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The Heritage Foundation's Rebuilding America's Military Project

Rebuilding America's Military: The United States Marine Corps

Dakota L. Wood



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Refocusing the Corps on Its Primary Mission: Contributing to the Prosecution of Naval Campaigns

About the Author

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This Special Report, the second in a series from The Heritage Foundation's Center for National Defense, addresses the U.S. Marine Corps, its current status, and its efforts to prepare for future challenges.

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Table of Contents

Executive Summary	1
Introduction	7
I. Naval Power and the U.S. Marine Corps	9
II. The Corps: An Overview of the Service	15
III. Environments and Threats:	
The Changing Strategic and Operational Context	
IV. Operational Concepts: Naval Campaigns	
in the Contested Littorals and Implications for the Corps	31
Recommendations	37
Conclusion	45
Endnotes	47

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Refocusing the Corps on Its Primary Mission: Contributing to the Prosecution of Naval Campaigns

To succeed in the one area in which it can act as no other service can, the Marine Corps must be as focused in meeting the challenges of naval campaigns in the Indo-Pacific's contested littoral waters as it was when it developed the amphibious warfare concepts, capabilities, and competencies employed in World War II. The Corps must ask whether a commitment of limited resources adds to its ability to prosecute a naval campaign and helps it to develop the capability to fight and win in the Indo-Pacific's contested littorals. If the answer is "yes," the Corps should move ahead aggressively. If the answer is "no" or "maybe," it should redirect those resources where they will be most useful.

Executive Summary

The primary role of the U.S. Marine Corps is established by U.S. law and Department of Defense (DOD) directive:

The Marine Corp shall be organized, trained, and equipped...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. In addition, the Marine Corps...shall perform such other duties as the President may direct. However, these additional duties may not detract from or interfere with the operations for which the Marine Corps is primarily organized.

Together, the U.S. Marine Corps and U.S. Navy constitute American *naval power*. The ability to project ground combat power by sea is what differentiates the Corps from the Army. Without this capability, there is not much reason to maintain a Marine Corps.

The Corps is currently very good at land-based crisis response missions, contributing to America's

special operations community, conducting sustained land operations in support of U.S. partners, and supporting regional combatant command requirements to work with partner nations to improve mutual capabilities. However, it lacks meaningful experience in and relevant organizations and capabilities for its primary role: contributing to the prosecution of a naval campaign.

The Corps has developed an array of relevant concepts for conducting operations in contested littoral environments, but it has yet to translate its ideas into the appropriately robust training, exercise, and experimentation efforts that are needed to inform the development of material, organizational, and major procurement efforts.

The Corps' high operational tempo has taken and continues to take a damaging toll on its people and equipment, creating pressures that make retention of skilled Marines more challenging and that rapidly age basic equipment, primary platforms, and major weapons. Unfortunately, very few of its operational commitments have anything to do with ships,

conducting amphibious operations, or contributing to a naval campaign.

The Corps' immersion in "other duties" to the neglect of its primary mission has created a dangerous shortfall in America's ability to respond effectively to China's emergence as the major power to be reckoned with in the Indo-Pacific region.

The Marine Corps Operating Concept, published in 2016, established the framework for the Corps' current thinking about the nature of anticipated operating environments and corresponding implications for Marine Corps capabilities. It also assessed the Corps' current condition relative to what it needs to be and to do and concluded that "[t]he Marine Corps is currently not organized, trained, and equipped to meet the demands of a future operating environment characterized by complex terrain, technology proliferation, information warfare, the need to shield and exploit signatures, and an increasingly non-permissive maritime domain."

Two follow-on concepts—Littoral Operations in a Contested Environment (LOCE) and Expeditionary Advanced Base Operations (EABO)—furthered the discussion, restating key tenets of naval power as it pertains to control of essential maritime geography and thereby revalidating the importance of the Corps' role in contributing to the prosecution of a naval campaign. LOCE assumes that "future adversaries may be capable of controlling choke points, holding key maritime terrain, or denying freedom of action and maneuver within the littorals by imposing unacceptable risk to forces at ever increasing ranges." Thus, the Corps needs forces that can:

- "Seize and defend advanced naval bases or lodgments to facilitate subsequent joint operations";
- "Conduct complex expeditionary operations in the urban littorals"; and
- "Conduct amphibious operations...to assure access" for naval and follow-on forces.

As explained in the LOCE paper, "The EABO concept further distributes lethality by providing land-based options for increasing the number of sensors and shooters beyond the upper limit imposed by the quantity of seagoing platforms available." It also "espouses employing mobile, relatively low-cost capabilities in austere, temporary locations forward" in the contested littorals.

Taken together, the Corps' concepts and assigned primary role clearly indicate that the Marines would contribute to the prosecution of a naval campaign by denying the enemy the ability to use the littorals while making it possible for the U.S. Navy to do so. The challenges for the Marine Corps (and the Navy) become inserting forces into areas where the enemy does not want them to be; operating in ways that minimize the ability of the enemy to detect and interrupt operations; resupplying forces that will likely be widely separated (or distributed); reinforcing those forces; repositioning forces as operational conditions demand; understanding what the enemy is doing; and coordinating all friendly activities so as to defeat the enemy's plans. This implies the ability to:

- Move and operate with minimal signature,
- Be tactically effective in many locations at once,
- Sustain the overall operation even as combat attrition takes a toll on force capacity, and
- Leverage technologies so that the human component of the force is optimally employed.

As currently structured, manned, equipped, and supported, the Marines have significant shortfalls in all of these areas.

- The supporting amphibious fleet is limited to a small number of large ships, and only a portion of these would be available for an operation in one part of the world.
- The Marines have few options for inserting and sustaining forces.
- The organizational structure of the Corps may have relevance (platoons and companies), but until tested, the service cannot be sure of this.
- The Corps does not yet possess sufficient weapons or surveillance systems that would help a naval force to gain and exercise sea control in littoral/archipelagic waters.
- The Corps has minimal short-range and no medium-range air defense capabilities.

- The Corps has only one small boat company, stationed in Japan and associated with the 31st Marine Expeditionary Unit (MEU), and it has no real-world combat mission experience.
- The Corps' ability to move combat vehicles and heavy-fires capabilities (such as artillery) is limited to what can be loaded internally or carried externally by a helicopter or carried to shore by current landing craft.
- Non-material elements—tactics, doctrine, organizational designs, training protocols, and institutional knowledge—are effectively nonexistent.

The Corps must reorient its efforts to solve these shortfalls.

In "Rebuilding America's Military: Thinking About the Future," we argued that revolutionary outcomes are achievable through evolutionary improvements that focus on solving actual problems against known or presumed adversaries and, further, that such problems and possible solutions are determined with aggressive and repetitive experimentation. Solutions to problems are found in many forms and include changes in organizations, equipment, and doctrine, among others. Provided below is a set of recommendations that would enable the Corps to prepare itself more effectively for the prosecution of a naval campaign in contested littorals, with a particular focus on Asia as the region of primary interest and China as the pacing threat.

1. Commit to intensive and sustained experimentation.

The Corps has undertaken relevant experimentation many times since the 1990s, but this experimentation has always been limited in scope, scale, and duration. The Corps' current efforts are problematic, constrained by time and opportunities. The Marines need to determine what their most important role is and allocate their efforts accordingly. They need to commit to an Advanced Base Force–like development effort to solve the LOCE problem, making a clear statement that this is their top priority. Amphibious operations are a singular specialty that only the Corps can provide and one that the U.S. will desperately need should conflict in the Asian littorals occur.

2. Develop new ranges for experimentation and training.

Experimentation and consequent training is most effective when it is most realistic: undertaken in settings that most closely resemble anticipated operational environments. The Corps should expand its settings beyond those available at its primary bases in the continental U.S. and the occasional deployment. The Corps should look to U.S. territories in the Pacific because they most closely reflect the archipelagic and congested littoral waters that it would encounter in the Indo-Pacific region.

3. Adjust acquisition efforts to account for tools and platforms directly related to conducting distributed operations in a contested littoral/archipelagic environment.

The Marine Corps should be acquiring anti-ship and anti-air systems and the landing craft, small boats, and combat vehicles that are most useful in getting Fleet Marine Forces ashore and positioned so that they can contribute to a naval campaign. Additionally, logistics is always the linchpin for sustained operations of any sort, and the Corps must continue its efforts to field new capabilities in this area: more resilient and flexible sources of power, unmanned options for resupply, local manufacturing of critical parts and material enablers, and an ability to harvest raw materials locally rather than have finished supplies delivered from external sources.

4. Redefine amphibious shipping and support capability requirements to account for combat operations in a contested littoral environment in support of a naval campaign.

The Corps must work with the Navy to develop smaller, lower-cost ships that are better suited to the type of dispersed operational posture implied by LOCE. The Corps also needs to regain its ability to conduct small-boat operations, a capability that has eroded to near-irrelevance within the service.

5. Create relief in the operating forces.

The Corps must discipline its appetite for action, learn how to say "no" to requests for support when they begin to prevent the service from redeveloping its naval warfare capabilities, and reduce its habit of offering capabilities for use that could otherwise be used to prepare for its primary role.

6. Recoup resources currently committed to secondary, collateral, and additional duties or functions.

The Corps' relentless workload, high operational tempo, and small size (relative to workload) have combined to consume the service's limited resources and prevent it from adequately preparing for its most likely and obligatory contributions to future operations. Current challenges to securing adequate funding to expand the Corps imply that the Marines must reevaluate how and where they are committing the resources they have in order to free them for use in preparing for the future. With this in mind, the Marine Corps should:

- Strongly consider disestablishing Marine Corps Special Operations Command (MARSOC). MARSOC, while a boon to U.S. Special Operations Command (USSOCOM or SOCOM) and doing good work for the country, is an opportunity cost for the Corps. The Marines consistently resisted creating a special operations component until directed to do so in 2006, driven by a shortage of special operations teams needed to prosecute the global war on terrorism following the attacks of September 11, 2001. That national emergency has long been over, and the Corps should redirect its efforts to its primary role.
- Review its level of investment in Marine Forces Cyberspace Command (MARFORCYBER). Cyber capabilities are essential to current military operations and will be even more so in the future, but this does not necessarily mean that the Corps must have this capability organic to the service. It could seek such support from the Navy or any other military service or Defense organization. The manpower commitment to MARFORCYBER might be better reallocated to the Corps' unique role if the function/support can be obtained elsewhere.
- Reconsider its Special Purpose Marine Air-Ground Task Force (SPMAGTF) commitment. As with its other non-amphibious/non-naval warfare commitments, the Corps should reassess the value it gains and provides from permanent SPMAGTF commitments when compared with the challenge it faces in readying for future war in the contested littorals.

