the need to meet the changes and challenges of the current *2018 National Security Strategy*.³ Due to these sweeping changes in the U.S. armed forces and the lack of communication between Services (with the exception of the Marine Corps and the Navy), it has also been difficult to implement and communicate these reforms to partners and allies.

Without an overarching Joint concept implemented by the Joint Chiefs of Staff (JCS), it is very difficult to communicate the changes so that allies and partners can adapt national operating concepts and plans accordingly.⁴ Most allies and partners collaborate with more than one U.S. Service and therefore need to keep track of the very rapid and unclear development of concepts. In the *Commandants Planning Guidance: 38th Commandant of the United States* (CPG) and FD 2030, the documents mention several times that closer integration between the U.S. Navy and Marine Corps is imperative.⁵ The U.S. Army is not mentioned at all. How should allies and partners interpret that? Does that mean that if the Army is planning operations or exercises with an ally the Marines will not? What about the U.S. Air Force? Is their new concept, agile combat employment, compatible or in competition with the other Services?⁶ These examples are evidence that the Department of Defense needs to do more to encourage interoperability between and among Services and allies, including increased communication with allies on changes happening at the Service and national level of the U.S. armed forces.

For smaller allies and partners that are dependent on support from the United States, the fast moving concept development may cause challenges with interoperability.⁷ Allies and partners are not a major part of the force design and concept development of the U.S. armed forces, even though the United States is planning to conduct operations on or in the vicinity of allied territory.⁸ What can the Marine Corps do to better integrate its allies and partners into the concept and force development processes? There is obviously a major potential not being utilized in the concept development by the Corps and the other Services; that is, how does the U.S. armed forces use the already present forces of allies and partners inside the weapon engagement zone (WEZ) that can facilitate U.S. forces' defense of allies and prevent infiltration of contested areas by adversaries?⁹

What are the allied implications of the implementation of FD 2030? The United States has many allies and partners that depend on allied reinforcements in times of crisis and war. The Marine Corps is an important part of many allied and partner nations' national military plans. It has been one of the most

important and tangible partner forces for Norway. The new changes will have operational consequences for the defense of Norway. Accordingly, the Norwegian Armed Forces needs to adapt its own concept development to improve and ensure interoperability, but with a lack of up-to-date information from the U.S. side, it makes this task exceedingly difficult. Norway can offer its unique geography as a testbed for common experimentation, ensure that the national capabilities complement the U.S. Joint forces, and explore options to operate as an allied inside force.

For the U.S. military Services, however, the change in interoperability will better integrate the Marine Corps with the Navy by adapting structure, materiel, and operating concepts. The Commandant stresses that the Marine Corps is an agile, expeditionary, and maritime organization with a focus on China and operations in the Pacific region. The Corps should move away from prolonged land campaigns and leave decisive land operations, carried out by major mechanized units, to the U.S. Army.

A comprehensive implementation plan to include allies and partners to operationalize the FD 2030 and other Joint and Service concepts, which implies exercises, procurement, and concept integration, is needed to succeed in creating an advantage over China and Russia. This article will first analyze the strategic context, then the FD 2030 and Marine Corps and other U.S. Services' operating concept development before analyzing the implications for allies and partners by using Norway as a case study.

Background

The Marine Corps is organized under the Department of the Navy and is a natural part of the naval force.¹⁰ The Marine Corps is manned, trained, and equipped to seize and defend forward naval bases, and it is evidently capable of participating in major land operations.¹¹ Nonetheless, a naval force is not optimized to seize and hold larger land areas. The U.S. Navy's core missions are maritime control, power projection, and deterrence.¹² If deterrence fails and war breaks out, a decisive battle on the deep waters of oceans seems less probable than an exchange of long-range missiles and airstrikes between naval and land forces.¹³ Such a war will be fought in the littorals, and that is where the Marine Corps has its natural place.

Although the Marine Corps is maritime in both law and organization, it has taken part in land battles during the last 30 years, from Operation Desert Storm, where it conducted a ground offensive with two divisions, to the Global War on Terrorism in Afghanistan and Iraq, where it rotated forces in and out for almost 20 years. The consequence has been that training, education, organization, and materiel investment have been focused on these land operations, while the Marine Corps has insisted that major amphibious operations are still

needed. This development has brought to life an old inter-Service rivalry. In the years after World War II, the War Department, the Army, and Navy wanted to abolish the Marine Corps and transfer the air forces to the Air Force and the land forces to the Army.¹⁴ With *Force Design 2030*, General Berger has pointed out the direction to make sure the Marine Corps is relevant for the future threats.

New Technologies and New Threats

The current U.S. security strategy establishes China and Russia as the main adversaries and claims that the United States has returned to an era of great power competition. The strategy signals a need to change the focus for the U.S. military Services from counterinsurgency to future threats from China and Russia.¹⁵ China's massive investments in building ships, long-range precision missiles, hypersonic missiles, and air defense are already threatening U.S. hegemony in the Pacific region.¹⁶ Also, Russia's modernization of long-range precision missiles, air defense, and electronic warfare (EW) capabilities challenge the U.S. ability to deter conventional attacks in Europe. China and Russia's reliance on long-range precision missiles is referred to as antiaccess/area-denial (A2/AD). It describes both the ability and strategy to deny an opponent's access to a given area and its ability to target forces that are present inside the same area/WEZ.¹⁷

The A2/AD threat have forced the U.S. military to revise their operating concepts. The current American way of waging war will not work against an opponent with a comprehensive A2/AD defense. Large and sophisticated platforms such as an aircraft carrier will be vulnerable to long-range antiship missiles. Long-range missiles will threaten a build-up of forces in forward bases. Also, sophisticated air defense will threaten U.S. dominance in the air.¹⁸

It is the A2/AD threat from China and Russia and concept development in the U.S. Navy and Marine Corps that has spurred General Berger to take structural steps. He published the *Commandant's Planning Guidance* in July 2019 and announced major changes in manning, training, and equipment.¹⁹ Since then, extensive planning processes, simulations, and discussions have been ongoing within the Marine Corps and with the DOD and the other Services. The result of this work was published in *Force Design 2030*. General Berger has stated that the Marine Corps has shortfalls in capabilities such as long-range air defense, long-range precision fires, and long-range unmanned aerial vehicles needed to support Joint, naval, and Marine Corps operating concepts. To achieve that, the Marine Corps needs to divest in legacy capabilities to make room for new ones.²⁰ Neither major amphibious operations nor the ability to attack or defend territories in brigade and divisional formations seems to be a priority for the Marines. However, it is not just the U.S. Navy and the Marine Corps that have understood the necessity for renewing operating concepts.

The U.S. Army has developed the concept multidomain operations (MDO).²¹ This concept describes how the Army will challenge an adversary in all domains with task-organized forces capable of penetrating an A2/AD defense, along with the ability to operate inside the adversary's WEZ. Similarly, the Navy has developed several concepts to deal with these new threats, such as distributed maritime operations (DMO). It is a concept for making the fleets less vulnerable by scattering ships in smaller groups to be more difficult to target but at the same time being able to mass fire and effects against an adversary in time and space. The Joint concept for access and maneuver in the global commons (JAM-GC) is a Joint maritime concept from 2016 succeeding the air-sea battle concept. The JAM-GC describes an "inside force" that facilitates for an "outside force" ability to maneuver and conduct operations by securing key maritime terrain.²² Littoral operations in a contested environment (LOCE) is an integrated operating concept for the Marine Corps and the Navy to seize, secure, and operate in coastal areas with an A2/AD threat.²³ Yet another concept is the expeditionary advanced base operations (EABO). This is the Marine Corps' concept to support the Navy in sea denial and sea control operations with small and robust task forces (which the Marines now call stand-in forces) able to operate within an adversary's missile range (WEZ) from bases with low signature. The units and bases have to be small and emit very little electromagnetic signature to avoid being targeted by long-range missile systems (the size of these bases is yet to be decided). These bases can be defended while being able to target adversaries' long-range sensors, communications, and missile systems.²⁴ EABO supports all Navy concepts but has similarities with the Army's MDO concept. Both envision Joint forces being able to operate within the enemy's WEZ, in all domains, and therefore be relevant in the South and East China Sea with long-range air, sea, and land missiles.²⁵

Force Design 2030 and the EABO

In this context, *Force Design 2030* will increase somewhat in scale in 2021 and will imply significant changes in 2022.²⁶ The transformation will take place during the next 10 years, but the Marine Corps will begin to divest obsolete capabilities quickly to finance new ones.²⁷ The Marine Corps claims that China and Russia will achieve peer parity with the United States 10 years from now, especially concerning A2/AD capabilities, and have even achieved an advantage in missile technology and hypersonic technology. The Department of Defense's annual report to Congress states that "China has already achieved parity with—or even exceeded—the United States in several military modernization areas."²⁸ That includes shipbuilding, land-based long-range missiles, and integrated air defense systems.²⁹

To achieve the EABO concept and become more closely integrated with

the U.S. Navy, the Marine Corps must invest in new technology. Long-range precision missile and antiship missiles, unmanned aerial vehicles, boats, and submarines with long endurance and armament, as well as longer-range air and missile defense are among the most important investments. Logistics in the EABO environment will be challenging because of distance, dispersion, and survivability. This is due to many small Marine units in need of supplies spread over a great area while being potentially targeted by adversary surveillance systems. The Marine Corps therefore needs to explore and invest in better ways to conduct logistics. The Marine Corps bought forward the Lockheed Martin F-35B Lightning II, which can take off and land vertically. In the EABO concept, the Corps must maximize the use of that technology by operating from small, rudimentary, and dispersed bases. Moreover, General Berger wants to explore human/machine integration and artificial intelligence to improve performance, protection, and decision support.

Force Design 2030 advocates testing of new structures. Among the most important structural changes is the question of transforming all or some infantry regiments into Marine littoral regiments (MLR). The Marine Corps has studied the Pacific campaigns during World War II for inspiration, especially the role of the Marine defense battalions on Wake Island and Guadalcanal (Solomon Islands). These had coastal artillery, air defense, and infantry securing islands and supporting the U.S. Navy operations.³⁰ III MEF, with the Pacific region as its area of responsibility, has already started experimenting with the MLR. The MLR's role is to protect, operate, and target the adversary from expeditionary advanced bases (EAB). EABs are small bases that are well concealed and protected against long-range missile and EW threats. Several EABs will be able to mutually support each other and be part of an overall sea-denial or sea-control operation to support a larger Joint force.³¹

To change the operating concept, the Marine Corps must change the way it is educating, training, and executing military and naval exercises with partners and allies. Moving away from operating in larger military formations, the Marine Corps seems to intend for future operations to be fought by smaller units spread over larger areas. This will put increased demands on the individual Marine, noncommissioned officer, and junior officer's ability to operate autonomously and the ability to handle advanced technical equipment.³² General Berger also wants to look at where the Corps is stationed and where it conducts training and exercises to ensure the Service is strategically positioned (force posture) to meet future threats. Integration with allies and partners is important to the Marine Corps. Yet, *Force Design 2030* and the EABO concept have limited focus on interoperability, and the tempo of this transition is so high that allies are not able to keep track of the changes.³³

One of the biggest changes in *Force Design 2030* is that the Marine Corps

wants new amphibious ships that are cheaper, smaller, and can navigate in narrow waters. This is to enable maneuvering of forces and logistics within the adversary's WEZ. China is stated as the main threat and the Pacific region with III MEF as the main effort in the transformation of the Marine Corps. To ensure that the Service is relevant in the Pacific, its organization, equipment, and concepts have to be tailored and specialized for that area. The transformation that General Berger has initiated is going to make the Corps a relevant force on high readiness, ready to face the threats of the future, primarily aimed at China and the Pacific region.³⁴

The change, however, will also have some likely negative consequences. First, the Marine Corps loses flexibility. A trademark of the Service is that it has been able to conduct missions throughout the conflict spectrum and with all types of tasks. By removing all tanks, bridging units, some infantry battalions, and tube artillery, as well as changing the operating concept and structure, the ability to attack and defend as a regular combat formation is affected. The Marine Corps also intends to remove some units and equipment that are well suited for counterinsurgency and humanitarian assistance, such as military police and helicopters.³⁵ Second, the reorganization makes the Marine Corps more vulnerable. A too narrow priming of operating concept and structure against an A2/AD threat can allow an opponent to adapt by creating and exploiting new vulnerabilities, such as targeting logistics, lines of communication, or vulnerable EABs with regular and/or militia forces. Third, the priority of China as the primary threat is likely to cause personnel, equipment, concepts, and training to be tailored for the Pacific region, and specifically for the South China Sea. This will make the Service less capable of operating in harsher climates. These changes are, therefore, both good and bad news for partners and allies such as Norway.

Case Study: Norway

The Norwegian military has gone through drastic changes since the height of the Cold War. In the 1950s and 1960s, the Norwegian Armed Forces consisted of more than 350,000 servicemembers, with the whole society organized for a "nation in arms," prepared to defend against a Soviet invasion.³⁶ The large mobilization force was built around the conscript service and mobilization. Then as now, the strategic dilemma for Norway was how to organize the military to be an effective deterrence as a trusted North Atlantic Treaty Organization (NATO) member, while at the same time not provoking its powerful and aggressive neighbor.