Reevaluate its investment in specific types of climate-specific warfighting. Changing geostrategic conditions often call for changes in force preparation and focus. The Corps has a history of fighting in cold weather and mountainous terrain, and war plans during the Cold War anticipated the Marines fighting in Norway or on the Korean Peninsula. Given the relatively small size of the U.S. military and the multitude of challenges the Joint Force must consider in its efforts to prepare for the future, the Corps should carefully assess whether its investment in cold-weather training in places like Norway is more opportunity cost than warfighting benefit when compared with the imperative to prepare for naval warfare in the Indo-Pacific region.

7. Expand integration with the Navy.

The Corps should work with the Navy to establish a formal office, with permanently assigned personnel, that is highly visible to the Commandant of the Marine Corps and Chief of Naval Operations and has as its specific purpose the developing of solutions to the challenges of conducting a distributed naval campaign in contested littoral waters. The Marine Corps and the Navy will have to work together to prosecute any naval campaign in the coming decades. Developing relevant equipment, platforms, tactics, organizations, and procedures must therefore be a highly focused, intentional effort for both services, working in intimate collaboration.

The reemergence of great-power competition will demand the full attention of each of the services. For its part, the Corps must be as focused and disciplined in attending to the challenges of contributing to naval campaigns in the contested littoral waters of the Indo-Pacific region as it was during the interwar period of the 1920s and 1930s when it developed the concepts, capabilities, and competencies for amphibious warfare that were crucial to victory in World War II. It must make the hard decisions that are required to ensure that it succeeds in the one area for which it is obligated and uniquely qualified and in which it can act as no other service can.

In every decision to commit its limited resources, the Corps must return to its "mission statement" and ask two fundamental questions:

Does this commitment contribute to the ability of the Corps to prosecute a naval campaign? ■ Does this commitment help or hinder development of the capability to fight and win in the contested littorals of the Indo-Pacific region?

If the answer is "yes," then the Corps should move ahead as aggressively as possible. If the answer is "no" or is in that muddling, ambiguous middle of "maybe," then the Corps should dispense with it and redirect those resources where they will matter most.

Introduction

This Special Report is one of a series from The Heritage Foundation's Center for National Defense that addresses the U.S. military's efforts to prepare for future challenges. Heritage's Rebuilding America's Military Project (RAMP) means to assess the ability of the United States military to protect the country's national security interests from threats as they and the environment and conditions within which the military will operate change over the next two decades or so.

Preparing for the future is hard even in the best of circumstances: when one is free of distractions, has plenty of resources, and is blessed with talented people working diligently to ensure that the organization is accounting for evolving trends, technological breakthroughs, and expected competitions. But "best conditions" rarely exist, and in trying to predict the challenges of the future, they never do. As Lawrence Freedman has observed:

[The] future is not preordained. This is the main reason why prediction is so difficult. There are decisions yet to be made, even about challenges that are well understood, along with chance events that will catch us unawares and developments already in train that have been inadequately appreciated.¹

Thus, the actual task of preparing for the future becomes enormously difficult because circumstances are so unhelpful in the present and the details of the future are patently unknowable. Yet the services have to try because the capabilities they have now grow old and perhaps less effective, new opportunities emerge as conditions change, and opponents are always working to blunt one's strengths and exploit vulnerabilities.

At present, the military services are constantly engaged in operations that consume time, attention, and resources; are too small and inadequately funded relative to their workload; and are beset with aging equipment, delayed or truncated modernization programs, and creaky supporting infrastructure. The men and women who have volunteered to serve their country in uniform are doing extraordinary work to accomplish the mission in spite of all of this, but their leadership has a maddening preference for betting the future of their services on "big leaps" in capability premised on the promise of some technological

advance that has yet to be proven in real-world use.

Given what is at stake—namely, the future security of the United States—this is a high-risk approach to preparing the military for future battle.

In our first *Special Report* for RAMP, "Rebuilding America's Military: Thinking About the Future," we made the case that there is a better way, that "revolutionary outcomes [are achievable] at less risk through evolutionary improvements that build on each other until transformative tipping points are reached." We highlighted the work of military historians who have documented that:

[P]reparation for the future works best when specific problems are identified and the services focus their efforts on solving them, employing an iterative approach over many years so that pieces of the problem are solved bit by bit and robust experimentation and force exercises discover what can (and cannot) be done, usually leading to revelations that could not have been known beforehand.³

This approach has been adopted in the past, producing extraordinary results in the two decades between the great World Wars and at times during the Cold War when a service would focus on solving current problems—for example, how to defeat Soviet forces poised to invade Western Europe (i.e., threat-based planning)—rather than engage in speculative thinking about what might be possible, as was often the case during the 1990s when capabilities-based planning dominated thinking in the Department of Defense.

This report focuses on the U.S. Marine Corps, its current status, and its efforts to prepare itself for future challenges. It is not our intent to predict specific outcomes, the pace at which adjustments to the force might occur, or how competitors might change their focus and approaches to conflict. Rather, the objective of this paper is to take cues from history, geography, fielded technologies, and what the actual use of force in real-world conditions implies for Marine Corps capabilities in future war—in this case, the realm of naval warfare particularly as manifested in the littorals, the imperative to distribute military power and risk as broadly as possible, and the profoundly important role of the Corps in contributing to the prosecution of a naval campaign.

I. Naval Power and the U.S. Marine Corps

The primary role of the U.S. Marine Corps is established by U.S. law and Department of Defense (DOD) directive:

The Marine Corps shall be organized, trained, and equipped...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. In addition, the Marine Corps...shall perform such other duties as the President may direct. However, these additional duties may not detract from or interfere with the operations for which the Marine Corps is primarily organized.⁴

In a seminal essay published in 1954, noted political scientist Samuel Huntington described the importance of a defining purpose for a military service: "The fundamental element of a military service is its purpose or role in implementing national policy," the "how, when, and where the military service expects to protect the nation against some threat to its security. If a military service does not possess such a concept, it becomes purposeless, it wallows about amid a variety of conflicting and confusing goals...." Further:

A military service may at times, of course, perform functions unrelated to external security [but these are] subordinate and collateral responsibilities. A military service does not exist to perform these functions; rather it performs these functions because it has already been called into existence to meet some threat to the national security.⁵

Huntington was specifically addressing the U.S. Navy, urging it to recognize and embrace its essential purpose: constituting naval power for the nation. But his general point that each service has a defining purpose clearly applies to the Marine Corps too, especially since it is an essential element of naval power, working in concert with the Navy to project national will across and by way of the seas.

The Corps has not entirely forgotten this foundational aspect of its purpose, but since September 11, 2001, it has been focused on the demands of current operations and has both been pulled and become distracted by a range of "additional duties," "collateral

responsibilities," and the allure of new operational challenges like special operations and cyber warfare.

The terrorist attacks on 9/11 spurred the U.S. to mount a full-scale response, sending substantial forces to Afghanistan. While this did not place extraordinary demands on the Corps per se, it did have the effect of focusing the U.S. military on counterterrorism operations. Absent a competing demand for attention, given the collapse of the Soviet Union a decade earlier and Russia and China not yet on the world scene as major competitors, combat operations in Afghanistan captured the full attention of the Pentagon and the military services (though less so for the Navy). A year later, planning for the invasion of Iraq and the overthrow of the Saddam Hussein regime was in full swing, which did place a substantial burden on the Corps since it called for a large-scale conventional war against a sizeable state military.

As Afghanistan and Iraq shifted to protracted counterinsurgency and security/stability operations, both the Marine Corps and the Army became hard-pressed to sustain repeated deployment cycles. The constant use of principal major equipment items, the burden of repeated deployments, and the challenges of maintaining readiness levels while also pursuing modernization programs (needed far earlier than would otherwise be the case due to the constant operational workload) left little time, attention, or resources for thinking about and preparing for any other type of conflict.

But things change. Over the past few years, as operations in Afghanistan and Iraq have waned, freeing Marine Corps units from the incessant toll of constant deployment, emerging geostrategic challenges from Russia and China have spurred the Corps to rediscover its past and consider the role it should play in projecting combat power abroad via the seas. While the Corps has embraced the challenge intellectually, it has found that returning to the sea after so many years ashore is harder than it had perhaps anticipated. Marines who came of age during the 1990s routinely deployed with relatively small (2,200 personnel) Marine Expeditionary Units (MEUs) embarked aboard three amphibious ships that constituted an amphibious ready group (ARG). These MEU/ARG deployments served as crisis response forces useful for evacuating U.S. citizens from threatening security situations abroad, reinforcing embassy and consulate facilities when local security

was deemed insufficient, establishing a U.S. military presence in locales of interest as directed, and providing assistance when humanitarian crises arose due to a natural or man-caused catastrophe.

However, in the post-9/11 world, the Marines, like the Army, needed to focus on counterterrorism and counterinsurgency operations, and this left little room for thinking about their naval future. Complicating matters further, the Navy shrank in size, to include the number of amphibious ships it operated, leaving few opportunities for Marine Corps units to gain shipboard experience. In short, for nearly 20 years, the Corps had less opportunity to gain experience in naval matters and invested little intellectual effort in exploring its role in future naval campaigns.

The Corps recognizes this and is trying to find its way back, but its intellectual rebound has yet to be matched by significant changes in *fielded capabilities*. This is the Corps' primary purpose after all. It is something all Marines learn on becoming Marines, and it infuses all of its public statements, key documents, and the stories it tells itself and external audiences. Of late, however, it has not truly manifested this "truth" as a programmatic, organizational, or exercised reality—at least not at a level that reflects the importance of its historical, and once again needed, contribution to national naval power.

The point to executing a naval campaign is to harness naval power to promote and protect U.S. security, economic, and diplomatic interests in ways that are not possible with other forms of military power. Naval power is one of the hallmarks of a global power. A land power can extend its will into contiguous territory, but unless it possesses a navy, its influence and ability to determine its destiny stop at the water's edge. Conversely, a naval power can go wherever the seas permit (which is most of the world) and can control a land power's access to raw materials and markets that are beyond its natural reach by land. A naval power can constrain the reach, and therefore the growth, of a land power, something that is very hard for a land power to do to a naval power.

Naval power creates and maintains options for a country that is able to leverage it. A landlocked country is limited to the resources it possesses within its borders or that it can trade for or seize from others contiguous to its borders. It has a very limited ability to ensure its current and future security unless it has overwhelming military power relative to its immediate neighbors.

By contrast, a naval power is less constrained by terrain or the goodwill of neighbors through which goods and materials must pass on land. The exceptions to this inherent advantage usually involve maritime chokepoints and near-seas where a competing land power can threaten seaborne transit. A naval power can reach the world if it has a fleet able to sail to distant places and ensure safe passage for materials heading to and from markets. A naval power also has options should a competing power attempt to block it from land access in its home region, as it can trade in other regions via the seas.

A naval power has the advantage of "exterior lines" (broad expanses outside of the enemy's reach) that enable it to reposition forces in ways that create multiple options of attack for which the enemy must account. A naval power fighting a land power can prevent the flow of goods, materials, and resources that come by sea, restricting its land-power enemy to dependence on overland transport that is subject to terrain, fixed transportation networks, and interdiction by long-range fires and airpower.

The ability to use the seas and control access to them on a global scale is a strategic advantage that few countries enjoy. Operating at sea is hard. Winds, waves, currents, and the corrosive effects of saltwater and sea spray play havoc with ships. Operating at sea far from home and for extended periods is even harder. Warships need access to ports to reprovision, refuel, repair, and replenish expended stores such as ammunition and parts, although replenishment at sea can mitigate some of these requirements. Ports that can handle large, deep-draft vessels and that have all of the resources a warship might require are few and far between and must depend on the host country's willingness to approve access.

The farther a warship gets from home, the more dependent it becomes on foreign ports and the more risk it must accept if its access to such ports is threatened. Even if access is assured by an alliance or a partner state willing to provide support, there is still the matter of how close the port is to the scene of action. The farther a ship has to travel, the longer it is unavailable for use in combat. After replenishing, it must then transit back to the battlespace, burning fuel and consuming stores it would otherwise have used to conduct the operations for which it was deployed. This is the chief reason the U.S. Navy maintains currently unmatched at-sea or underway replenishment capabilities designed to keep combatants "in

the fight" while the logistics ships make transits to and from port.

Time and distance also affect the ability of the logistics fleet to keep the battleforce fleet in the fight, and the fewer logistics ships there are, or the more dispersed the battle fleet might be, the harder it is to keep naval combat power applied against the enemy. Options become important, and the ability to operate closer to the enemy, when possible, improves the ability to keep the pressure on him and to sustain fleet activities that improve one's own position while degrading and reducing his.

Distance matters more to a naval power than it does to a land power. A land power at war is challenged by terrain, but its forces can scavenge necessary resources (fuel, food, water, etc.) from occupied terrain. It can also mobilize and send forward reinforcements as long as population and industrial capacity are available. Naval forces operating far from home cannot scavenge resources while at sea and are very hard to reinforce when thousands of miles away. They fight with what they bring and have few options available should supporting fires be needed from outside the fleet. Since the fleet is fixed in size for all practical purposes, any loss from combat action or mechanical failure has a profound effect on the ability of the force to remain effective in a fight.

Conversely, a country that is able to operate close to its own shores has an easier time maintaining presence and supporting naval actions with shore-based capabilities like long-range missiles and maritime patrol aircraft. It has the advantage of "interior lines," able to shift resources as needed quickly and efficiently with minimal interference by an enemy; it can operate within a tight sphere that it controls. But its resources are not infinite, and the more coastline and area of interest it must address, the more thinly its capabilities must be spread.

These competing realities of expeditionary and coastal navies matter a great deal in designing and employing naval forces and have a direct bearing on the role of the Marine Corps as an instrument of naval power. This is where the Corps is an essential contributor: It enables a naval force to secure access to supporting facilities close to the scene of action, to deny an enemy such capabilities, and to project combat power ashore to accomplish military objectives necessary to obtain the political win for which the war is fought. This also includes controlling key

maritime terrain from which freedom of action at sea can be enabled or denied.

Together, the U.S. Marine Corps and U.S. Navy constitute American naval power. To be sure, each service performs tasks unrelated to the other's. For example, the Navy's submarines collect intelligence and provide one leg of the nuclear triad, among many other things they can do from below the sea, and appropriately configured surface ships have been tasked with ballistic missile defense responsibilities and have conducted more cruise missile strikes against land targets than have confronted an enemy navy since the end of the Cold War. Quite separately, the Corps has conducted sustained ground combat operations in places far removed from the seas (for example, in Afghanistan and western Iraq) and can fly from shore bases directly to scenes of crisis without ever touching a ship or drawing on sea-based support. But throughout their history, both services have melded their capabilities to generate combat power that would otherwise have been impossible without such collaboration.

From the founding of the country, U.S. Marines have sailed with the Navy to protect U.S. interests and exert America's will in distant lands. In various instances stretching from "the shores of Tripoli" (in modern-day Libya) to Inchon, South Korea, Navy ships have delivered Marine Corps forces to foreign locales when U.S. citizens, alliance obligations, and unilateral security or economic interests were threatened. In similar manner, the Corps' expertise in amphibious warfare has made it possible to seize key terrain from which naval and air power could be projected still farther.

The Pacific campaigns of World War II are the most obvious examples of the importance of this capability, with land combat forces (the Corps through the Central Pacific and the Army along a southern path), delivered by the Navy, seizing islands and their critical ports and airfields that were leveraged as support bases for further operations against the Japanese. More recently, in November 2001, Naval Expeditionary Task Force-58, under the command of then-Brigadier General James N. Mattis and comprised of amphibious ships carrying the 15th and 26th Marine Expeditionary Units, launched the most distant amphibious assault in Marine Corps history, delivering a combat force 441 miles to secure Forward Operating Base Rhino, a desert airstrip in Afghanistan to be used to conduct operations against the Taliban.⁶

Conducting such operations is not a simple matter. Arguably, amphibious operations are the most difficult of military operations, especially when the likelihood is high that they will be opposed by an enemy whether at the beach, on the way to the beach, or after the landing force has made its way inland. Even under the best of circumstances, it is a complex choreography of Marines and sailors attempting to get themselves, their equipment, and supplies from a ship, through the sea, and onto a beach to push relevant combat power ashore and into a hostile land. It takes an enormous effort to become competent in this specialty, and few forces in history have ever managed it well. Historically, it has defined the Corps and its contribution of an unmatched capability to the U.S. arsenal, something about which Marine Corps General Alexander A. Vandegrift reminded Congress at a pivotal point in the Corps' history, just after World War II.7

This is not to say that the Corps should not do things other than amphibious operations or has been wrong to engage in sustained land operations ashore, whether in Korea and Vietnam or, since September 2001, in Afghanistan, Iraq, and Syria. In war, operational commanders do what needs to be done to accomplish objectives, often using forces designed primarily for one purpose to do something else that is of higher priority. The services reorient to the demands of war accordingly.8 More forces were needed for operations in Afghanistan and, later, in Iraq than the U.S. Army or U.S. Special Operations Command (USSOCOM or SOCOM) could field on their own; thus, the U.S. Marine Corps contributed essential combat power alongside its fellow ground combat forces. It was wholly appropriate to do so since the whole purpose of the Corps is to fight battles on land with its unique role being to provide this ability by getting to the fight by sea, not simply to ride around on ships as an end in itself.

The ability to project ground combat power by sea is what differentiates the Corps from the Army. Without this capability, the U.S., like nearly all other countries, would be limited to moving forces overland (by road or rail) or delivering them to a deep-water port or flying into an airfield and then traversing overland to get to the fight. Without this capability, there is not much reason to maintain a Marine Corps. With this in mind, the Department of Defense has explicitly directed the Marine Corps to develop the tools necessary to fulfill its role within the Joint Force:

- (1) Seize and defend advanced naval bases or lodgments to facilitate subsequent joint operations.
- (2) Provide close air support for ground forces.
- (3) Conduct land and air operations essential to the prosecution of a naval campaign or as directed.
- (4) Conduct complex expeditionary operations in the urban littorals and other challenging environments.
- (5) Conduct amphibious operations, including engagement, crisis response, and power projection operations to assure access. The Marine Corps has primary responsibility for the development of amphibious doctrine, tactics, techniques, and equipment.
- (6) Conduct security and stability operations and assist with the initial establishment of a military government pending transfer of this responsibility to other authority.
- (7) Provide security detachments and units for service on armed vessels of the Navy, provide protection of naval property at naval stations and bases, provide security at designated U.S. embassies and consulates, and perform other such duties as the President or the Secretary of Defense may direct. These additional duties may not detract from or interfere with the operations for which the Marine Corps is primarily organized.⁹

As noted, however, it is hard to do several different missions equally well. Time spent gaining competence in one must necessarily be taken from efforts to get and maintain competence in others. If the Corps is forced to shift its focus and efforts from one thing to another as dictated by circumstances and the needs of the nation, it risks being consumed by current demands for duties that are "other" or "additional" to its primary function and thus losing touch with the purpose for which the Corps exists: contributing amphibious combat power to the prosecution of a naval campaign.

This is where the Corps currently finds itself: very good at land-based crisis response, making important contributions to America's special operations community, conducting sustained land operations in

support of U.S. partners in various theaters, and supporting regional combatant command requirements to work with partner nations to improve mutual capabilities but lacking meaningful experience within the current force at doing the one thing that it is supposed to do and no other force can do: amphibious operations.