Although a decent-size military, the quality of the Cold War-era Norwegian Armed Forces was low and the cost was high. As the Cold War came to an end, Norway found itself spending 3 percent of its gross domestic product (GDP)

on the military.³⁷ Still, the military had become stagnant, technologically impaired, expensive, and irrelevant.³⁸ The Norwegian Armed Forces transitioned into a modern but small force, where the trade-off has been a smaller military in exchange for higher quality and lower cost. Just a few years ago, the number was as low as 1.5 percent, and Norway is still vague when it reaches the common agreed NATO target of 2 percent of GDP. However, today's force is a modern, high-quality, combat-proven force, for the most part interoperable with its closest allies.

The Royal Norwegian Navy consists of 4 frigates, 4 submarines, 6 corvettes and 4 mine countermeasure vessels, a Coastal Ranger Command, and 15 Coast Guard vessels. The Royal Norwegian Air Force has 52 Lockheed Martin F-35 Lightning IIs, 5 Boeing P-8 Poseidons, and close to 50 helicopters. The army consists of one mechanized brigade, one infantry regiment, border guards, and His Majesty the King's Guard, with a land operations center and supporting units. Finally, Norway has a Special Forces Regiment, a Home Guard with 40,000 soldiers and joint enablers.³⁹ All in all, the force consists of around 65,000 servicemembers, of which 40,000 are reserve.⁴⁰

Norway has been a trustworthy military partner for the United States and NATO. Although small in numbers, Norwegian forces have contributed to combat operations in Afghanistan and Iraq, naval counter pirate operations in the Gulf of Aden, and in the air campaign in Libya, among others. In Libya, Norway punched above its weight, delivering a total of 588 bombs and ostensibly "took some of the most challenging missions and performed in a superb manner."⁴¹

Norway supports a military primarily to preserve peace as the status quo. The overarching political aim is to ensure territorial integrity, national sovereignty, and political options. The Norwegian military is therefore highly trained and capable of operating in one of the world's most challenging environments. Although Norway has increased its annual spending, it will always be a minor state compared with Russia. The Norwegian Armed Forces follows a maneuver warfare conceptual doctrine, abides to NATO standards, and trains regularly with allies and partners.

The Norwegian Armed Forces' most demanding strategic tasks are to deter and, if necessary, defend Norway and its allies against attacks. Norway achieves these tasks by a mix of national defense and allied reinforcement.⁴² NATO is the mainstay of Norwegian security, and the United States is Norway's most important ally.⁴³ Of all U.S. forces associated with the reinforcement of Norway, the Marine Corps has been the most important. During the Cold War, the United States dedicated an air-landed Marine Expeditionary Brigade (MEB) to Norway to draw prepositioned equipment from the caves in Trøndelag. Today, the prepositioned equipment is still there, but there are no dedicated forces.

It is impossible to determine how long it will take to get allied reinforcement to Norway. There are too many variables, such as the overall situation, local threat, political and military decision making, and available forces. There is a big difference between deployment to Norway as part of an exercise and deployment during a crisis or war. A situation where Norway requests help from allies will most likely be elevated to a point beyond Norwegian interests, to a question of U.S. policy interests in great power competition. Both political and military decision-making processes in the United States will, therefore, revolve around American strategy and, to a lesser extent, Norwegian strategy. The great power competition and possible conflicts around the world will put pressure on all available U.S. forces. Although the United States is the world's largest military power, it has far from a surplus of forces due to all its commitments worldwide. It is therefore a question of priority. Nevertheless, the most important question will be whether a conflict with Russia has escalated to a level where Russian A2/AD capabilities cover the access to the North Atlantic and Russia either threatens to use or actually will use such capabilities.

With this new threat and change of concept and structure for the Marine Corps and U.S. Navy, a military option with large naval groups or larger troop transport to Norway will be less likely. The Marine Corps and U.S. Navy, conversely, will probably try as early as possible in a conflict to establish EABs with distributed naval groups and Marine units to establish sea denial or sea control. Large reinforcements in the form of air, land, and sea forces will probably be kept at a distance until sea and air control is established. The situation in the rest of Europe—and the world for that matter—determines if U.S. forces are available. If a Marine Corps and Navy Joint force is available, it will bring significant capabilities, way beyond what the Norwegian Armed Forces have internally. Norwegian air defense, long-range precision missiles, land-based ship missiles, and electronic warfare are inadequate or limited. One can envision a Joint operational integrated concept in which the Norwegian Armed Forces, U.S. Navy, Marine Corps, and other allies with unique and complementary capabilities neutralize and reduce Russia's A2/AD capabilities and gradually establish sea and air control.⁴⁴ This could facilitate larger NATO reinforcements to Norway.

Norway is ideal for the EABO concept with thousands of islands, small ports, long coastlines, advanced digital and physical infrastructure, and a whole-of-society concept for defense (the total defense concept).⁴⁵ The Marine Corps' transformation is well adapted to the Russian A2/AD threat, Norwegian geography, and adds substantial military capabilities. The downside for Norway is that the Marine Corps' focus is on China. General Berger also signaled in his *Commandant's Planning Guidance* that he would not specialize units in various climate and geographical areas.⁴⁶ Equipment procured for the South China Sea

may be less suited for the Norwegian winter climate, as will the specialized competence required for cold-weather operations. The sum of this can have negative operational consequences for the defense of Norway by the United States.

What is relatively clear about this change is that the Marine Corps will not provide large land forces, as a second land army that traditionally has trained with the Norwegian Armed Forces and tasked to seize or defend territory together with the Norwegian Army and other NATO partners. Norway will have to hedge on reinforcements from the U.S. Army, NATO, or other nations that have bilateral agreements with Norway. Such reinforcements, however, will depend on the situation in the rest of Europe and whether the situation allows for the transfer of major land forces to Norway. That means that Norway has to be able to do more alone. Therefore, Norway must take a thorough look at *Force Design 2030* and other conceptual changes in the U.S. Joint force when developing new security policy, strategy, operating concepts, and force structure. Thus, the possible consequences of these changes for Norway are increased defense spending to increase capabilities and volume, changes in operating concept, and hedging for allies and partners in the security strategy.

With America focusing on China, the U.S. military changing operating concepts, and Russia improving its A2/AD capabilities, Norway's independent ability to defend the country becomes more important. The Norwegian Armed Forces must be organized with a balanced force structure that also takes into account the modern Russian A2/AD threat. A Norwegian operating concept should be able to be integrated into the Marine Corps' EABO concept, the U.S. Navy's DMO concept, and the Army's MDO concept. Allies such as Norway may very well be counted in these concepts as allied stand-in forces. That, however, requires training and exercises with the Marine Corps and other U.S. Services to build conceptual and procedural interoperability. It also requires investments in technology that can communicate with U.S. systems. With Norwegian Armed Forces already on the ground, in the air, and at sea, the forces are already there inside the WEZ to locate and target the adversary and facilitate U.S. deployment. There is a potential here to harness that persistent presence to break a possible A2/AD threat. This should be further addressed in the U.S. concept development in general and Marine Corps concept and force development in particular.

Conclusion

The U.S. Joint force concept development is rapid and complex. With *Force Design 2030*, the Marine Corps enters a significant period of change in concept, structure, and education. This will accelerate next year and will have a significant impact from 2022 onward. The changes will turn the Service closer to the U.S. Navy and the mission of deterring China in the Pacific region. This

rapid and complex change is necessary, but it is difficult for allies and partners to adjust to. Without a U.S. Joint operating concept that binds all the Service concepts together, it is difficult for allies and partners to integrate the new concepts into their own national defense plans and force designs.

The maritime focus in the Corps is a natural part of the organizational changes and the traditional role of the Service. At the same time, the Marine Corps is reducing its ability to conduct major land operations. This has direct consequences for the Norwegian defense planning and its armed forces' organization and operating concepts. On the other hand, the concepts like EABO and DMO are applicable to Norway and the threat scenarios from Russia, as long as the equipment can cope with the climatic conditions and the Marines are trained in similar conditions. It will be necessary for the Norwegian armed forces to adapt to EABO and other new U.S. operating concepts first and foremost to increase combat synergy through improved interoperability. An overview of what new capabilities the Marine Corps can bring and what it will not bring or store in Norway in the future is also essential, along with the reaction time and expected operational sustainability it will have. In addition, the Norwegian armed forces have to be prepared for fighting an armed conflict or war alone for a prolonged period of time due to the uncertainty of which U.S. forces, NATO forces, or other bilateral partners that will be available, or able to reinforce Norway due to A2/AD threats, or situations in other parts of the world. This has implications for how Norway should line up its armed forces. The possible consequences of these changes for Norway are increased defense spending to increase capabilities and force structure, changes in operating concept, and hedging for allies and partners in the security strategy. The Norwegian armed forces and politicians should motivate the United States to test out new concepts, force structures, and capabilities in Norway by offering challenging and realistic training opportunities and exercise areas. This will give the Marine Corps important operational experience in a demanding climate, and it will allow the Norwegian military to incorporate concepts and capabilities in its national plans. By doing so, the threshold for the Marine Corps to support Norway when needed will likely be lower.

Other allies and partners will likely have challenges similar to Norway. Rapid and complex changes, including the lack of a Joint U.S. concept, make this necessary concept development slow to implement in allied and partner national plans and concepts. A comprehensive implementation plan to include allies and partners to operationalize the different U.S. concepts, which implies exercises and procurement, is needed to succeed in creating an advantage over China and Russia. Mutual wargames, exercises, and concept development, in addition to exchange of technologies, is needed to create the edge that ensures that the United States, with its allies and partners, will win a possible future

great power conflict or war. There is a major potential not being utilized in the concept development by the Marine Corps and the other Services to use the already present forces of allies and partners inside the WEZ, as an allied inside force, that can facilitate U.S. forces' targeting of adversaries and infiltration of contested areas.

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China and Japan Past and Future

Jared Morgan McKinney, PhD¹

Japan Rearmed: The Politics of Military Power. By Sheila A. Smith. Cambridge, MA: Harvard University Press, 2019. Pp. 352. \$29.95 (hardcover).

China and Japan: Facing History. By Ezra F. Vogel. Cambridge, MA: Belknap Press, an imprint of Harvard University Press, 2019. Pp. 536. \$39.95 (hardcover).

Rethinking Sino-Japanese Alienation: History Problems and Historical Opportunities. By Barry Buzan and Evelyn Goh. Oxford: Oxford University Press, 2020. Pp. 368. \$35.00 (paperback).

Japan's 2019–23 *National Defense Program Guidelines*, following the cue of President Donald J. Trump's 2017 *National Security Strategy*, characterize the current security environment as one increasingly defined by "inter-state competitions." Whereas previous iterations of the guidance (2004, 2010, and 2013) put the North Korean weapons of mass destruction threat at the top of regional threats to Japan, the latest guidance bumped North Korea down, replacing it with Chinese "unilateral, coercive attempts to alter the status quo," particularly regarding the Senkaku Islands, "an inherent part of Japanese territory"—another formulation that did not appear in the earlier defense guidelines.² Japan's apparently increasing wariness toward China calls out for explanation. While the United States has no territorial disputes with China, Japan does. Culminating in a statement from President Barack H. Obama in 2014, U.S. leaders have recently extended (or clarified, depending on one's interpretation) America's security treaty with Japan to cover these disputed land features. Tensions escalated in 2010, when a Chinese fishing boat with a drunk captain rammed

into a Japanese Coast Guard vessel, and then in 2012, when the nationalist governor of Tokyo provoked Japan's government into nationalizing three of the "islands" in the Senkaku grouping. Today, the "islands" have become a trigger point where—on almost any given day—something could go wrong, sparking an international incident or worse.

In *Japan Rearmed*, Sheila Smith, the Council on Foreign Relations' senior Japan fellow, seeks to tell the story of how Japan has moved—and is moving—away from its pacific post-World War II constitution, in which the nation, at America's order, did "forever renounce war as a sovereign right." Smith argues that Japan's leaders have perceived the post-Cold War era as increasingly threatening, beginning with North Korea's withdrawal from the Nuclear Nonproliferation Treaty in 1993 and now including the rise of China to great power status. In this environment, Abe Shinzo (prime minister 2006–7; 2012–20) worked to amend Japan's constitution to weaken its renouncement of war and military preparations, a long-time ambition of the Liberal Democratic Party (LDP). Abe's attempts at revision were opposed by a significant majority of Japanese, and so the LDP settled for expansive reinterpretations of Japan's constitution, to include the right of collective self-defense, ostensibly in cases where Japan's survival might be threatened, but in practice it is used much more generally.³

Smith concludes that 1) the threats from North Korea and China and 2) the "unpredictability of decision-making in Washington" are driving Japan's apparent desire to take its security more fully into its own hands. Smith, however, concedes that despite all the talk and even some modest budget increases, "it is unlikely this will significantly alter the way in which the SDF [Self-Defense Force] is armed, nor will it massively increase the size of Japan's military forces."⁴ In other words, the title of her book is misleading: at best, she intimates that at some vague point in the future, Japan might *think* of rearming. This feeble—but undoubtedly correct—conclusion highlights a serious shortcoming in the world of defense policy rhetoric. The story of Japan's rearmament is one of bluster rather than bombs. This is a simple, understandable, and a relevant fact worthy of reflection and investigation. It does not need to be disguised by overemphasizing very modest changes in Japan's domestic politics or defense procurement. Furthermore, there are good reasons to doubt this will change—though strangely Smith does not consider them.

The most important of these reasons is Japan's demographic decline. By mid-century, barring some radical change, Japan will have fewer than 100 million people, down from 127 million today. The number of old-age dependents will increase by roughly 50 percent from today. Japan's gross domestic product (GDP) growth, even modeling strong production and productivity, will be *negative* as a result of fewer workers. National debt—already the world's highest relative to GDP—will radically increase.⁵ Given this future, which has now

been acutely exacerbated by COVID-19, is it wise to interpret growing Japanese nationalism, hawkishness vis-à-vis China, and even “rearmament” as the beginning of a long-term trend, as Smith implies?