Marine Corps officials have repeatedly expressed their concern about the need to regain skills in amphibious operations, but the Corps has yet to translate its concerns into appropriately robust training, exercise, and experimentation efforts that would inform the development of material, organizational, and major procurement efforts and expose a larger part of the Corps to shipboard operations at sea. This is unfortunate, as the Corps is the only service able to support the Navy's efforts to rediscover what it means to prosecute a naval campaign against an enemy in and through lethally contested waters.

Captain Wayne P. Hughes, Jr., USN (Ret.), has long documented the importance of naval power and has intently studied the criticality of various factors that are fundamental to victory at sea, to include the characteristics of ships, the size and design of fleets, the purpose for which fleets are deployed, naval tactics, and how changes in technology affect all of this as they pertain to naval campaigns undertaken for the larger purpose of influencing events ashore. In his landmark treatise *Fleet Tactics*, ¹⁰ Hughes methodically makes the case for naval forces, of which the Corps is an essential part, to focus on the specialized platforms and tactics necessary to win in naval warfare.

Specifically, Hughes goes to great lengths to illustrate how scouting (reconnaissance); concealment

(signature reduction); magazine or munitions capacity distributed across the force; fleet size (the numbers of platforms or units); and dispersion of the force itself are not only essential to combat effectiveness, but increasingly so as a consequence of the impact modern technologies are having on the precision and range of weapons and increased battlespace awareness for the forces employed. The Corps has a key role to play in all of these areas, and if properly focused on this role, it makes possible the effective application of U.S. naval power to secure strategic security interests.

In an era of renewed competition among great powers (the U.S., Russia, and China) and moderate powers that possess important advantages due to geography and relative military power (Iran and North Korea), the ability to project and sustain naval power is a crucial capability, but the dominance the U.S. once enjoyed has eroded since the end of the Cold War. From a fleet of nearly 600 ships in 1987, including 59 amphibious ships, the Navy has shrunk to a battle force of 286 combatants, of which only 32 are amphibious. Is Similarly, the Marine Corps has lost capacity, practical experience, and even institutional understanding relevant to the conduct of amphibious operations. It must regain its expertise in this function if the U.S. is to prevail as a global power.

Before addressing the specific implications of naval maneuver warfare and the corresponding contributions the Corps can make in the prosecution of a naval campaign, we should review the Corps itself: how it organizes for battle and how this helps or hinders its efforts to prepare for the future.

II. The Corps: An Overview of the Service

The active duty Marine Corps is composed of $oldsymbol{oldsymbol{\perp}}$ 185,000 Marines distributed across three divisions of 24 battalions; three air wings of fixed-wing, rotary-wing, and tiltrotor aircraft; an operational/ combat logistics element that makes it possible to conduct operations abroad; and a large supporting establishment that includes service headquarters, recruiting, initial training and various technical schools, and all of the supporting infrastructure (bases, air stations, and maintenance and supply depots) without which one could not have a Marine Corps in the first place. The Marines have also established a special operations component (the Corps' contribution to U.S. Special Operations Command) and a cyber command that both links the Corps with the higher-order capabilities of U.S. Cyber Command (USCYBERCOM) and provides operational and tactical-level capabilities to field commands.

The Corps' structure is consistent with that of other land and air forces. Its ground combat component is arranged in divisions, regiments, battalions, and companies, and its aviation community is composed of wings, groups, and squadrons, all of which are familiar to any military professional. But it has long adhered to an organizing principle—the Marine Air Ground Task Force (MAGTF)—that is unique to the Corps and mystifying to just about everyone outside of the service, at times even causing frustration with other military organizations and certainly for non-Marine senior military leaders in operational commands.

The Corps is dogmatic in organizing and deploying its units as MAGTFs. ¹² The MAGTF concept rests on the idea that any operational unit will have ground combat, air combat/support, and logistics capabilities organic to it, represented in individual units or detachments but all reporting to a single common commander.

A significant selling point for MAGTFs is that all personnel are in the same service and thus share a common culture and history and are rooted in the same doctrine. This enables a MAGTF to provide a full range of capabilities—from those normally associated with combat operations to logistical support functions like power generation, water purification, food services, engineering capabilities, and medical support—with minimal internal friction that would otherwise arise from dissimilar service backgrounds,

The MAGTF also reflects the Corps' culture and operational experience, which prizes the ability to operate independently in remote, austere combat environments with minimal reliance on external support, especially at the outset of an operation.

This organizing principle has enabled the Corps to execute operations quickly, especially when delivered by amphibious shipping, without the delay or frictions that accompany the formation and employment of a joint task force (JTF) with capabilities contributed by the various services. Unlike a JTF-which must be defined, its components identified, notified and mobilized, and brought together under a common command element and then deployed and employed, all while the elements are getting to know one another—a MAGTF arrives ready for action with all of the assets it typically needs and can provide a theater commander with an operational capability within hours of notification. It has proven quite successful in numerous cases, from deploying ashore in Lebanon during the 1980s13 to its deep insertion into Afghanistan in late 2001,14 from providing security support to U.N. humanitarian operations in Somalia in December 1992¹⁵ to conducting disaster relief operations as exemplified most recently when the 31st Marine Expeditionary Unit anchored U.S. relief operations on Tinian in the wake of Typhoon Yutu.16

Even small packages of Marine Corps units are organized around the MAGTF construct. When a deployment calls for something less than a battalion or heavily favors a particular aspect of capability, the Corps will deploy a Special Purpose MAGTF (SPMAGTF).17 Examples of this can currently be seen in Special Purpose MAGTF-Crisis Response-Central Command (SPMAGTF-CR-CC)18 and Special Purpose MAGTF-Crisis Response-Africa (SPMAGTF-CR-AF),19 the SPMAGTFs permanently organized for crisis response missions in the U.S. Central Command and Africa Command areas of responsibility, respectively. With the nearly complete fielding of the MV-22 Osprey, a small MAGTF can self-deploy a thousand miles or more on very short notice. If accompanied by KC-130 cargo/refueler aircraft, the unit can deploy with more equipment and supplies at even greater ranges. Regardless of its size, however, or the weighting of the force among its ground, air, and logistics components, it is always referred to as a MAGTF.

To be clear, the MAGTF construct has proven effective, cohesive, and reliable in innumerable instances, both before its formal adoption in 1962^{20} and since then. Its single service culture and familiarity among the constituent parts, gained through habitual affiliation and carefully programmed training iterations, makes planning and executing tactical actions more efficient than would otherwise be the case with an *ad hoc* task force.

As good as the MAGTF has proven to be, however, the Corps still needs to broaden its thinking about organizational design so that it is at least willing to explore ideas that do not fit neatly into the MAGTF model or perhaps even the long-established internal structures of companies, battalions, and regiments. For example, future battlefields, especially if part of a naval campaign that includes the littorals or archipelagic waters of much of the Indo-Pacific region, may be dealt with more effectively by combat formations that are "flatter" and possess many more employment elements capable of pseudo-independent operations, reporting to a single higher headquarters.

The Corps' insistence on maintaining an organic capability set in every functional area for every deployment can create obstacles to thinking about different organizational constructs that might be better suited to different tactical settings. At times, an operational commander may want just a piece of what a MAGTF would normally bring, perhaps just a platoon or company of infantry Marines or a detachment of helicopters. The Corps typically pushes back against such requests, citing its longstanding practice of providing a "complete package."

It could also be that a specific mission or a particular approach to arraying military power lends itself to discrete elements drawn from one or more services depending on which can provide the best option for the task. Historically, when a force is "task organized" for a particular mission, it is constructed to possess the things that must be organic to get the job done, while various supporting functions are provided by other forces as needed. These "task forces" are understood throughout the U.S. military, are highly flexible by definition, and are structured to accomplish a specific task with specific tools or capabilities.

If the Corps is to determine what it needs to succeed in warfare in the littorals, especially as a key contributor to the prosecution of a naval campaign—its primary function—then it must approach concept development and experimentation with an open

mind, unconstrained by its dogmatic adherence to the MAGTF organizing and employment principle or established forms of basic combat units. It could very well be that Marine Corps forces employed as Fleet Marine Forces²¹ (i.e., integral components of an operational naval force) contributing to a naval campaign are organized and employed as air–ground task forces after all, but the Corps should not presume this before experimentation proves the efficacy of the approach.

Organizational issues aside, the Corps maintains a steady operational tempo that it says is unsustainable, although it has maintained it for 15 years or more. The service prefers a deployment-to-dwell ratio of 1:3 for its units and individual Marines, which means that for every period of time operationally deployed, three are spent back home. However, for several years, the Corps has dealt with a ratio of 1:2, 4 with its units constantly engaged in being deployed, recovering from deployment, or getting ready to deploy. This leaves almost no time for anything else like training on skills other than those most likely to be needed during the next deployment, engaging in larger experimentation efforts, or relearning what it takes to operate at sea and conduct amphibious missions.

This constant operational footing takes a toll on people and equipment, creating pressures that make retention of skilled Marines more challenging and that rapidly age basic equipment, primary platforms such as planes and vehicles, and major weapons. Both of these situations generate large costs: in manpower, the cost to recruit, train, and retain people, and in matériel, greater costs in maintenance, operating expenses, and premature replacement of worn-out gear.

The Corps' challenges are not unique; rather, they reflect the challenges with which all of the services are struggling. Where they are unique to the Corps is in the impact they have on the Corps' ability to focus on its primary mission. As noted, the Corps is very busy trying to fulfill an insatiable demand for its forces. SPMAGTFs for Europe, Africa, and the Middle East; rotational training/presence forces regularly cycled to the Black Sea region and Australia; coldweather training in Norway; Marine Expeditionary Unit deployments to the Mediterranean, Indian Ocean, and the Western Pacific; ongoing operations in Syria; special operations in Africa, the Middle East, and the Indo-Pacific region; bilateral training events with partners in the Americas—the list is long.