It is *prima facie* more plausible to instead see the current moment of elite angst as the beginning of a process of adjustment to Japan’s geriatric future, a future in which saber rattling about uninhabited rocks is not a priority. The strategist needs to look to tomorrow, true; but they must be just as—or even more so—attuned to the next generation. Smith has given us a book about the moment—but its predictive value should be questioned. Since publication, Abe has been replaced as prime minister by his close aid and confidant Suga Yoshihide, who is widely perceived as a transitional figure who will maintain the foreign policy status quo. However, it is unclear to what extent the up-and-coming generations of prospective Japanese leaders will emulate Abe’s historical revisionism and nationalist policies. Without Abe, will the LDP’s priorities in time become different? These questions cannot be answered here, but they should alert the reader to the potential for change in Japan.

In her book, Smith often uses the passive voice: the Senkaku Islands, she says “became equated with the defense of Japan.”⁶ Actually, they have *been made* to represent Japan’s security by leading LDP politicians. Could there come a day in which Japan deprioritized the inflexible defense of the “islands,” admitting that, yes, they were taken during Japan’s period of imperial expansion, and yes, they have virtually no intrinsic value? This latter point was in fact clarified by the Permanent Court of Arbitration’s 2016 ruling against China in the South China Sea, which dismissed claims that land features that could not sustain human habitation generated the right to an exclusive economic zone (EEZ). “Island” is intentionally written here in scare quotes when discussing the Senkakus because it *should* be perfectly clear that per the ruling, the “islands” should be seen merely as rocks, generating only 12 nautical miles of territorial waters and no other rights under the United Nations Convention for the Law of the Sea (UNCLOS).⁷ This is an important point to understand, because when UNCLOS came into effect in 1994, the belief that sovereignty over negligible maritime features justified expansive new EEZs contributed to the *escalation of* existing territorial disputes, including the one between Japan and China.

Were Japan and China able to eventually negotiate a resolution to the dispute (which Japan does not currently recognize as even existing)—such as turning the disputed rocks into a nature sanctuary—this trigger point would be removed.⁸ Without this trigger, fewer obstacles would stand in the way of positive relations between a Japan and China focused on economic and cultural exchange (discussed in-depth below). Even if the North Korean threat still existed, Japan already spends more on its military (~\$50 billion) than the entire GDP of North Korea (~\$40 billion). This spending could be refocused on bal-

listic missile defense and deterring North Korean aggression. In such a scenario, there would be no reason for Japan to rearm since current spending would likely suffice to secure Japan's survival, interests, and status. This would be an outcome that would enable Japan to prioritize sustaining economic growth and taking care of its aging population—the two issues that will pose the greatest societal strain in the coming generations.

Japan Rearmed is not the book we—as strategic analysts—need. It does not reflect seriously on Japan's future nor go beyond merely relaying journalistic facts about its past. America's strategic community needs to grapple seriously and imaginatively with Japan's geriatric future. This will require, in part, appreciating how the present situation of relative Japan-China hostility *may* simply be a passing moment, a fact already suggested by the improvement in the two countries' bilateral relations since 2018 and Xi Jinping's planned state visit to Japan (which, due to COVID-19, has been postponed). This possibility is hinted at by Kei Koga's concept of "tactical hedging," which he argues explains the tentative vagueness of Japan's "Free and Open Indo-Pacific" policy concept: a way to test the waters and think about Japan's future strategic orientation, but without—for now—making firm commitments or alienating other powers (read: China).⁹

To get some perspective on this possibility, it is useful to turn to Harvard sociologist Ezra Vogel's new book, *China and Japan*, which offers a detailed historical narrative of relations between these two states, a story he begins in the sixth century and—with increasing detail—brings to the present. Vogel's narrative emphasizes the importance of intercultural transmission between the states, the outsized role status concerns have played in the relationship, the persistence of trade even during periods of political estrangement, and the effects of modern Japanese imperialism.

Historically, diplomatic relations between Japan and China have been characterized by periods of "on" and "off." Typically, the existence of political relations required ritual submission by Japan to China's tributary system. Such submission entailed communicating with the Chinese emperor—the Son of Heaven—in an appropriate manner and submitting to China's requirements for the tempo of political and economic exchange. During periods of great cultural acquisition from China, such as between 600–832 CE, the Japanese considered the benefits of ritual submission as worth the annoyance. During periods of Chinese disunity, as seen in the last days of the Tang Dynasty and the period of chaos that followed its collapse, political relations went into "off" mode, but Vogel continually stresses how religious exchanges and trade nonetheless persisted. From 1403–1549 CE, during the golden years of the Ming Dynasty, relations were proper (from the Chinese perspective) but distant, as the Ming emperors tended to disdain the benefits of commerce. The invasions of Korea by Toyoto-

mi Hideyoshi, Japan's Genghis Khan, from 1592–98 CE, brought Japan and China into direct conflict for the first time since the Mongols attempted to conquer Japan three centuries earlier. This invasion, though long mostly forgotten in the West, is seen by many Chinese and Korean scholars as the first wave of Japanese imperialism.¹⁰ After Hideyoshi's failed invasions, formal relations shifted to "off" during Japan's Tokugawa period (1603–1868). Indeed, official representatives of the two countries would not meet again until 1862, which begins the period of modern interaction.

That Japan modernized successfully, and China did not, is one of the great comparative sociological cases of the mid-nineteenth and early twentieth centuries. The United States was the initial catalyst for Japan's modernization. Commodore Matthew C. Perry, who sailed to Japan in 1853, and the Harris Treaty (1858) that followed—America's first unequal treaty in the Far East—prompted Japan to focus everything on modernization so as to not end up like China, harassed and exploited by the Western powers.¹¹ Li Hongzhang, China's great statesman of the era, recognized the successful trajectory of Japanese modernization and pressed in 1870 for the opening of formal treaty relations between the two states. These would culminate, in 1887, in a letter sent from the "Great Emperor of the Great Qing" to the "Great Emperor of the Great Japan," a formal recognition of equality.¹²

Unfortunately, modernization—for Japan—meant emulating the imperial practices of the Western powers. By the 1870s, the Japanese already thought they should open Korea to trade just like Perry had opened Japan, something they indeed sought to accomplish through gunboat diplomacy beginning in 1875. And so Japan began a quest for empire, one that would have no discernible stopping point, and would—in the next century—end in catastrophe.

The stories of the Sino-Japanese War (1894–95), Japan's rivalry with Russia over Manchuria, which culminated in the Russo-Japanese War (1904–5), and the Great Game of acquiring extraterritorial rights in China following the Boxer Rebellion (1899–1901), have all been told well elsewhere.¹³ Vogel does a good job highlighting some lesser-known episodes, such as the 1882 Soldier's Riot in Korea, when disgruntled former Korean soldiers killed Japanese nationals who had been helping Korea's Army to modernize. This provoked Japan to dispatch a cohort of soldiers to Korea, who were met by a counterintervention from China (Korea's traditional protector), which defeated the numerically inferior Japanese force. In response to this bloody nose, Japan would significantly increase its military budget in the coming years. If 1882 provided the justification for massive investments in the army, the visit of China's Beiyang Fleet to Nagasaki in 1886 did the same for the navy. The Chinese envisioned the visit as an exercise in swank diplomacy—to impress the Japanese and gain their respect—but instead, the visit by China's four modern battleships (which

had been acquired from Germany and Britain) provided the justification for a drastic expansion of the Japanese Navy.¹⁴ These stories suggest two potentially timeless lessons. The first is that a minor defeat may rouse the party with the bloodied nose to redouble its efforts. The second is that deterrence signaling of the sort long praised by navies—the dispatch of the Great White Fleet by President Theodore Roosevelt in 1907 is an American example—can provoke rather than deter. Both cases bring to mind the maxim “nothing fails like success,” because it was precisely the initial triumph that produced the eventual humiliation.¹⁵

The era preceding the Sino-Japanese War is an example of economic dominance. By 1893, approximately 90 percent of all Korean imports came from Japan, and the Japanese actually practiced debt-trap diplomacy, lending to Korean peasants and taking their land when they could not pay the interest.¹⁶ Such dependence would only increase after China’s defeat in 1895, when Japan became the *de facto* suzerain of Korea. When Japan’s imperialism made its eventual wars with China, Britain, and the United States inevitable remains a debated question, but already the precursors to the denouement are evident. Of these, Japan’s conception of its national interest is among the most important: specifically, the perceived existential need to dominate Taiwan, Korea, and Manchuria. Some Japanese intellectuals, such as Ishibashi Tanzan, questioned this expansive conception of interest, suggesting it would be more rational simply to purchase raw materials and agricultural goods on the open market than to pursue the alternative of imperialism.¹⁷ Japan’s 1915 Twenty-one Demands—which “would have made China a sort of Japanese colony”—illustrated the problem with the imperial conception of national interest.¹⁸ Like the Romans, the Japanese discovered that expansion generated incentives for further expansion, while defeat simply demanded the redoubling of efforts. If your only policy is “forward,” eventually you collide with forces that are not so easy to displace.

Japan would gradually discover this first in China, where after 1927 Japanese populists insisted it was time to “get tough” with concerted Chinese opposition sputtering to a start in 1932, following the so-called Shanghai incident.¹⁹ Some of the most interesting thinking of this era was done by Jiang Baili, a 1906 Chinese graduate of Japan’s Military Officer’s Academy. He contended that Chiang Kai-shek’s strategy of negotiating with the Japanese was doomed to failure since Japan’s political leaders were not in control of their army and that all-out war between China and Japan was inevitable. In such a war, China needed to pursue a strategy of “long resistance,” avoiding defeat rather than seeking victory. After total war began in 1937, Chiang would come to adopt this strategy.²⁰

Japanese society was transformed after World War II, with the American occupation imposing land redistribution and educational changes. But, due

to American pressure resulting from the Communist victory in 1949 and the subsequent Korean War, Japan neither opened diplomatic relations with the People's Republic of China (PRC) nor concluded peace with it through the Treaty of Peace with Japan signed in San Francisco in 1951. The Nagasaki flag incident of 1958 illustrates the peculiarity of relations in this era: both states were tentatively seeking commercial connections, but pressure from Taipei and Japanese nationalists resulted in the removal of a PRC flag at a trade fair, which the Chinese interpreted as an insulting act of nonrecognition. This led to a hard break in bilateral relations, which would not be fully reset until after Henry A. Kissinger began the process of normalizing relations with China. Sino-Japanese negotiations followed from 1972–78, and while Mao's policies brought uncertainty, China's priority was that Japan cut relations with Taiwan. Deng Xiaoping visited Japan in 1978, where he met the emperor, a first in the history of the two countries' bilateral relations. Even as trade, social, and diplomatic exchanges increased, Japanese domestic changes introduced new irritants to the relationship. In 1978, Japanese class-A war criminals were enshrined in Tokyo's Yasukuni Shrine. Then in 1985, the Japanese prime minister visited the shrine, the first episode in a series extending through 2013 when Abe visited it as prime minister, which would infuriate the Chinese.²¹

Since the turn of the century, Sino-Japanese political relations have fluctuated in response to visits to Yasukuni Shrine, controversies about Japanese textbooks that minimize the nation's responsibility for the horrors of the Second World War, and the dispute over the Senkaku Islands, which erupted by chance in 2010. Even so, trade relations have remained strong, with annual trade approaching \$350 billion in recent years. Vogel suggests the Japanese have been smarter than Americans in working in the China market, taking a long-term perspective while keeping a low profile. Remarkably, unlike U.S.-China trade, China-Japan trade has remained balanced, with the Chinese buying from Japan almost as much as they sell to it.²²

Vogel's task was historical, and here he unquestionably succeeds. But he has little to say about the future of relations between the two countries. Here, Barry Buzan, a distinguished international relations scholar, and Evelyn Goh, a regional expert, move the discussion into the future with their book *Rethinking Sino-Japanese Alienation: History Problems and Historical Opportunities*. Their book seeks to reimagine Sino-Japanese relations across various levels (comparative historical, world historical, cultural, normative, and strategic), but this article will focus here on the strategic implications of their findings. Their basic argument is that in the grand historical scheme of Sino-Japanese relations, the question of respective identities and status has always been pressing. Would Japan recognize China as the legitimate leader of the region? As explained above, occasionally it did, while typically it did not, and in two episodes (Hideyoshi's

invasions and the era of modern imperialism) Japan sought to reverse the status hierarchy. Buzan and Goh call this the *constitutive bargain* because of the way it structures respective relationships. Within such a structure, states interact according to certain mechanisms (specific agreements, terms of exchange, customs, etc.), which Buzan and Goh call the *regulative bargain*. Their contention here is that for much of history, China and Japan have managed to set aside the constitutive question and manage their relations through various regulative bargains, but that will be increasingly untenable in the future.

After President Richard M. Nixon opened relations with China, Japan quickly followed. Buzan and Goh argue that the mostly positive Sino-Japanese relationship of this era—from the 1970s through the mid-1990s—can be explained by a successful reciprocal bargain: the two countries would focus on economic relations and contentious historical and territorial disputes would be put aside, Japan would embrace its new pacific identity, and the United States would—as the “ring-holder”—mediate differences. Given the perceived threat from the Soviet Union and the new economic rationality embraced in China after Mao’s death, the bargain made sense.

A series of developments, however, have since wrecked the strategic bargain. The Soviet Union collapsed, undermining the bargain’s strategic rationale. As a result of Japan’s “Lost Twenty Years,” when its GDP declined as China’s economy boomed, the “economics first” arrangement was also undermined. At the same time, in the mid-1990s, President William J. “Bill” Clinton’s administration began pushing for a more active Japanese role in regional security, a process that culminated in Abe’s attempts to revise Japan’s pacific constitution. The United States, in demanding a more active Japanese role in alliances and extending its defense treaty to cover the Senkakus, has all but abolished its position as the “ring-holder.” Historical issues have again come to the fore of Sino-Japanese relations, both because of revived revisionism in Japan and because of China’s patriotic education campaign, which emphasizes Japanese war crimes and aggression to legitimate the rule of the Chinese Communist Party.²³ Territorial disputes too are back, not only because of China’s growing power and assertiveness but also because of the overall breakdown in relations.

Buzan and Goh think a new strategic bargain is necessary to stabilize international relations in East Asia. They propose four scenarios. The first is an updated version of the previous bargain in which the United States maintains its role as the region’s hegemon. It is, however, unclear how this would be a bargain at all from the perspective of China and Japan, particularly given increasing American attempts to form an anti-China coalition in the Indo-Pacific. The second scenario, however implausible at the current moment, is a U.S.-China leadership condominium: the United States and China would agree to share

power in concert in the region. In this scenario, Japan's role would be that of a middle power, seeking good relations with both of the major economic and political nodes. The third scenario is one in which China and Japan share leadership in East Asia in a way analogous to the Franco-German bloc that has enabled the success of the European Union. In the bargain, "Japan would have to accept a powerful China; while China would have to accept a normal Japan."²⁴ China's Belt and Road Initiative might be redesigned to lead all roads not only to Beijing, but also to Tokyo. The two countries' history problems might be resolved with "a package deal of mutual apologies and thanks."²⁵ In the final possible bargain, Chinese hegemony, the United States withdraws from the region and China and Japan negotiate their relationship using various combinations of coercion and seduction, resistance and submission.²⁶

Of these scenarios, the third—shared Sino-Japanese leadership in East Asia—contributes the most to the current strategic literature, which has already, more or less, considered the other potential scenarios. Chinese, Japanese, and American strategists need to all carefully consider the inputs and likely consequences of such a scenario. A bargain between China and Japan would fundamentally change the region, reducing the likelihood of armed conflict, opening new economic opportunities, creating the prospect of concerted political action in response to persistent regional problems (e.g., North Korea, climate change, financial stability, and, indeed, transnational viruses), and undermining demand for American military operations as a regional balancer, a prospective development of particular importance for a U.S. Marine Corps increasingly focused on strategy and operations in the Pacific region.

Given the painful alienation between China and Japan during the last generation, scholars in both countries are likely to see the prospects of serious rapprochement as slight to nil. Two factors, however, are likely to increase the odds in the coming generation.

First, as suggested when discussing Smith's book, Japan's unprecedented demographic decline presents the possibility of a domestic realignment in which social concerns assume a much higher priority than side issues such as constitutional revision, fighting over history, and disputing symbolic issues with China. There are different layers to modern Japanese identity, and the sort of revisionism and nationalism pursued by Abe and the LDP operates on the most superficial for much of the population.²⁷ Strategic analysts should *not* presume that Japan's recent period of poor relations with China is indicative of how relations will develop *in the next generation*.

Second, the future development of Sino-Japanese relations is likely to be dependent on the trajectory of Sino-American relations. If U.S.-China relations worsen, China has an incentive to improve its relationship with Japan.

Emotional and historical issues clearly can inhibit rational decision making.²⁸ But China contra mundum, like the Japan contra mundum of the 1930s, is bound to result in catastrophic failure. Insofar as Japan and China care about their security and prosperity, they *each* have a strong incentive to cooperate peacefully. As regional tensions increase, threatening economic linkages and raising the risk of a violent clash, the incentives for a new Sino-Japanese bargain will increase. In the next 20 years, it would be unsurprising—based on current escalatory trends—if China were to make some significant moves to recognize Japan’s post–World War II identity as a peace-loving state and deescalate or resolve the outstanding irritants to bilateral relations.²⁹ Such a development would move China and Japan in the direction of a new strategic bargain. There certainly would be some irony if the prospect of a U.S.-China Cold War ended up stabilizing peaceful relations between East Asia’s two most important states.

Such a bargain would undermine the domestic political case for Japan to actually “rearm,” taken in the sense of meeting or exceeding the global average of defense spending as a percentage of GDP (~2 percent). Japan, furthermore, would have no interest whatsoever in participating in a prospective U.S.-China Cold War. This could have serious implications for American bases on Japanese territory, for America’s nascent attempts at decoupling, and indeed America’s overall strategy. Where originally the United States imposed a peace constitution on Japan to restrain it from using force as an instrument of foreign policy, in this future, the roles would be reversed, with Japan seeking to restrain the United States. Japanese companies, furthermore, are not likely to radically disrupt their supply chains or undermine their commercial relationships at America’s prompting. Today, there is already talk of coercively limiting Taiwanese semiconductor trade with China. What would happen if the United States started sanctioning Japanese companies? This is no longer the 1950s, and the United States is not today positioned to coerce Japan into severing economic relations with China. To the contrary, a more likely outcome is a Japan intent on maintaining its freedom to act, and trade, as it pleases.

The possibility that America’s closest Asian ally may not in the future join the “contain China” chorus should provoke a review of the long-term sustainability of current U.S. policy. Why might China’s neighbors assess the “China threat” differently than a United States located half a world away? This question can be asked not only of Japan but other important states in the region, such as Indonesia and Vietnam.³⁰ The answer may indicate that it is American policy in the region itself that needs to be rebalanced.³¹ Japan’s current tactical hedging indicates an openness to different possible paths in the coming generation. Which path Japan takes will ultimately be up to its people and leaders, but it will certainly be influenced by the decisions of China and the United States.

In short, East Asia's future, far from being fated by history or current trends, remains open to agency.

Endnotes

1. Jared Morgan McKinney, PhD, is an instructor/professor of national security studies at Air University. He would like to thank Daisuke Minami and Augustine Meaher for their comments but takes responsibility for any shortcomings in the argument. Opinions, conclusions, and recommendations expressed or implied within are solely those of the author(s) and do not necessarily represent the views of the Air University, the United States Air Force, the Department of Defense, or any other U.S. government agency.
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5. Selahattin Imrohoroglu, Sagiri Kitao, and Tomoaki Yamada, "Fiscal Sustainability in Japan: What to Tackle," VOX EU, 7 June 2019.
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11. See George Feifer, *Breaking Open Japan: Commodore Perry, Lord Abe, and American Imperialism in 1853* (New York: Smithsonian Books/Collins, 2006).
12. Ezra F. Vogel, *China and Japan: Facing History* (Cambridge, MA: Belknap Press, an imprint of Harvard University Press, 2019), 80–85.
13. S. C. M. Paine, *Imperial Rivals: China, Russia, and Their Disputed Frontier* (Armonk, NY: M.E. Sharpe, 1996); S. C. M. Paine, *The Sino-Japanese War of 1894–1895: Perceptions, Power, and Primacy* (Cambridge, UK: Cambridge University Press, 2005); and David MacLaren McDonald, *United Government and Foreign Policy in Russia 1900–1914* (Cambridge, MA: Harvard University Press, 1992).
14. Vogel, *China and Japan*, 112.
15. See Jared Morgan McKinney, "Nothing Fails Like Success: The London Ambassadors' Conference and the Coming of the First World War," *Journal of Strategic Studies* 41, no. 7 (2018): 947–1000, <https://doi.org/10.1080/01402390.2018.1482458>.
16. Vogel, *China and Japan*, 111–16.
17. Vogel, *China and Japan*, 210.
18. Michael A. Barnhart, *Japan and the World Since 1868* (London: Edward Arnold, 1995), 52.
19. Vogel, *China and Japan*, 224.

20. Vogel, *China and Japan*, 244, 255. For the history of the war years, see Rana Mitter, *Forgotten Ally: China's World War II, 1937–1945* (Boston: Houghton Mifflin, 2013).
21. Vogel, *China and Japan*, 338, 301, 352.
22. Vogel, *China and Japan*, 394–96, 402; and Matthew Johnston, “China’s Top Trading Partners,” Investopedia, 9 August 2019.
23. See Zheng Wang, *Never Forget National Humiliation: Historical Memory in Chinese Politics and Foreign Relations* (New York: Columbia University Press, 2012).
24. Barry Buzan and Evelyn Goh, *Rethinking Sino-Japanese Alienation: History Problems and Historical Opportunities* (Oxford, UK: Oxford University Press, 2020), 224.
25. Buzan and Goh, *Rethinking Sino-Japanese Alienation*, 274–76.
26. Buzan and Goh, *Rethinking Sino-Japanese Alienation*, 290.
27. Michal Kolmaš, “Identity Change and Societal Pressures in Japan: The Constraints on Abe Shinzo’s Educational and Constitutional Reform,” *Pacific Review* 33, no. 2 (November 2020): 185–215, <https://doi.org/10.1080/09512748.2018.1540497>.
28. Buzan and Goh, *Rethinking Sino-Japanese Alienation*, 277.
29. On this topic, see Karl Gustafsson, “Routinised Recognition and Anxiety: Understanding the Deterioration in Sino-Japanese Relations,” *Review of International Studies* 42, no. 4 (2016): 613–33, <https://doi.org/10.1017/S0260210515000546>; and Karl Gustafsson, “Recognising Recognition through Thick and Thin: Insights from Sino-Japanese Relations,” *Cooperation and Conflict* 51, no. 3 (October 2016): 255–71, <https://doi.org/10.1177/0010836715610594>.
30. Yohanes Sulaiman, “What Threat?: Leadership, Strategic Culture, and Indonesian Foreign Policy in the South China Sea,” *Asian Politics & Policy* 11, no. 4 (October 2019): 606–22, <https://doi.org/10.1111/aspp.12496>; Dave McRae, “Indonesia’s South China Sea Diplomacy: A Foreign Policy Illiberal Turn?,” *Journal of Contemporary Asia* 49, no. 5 (2019): 1–21, <https://doi.org/10.1080/00472336.2019.1601240>; and Do Thanh Hai, “Vietnam: Riding the Chinese Tide,” *Pacific Review* 31, no. 2 (2018): 205–20, <https://doi.org/10.1080/09512748.2017.1377282>.
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BOOK REVIEWS

The Russian Understanding of War: Blurring the Lines between War and Peace. By Oscar Jonsson. Washington, DC: Georgetown University Press, 2019. Pp. 200. \$98.95 (hardcover); \$32.95 (paperback).

Spending a few hours reading Jonsson's slim but powerful *The Russian Understanding of War* is a useful tonic to "Blurred Lines," a recent U.S. *Naval War College Review* article that forcefully argues that the U.S. focus on "new" concepts of gray-zone conflict and hybrid war represent failures of American strategic thinking and unhelpfully, even dangerously, confuses actual, violent combat with political subversion. Prior to reading Jonsson, this reviewer had enthusiastically forwarded Donald Stoker and Craig Whiteside's "Blurred Lines" to my Marine Corps University colleagues, appreciating the article's rigorous argumentation, foundation in classical military theory and history, and call to keep war, war and peace, peace. To be fair, this reviewer also enjoyed the article's strident "get off my lawn!" condemnation of academic faddishness and claims of originality when Carl von Clausewitz and Sun Tzu said all of this so long ago. According to Stoker and Whiteside, U.S. sloppy thinking on this topic is only compounded by a Russian cynical play to parlay U.S. conceptual confusion to its advantage, both practically, in its own subversion in Ukraine, but also in the broader sense of U.S. thinkers unwittingly legitimizing and accepting Russia's concepts over traditional Western international relations theory and definitions.

But what if Russia, as explained by Jonsson, has struggled at a deep intellectual and military theory level with these blurred lines between peace and war? What if Russian thinkers only gradually and systematically moved to now holding the view that these gray area, politically subversive, information, and economic avenues of attack actually represent a greater risk to Moscow than North Atlantic Treaty Organization (NATO) armored divisions and strike fighter squadrons? Jonsson anticipates Stoker and Whiteside's call for a focus on the antecedents of gray-zone thinking in the military classics and history by his close examination of Russian military thought's evolution from Vladimir Lenin through several traditionalists steeped in Clausewitz, who insisted that war's physical violence made it a fundamentally separate concept from political

competition, and finally to recent thinkers that viewed the Color Revolutions and Arab Spring as a warlike threat to the legitimacy of the Russian regime and its client states in the Middle East. Flipping Clausewitz on its head, Jonsson concludes that Russia has undergone a major revision in its understanding of the nature of war, centered on “a larger focus to the political goal of war rather than its means (the armed violence)” (p. 154).

Jonsson’s Russian language skills, fieldwork in Moscow, and immersion in actual Russian writings no doubt results in some empathy for how Russians think about war—and how some of this thinking is rooted in real fears that the West is exploiting these nonmilitary methods to undermine Russia from within—but he is no apologist for Moscow and soberly returns again and again to Russia’s offensive use of these methods in its near abroad against Georgia and Ukraine as well as within the Western democracies themselves. Based on his PhD doctoral dissertation from the Department of War Studies, King’s College London, his approach clearly is also informed by his service as a researcher at the Swedish Defense University and at the Policy and Plans Department of the Swedish Armed Forces Headquarters. His writing is crisp, clear, economical, and, at 160 pages, well-suited for study and reflection for the busy U.S. policymaker. At the same time, in this age of quick-reaction blogging and commentary, his rigor and grounding in Russian military thought is a delight: there is something to be said for revealing what Russian military thinkers have actually written on “the idea that the main battlespace is the mind” (p. 12).