But very few of these have anything to do with ships or conducting amphibious operations, especially with a focus on warfighting, which calls to mind Huntington's caution about subordinate and collateral duties crowding out a service's primary function or role. The Corps does all of these missions very well, but in practical terms, they are tasks that are also performed by elements of the Army and special operations community. Where the Corps is not spending much time is in amphibious operations, the one area for which it is obligated and uniquely qualified and in which it can act as no other service can.²⁵

The Corps' immersion in "other" tasks to the neglect of its primary mission has created a dangerous shortfall in America's ability to respond effectively to China's emergence as *the* power to be reckoned with, both in the Indo-Pacific region now and possibly on a global stage in the near future. Lacking a credible

ability to contest swathes of strategic maritime geography that are critical to China's rise, the U.S. will find itself ceding influence within and, in practical terms, the ability to shape a region that has every potential to be the center of economic activity for the next century and thus essential to the long-term viability of the United States.

The Corps has adapted to changes in its environment in numerous instances over its 243-year history. It is on the cusp of another dramatic change, and its attention, focus, and investments over the next several years will mean the difference between success and irrelevance. Given the stakes in play, it is useful to review how the world around the Corps is changing and how these changes should be affecting its thinking about its own efforts to adapt.

III. Environments and Threats: The Changing Strategic and Operational Context

In January 2018, Secretary of Defense James Mattis released the 2018 National Defense Strategy (NDS), setting the tone, focus, and foundation for the Department of Defense in general and the military services in particular. The most important sentence of the document is this: "The reemergence of long-term strategic competition, rapid dispersion of technologies, and new concepts of warfare and competition that span the entire spectrum of conflict require a Joint Force structured to match the reality." In addition:

Long-term strategic competitions with China and Russia are the principal priorities for the Department, and require both increased and sustained investment, because of the magnitude of the threats they pose to U.S. security and prosperity today, and the potential for those threats to increase in the future....

Modernization is not defined solely by hardware; it requires change in the ways we organize and employ forces. We must anticipate the implications of new technologies on the battlefield, rigorously define the military problems anticipated in future conflict, and foster a culture of experimentation and calculated risk-taking.²⁸

The NDS reflects both the cyclical nature of geopolitical affairs—the "reemergence of long-term strategic competition"—and the imperative to put serious, thoughtful effort into understanding how the world of military affairs changes and to invest commensurate resources, notably in experimentation, to find solutions to real rather than imagined problems.

This reminder that the world changes and that the military must be able to adapt as necessary is itself a cyclical issue. The U.S. military, and especially the Marine Corps, has regularly had to assess changes in geopolitical affairs, technologies, and U.S. interests for their implications for military affairs, and conditions can change dramatically between and even during wars. The forces that best figure out what it all means win, and those that fail to do so suffer defeat.

In December 2011, the last U.S. military units completed the withdrawal of the United States from Iraq, ending eight and a half years of combat operations.²⁹ During the period, Marine Corps units, alongside the

Army, engaged in intense ground combat as occurred in Fallujah and Ramadi, but most combat actions were skirmishes with insurgents and counterattacks in response to ambushes incident to security patrols. In fact, skirmishing characterized the majority of military actions over the past two decades. The last major, conventional combat action involving combined arms maneuver against a heavily armed state military was the invasion of Iraq in 2003.

Both types of military action—conventional war and irregular conflict—are challenging, risky, and lethal, but they differ significantly in the types of activities a force must undertake, and neither can be approached half-heartedly. As the U.S. military painfully learned between 2003 and 2006, counterinsurgency is every bit as complex and lethal as "big war" (for those directly involved) and demands a service's full attention. Such shifts between forms of war are highly disruptive and generate a great deal of debate within and around the affected services.³⁰

Big conventional wars do not occur often even if they do occur regularly. In "big war," the stakes are high, the weapons employed are extraordinarily destructive, and the complexity of orchestrating the large forces involved places great demands on the people involved. It is a form of war at which the U.S. excels, and its scale and intensity define the generation that wages it. The experience is so profound that it shapes one's perspective with regard to what war is. The U.S. military acquires such experience in largescale combat (and what it takes to execute it) about once every generation, but in the intervening years, such knowledge is lost in practical terms and has to be regained. Those with personal experience leave the military and are replaced by those whose only knowledge may come from the classroom and limited field exercise. Even for those who do spend a lengthy career in service after such a war, their personal understanding is framed by their status at the time of action: A Marine may be promoted three or four times in the 15 or 20 years between major conflicts, so when the next war occurs (if the Marine is still on active duty), his or her practical reference point is an experience that likely occurred two decades earlier.

Of course, the way to mitigate this problem is to study and exercise the skills needed for "big war" as a matter of routine, but the U.S. military has a hard time doing this because of the different demands placed on its time and an unfortunate tendency to get distracted by preferred matters and lose its proper focus on necessary matters like the continued study of war, intensive experimentation, and realistic training for tasks other than those of immediate concern on the immediate battlefield. In our current times, the vast majority of Marines are consumed by operations against irregular forces for nearly the entirety of an average military career.

Not surprisingly, the same condition accompanies experience in irregular warfare, especially given its duration due to its nature. It extends far longer than a conventional war and is frustrating because of its difficulty to resolve, and the percentage of a force exposed to it over time is arguably higher because of the rotational nature of force employment, thus making the experience of the force as a whole more protracted. As is the case with "big war" for those who wage it, irregular wars define the view of those who are veterans of them. In either case, it makes shifting from one type of conflict to another quite difficult.

Specific to the Marines, the last time major amphibious operations were planned occurred nearly 30 years ago in 1991 when the U.S. previously engaged Iraqi forces in battle. At that time, the Corps was tasked to plan for a major amphibious assault into Kuwait, which was occupied by Iraq. Executed as a demonstration operation—that is, going through all of the motions one would normally expect for such an assault without actually landing in order to deceive the Iraq military into reacting to it, which it did, thereby tying up 10 Iraqi divisions³¹ that otherwise would have been available to respond to the main effort—the U.S. Army's flanking movement launched out of Saudi Arabia. The action involved 18,000 Marines³² spread across 36 amphibious ships³³ and an extraordinary amount of planning and coordination involving all of the services and various senior operational commands. There are few Marines still on active duty who can cite that as a personal experience.

Before Operation Desert Storm, the reference for sustained operations ashore was Vietnam, but it ended nearly 20 years before the Gulf War, 30 years before Operation Iraqi Freedom, and almost a halfcentury ago for those who are busy in current operations in Afghanistan, Iraq, Syria, and elsewhere.

In the years between wars, and even during their run, conditions change dramatically. New technologies are developed that change what military forces are able to do; major states rise and fall; crises occur in different parts of the world and carry with them implications for force posture, terrain, and participants. U.S. security interests shift accordingly. Thus, what is learned in one major war may or may not be relevant to the next and may have little applicability in the multitude of minor crises that keep the military busy in between wars, and vice versa.

The size of the military changes as well, with profound implications for today's Corps. Vietnam and even the Gulf War took place when the U.S. military was sized for global operations against the Soviet Union. The U.S. had to be in many places and in sufficient numbers to counter Soviet activities, deter the Soviets from acting opportunistically, and strengthen and reassure allies. The U.S. Army was nearly 800,000 soldiers strong in its Active component, large enough to maintain 200,000 soldiers in Europe in addition to forces maintained in South Korea and Japan in the 1960s, '70s, and '80s.³⁴ Although the Marines were part of all major war plans, the Army carried the primary burden in multiple theaters for land combat, thus freeing the Corps to handle mobile naval forward-presence and crisis response missions with the U.S. Navy. The Army held terrain and deterred the Soviets while the Corps responded to emergent crises.

Following the Cold War, even though U.S. forces were reduced in size, they were sufficient in size to deal with numerous crises because there were no major competitors capable of seriously challenging U.S. interests. The Soviet Union was gone, China had not yet emerged as a significant power, and North Korea had not yet acquired nuclear weapons. As was much reported at the time, the U.S. stood alone as the "hyper-power," a rare occurrence in world history.

To repeat, during the Cold War and the 20 years or so that followed, the Army was large enough to credibly deter major competitors in at least two theaters, making it possible for the Corps to support other national security interests in concert with the Navy. As noted, however, following the end of the Cold War, the U.S. military underwent a substantial reduction in size. The U.S. Army presence in Europe was reduced from nearly 200,000 to just 26,500. The Soviet Union collapsed, and with it the Warsaw Pact coalition, but so too did the size and quality of NATO militaries as member states shifted their investment in forces necessary to defeat a Soviet invasion to domestic social programs.

Unfortunately, the reemergence of Russia as a serious military presence in European affairs in the past few years has not been met by a corresponding increase in NATO forces and capabilities. The result is a weak posture that is worsened by the minimal presence of U.S. forces. Meanwhile, the Marines not only shrank along with the other services, but took on additional missions even while the bulk of the force continued to focus almost exclusively on irregular warfare.

Turning back to the NDS, world affairs have come back around to competition among major state powers at a time when the U.S. military is much reduced in size; its presence abroad in key regions is similarly reduced (and that of allied forces even more so after years of neglect); and U.S. operational experience is framed by military action against irregular forces that lack any of the capabilities possessed and being modernized by China and Russia.

It has taken almost the entirety of the U.S. military, including National Guard and Reserve elements, to sustain unit rotations for large-scale operations against insurgents and terrorists in Iraq and Afghanistan. A war with Russia in Europe would likely consume everything the present Army has, including forces committed elsewhere as in South Korea. In a world of greatly increased tensions involving both Russia and China, U.S. leadership would have to decide where to commit the Army and probably much of the Air Force. The geography and terrain of Europe would be handled best by Army forces, and this is where the Army should focus its war preparation efforts.

In like manner, a war with China would involve competition across vast stretches of ocean and archipelagos in the Indo-Pacific, and this should attract the full attention of the Navy and Marine Corps, which are best suited to operating in this environment. While the defense community has discussed the potential for Army contributions in this theater—theater missile defense, short-range missile and rocket fires, and perhaps developing a modern version of coastal defense capabilities—it would necessarily detract from the force capacity desperately needed to counter Russia in Europe.