Jonsson’s core task is to answer the question whether the focus on nonmilitary approaches changed the Russian understanding of the nature of war, and if so, how. His clarity provides a clear guide to what could easily devolve into an ambiguous chore of wordsmithing and even tautological thinking. But he pulls his investigation off, even if he compels the reader to confront such puzzles as nonmilitary means becoming, in the latest evolution of Russian thinking, “so effective that they should be considered violent” (p. 5). This can be puzzling if one approaches, as this reviewer initially did, Jonsson’s argument with the Webster’s definitions of “violence” and “to violate” in mind as being based on “physical force” and “to break,” but Jonsson appears to employ the terms in the broader sense of “to do harm.” And if Western ideas and freedoms on the one hand, or economic sanctions on the other, “do harm” to the Russian regime’s hold on power and dominance over its neighboring countries, then such methods are “violent” and hence a form of war; “war” not in its rhetorical loose sense as a “war on crime” or a “war on drugs,” but in terms of decisive efforts to defeat an opponent and to impose one’s will on an adversary, albeit with primarily nonmilitary, nonkinetic methods.

Jonsson’s case that Russia’s concept of war had been broadened—with war no longer sufficiently defined solely by armed force—is counterintuitively

strengthened by his attention early in his book to Russian thinkers in the early 1960s, who explicitly rejected the possibility of expanding the concept of war to include nonmilitary means. In this same time period, however, Jonsson also surfaces the work of thinkers like Evgeny Messner (1891–1974), an officer who served in the pre-revolution Imperial Russian Army and whose later writings in 1959–60 focused on “subversion war” aimed at eroding the enemy’s moral and societal cohesion (p. 39). Messner’s works were prohibited in the Soviet Union but revived in Russian military thought during the 1990s—showing how this line of thought long predated recent attention to the oft-cited speech in 2013 by Chief of the General Staff Valery Gerasimov on “blurring the distinctions between a state of war and peace” (p. 73).

Reading Jonsson, we are left not with a binary war or peace, but a more troubling sense that the “unarmed means are becoming violent and that they are blurring the boundary of war and peace” (p. 85). Coupling the words “violent” with “unarmed” or nonmilitary is jarring, but Jonsson’s depiction of the Russian regime’s deep-seated fear that the hollowness of its rule will be revealed to its public by Western nonmilitary information and influence campaigns is perhaps the best argument for Russia’s viewing of political and economic subversion, with or without doses of military force, as a warlike threat to regime survival. And as a powerful offensive tool to employ against Russia’s adversaries. One comes away from Jonsson with an understanding that in some ways Russia views itself already at war with the West, making Jonsson’s treatment of Russia’s offensive campaigns—election interference and social media campaigns to “destabilize not only the cohesion in individual states but also the broader West”—as only the early phases in a new long war. Jonsson provides essential insights to Russia’s approach to a war that is likely to endure and tax our resilience . . . and patience.

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This article underwent a security review by the CIA Classification Prepublication Review Board, but its views are the author’s alone and do not represent the official policy or position of the Central Intelligence Agency or Department of Defense.

Note

1. Donald Stoker and Craig Whiteside, “Blurred Lines: Gray-Zone Conflict and Hybrid War—Two Failures of American Strategic Thinking,” *Naval War College Review* 73, no 1 (Winter 2000).

Maxwell Taylor’s Cold War: From Berlin to Vietnam. By Ingo Truschweizer. Lexington: University Press of Kentucky, 2019. Pp. 302. \$45.00 (hardcover).

Maxwell Taylor's Cold War: From Berlin to Vietnam sets out to elaborate four interrelated themes that have been shaping the U.S. national security state since the dawn of its inception: the warfare state, strategy and bureaucracy, strategy in general, and the role of powerful individuals. Even though the book is conceived as a biography of Maxwell Taylor, who served the United States as an exceptional officer, general, and chief of staff, it surpasses a mere description of Taylor's life by giving insight into the broader U.S. Cold War strategy shaped by the events in Berlin, the Korean War, and the Vietnam War. Methodologically, Ingo Tauschweizer's approach could also be applied as a research guideline for civil-military relations in American history before 1947.

Tying these four categories together is one of Tauschweizer's strongest feats: the deep discussion of strategy and war in the sense of Clausewitz or what the Cold War strategist made of the Prussian military theorist. At the Command and General Staff College, Taylor had been taught in 1934 and 1935 that strategy was foremost about winning battles in order to defeat the enemy. The author rightfully hints at this "apparent reductionism" of Clausewitz in 1934 and 1935 and subtly returns to this theme repeatedly in his book (p. 28). World War II, where Taylor served in the 82d Airborne Division, Dwight D. Eisenhower's command of national resources as well as the war theater had taught him that strategy had now become a task for the entire nation (p. 28).

Taylor's reading of military strategy was sound as well as his appreciation of diplomacy. He showed his skills in both dimensions as U.S. commander in Berlin, where he acted as diplomat and general at the same time. As a general, he understood the impossibility of defending Berlin, which had become an island in a Communist red sea, and by extension the impracticality of the defense of Western Europe in 1949. Following his realization, Taylor acted as a skilled manager of Berlin in a precarious and volatile time by sticking to winning the cultural battle between the free world and Communism. Taylor worked with his chief economist Howard Jones and West Berlin's elites to alleviate the housing and economic problems and supply shortfalls resulting from Soviet pressure as well as provocation by Communist organizations like the Free German Youth (*Freie Deutsche Jugend* or FDJ), which held a rally in 1950 in West Berlin. Taylor understood that military actions could quickly lead to political consequences and ordered Western forces to remain calm: "when we have to shoot on a Berlin street, we have accepted defeat to a certain degree. We have lost something we can never get back" (p. 42).

His upbringing, education, and service in World War II had not only made Taylor into a strong military leader grounded in Western values, as concisely shown by the author. Taylor's life and career also brought him to Korea and then to a leading position in the formulation of Vietnam War strategy. His lessons from Berlin and Korea led to him to conclude that a limited war was the only

rational option since nuclear war, “international suicide,” violated Clausewitz’s definition of war as “the continuation of politics by other means” (p. 97).¹ At the White House, Taylor was involved in translating the strategy of flexible response in a Cold War environment to crises around the world, which may have been a sound strategy in the nuclear age but increased the “likelihood of getting drawn into shooting wars” (p. 103). Students, historians, and policy makers are advised to carefully read Trauschweizer’s chapter “Camelot’s Strategist” to fully understand America’s involvement in Vietnam. The White House and Taylor applied the lessons learned from Korea to the evolving struggle in Vietnam to find a deterrent to limited aggressions by a potential enemy without resorting to the nuclear option. President John F. Kennedy embraced the Taylor-Rostow Report from November 1961, which argued for “prompt and energetic action” against Hanoi and “limited actions” according to Taylor (pp. 122–25). Discussing the military options provided to Kennedy and the decisions made by him to “double down on the success of Diem and the Republic of Vietnam,” the author pinpoints with a historian’s acumen the end of 1961 as “a moment of commitment and escalation” (p. 125).

In the early 1960s, the U.S. national security establishment understood that conflicts might arise from Soviet or Chinese aggression around the world and what dangers wars of national liberation might pose. Vietnam featured both, and neither Taylor nor the National Security Council aligned Vietnam War strategy accordingly. While Clausewitz offers valuable lessons for the interplay between military battles and diplomacy in a conventional war, in Vietnam the United States faced a revolutionary war supported by the Chinese and the Eastern Bloc. However, Taylor rightfully noted that counterinsurgency was not unknown to Americans, having themselves fought an insurgency against the British or against insurgents in the Philippine-American War (1899–1902). Although General William C. Westmoreland studied the successful British counterinsurgency in Malaysia in 1964, the author elucidates how these historical examples were either not helpful or ignored, as in hindsight Taylor blamed U.S. intelligence for the downward spiral of the Vietnam War: “Taylor conceded the U.S. government never understood its ally—quite unlike in Korea—and knew next to nothing about North Vietnam and its leaders” (p. 195).

Trauschweizer’s study uncovers worthwhile insights from the history of the Cold War and the Vietnam War for policy decisions in contemporary and future conflicts. Readers are strongly advised to reflect on the 1962 wargames, when Taylor, playing the red team, won in a protracted war against half a million American troops of the blue team in Southeast Asia, but came to the conclusion that war was unavoidable (p. 128). Also at the end of his career, drawing from his experience, Taylor assessed the challenges to the United States and the international order for the 1980s in his book *Precarious Security* (1976).

His analysis of the disruptive powers of demographic change, environmental factors, and religious tensions as well as his recommendations for the security of the United States to properly balance strategic and conventional armed forces, keep a healthy relationship between the executive and legislative branches, and to maintain strong alliances are as relevant today as in the past (p. 201). The last chapter, aptly named “Wise Man?,” assesses Taylor’s life and role in shaping the Cold War, but beyond that teaches the reader about the fallacies of relying too much on the military’s advice in political decisions during war. Here, the student of war and diplomacy is reminded not to read Clausewitz’s famous line that “war is only a continuation of State policy by other means” only in one direction. Clausewitz strongly advises the reader in chapter VI of *On War* to observe the civil-military relationship accordingly: “Experience in general also teaches us that notwithstanding the multifarious branches and scientific character of military art in the present day, still the leading outlines of a War are always determined by the cabinet, that is, if we would use technical language, by a political not a military functionary.”²

As Trauschweizer impressively shows, Taylor was a skilled and experienced military general who successfully acted in Berlin and Korea, understood at least conceptually the challenges offered by a revolutionary war in Vietnam, but neither could he overcome the logic of the warfare state nor the fault line between operational strategy and politics at the White House. Trauschweizer’s book offers the reader an insightful study of Taylor’s life, the Cold War, and invaluable and timeless lessons on the civil-military relationship.

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Notes

1. Carl Von Clausewitz, *On War*, trans. J. J. Graham (New York: Barnes & Nobles Books, 2004).
2. Clausewitz, *On War*.

The Arab World and Western Intelligence: Analysing the Middle East, 1956–1981. By Dina Rezk. Edinburgh, UK: Edinburgh University Press, 2018. Pp. 360. \$110 (hardcover); \$29.95 (paperback and ebook).

With *The Arab World and Western Intelligence*, Dina Rezk presents a thoughtful and insightful reevaluation of the mainstream, near-ubiquitous narrative of Western intelligence failures by analyzing both British and American intel-

ligence thinking, specifically regarding politics, military activities, and leadership of Egypt during the Cold War. In particular, Rezk asks if Western experts have “in some fundamental way” failed to understand the “dynamics, leaders, and culture” of the Middle East, using significant case studies to focus on the “most knowledgeable and powerful intelligence agencies in the world” and their assessments of events in the region. While Rezk acknowledges a growing historiography focused on the period and region that she has chosen, largely made possible by the recent declassification of relevant government sources, Rezk also points out that intelligence is a “missing dimension” lacking in this literature. Rezk uses the lens of intelligence to explore not only what Western governments knew and understood about the Arab world, but how that knowledge was conceptualized, thus presenting a work that combines elements of diplomatic, cultural, and intellectual history—pointing out that scholars of the “cultural turn,” including Edward Said, have yet to bring their methods to bear on this “missing dimension” of intelligence. Accordingly, Rezk sets out to examine how Arab nationalism was perceived by the West, the significance of Arab “otherness” in Western intelligence assessments, and whether or not a “Cold War lens” dominated these assessments vis-à-vis the importance of regional dynamics. All told, Rezk asserts that her work serves both scholarly and professional audiences by evaluating the strengths and weaknesses of British and American intelligence agencies during this period, and by exploring Western perceptions of Egypt’s most notable “great men” of the period—Gamal Abdel Nasser and Anwar Sadat (pp. 1–6).

In the first chapter and, indeed, throughout the book, Rezk offers an interesting analysis of Western intelligence consensus that is divergent from a strict reading of Said. Rezk identifies evidence of attempts by American and British intelligence officials to understand the “foreign thought structure” of the Arab world, including important and valid observations borne out by actual events, and an “evolution of thought” demonstrating a certain awareness and progressive learning among Western intelligence agencies. Rezk does observe, however, that the language of colonization and assumptions of Western superiority permeate these records, foreshadowing the conclusion that the basic assertions of Edward Said were essentially correct but not necessarily accurate in every sense or example (pp. 46–47).

Subsequent chapters flesh out the narrative and purposes as outlined in the introduction in a case study approach that examines such events as the formation of the United Arab Republic (UAR), revolution in Iraq, Syrian secession from the UAR, and civil war in Yemen, etc., all in turn. In most cases, Rezk is able to highlight how Western intelligence agencies frequently did not “fail” to grasp the significance of developments in the Middle East or predict the course of related events with a reasonable level of accuracy. The few failures that did

occur were, in the main, qualified failures affected by various other contributing factors, such as the “failure” of Western intelligence to predict the 1958 revolution in Iraq. Rezk explains how this episode stands as a “tactical” rather than strategic failure, in that British and American intelligence agencies in 1958 had been already aware of various pressures that would prove instrumental in fomenting upheaval and leading to revolution (pp. 79–83, 104).

Ultimately, Rezk brings together robust archival research with a nuanced analysis that challenges and complicates mainstream narratives regarding Western intelligence failures and offers an interesting and refreshing evaluation of Western intelligence decisions and interpretations in conversation with Edward Said’s *Orientalism*. Rezk’s book is valuable for the historian and practitioner alike in that this book offers a rare look inside the intelligence community, in terms of internal discussions, opinions, and positions and the relationship to actual events—how intelligence analysis was or was not responsive to cultural understandings, overwhelming biases, and political currents. Rezk successfully follows through on intentions identified at the outset of her book. Well researched, thoughtfully and cogently presented, recommended.

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The War for Muddy Waters: Pirates, Terrorists, Traffickers and Maritime Insecurity. By Joshua Tallis. Annapolis, MD: Naval Institute Press, 2019. Pp. 280. \$34.95 (hardcover).

Joshua Tallis promises a discussion of maritime insecurity in littoral regions, and he delivers. Readers seeking only to skim the text for important concepts and key words will be disappointed. *The War for Muddy Waters* (hereafter TWMW) is an information-dense book, based on the author’s doctoral dissertation (p. 206). Tallis’s book reveals a categoric grasp of broken windows theory and how it can be used in counternarcotics, countertrafficking, counterterror, and counterpiracy operations in the Caribbean Basin, West Africa, and the Straits of Malacca and Singapore. There are, above all, three themes throughout the book. First and foremost is that (a) TWMW is a contextual discussion, meaning that (b) any interpolation or interpretation of the book ought to be done in the dual contexts of the geography and the implementation of broken windows theory to United States Navy constabulary operations. To tie them together and thereby form theme (c), Tallis identifies both previous themes as elements of maritime insecurity in littoral zones.

Tallis posits that the most efficacious approach to countering narcotics trade, human and drugs trafficking, terror, and piracy is to apply broken windows theory. In brief, broken windows is a social-constabulary approach to community crime prevention and mitigation. Where greater crimes are the net result of a community's or communities' attempts to meet their needs through smaller crimes (e.g., dodging parking tickets, not paying the cable television bill, spray painting car windows) escalating to capital crimes, broken windows seeks to address these small indiscretions by attempting to connect particularly vulnerable inhabitants to social program. This is similar in many respects to a foundational concept of the welfare state.

Littoral zones, regions that extend to the limits of a country's exclusive economic zone (EEZ), and roughly 322 kilometers inland, include 75 percent of the global population and 80 percent of capital cities. Virtually all territory within the littoral zone are at risk from twenty-first century capital ship weapons systems. Maritime insecurity consists in dangers analogous to those experienced in the densely populated, crime-ridden, and poverty-stricken slums of major urban hubs, including New York City; São Paulo, Brazil; and Mumbai, India. Tallis argues that crime originates within these areas as desperate attempts of their inhabitants to meet subsistence needs. What originates as petty crime can evolve into terrorism, human trafficking, and general violence. It is also in these areas where asymmetric conflict—allied combat-capable navies against pirates in a fishing boat, for instance—is most likely to occur.

The U.S. Navy is so staunchly Mahanian in its outlook, argues Tallis, that it is more likely than not to leave close-to-shore activities in the hands of specialists, and he takes issue with this. Mahanian seapower theory emphasizes unconditional zero-sum battles, or in other words certain victory in decisive battles on the high seas. Interdiction is a common means of instigating such a battle. This is not feasible in urban slums wherein much of littoral crime takes place, because littoral crime is of a low intensity nature. Postmodern navies identify the rise of hybrid threats and faces them by ensuring seas are safe for all who use them through supervision and enforcement, rather than through domination. Therein lies the rub: the Navy is a domination fleet, not a constabulary one.

The text follows a context-progressive course, leading from the Caribbean Basin to West Africa to the Straits of Malacca and Singapore and showing convincingly how his construction of broken windows can apply to ever larger geographic areas. Having illustrated in chapters 1–6 the regional similarities between the narcotics trade driven Caribbean Basin to the mass piracy of the West African coast, he proceeds to elucidate on counterpiracy efforts in the Straits of Malacca and Singapore in Southeast Asia. The Singapore Strait is portrayed as being disproportionately important strategically to China, Japan, South Korea, and other states, such as the city-state Singapore, Malaysia, Indonesia, and Bru-

nei, all of which depend on imports of Saudi Arabian oil. The United States uses these maritime causeways to transit to postings in the Middle East.

Tallis continues to illustrate the influence of various states in the region, but while he identifies and references Malaysia's importance as a littoral state, he uncharacteristically fails to explain why it is important. He subsequently fails to identify why it is important, and all but dismisses it out-of-hand (p. 177). Tallis's most significant statement about it is that Malaysia's Maritime Enforcement Agency (MEA) prioritizes policing illegal fishing and protecting Malaysia's tourist industry over combating piracy in Malaysian waters (p. 190). The latter can be approached in two ways. First, the MEA's priorities can be seen as a form of broken windows theory in practice: by clamping down on illegal fishing, it is securing traffic important only to Malaysia's interests and could be seen as restricting piracy indirectly in this way. Alternately, MEA's focus could be interpreted as a distancing behavior, separating it from its littoral-state neighbors in the traits. In this case, Malaysia may pay only lip service to counter piracy efforts: this interpretation is supported by Tallis's observation that Malaysia has only recently acknowledged that maritime piracy in its waters can pose a real threat (p. 194). It is possible that omitting a discussion, namely that Malaysia is no significant loss to the book's overarching thematic discussion. It is similarly possible that merely mentioning Malaysia's stance on counterpiracy operations was considered sufficient exposure by his editors.

Irrespective of the reasons Malaysia was dismissed as an outlier in Tallis's assessment of the region, or of its portrayal as such, the state should have been either ignored entirely, or at the least should have merited at least a page of discussion. As it stands in *TWMW*, Malaysia sits in an analytic limbo, both acknowledged and rejected for no conclusive reason. This omission, intentional or not by Tallis's own design or by any number of editors and reviewers does a disservice to the topic and to Tallis's argument that broken windows theory can be utilized in Southeast Asian littoral regions' constabulary and military efforts. Granted, his discussion focuses on the straits, but since he notes Malaysia as a geographically important state, it should be treated as such.

In every way short of suggesting how nations' navies can actually implement broken windows in their naval strategies, Joshua Tallis has created a comprehensive analytical model from which the implications of employing broken windows theory in the contexts of counternarcotics, countertrafficking, counterpiracy, and counterterror efforts in littoral regions may be examined.

TWMW presents a unique application of broken windows theory to the reader. Transposing a constabulary principle from conventional services and applications on land to an ever-expanding and increasingly complex crime management context on the sea—and making sense of the process—is no small or easy task. There is no doubt in this reviewer's mind that the unfortunate manner

in which Tallis concludes his book is a result of topic fatigue: a second printing, or a second edition some years hence addressing the larger of the book's sticking points, is strongly recommended.

TWMW is not an easy read; it would not likely find its way onto an undergraduate political science syllabus. It would find a more secure footing as a book on a doctoral comprehensive exam, but it is as a reference text for theorists and policy makers that it finds its niche.

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Chile, the CIA, and the Cold War: A Transatlantic Perspective. By James Lockhart. Edinburgh, UK: Edinburgh University Press, 2019. Pp. 224. \$100 (hardcover); \$24.95 (paperback and ebook).

Since 2018, Edinburgh University Press has published the Intelligence, Surveillance, and Secret Warfare Series in which it “explores the full spectrum of spying and secret warfare in a globalized world.” With three titles published and five more anticipated, the series recently welcomed its newest edition, *Chile, the CIA, and the Cold War: A Transatlantic Perspective* by American University in Dubai history professor James Lockhart.

The author launches the reader into the turmoil of 1970s Chilean politics with the abduction turned assassination of Chilean army chief of staff René Schneider, which was ultimately intended to thwart the congressional election of Communist leaning Salvador Allende, who held power from 1970 to 1973. Lockhart then proceeds through an introduction, nine chapters, and a conclusion, each with notes, to make three key arguments. First, that Chile, as a country, with particular attention to Chilean political actors (most of whom are men) as well as activists and guerrillas, decided its own fate as a country exercising its agency as an actor in the Cold War. Second, Chilean affairs influenced inter-American and transatlantic politics, as opposed to much previous Cold War literature that situates Chile as a state acted on by opposing agents from both the American and Soviet spheres of influence. Third, Chile, despite many foreign and domestic intelligence, military, and insurgency operations, “ground conditions in Chile and other Latin American nations were far more influential” regarding Chile’s conduct during the Cold War (p. 7). The book successfully addresses these arguments while contributing to the field.

In the introduction, Lockhart begins by reviewing the variety of perspectives on Chile’s situation and experience within the Cold War, as a state with

limited agency toppled from outside, whether by clandestine American anti-Communist power brokers at the Central Intelligence Agency (CIA) and the White House, an internal conflict heavily influenced by Latin American neighbors such as anti-Communist Brazil and revolutionary Cuba, or a combination of these Cold War variables. Also, Lockhart specifically addresses CIA intervention, which the literature suggests is the key factor in Chile's Cold War experience, is actually less impactful given many of its imposed outcomes simply could not be implemented (p. 7). Given Lockhart's particular interest in Cold War intervention, the book's theoretical lineage draws from a range of Cold War and Latin Americanist historians, particularly Odd Arne Westad, Peter Kornbluh, and Kirsten Weld. Lockhart is especially drawn to Westad, whose "concept of the essence of the long Cold War" and work on Cold War intervention informs much of Lockhart's writing style and intellectual approach to this book (p. 7).

Given this lineage, *Chile, the CIA, and the Cold War* addresses the larger context of Chilean history from shortly after Chilean independence from Spain in the early nineteenth century and situates Chile as the "the England of South America," a constitutional state that although authoritarian was "pragmatic, pro-business, and socially conservative" (p. 19). The author then navigates twentieth century Cold War anti-Communist and pro-democracy politics as well as myriad Chilean political actors with emphasis on Gabriel González Videla, the Eduardo Frei administration, General Roberto Viaux's movement, and the rise of Augusto Pinochet. The author focuses on the deeply complex political maneuvering of these actors as well as American, Latin American, and some transatlantic communication with Chilean leaders, and the political conflict against Communism, all with an eye toward intervention. Lockhart bookends the story with American President Barack Obama's visit to Santiago in 2011 when he faced Chilean calls for a formal apology for American intervention during the Cold War.

Lockhart makes his contribution to this area of Cold War and Latin American history especially well, weaving his arguments together to demonstrate that despite powerful interventionist movements, Chile sustained its agency as an international actor. Lockhart's other contribution is in his use of sources from Chile, the United Kingdom, the United States, and Russian to Spanish translations of Soviet records on the Chilean Communist Party. In particular, Lockhart made use of the American National Archives' expansive collection of recently declassified CIA records regarding its interventionist efforts in Chile. In Santiago, the author accessed collections of international relations, nuclear energy, and human rights records. These construct the intervention narrative, yet the reader is left with further curiosity about the transatlantic perspective component of the book title.

While the title claims a transatlantic perspective, this does not appear well defined in the introduction or apparent at times in the chapters. The author does bring in Spanish postcolonial context as well as Soviet and British perspectives; yet, much of the story is indeed focused, as his argument states, on Chilean agency and American intervention. Thus, the majority are from the United States and Chile, with only one archive consulted in Europe, the British National Archives. Also, his use of periodicals and published primary sources are almost entirely American or Chilean. The author uses American and Chilean sources, expertly weaving them into his tale of interventionism and his argument, though the reader is left with curiosity about the transatlantic component of the book's title, especially outside of Great Britain, given Chile's Spanish colonial past.

Thus, this book is an excellent case study for historians of Latin America, the Cold War, and intelligence studies as well as international relations scholars, political geographers, and political scientists interested in intervention and statecraft. Given the book's arguments and exceptional use of declassified CIA records, the book is a useful and even necessary addition to the literature on Cold War Chile, intelligence studies, and studies of intervention. The narrow focus of the book may limit its utility in teaching though. Graduate seminars on Latin America, the Cold War, or research methods courses would benefit, though may prove more difficult to assign in undergraduate teaching.

Overall, this engaging book makes a contribution to Cold War history with understanding the role of Chile within what Westad calls the global Cold War. Also, the author makes an important argument that empowers the agency of state actors and activists outside the Cold War binary of the United States and Soviet Union. Lastly, the author resourcefully used newly accessible records that help to better narrate how the Cold War came to be and understand the myriad relics it left behind.

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The Marines, Counterinsurgency, and Strategic Culture: Lessons Learned and Lost in America's Wars. By Jeannie L. Johnson. Washington, DC: Georgetown University Press, 2018. Pp. 324. \$110.95 (hardcover); \$36.95 (paperback).

Jeannie L. Johnson's policy-relevant book assesses what the American government and United States Marine Corps have learned and retained, learned but discarded and lost, and failed to learn in counterinsurgency from the early twen-

tieth century to the early twenty-first. General James N. Mattis, who wrote the book's foreword, hopes that her study and recommendations "can serve as catalyst for change in the American approach to counterinsurgency" (p. x). Thus, her book will resonate with anyone dissatisfied with Otto von Bismarck's quip that "what we learn from history is that nobody learns from history." Johnson believes that we can and should.

Marines will find Johnson, a veteran of the intelligence community, well informed. She was in touch with Marines who had served in Southeast Asia and/or the Middle East. She immersed herself in *Leatherneck* and the *Marine Corps Gazette* while conducting her research. She also studied the Marine Corps' *Small Wars Manual* (1940), the U.S. Army-Marine Corps *Counterinsurgency Field Manual* (Marine Corps Warfighting Publication no. 3-33.5, 2006), and the U.S. Army *Stability Operations Field Manual* (Field Manual 3-07, 2008), among other military and scholarly publications.