The Pacific region, especially all of its many islands, is an area within which the Corps (and even the Navy) has had limited numbers and experience for a considerable period of time, notwithstanding the contributions made by naval forces in numerous disaster relief

operations and the III Marine Expeditionary Force's work with Japan, South Korea, and other allies and partners in the region. The Corps still deploys MEUs with Navy ARGs, but in relation to the size of the Corps and the experiences accrued by most Marines over the past two decades, amphibious operations, exercises, training, and even education are in short supply. Very little of the present Corps has direct experience with shipboard deployments and meaningful time at sea. The state of the Navy's amphibious fleet is a major contributor to this shortfall.

In 1990, the U.S. Navy had 59 amphibious ships,³⁷ making it possible for the Marines both to operationally deploy and to conduct unit training and force exercises. Today, the Navy has 32 amphibious ships,³⁸ of which approximately half are available for use (globally) at any one time, and then only for preparation for deployment and actual deployments. This shortage of ships was cited by the Government Accountability Office (GAO) as "the most prevalent factor...that hampered training completion" for Marine Corps forces attempting to regain amphibious warfare skills³⁹ and was a major factor in the Corps' decision to field crisis response forces that were not dependent on the availability of amphibious ships.⁴⁰

This also has a bearing on connecting the Corps institutionally and culturally to operations at sea, on Marines gaining a feel for and experienced-based understanding of amphibious operations. It is one thing to study amphibious operations in school and quite another to earn the experience of embarking aboard ship, becoming part of the routine of a ship underway. Commanders and planners need to practice the skills needed to move a force from ship to shore and to understand how the Corps contributes to the exercise of naval power in a campaign against a major enemy: using the sea and maritime geography to deny the enemy freedom of movement, the ability to sustain his operations, and the ability to project power at range while providing these advantages to the U.S.⁴¹

To provide some historical context, it is perhaps useful to note that between Desert Storm and Iraqi Freedom, the Marine Corps fully focused on MEU deployments and the routine rotation of units between the U.S. and Okinawa, Japan, committing 18 of its 27 battalions (and associated aviation and logistics units) to this effort roughly every 18-month period or six battalions in an active, planned deployment on any given day.⁴²

The Corps can do many things and has performed all of its assigned tasks quite well. But, recalling Huntington, it should not allow its "other" tasks to distract from its primary function as "fleet marine forces" tasked "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."⁴³ To the extent that it does allow itself to be so distracted, it contributes capacity to roles being performed by other forces, like the Army and special operations community, but loses its ability to perform a role that only it and no other force can perform.

Which brings us to today's Marine Corps and its efforts to transition from one era to another. Historically speaking, this is not an unusual challenge for the Corps.

A Brief History: The Corps' Adaptation to Changing Conditions

In his sweeping history of the U.S. Marine Corps, Allan R. Millett characterized four major phases of primary activity and focus for the Corps:⁴⁴

- **Phase I: Continental,** stretching from the opening of the American Revolution through the early 20th century. During this phase, Marines served primarily as ship guards and secondarily as infantry useful for boarding ships, repelling boardings, and carrying on land actions as deemed necessary by the ship's captain.
- **Phase II: Colonial,** beginning with the Philippine–American war in 1899 through Shanghai in 1941. U.S. Marines served as naval forces engaged in prolonged overseas interventions ashore.
- Phase II: Amphibious Assault, from after the Spanish–American War of 1898 until the present (as of 1991 when the history was published). During this period, the Corps' signature role was to seize and defend advanced bases to contribute to a naval campaign, a purpose formalized by creation of the Fleet Marine Force.
- Phase IV: Force-in-Readiness, subsequent to World War Two and running until the present. This is the daily work undertaken by the Corps in periods between major wars, "particularly outside the European continent."

A variety of factors drove the Corps to be what it was and to do what it did during each of these periods. On some occasions, it was a specific need that was not being met or could not be met with Army or Navy forces as they were constituted at that time. At other times, it was an external threat that had to be addressed, accompanied by the opportunity for the Corps to further its service interests. More often, it was simple competition with the Navy and Army, which often attempted to have the Corps disbanded or relegated to duties that posed less of a threat to their own funding and influence. Chance also played a role in bringing attention to the Corps, and with it came important public support that translated into funding and influence (much to the frustration of the Navy and Army). 45 But on each occasion, the Corps assessed its situation and, through hard work, imagination, determination, and no small amount of swagger, did what it needed to do to succeed in spite of the challenges before it.

Last updated in 1991, Millett's history does not account for the many events that have occurred since then, including the breakup of the Soviet Union and the end of the Cold War; the United States' unipolar moment during the 1990s (and a bit beyond); or the attacks of September 11, 2001, and the subsequent global war on terrorism. It also predated the overthrow of Saddam Hussein and the subsequent sustained operations in both Afghanistan and Iraq. Nor does it account for the rise of competing powers addressed in the 2018 NDS-Russia, China, Iran, and North Korea—or the dramatic expansion of Special Operations Command and the related consistent use of special operations forces globally and how all of this has affected the Marines, as well as the reduction in size of the U.S. military following the end of the Cold War and the toll that post-September 11 operations have taken on the equipment and personnel of the military.

Yet Millett's history of the Corps' ups and downs could easily extend to describe the current phase of Marine Corps activities: a mixture of small wars and force-in-readiness posture as the Corps tries to determine the implications of the return of great-power competition and how the service might contribute to naval power in a highly contested operating space.

As it did as the 19th century turned to the 20th, the Corps is once again assessing the implications of a naval campaign across the vast stretches of the Pacific. Though China possesses modern weapons

of great range and precision and is investing heavily in hypersonic weaponry and endeavoring to amplify the effectiveness of its current capabilities with artificial intelligence, quantum computing, and cyber, this challenge in many ways is no different from the challenges the Corps assessed during the 1920s and 1930s, because competition between forces is always relative. Sensors, range, accuracy, and mobility were less than their counterparts today, but both sides were dealing with the same technologies. These attributes are more advanced today, but both sides seek to exploit them. China has a better ability to detect enemy forces at greater ranges and to deliver weapons at those ranges with extraordinary accuracy, but its inventory of such weapons is limited. And U.S. forces have better mobility than they did nearly 100 years ago; their weapons are cutting-edge; they are able to leverage their own cyber capabilities to frustrate China's command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems; and if employed properly, they can overwhelm China's ability to focus its efforts in any one area by presenting a variety of threats from many different directions.

That is what competition in warfare is all about: not ceding any advantage to one's opponent, making necessary investments in operational concepts and related capabilities that give one advantages and deny the same to the enemy, and being willing to adapt organizationally so as to align the institution and operational units with the tools and techniques that are best suited to winning in combat.

Unfortunately, the Corps is perhaps challenged more by self-generated constraints that inhibit its willingness and ability to adapt as it must. In its efforts to do everything, it has spread its finite resources (time, attention, units, platforms, and budget) across so many things that it cannot focus sufficiently on any one area. It lacks a unifying vision or purpose—the very thing that is most important when circumstances are least certain.

If there is one thing that the Corps can do to posture itself most effectively to prepare for the future, it is to define what it can (and should) contribute to U.S. military power that no other service can contribute. It should not attempt to be a contributor in all areas of military operations. Regional combatant commanders will always have validated requirements that exceed what our current force structure can satisfy, because such demands are insatiable.

Special operations forces have never before been in such demand as they are today, and cyber seems to be regarded as the must-have organic capability without which a force is doomed to fail in war. More can always be done to improve the capability of partners, shape security environments, preclude minor challenges from becoming major national security problems, forestall the expansion of a competitor into some new area, or gain better awareness of some region. But by trying to do everything, to respond to as many requests as it has resources, the Corps is failing to assess risk to strategic national security interests, determine what is necessary to generate and maintain its unique ability to contribute to naval power, and differentiate itself from the Army and the special operations community.

Much as it is today, the Marine Corps found itself on two distinctly different paths during the two decades between World War I and World War II. By the late 1930s, the Corps had been fully engaged in its Colonial Phase for 40 years, punctuated by its 15-month involvement in World War I (June 1917-November 1918).46 The exploits of the 4th Marine Brigade,⁴⁷ in particular, became part of the Corps' legend even though the vast majority of the Corps' experiences was in "small wars" stretching from the Philippines to Nicaragua and to Shanghai. Yet as significant as World War I was for the Corps' coming of age in a "big war" role, and as busy as the Corps was kept with deployments to various smaller-scale conflicts around the world, 48 it was also aware (along with the Army and Navy) of Japan's growing imperial interests in the Western Pacific. The Corps joined its sister services in considering what would be necessary to project naval power across the Pacific should the U.S. determine that its own interests were at stake, and it invested substantial resources in trying to figure out how to solve the problem of landing combat forces on a foreign shore.

Two key documents took shape during the 1930s that reflected these two tracks—landing or amphibious operations and "small" or expeditionary wars—with both initial editions published within a year of each other. In a sense, one looked back to capture lessons from the Corps' decades of experience in "small wars," while the other looked forward, capturing insights from a range of experiments and exercises undertaken to determine new methods for executing the amphibious operations needed to move naval power forward across oceanic distances. *Tentative*

Manual for Landing Operations (1934)⁴⁹ and Small Wars Operations (1935, later revised and issued as Small Wars Manual in 1940)⁵⁰ were the products of intensive study, institutional focus, and a commitment to figuring out how to solve very difficult problems. In both cases, the Corps set aside the resources necessary to develop practical doctrine grounded in proven techniques. This led to organizational designs, employment methods, and related material requirements from the care, use, and feeding of horses and the utility of automatic weapons to landing craft and amphibious combat vehicles that made possible the seizure and defense of advance naval bases. The Corps was successful in bridging current and future demands because it made the commitment to do so, to invest the necessary resources in solving problems, and to avoid the temptation either to remain comfortable in what it knew best (small wars) or to allow what had so recently made it famous (its exploits during World War I) to constrain its future.