Johnson divides her book into two parts: The Strategic Cultures of Americans, the U.S. Military, and Marines; and Marines across a Century of Counterinsurgency Practice. The first, more theoretical part, borrows from the Central Intelligence Agency's (CIA) cultural mapping/cultural topography method, which was developed to better understand the behavior of foreign governments. Johnson uses it introspectively to evaluate American and Marine Corps attitudes and inclinations toward counterinsurgency. The second, more empirical part, reconstructs Marine Corps experiences in Central America and the Caribbean in the 1910s and 1920s, the Combined Action Program (CAP) in Vietnam in the 1960s, and counterinsurgency in Iraq in the 2000s.

What Johnson Concluded about Marines' Attitudes and Inclinations

Johnson found that the Marine Corps remained averse to, and thus unprepared to invest and succeed in, counterinsurgency warfare. Complementing historian Russell Weigley's arguments from several decades ago, Johnson learned that Americans preferred the employment of superior force and technology to bring fast, conclusive, and measurable results that conventional strategies brought over the more drawn out, inconclusive, and difficult-to-measure unconventional ones of counterinsurgency. Conventional strategies remained associated with bravery, heroism, and valor, while counterinsurgency has led to incidents of what the author referred to as "Marines behaving badly." This behavior derived from the ethnocentric and racist attitudes Americans tended to take with them when deployed in the developing world, or Global South (Latin America, Africa, and Asia), and that proved embarrassing when exposed in Congress and the press. Neither Americans nor Marines typically dreamed of this when imag-

ining who and what Marines were and what they were supposed to do when carrying out their missions abroad, and so they remained averse to it.¹

Indeed, Johnson identified the narrative storyline that Marines preferred. This storyline privileged conventional operations from the Barbary Wars (where Marine officers acquired the Mameluke sword), the First World War (particularly Belleau Wood, where Marines took the name Devil Dogs), the Second World War (where Marines mastered amphibious assault and raised the flag on Mount Suribachi), and the Korean War (where Lewis B. “Chesty” Puller broke out from the Chosin Reservoir). These remain the kinds of stories that Marines admired. Consequently, this kind of warfighting shaped and conditioned Marine self-image and oral traditions, training regimes, and preparation for future wars during the century Johnson considered.

Although Johnson acknowledged these preferences, there was more to know about Marine attitudes and inclinations toward counterinsurgency than they offered. Indeed, she concluded that many aspects of their identity, norms, values, and perceptions naturally lent themselves to counterinsurgency. For example, Marines’ adaptability and improvisational style served them well. So did their proclivity to tough it out in austere, low-budget environments while getting their hands dirty and suffering hardship without complaining—“doing windows,” as she phrased it.

What Johnson Encountered in Marine Experiences

Johnson reached a mixed conclusion with respect to Marine experiences. The earliest examples—so-called Banana Wars in Central America and the Caribbean—were least effective. American misunderstanding of what Marines could accomplish in the Dominican Republic, Haiti, and Nicaragua and Marine ignorance of local politics, society, and culture, not to mention their racism, inhibited them. This notwithstanding, Marines found valuable lessons about counterinsurgency there, and they committed them to paper in the *Small Wars Manual*. This manual was, however, shelved in the late 1920s and 1930s as Marines focused on amphibious warfare, which they perfected in the Pacific in the 1940s. There was little or no continuity between the lessons learned in these Banana Wars and the counterinsurgency missions Marines were tasked with in Vietnam in the 1960s and early 1970s.

In Vietnam, the United States returned to counterinsurgency, which Marines’ Combined Action Program executed well. CAP platoons and squads were led by highly motivated sergeants and, more often, corporals who worked closely with Vietnamese Popular Forces (PF) in jointly patrolling their rural communities while working on small-scale civic-action projects to improve their lives in a modest, sustainable way. CAP Marines’ rapport with these Vietnamese was such

that they were perceived as defenders—not only against Vietcong insurgents but also against a sometimes abusive central government in Saigon and the larger, more conventional American units that passed through these villages. The problem was that higher echelons in U.S. Military Assistance Command, Vietnam (USMACV) did not value CAP. USMACV also failed to incorporate CAP Marines' intelligence into its planning and operations. This rendered CAP somewhat irrelevant to the overall U.S. effort, leaving some of its Marines frustrated.

In the post-Vietnam period, Marines internalized a great deal about counterinsurgency, but the subject retained only “a junior place” in professional military education and training in the 1980s and 1990s (p. 220). General Charles C. Krulak (Commandant from 1995 to 1999) emphasized two concepts in the years prior to 11 September 2001: “three-block wars” and “strategic corporals.” Both built upon preexisting institutional strengths to produce effective results in Iraq, particularly during the second battle of Fallujah and the Sunni Awakening. Marines dominated these engagements, not only from a military perspective but also from a stability-operations, civil-relations, and press-management point of view. Johnson criticizes some, however, for exaggerating the novelty of this. Had Marines had the historical perspective that she believes they should have, they would have seen this for what it was: an application of lessons learned over a century rather than innovation in the war on terrorism.

Commentary

Johnson's book remains not only about learning from history but also about how transformative leaders need to identify cultural obstructions in organizations like the Marine Corps. For transformative Marine leaders like Krulak and Mattis to create the kind of change they seem to have in mind, they will need to deal with the biases for conventional action and other problems outlined here. Johnson's use of cultural mapping/cultural topography seems a comprehensive and effective way to go about this. Thus, Marines will find this book useful.

Among Johnson's most penetrating insights remains her observation that “US energies and resources have been most effectively spent when in the service of indigenously motivated trajectories already under way. In this sense, it is the US that becomes the force multiplier instead of the other way around” (p. 270). That is, there remains only so much that American counterinsurgency operations, no matter how well conceived, planned for, and implemented, can accomplish in nations like Haiti, Vietnam, and Iraq. The United States, on its own, simply does not have the power and influence to remake these countries when they are not already inclined to remake themselves. Indeed, Johnson showed how Marine intervention, by systematically fostering centralized governments that led to decades of dictatorship, worsened the situation in Central America and the Caribbean.

Johnson could have better contextualized some of her discussions within global-historical frameworks. For example, the Marine Corps' return to counterinsurgency in Vietnam was not simply a response to the insurgency in Southeast Asia in a long context of guerrilla warfare as an isolated phenomenon in world history. Rather, it followed a pivot toward the Global South, where wars of national liberation were raging, and the flexible-response doctrine, which included modernization and developmental aid, Green Berets, and the Peace Corps seemed completely new to Americans in the late 1950s and 1960s. So, the conflict in Vietnam remained a small war, but its context was quite different than the one that framed U.S. intervention in the Caribbean Basin in the 1910s and 1920s. Turning to lessons learned from the banana wars might have seemed as pertinent to Kennedy and Lyndon B. Johnson administration officials and Marine leaders of the time as looking for guidance from the Civil War or the Indian wars of the nineteenth century. This minor criticism notwithstanding, Johnson's book ought to be read by policy makers, Marines, and those who study military and naval affairs.

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Note

1. Russell Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (Bloomington: Indiana University Press, 1973).

Russia and Central Asia: Coexistence, Conquest, Convergence. By Shoshana Keller. Toronto: University of Toronto Press, 2019. Pp. 360. \$52.95 (paperback); \$42.95 (ebook).

Historian Shoshana Keller's book is an ambitious yet carefully composed account of the historical relationship between the peoples of Central Asia and Russia. It is a welcome contribution to the field of Central Asian studies and world history alike, addressing key issues of social, cultural, and political relations with an eye toward military histories. Keller is particularly interested in the forces that shaped this understudied region and led to the contours that we see there today. She manages this successfully. One of the reasons for this success is her skillful organization of the material.

In several hundred pages of tightly written text, Keller explores three themes

that she finds characterize the historical relationships in the region: coexistence—when the various peoples shared the lands, even living through Mongol rule together; conquest—as Russia expanded, incorporating the Perso-Turkic peoples and their lands into its empire; and convergence—when Russians and Central Asians experienced Communism and later post-Soviet occurrences such as economic reform and authoritarianism. Despite examining multiple ethnic, linguistic, and socioeconomic groups between the eighth and twelfth centuries, thoughtful design and a comprehensive structure ensure the quality of the overall work. While the chapters proceed chronologically, the book incorporates concepts and concerns that give the work a thematic coherence as well.

One example of what the author does well includes her treatment of Jadids: local Muslims who made efforts to reform society in the late nineteenth to early twentieth centuries, especially through new methods of teaching, theater, and publishing. She offers the details of this story in an engaging and accessible manner, illustrating her points with excerpts from Uzbek sources. Jadids founded newspapers and wrote articles expressing their concern over the tension between “European encroachment,” adopting “European science and technology” in order to strengthen Turkestanian society, and “traditional ways of understanding the world” (p. 137). One question that remained for this reader was the role of the largely nomadic people—Turkmen, in particular—in this chapter on Central Asian history. Keller notes that when reformist Turkestanians wrote about cultural revival and nationhood, referring to “our nation,” it was not an all-inclusive term (p. 137). The nomadic Turkmen, Kazakhs, and Kyrgyz, Keller tells us, were excluded, but the literature she cites in her bibliography refutes that perspective. A paragraph on the Kazakh contribution to efforts at cultural revival expands the author’s inquiry to a degree, but it does not go far enough to draw broad conclusions about the role of predominantly nomadic groups in the history of Jadidism.

In her study, Keller clearly distinguishes between “Central Asia”—the five Soviet created “-stans” (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) and the larger territory of “Central Eurasia”—the people and lands that stretch from the Caucasus Mountains to Mongolia (pp. 2–4). Yet, she deftly problematizes the names and concepts of these areas and local identities. For example, she interrogates Slavic and Turko-Mongol cultural complexes and offers a helpful Venn diagram to illustrate her points (p. 9).

An important argument Keller makes—and demonstrates by having the confidence to allow so many details to speak for themselves—is that Eurasia’s historical transformations “relied on local actors” (p. 257). Intellectuals and rebels, nomads and princes each contributed in their own ways to regional changes. Yet, as Keller points out, they are “rarely part of our general conversation about the modern world” (p. 1). Keller’s work rectifies this. She points out, for

example, that Central Asians “played active roles” in globally significant events such as the revolutions of 1905 and 1917, and World War I, even if “an active role was not a controlling role” (p. 156).

Keller is well versed in Russian and Uzbek, which gives here access to a wide variety of material, including archival sources in both languages. Her bibliography illustrates her linguistic and intellectual reach, incorporating the latest literature. Though dissertations are not included, presumably because there was already so much to consider.

One aspect of this detailed study that the uninitiated might find confusing is the preponderance of local terms, proper names, and place names. The good-quality maps are welcome aids. Keller wants to be clear, offering names and qualifying terms carefully, but the number of foreign names and terms is large. The list of place names in the index and a glossary are helpful.

Those looking for a comprehensive study of Central Asian history will find this a useful book for a general audience. It is likely to inspire others to tackle the longue dureé of Central Asian history. It will be a valuable resource for students and a reliable tool for instructors.

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LikeWar: The Weaponization of Social Media. By P. W. Singer and Emerson T. Brooking. New York: Houghton Mifflin Harcourt, 2018. Pp. 432. \$16.99 (paperback); \$9.99 (ebook).

LikeWar was published almost two years ago, amid a flurry of other books that capitalized on the 2016 election scandal and explored the way in which social media and the internet have disrupted politics. In this crowded new arena of political analysis, *LikeWar* provides a well-researched survey from the early days of electronic communication through the departure of the internet from its “adolescence” (p. 51). P. W. Singer and Emerson T. Brooking’s research builds on their respective roles at the New American Foundation, funded by the software giants of the Gates Foundation and Google’s Eric Schmidt, and at the Atlantic Council’s Digital Forensic Lab. In 2008, Singer coordinated the Defense Policy Task Force for Barack Obama’s presidential campaign.

LikeWar’s main thesis is that social media both has become a method for fighting war as well as changing the definition of what war is. *War* in the traditional sense considers militaries, empires, and physical and ideological terri-

tories. Most war history and military theory describe individuals who are not political or imperial leaders as subservient and often anonymous in the broader idea. The individual is subsidiary to the warring parties. The authors explain that “today’s fighters have turned social media into a weapon in their own national and personal wars, which often overlap” (p. 19). Singer and Brooking’s emphasis on individual anecdotes and internationally diverse examples highlights an indispensable part of the new field of cyberwarfare. The aggregation of individual experiences in the virtual world of social media influences and sometimes determines the outcome of a political conflict. Singer and Brooking write animatedly to then prove that the internet offers a new medium, definition, strategy, and territory for war. Each of these thematic elements are woven in such a way that the reader garners more information and becomes equipped for the chapter ahead.

At moments, *Like War* provides insight into historical-contemporary parallels and observations of chain effects from social media to the tangible world. At other instances, the author’s personal biases sway the book from informative to zealous. The book begins by describing the evolution of Donald J. Trump’s Twitter strategy from that of a reality-television real estate magnate to that of a political candidate. Examples of Trump’s complications with Russia, his own social media influence, and the Internet Research Agency in Saint Petersburg pervade the book—like a trail of cookie crumbs to maintain a popular audience’s intrigue.