Today, the Corps has earned accolades for its sustained performance in land operations since 2001, first in Afghanistan and later in Iraq, in establishing crisis response units oriented on Africa and the Middle East, and its contributions to special operations activities in Africa, the Middle East, and Asia. It has articulated a need to rediscover amphibious operations originating and sustained from at-sea platforms as well as the implications for widely distributed operations in a contested littoral zone, but it has spent a great deal of time and garnered more attention for its deployments to Norway for cold-weather operations on NATO's northern flank, with Russia the presumed catalyst for action,⁵¹ and Darwin, Australia, a signal of America's increased interest in the Indo-Pacific region and hedge against China's expansionism and North Korea's aspirations.⁵²

What the Corps needs to do is invest the time, effort, and resources necessary to figure out how to facilitate a naval campaign against China in the Indo-Pacific region and to do so at a scale and with the intensity it devoted to figuring out how to conduct landing operations during the 1920s and 1930s. If the U.S. has indeed found that history has returned with a vengeance and that it is once again in competition with major powers on a global scale, then the U.S. military must do its part to ensure that national interests can be protected at that scale. The Marine Corps can lead the way by focusing on its unique role, prescribed by law, 53 clarified by directive, 54 and implemented in practice. 55

Intellectually, it is off to a good start, which is hardly surprising given the Corps' recent history of conceptualizing its role in contributing to naval power since the mid-1990s. It has long appreciated that advances in various technologies (sensor, data analysis and resulting information sharing, precision weaponry) and the most likely environments for combat (the congested littorals) suggest that Fleet Marine Forces will need to operate more dispersed, move with less signature, and avoid an enemy's massed capabilities so that it can frustrate the enemy's efforts by presenting multiple problems and thereby thin the enemy's resources and restrict its options in the battlespace.

In 1992, the Navy and Marine Corps jointly published a White Paper entitled "...From the Sea." The paper was spurred by the collapse of the Soviet Union and the consequent rethinking of its implications for U.S. national security interests and related military capabilities. Its context so neatly resembles today's challenge of considering the implications of a return to "great power competition" that a good portion of the Introduction bears repeating:

The world has changed dramatically in the last two years, and America's national security policy has also changed. As a result, the priorities of the Navy and Marine Corps have shifted, leading to this broad assessment of the future direction of our maritime forces.

The fundamental shift in national security policy was first articulated by the President at the Aspen Institute on August 2, 1990. The new policy is reflected in the President's National Security Strategy and the "Base Force" concept developed by the Secretary of Defense and the Chairman of the Joint Chiefs of Staff.

This National Security Strategy has profound implications for the Navy and Marine Corps. Our strategy has shifted from a focus on a global threat to a focus on regional challenges and opportunities. While the prospect of global war has receded, we are entering a period of enormous uncertainty in regions critical to our national interests. Our forces can help to shape the future in ways favorable to our interests by underpinning our alliances, precluding threats, and helping to preserve the strategic position we won with the end of the Cold War.

Our naval forces will be full participants in the principal elements of this strategy—strategic deterrence and defense, forward presence, crisis response, and reconstitution.

With a far greater emphasis on joint and combined operations, our Navy and Marine Corps will provide unique capabilities of indispensable value in meeting our future security challenges. American Naval Forces provide powerful yet unobtrusive presence; strategic deterrence; control of the seas; extended and continuous on-scene crisis response; project precise power from the sea; and provide sealift if larger scale warfighting scenarios emerge. These maritime capabilities are particularly well tailored for the forward presence and crisis response missions articulated in the President's National Security Strategy.

Our ability to command the seas in areas where we anticipate future operations allows us to resize our naval forces and to concentrate more on capabilities required in the complex operating environment of the "littoral" or coastlines of the earth. With the demise of the Soviet Union, the free nations of the world claim preeminent control of the seas and ensure freedom of commercial maritime passage. As a result, our national maritime policies can afford to de-emphasize efforts in some naval warfare areas. But the challenge is much more complex than simply reducing our present naval forces. We must structure a fundamentally different naval force to respond to strategic demands, and that new force must be sufficiently flexible and powerful to satisfy enduring national security requirements.

The new direction of the Navy and Marine Corps team, both active and reserve, is to provide the nation:

- Naval Expeditionary Forces
- Shaped for Joint Operations
- Operating Forward from the Sea
- · Tailored for National Needs

This strategic direction, derived from the National Security Strategy, represents a fundamental shift away from open-ocean warfighting *on* the sea toward joint operations conducted *from* the sea. The Navy and Marine Corps will now respond to crises and can provide the initial, "enabling" capability for joint operations in conflict—as well as continued participation in any sustained effort. We will be part of a "sea-air-land" team trained to respond immediately to the Unified Commanders as they execute national policy.⁵⁶

"...From the Sea" highlighted the ability to reduce capabilities in open-ocean naval warfare as a consequence of gaining "preeminent control of the seas" once the Soviet Navy had effectively ceased to exist, and it noted a strategic shift from "a global threat to a focus on regional challenges" driving a focus on operating in complex littoral areas. Today, the U.S. is not concerned with a single global challenger like the Soviet Union, but the aggregate of several major regional challengers poses the same type of problem when it comes to the capacity of the force to be in many areas at once, operating against major state competitors that are fielding advanced military capabilities.

Though this shift to contested littorals is the same today as it was in 1992, the advancements of many weapons and sensors, to include longer range and greater precision, make coastal and archipelagic waters much more lethal. Neither China nor Russia is yet able to compete for dominance on the high seas, but neither needs to do so. Rather, they seek to control maritime areas of immediate importance to their national security interests, and these lie in coastal areas and include shipping lanes through which raw materials, finished goods, and sources of energy (petroleum products and liquefied natural gas) are moved. In short, the challenges and opportunities for the Corps and the Navy are similar in focus today as they were during the last great shift in strategic focus, but they are more severe and more important given the greater complexity and capabilities of America's competitors.

In fairly short order, the Corps responded with a number of concepts intended to explain how it would meet the challenge articulated in "...From the Sea," and these informed its programmatic efforts to equip its forces accordingly.

In Operational Maneuver from the Sea (OMFTS),⁵⁷ published in 1996, the Marines described how

amphibious forces would leverage the sea as a giant maneuver area that would enable them to gain positional advantage over an enemy. Its companion concept, *Ship-to-Objective Maneuver* (STOM), ⁵⁸ made the case for launching amphibious assaults from over the horizon, thought to be necessary by the increasing ranges of enemy surveillance systems and anti-ship weaponry. Among the key programs directly related to this concept were the Expeditionary Fighting Vehicle (EFV), MV-22 Osprey, and F-35B Joint Strike Fighter.

The Navy and Marine Corps continued the conversation with "Forward...From the Sea," published in 1997, the same year STOM was published. "Forward...From the Sea" again emphasized the importance of being able to operate in the littorals for the specific purpose of projecting power inland and dictating how the maritime environment in proximity to shore could be used. It did not have a meaningful impact on the Navy's shipbuilding program, which continued to emphasize large, multipurpose warships that favored long-range strike missions executed by cruise missiles and strike aircraft operating from carriers.

The efforts to further develop near-shore operational concepts and capabilities were interrupted by the terrorist attacks of September 11, 2001. As noted, the Corps turned to the immediate demands of operations in Afghanistan and Iraq and developed a special operations capability as its contribution to USSO-COM efforts. It was not until 2005 that the Corps published its next paper on operating in a highly contested space against an adversary with substantial capabilities. "A Concept for Distributed Operations"60 discussed the importance of being able to operate in a way that caused problems for an enemy while generating advantages for Marine forces. It implied new organizational designs at the tactical level and certainly better capabilities with which to coordinate and support small units operating at distance from each other, but little was seen programmatically to turn the idea into reality.

The next several Navy–Marine Corps papers emphasized such questions as presence, alliances, and confidence building to the detriment of focusing the Navy on warfighting, its chief purpose as a military service. However, they did highlight the importance of establishing control of the sea, which "may require projecting power ashore to neutralize threats or control terrain in the landward portion of the littorals," and emphasized a regional focus on

"the Western Pacific and the Arabian Gulf/Indian Ocean." Naval Operations Concept 2010 was much more explicit about the warfighting purpose of sea power and the necessity of controlling the seas, as "it allows naval forces to close within striking distance of land to neutralize land-based threats to maritime access, which in turn enhances freedom of action at sea and the resulting ability to project power ashore." 63

This raises the obvious question of how to gain sea control in the littorals when enemy forces now have the ability to influence the maritime domain from shore, using long-range anti-ship cruise missiles (ASCMs), shore-based maritime patrol aircraft capable of carrying torpedoes and ASCMs, and fighter/attack aircraft capable of delivering other types of ordnance against naval targets. This role for amphibious forces—supporting sea control in the littorals—was acknowledged in subsequent Marine Corps and naval papers:

- Marine Corps Operating Concept (MOC);⁶⁴
- Littoral Operations in a Contested Environment (LOCE);⁶⁵ and
- Expeditionary Advanced Base Operations (EABO).⁶⁶

The Marine Corps Operating Concept established the framework for the Corps' current thinking about the nature of anticipated operating environments. It characterizes enemy threat capabilities and discusses related implications with which Marine forces will have to contend as well as major themes that should guide the Corps' development of its own capabilities, among which is a unit's ability to manage its electromagnetic or energy signature so that it will be able to reduce the chances of detection and survive on the modern battlefield.

Most important, the MOC asserts that "[t]he Marine Corps is currently not organized, trained, and equipped to meet the demands of a future operating environment characterized by complex terrain, technology proliferation, information warfare, the need to shield and exploit signatures, and an increasingly non-permissive maritime domain." This is a profound indictment of the Corps' shortcomings in fulfilling its primary and historically rooted warfighting role: "[F]ighting at and from the sea was, is, and will remain a core competency that the Nation requires." By this, the MOC clearly means that the Corps must provide this warfighting competency.

Finally, the MOC strongly implies the need to experiment, hinting at the utility of unmanned systems in various applications.⁶⁹

LOCE takes the discussion further, adding details to the outline created by the MOC. As with the MOC, it restates (but more explicitly) key tenets of naval power, especially as it pertains to control of essential maritime geography, and thereby revalidates the importance of the Corps' role in contributing to the prosecution of a naval campaign: "[F]uture adversaries may be capable of controlling choke points, holding key maritime terrain, or denying freedom of action and maneuver within the littorals by imposing unacceptable risk to forces at ever increasing ranges." Without actually saying so, this reveals the importance of U.S. forces being able to control choke points, hold key terrain, and deny freedom of action to the enemy.