In 2018, *Like War* won bestseller awards from Amazon in the “nonfiction” category. Yes, this book is nonfiction, but the writers also constantly question the meaning of fiction and nonfiction in the age of social media. In their narratives, especially those sensitive to the country’s deepening bipartisan divide, there are gaps in information. In chapter 5, “The Unreality Machine,” Singer and Brooking illustrate an image of young men in Veles, Macedonia, popping bottles of Moët champagne at a nightclub. They describe “Dmitri,” who earns \$60,000 in six months for a network of “clickbait” for Facebook, including “fake news” like “Pope Francis Shocks World, Endorses Donald Trump for President” (p. 120). Who are the clients for this fake news? Are the same people having “Dmitri” advertise fad diets those who are having him generate “fake news”? The authors end this example with an allusion:

At the same time that governments in Turkey, China, and Russia sought to obscure the truth as a matter of policy, the monetization of clicks and “shares” known as the “attention economy”—was accomplishing much the same thing. (p. 120)

The connection is only extrapolated by the reader. Is this for the authors’ security during their investigative research or a loose end for the reader to deter-

mine their own “truth”? Singer and Brooking focus on how social media is used but leave motives ambiguous. Historical references are made to George Orwell, Alexis de Tocqueville, and Carl von Clausewitz’s philosophy of politics, communications, and war. Brief quotes provide supportive padding to the essay’s conclusions but do little to enrich the depth of analysis.

Singer and Brooking integrate so many social media quotes as substantial evidence of their point that their own writing blurs the boundary between Twitter posts. The book then spends three pages on the construction, propagation, and impact of conspiracy theories like #Pizzagate, in which Hillary R. Clinton was accused of running a child sex-trafficking dungeon out of a Washington, DC, pizzeria (pp. 127–29). While the motive of this section was to strengthen a correlation to the Cold War’s information operations like Operation Infektion, examples like these fall victim to the same hyperbolic descriptions that the authors studied.

Areas of the book less embroiled with former secretary of state Hillary Clinton and President Donald Trump contribute durable information to a bipartisan audience—for example the linguistic wordplay strategies on Chinese social media or the comparison of internet shutdown versus “throttling,” in which governments are able to target IP addresses and users to slow down internet access for specific activists or perceived threats. The conversational tone and layman’s terms make the concept and basis architecture of social media, internet access, and censorship accessible to any reader. One-hundred and seven pages of notes and cited sources prove the breadth of Brook and Singer’s research topics from the U.S. elections to Taylor Swift’s fan engagement to Mexico’s drug wars in Tamaulipas to Israel Defense Forces. If you agree to be carried through the book on the wings of lively social media stories and personalities, *Like War* includes several compelling notions that are worth considering by anyone in the field of information strategy. As Singer and Brooking put it: anyone is everyone.

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Phase Line Attila: The Amphibious Campaign for Cyprus, 1974. By Edward J. Erickson and Mesut Uyar. Quantico, VA: Marine Corps University Press, 2020. Pp. 235. Free (hardcover and PDF).

Dr. Edward J. Erickson is a professor of international relations at Antalya Bilim University in Antalya, Turkey. Dr. Erickson is a retired United States Army lieutenant colonel and a former professor of military history from the Marine

Corps University. He has published numerous books and articles about the Ottoman Army in the early twentieth century. Dr. Mesut Uyar is dean of the School of Business and Social Sciences at Antalya Bilim University in Antalya, Turkey. Dr. Uyar is a retired Turkish Army colonel and former associate professor from the University of New South Wales and the Turkish Military Academy. He has published numerous books and articles about the Ottoman and modern Turkish armies.

Erickson and Uyar are certainly right in pointing out that the Turkish amphibious campaign for Cyprus in 1974 has been neglected by international historians for a long time, from that point of view alone their book is a welcome addition (p. 215). *Phase Line Attila: The Amphibious Campaign for Cyprus, 1974* is the first full-length scholarly volume on Cyprus naval and ground operations of 20–22 July and 14–16 August 1974 in English. Thus, a prominent lacuna is filled in the literature of war studies in the Western world. The authors should be commended for undertaking such an enterprise. The book is well written, which makes it easy for the reader to follow the sources, immensely learned, and balanced in narration. The wider issues of nationality and nationalism is left aside throughout the text. The English translations from Turkish remain close to the original. This nuanced and perceptive study offers a fresh perspective both in terms of topic and analytical approach and is argued without any particular political bias being apparent. The bibliography is up-to-date and broadly international in scope and includes not only the expected English and Turkish literature but also the latest publications that appeared in English in Greece. The index is usable. The text is illustrated with 40 well-chosen photos, 12 minutely drawn maps, and 11 tables.

Phase Line Attila is organized chronologically to cover the entire campaign. The book's eight substantive chapters consider salient aspects of its subject matter: a study in amphibiosity; the militarization of Cyprus; planning for the assault, G-5 to G-1; the G-Day assault; consolidating the lodgment, G+1 to G+2; the operational pause, 23 July–13 August 1974; breakout to Phase Line Attila, 14–16 August 1974; and reflections on amphibiosity. These are bracketed by an appropriate introduction and conclusion. Erickson and Uyar are also very careful to define obscure military terminology for readers unfamiliar with such matters.

While relying on a wide array of published document collections, official publications, memoirs, and secondary sources both in English and Turkish, use of voluminous records found in the British Foreign and Commonwealth Office and the United States Department of State archival repositories in London and Washington, DC, could have provided rich material pertaining to campaigns and policy. The contemporary Turkish, British, and American press accounts could also have been beneficial. The importance of the great daily newspapers

of the concerned countries for the close analyses of the diplomatic and military events about Cyprus in 1974 is beyond question. That said, however, the primary focus of the work is not political but military. Thus, national aspirations and international rivalries do not hold center stage, though they are always in the background. Thus, too, American-Soviet displays of power in the Mediterranean do not command significant attention. What the book features, and does so uniquely, is the carefully planned and executed joint operational level amphibious assault in a contested environment. Yet although the authors' focus is clearly on the Turkish side, they do not lose sight of the larger picture.

Phase Line Attila is full of meticulously researched details and is particularly brilliant when it comes to the Turkish planning and execution of amphibious combat operations and military practitioners. In a work such as this one, a few minor slips are probably unavoidable. For instance, Rauf Denktaş did not become the first president of the Turkish Republic of Northern Cyprus in 1985 but on 15 November 1983 (p. 92n7); Anamur is not a suburb but an administrative subdistrict of Mersin (p. 139); commander of the TCG *Kocatepe*, Güven Erkaya, was not captain but staff lieutenant colonel in July 1974 (p.137 photo caption); the Turkish foreign minister's name was not Turhan Güneş but Turan Güneş (p.184). Nonetheless, this is a minor problem, and does not detract from the book's overall value.

One last observation regarding Marine Corps General Glen M. Walters's (, president, the Citadel, Charles, South Carolina) very interesting and personal foreword of *Phase Line Attila*. The characterization that the overthrow of the Cypriot government by a Greek Cypriot military junta on 15 July 1974 was a "pretext" for Turkish intervention is incorrect (p. xiv). The coup d'état was a clearly legitimate reason for Turkish military intervention on Cyprus. Turkey, aiming to forestall this junta's attempt to unite Cyprus with Greece, based its action on article 2 of the Treaty of Guarantee of 19 February 1959, which stipulated that Turkey, Greece, and Britain recognized and guaranteed the independence, territorial integrity, and security of the Republic of Cyprus and also the provisions of the basic articles of its constitution. They likewise undertook to prohibit all activity having the object of promoting directly or indirectly either the union of the Republic of Cyprus with any other state, or partition of the island. Thus in accordance with article 3 of this treaty, Turkey intervened militarily after consulting with other guarantor powers (in this case with Britain) with the aim of reestablishing the state of affairs established by the treaty.¹

It was the hope of Erickson and Uyar that this study stood as a "corrective source in presenting a balanced narrative of an amphibious and expeditionary campaign before it fades even more into obscurity" (p. 215). In that task, they have succeeded most impressively. Anyone who is interested with the naval and airborne operations on Cyprus during July–August 1974 will most assuredly

profit by reading *Phase Line Attila*. It is especially an indispensable aid to Anglophone military historians. This is a handsomely produced book for which Marine Corps University Press deserves special credit for bringing it to publication. It is wished that a paperback version will soon follow, for the book warrants a wide readership.

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Note

1. *Conference on Cyprus: Documents Signed and Initialled at Lancaster House on February 19, 1959* (London: Her Majesty's Stationery Office, 1959), Cmnd. 679.

Winning Westeros: How Game of Thrones Explains Modern Military Conflict. Edited by Max Brooks, John Amble, ML Cavanaugh, and Jaym Gates. Lincoln: Potomac Books, an imprint of the University of Nebraska Press, 2019. Pp. 296. \$29.95 (hardcover and ebook).

Game of Thrones, the immensely popular television series based on the novels written by George R. R. Martin, captivated the world for eight seasons from 2011 to 2019. In that time, it garnered worldwide fascination in dragons, medieval warfare, magic, family quarrels, and political intrigue. Additionally, it exposed the entire world to modern-day concepts normally reserved for academics, scholars, and military professionals. *Winning Westeros*, published in 2019 and written prior to the airing of season eight, bridges the gap between fan and scholar through an entertaining and analytical study of global strategy and modern conflict.

Winning Westeros is divided into four parts across 30 chapters with a foreword by Admiral James Stavridis and an epilogue by editor ML Cavanaugh. The collection is penned by 36 of the most respected authors, academics, and intellectuals specializing in the study of modern conflict. In the foreword, Admiral Stavridis succinctly outlines the anthologies overarching thesis and purpose:

In today's world of series television, there is no more global strategic plotline than that of *Game of Thrones*. . . . There is significant geopolitical and leadership theory, some magic and witchcraft, angry but tamable dragons, walking dead, much swordplay, brutal intrigue, and family quarrels. If you simply equate the magic and the dragons to emerging technology, the

tamable dragons to nuclear weapons, and the swords to guns, it is easy to find yourself in the world of global strategy. (p. x)

Many of the essays are fun and entertaining, some are dry and difficult to digest, but all are informative and enlightening. Each provides a unique perspective on *Game of Thrones* and modern military strategy within the confines of the books easily understood four-part structure.

Part one, titled “People and War,” is a collection of essays focusing on those aspects of conflict, both in *Game of Thrones* and the modern world, which are directly influenced by the human condition. Stated another way, this section is a conglomerate review of the nature of war. Central to this nature are several key elements: friction, uncertainty, fluidity, and disorder. These elements define *Game of Thrones* just as they define modern conflict. Strategic art as exercised by House Lannister, strategic leadership as exemplified in Jon Snow and Daenerys Targaryen, and the evolution of women in combat (e.g., Lyanna Mormont and Brienne of Tarth) are just a sampling of topics addressed in part one that find focus in the human domain.

Essays on the nature of war would be incomplete without a companion study of the character of war. Part two, “Technology and War,” fills that void with an in-depth examination of technology’s influence on the ever-changing character of war. Essays on asymmetric technological advantage, information and data manipulation, weapons of mass destruction (WMD), and the importance of sea power provide a cautionary warning to the reader: “(1) technological advantage is fleeting; (2) all technological advantages leak to the enemy; (3) technological advantages work both ways—for us and against us; and (4) technological advantage disables as well as enables us” (p. 68). In short, technological advantage will continue to shape modern conflict in the same manner that it decidedly shaped the *Game of Thrones* universe.

Part three of *Winning Westeros*, “Combat and War,” is a selection of essays focused on the operational and tactical levels of war and how they can be examined within the plotlines of the *Game of Thrones* universe. When designed and executed properly, these levels of war enable the strategist to accomplish a central political or military end state. “Combat and War” addresses this concept with essays on multidomain strike capabilities (joint fires), psychological warfare, mission command, and intelligence as a warfighting function. These essays provide a sturdy foundation for the global strategy topics discussed in the anthologies concluding section.

Part four, “Strategy and War,” ties the entirety of the book together through esoteric thoughts on strategic thinking and global strategy. Essays exploring the different levels of warfare, strategic storytelling, the importance of rapid force generation, military deception (e.g., the notorious Red Wedding), and strategic

decision making fill the pages with a plethora of quality content in the books closing chapters. The concluding essay, written by futurist author Paul Sharre, challenges readers and military theorists alike to not accept conventional thinking when examining the future operating environment. Comparing the antagonistic White Walkers of *Game of Thrones* to artificial intelligence and robotics, he pointedly exclaims, “[if] scholars of war want to truly understand it, then they must open their minds to the possibility that the nature of war might change” (p. 255). In a world of rapidly emerging technologies, this controversial proclamation intends to aggravate an already heated debate. It is no coincidence that it was chosen as a concluding exclamation mark for the entire anthology.

Winning Westeros provides aspiring military minds an introduction to global strategy and modern conflict concepts. Regrettably, the overarching theme will be lost on those same aspiring military minds if they are unfamiliar with the *Game of Thrones* television series or books. Equally regrettable, *Winning Westeros* was published prior to season eight of the television series. This is the book’s greatest detractor. Season eight introduced a number of plot twists and turns that made many of the essays obsolete and introduced a plethora of material to analyze, study, and discuss. A second edition would benefit greatly from revisions and/or counterargument essays based on the series’ controversial conclusion.

Shortcomings aside, *Winning Westeros* is an efficiently organized collection of essays that finds its strength in the expertise of its authors. Each author leverages their knowledge and experience to explain modern conflict and global strategy using the fictional *Game of Thrones* overlay. George R. R. Martin delivered to the world an amazing fictional universe with captivating and relatable characters. *Winning Westeros* takes that universe that he painstakingly created and offers its readers a worthy academic analysis of modern conflict and strategy. It is a must read for any fan of dragons, magic, siege warfare, global strategy, or modern conflict.

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