Thus, it is imperative that Fleet Marine Forces be able to fulfill their amphibious role as part of a naval force to deny these advantages to the enemy by:

- Seizing and defending "advanced naval bases or lodgments to facilitate subsequent joint operations";
- Conducting "complex expeditionary operations in the urban littorals"; and
- Conducting "amphibious operations...to assure access" for naval and follow-on forces.⁷¹

LOCE also raises the idea of an alternative force structure for both the Corps and the Navy. Noting the risk to sustainable, resilient naval power, LOCE explains how the Navy's current fleet design relies too heavily on a limited number of large, multipurpose warships so that the loss of one "would degrade the force's ability to accomplish the mission."72 This has substantial implications for the Navy's (and thus the Marine Corps') 30-year shipbuilding plan, which includes a 38-ship objective composed of large, multipurpose amphibious warships and no alternative platforms or fleet architecture of the type implied by LOCE. Thus, it appears that the analysis and ideas woven into the most current naval conceptual documents are at odds with current Navy-Marine Corps primary fleet programs that are the heart of naval power.

Finally, the Marine Corps has been developing a concept that harkens back to the Corps' effort in

the 1930s⁷³ to envision how amphibious forces might establish advanced bases to "turn the sea denial table' on potential adversaries."⁷⁴ As explained in the LOCE paper, "The EABO concept further distributes lethality by providing land-based options for increasing the number of sensors and shooters beyond the upper limit imposed by the quantity of seagoing platforms available" and "espouses employing mobile, relatively low-cost capabilities in austere, temporary locations forward" in the contested littorals. In addition:

Expeditionary advanced bases may be used to position naval ISR assets, future CDCMs [coastal defense cruise missiles], anti-air missiles (to counter cruise and ballistic missiles as well as aircraft), and forward arming and refueling points (FARPs) and other expedient expeditionary operating sites for aircraft, critical munitions reloading teams for ships and submarines, or to provide expeditionary basing for surface screening/scouting platforms, all of which serve to increase friendly sensor and shooter capacity while complicating adversary targeting. They may also control, or at least outpost, key maritime terrain to improve the security of sea lines of communications (SLOCs) and chokepoints or deny their use to the enemy, and exploit and enhance the natural barriers formed by island chains.

To accomplish all of this, the EABO discussion within the LOCE paper suggests that:

[T]he Navy and Marine Corps must pursue the ability to network sea-based and land-based sensors and shooters. Additionally, the Navy should determine what current or planned sensors and weapons can be fielded in an expeditionary variant while the Marine Corps should determine what changes to existing Marine systems can enhance their utility in a sea denial or sea control fight. Furthermore, new initiatives, such as fielding a common anti-ship missile that can be launched from existing surface combatants, submarines, manned (and perhaps unmanned) aircraft, and mobile ground launchers, should be explored.⁷⁵

Across these documents, published between 1992 and 2018, both naval services have repeatedly emphasized the importance of being able to win the naval

battle in complex, littoral waters. The various concepts acknowledge the advancements made in sensors and weaponry that make operating within the enemy's range of weaponry—increasingly large as the range of weapons improves—a high-risk proposition. The services assess that this means naval forces will have to operate in a more dispersed manner; that numbers matter both to offset combat losses and to complicate the enemy's efforts (he has to account for more threats in more places); and that "signature management" will be increasingly important to preserve combat power (minimize combat losses from enemy attack) and enhance the effectiveness of U.S. forces when sensors of all types are better able to detect things.

Finally, all of these concepts emphasize the necessity of adapting to evolving conditions. The global geostrategic picture changes. State powers rise and fall, affecting U.S. interests in various regions in various ways. Where the U.S. once had many allies with substantial capabilities and itself possessed a military structured for major conflict on a global scale, it now has a greatly reduced military, less of a military presence based abroad, allies that have neglected their militaries even more than the U.S. has, and more competitors in disparate regions who are making serious investments in their ability to impose their will in their home regions.

The U.S. depends on access to distant markets to maintain its economic vitality. To access those markets, it must have access to the seas, which also means the littorals and archipelagic waters that guard the approaches to ports and straddle shipping lanes. The seas also enable the U.S. both to support allies who may be threatened by powerful neighbors and to help sustain a geopolitical order that, in general, promotes trade, the rule of law, and freedom from the tyranny of authoritarian regimes with regional, if not global, aspirations.

All of this means that naval power is essential to America's most critical interests. The Marine Corps is a key to U.S. naval power, but aside from the good intellectual work of its concept papers, the Corps has not paid much attention to naval matters in quite some time. It knows this and has acknowledged it, but there is little evidence at present to argue that its intellectual work is affecting its major acquisition programs, organizational designs, exercise programs, or experimentation efforts at a sufficient scale.

Recall that naval power gives advantage to the nation able to use the seas to impose its will on an

enemy and that the nation without such an ability suffers the hobbling effect of a great disadvantage. Recall also that the U.S. military is much smaller than it was when the U.S. was engaged in competition with a great power and that the number of states of concern has grown from one—the Soviet Union with Russia at its core—to four, with China and Russia of greatest concern but also numbering Iran and North Korea as regional problems. And this does not count other problem states in South America, Africa, and portions of Asia that could well prove worrisome in the future.

Consequently, the U.S. military must be judicious in its focus and allocation of resources even as it sustains operations in the Middle East and South Asia. Where the U.S. Army has sufficient capacity to maintain substantial forces in multiple regions, it is probably best at present that it focus on the Russia problem in Europe, regionally destabilizing states like Iran in the Middle East, and North Korea. In like manner, the Navy and Marine Corps are best suited to the vast maritime geography of the Indo-Pacific region and the challenge posed by China to U.S. interests there.

As naval power relates to the strategic competition between the United States and China, specifically, the U.S. is a mature naval power with decades of experience operating in distant seas, and China is an aspiring naval power just now developing the capabilities needed to do so. While experience is a critical advantage, it does not wholly replace capacity. A small navy expertly handled is still a small navy; it can only be in one place at one time in numbers meaningful to war. While it can score successes against a larger navy if the opponent is foolish, it cannot sustain operations indefinitely or count on always avoiding losses (even if only from mechanical failures).

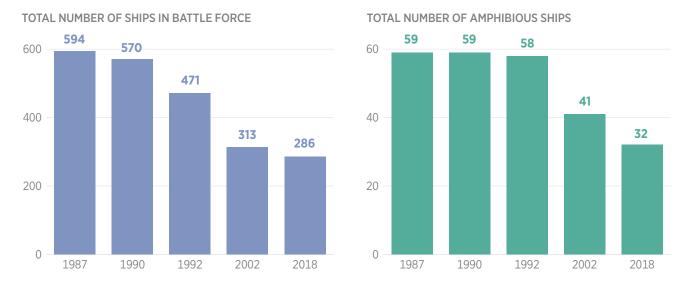
Moreover, the numbers do not favor the U.S. Consider the shrinking size of the U.S. Navy from near the end of the Cold War until now:⁷⁶

The fleet is roughly half as large today as it was during the Cold War when a global presence was needed to protect America's global interests. The amphibious fleet then was sufficiently large that the Marine Corps could both deploy and train its forces. Today, it can only deploy, and even then only in limited numbers.

Why is all of this important to the future of the U.S. Marine Corps? Because the Corps is an element of naval power that allows the fleet to exert and exploit control of adjacent land. When it comes to projecting military power across and from the sea against

CHART 1

U.S. Navy Has Been Shrinking Since End of Cold War



SOURCES: U.S. Navy, Naval History and Heritage Command, "US Ship Force Levels, 1886-Present," https://www.history.navy.mil/research/histories/ship-histories/us-ship-force-levels.html (accessed February 27, 2019), and U.S. Navy, Naval Sea Systems Command, Naval Vessel Register, "Ship Battle Forces," https://www.nvr.navy.mil/NVRSHIPS/SHIPBATTLEFORCE.HTML (accessed February 27, 2019).

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a land power—or from the land to the sea against a naval power—the Navy and Marine Corps enable each other. The result is naval power unmatched by that of any other country in the world.

The Navy can control the deep, open seas far from continental powers, using them as a veritable sanctuary from which to launch long-range cruise missiles and strike aircraft. The deep-water navy can also deny the enemy similar use. But it cannot get within close range of the shore, now measured in hundreds of miles due to the increasing ranges of shore-based ASCMs and maritime patrol aircraft that can also launch long-range, anti-ship weapons. It certainly cannot patrol an enemy's coastal waters to deny him their use for commerce, positioning of forces, or seizure of relevant offshore terrain from which he can project power even farther.

Similarly, a Marine Corps without a navy to deliver it by sea is not much different from an army and is similarly constrained in its movement and ability to affect the enemy. Without a maritime option, a land force can get where it needs to be only by moving overland from a contiguous landmass, flying to a nearby airfield capable of handling heavy cargo aircraft, or sailing to a deep-water port and then driving overland from there. China's geographic position makes all of these options problematic for a land force. Simply put, there are very few options available (almost none, really) to any army if the intent is to engage China's military in combat or to contest its ability to project military power into nearby countries or waters.

Thus, if the Marine Corps intends to be a useful contributor to naval power and has determined that it will likely need to operate in contested littoral waters in a naval campaign against China, we must look at the concepts the Corps is considering (and that are implied by such a campaign) to determine their implications for force design and related force capabilities.

IV. Operational Concepts: Naval Campaigns in the Contested Littorals and Implications for the Corps

In general, a naval campaign in littoral and archipe-lagic waters⁷⁷ would have to account for "complex terrain" similar to what land forces have to deal with when fighting in forests, cities, or the craggy features of mountainous terrain as compared with the broad stretches of deserts, savannahs, prairies, or farmlands. In the open ocean, sensors can detect ships and aircraft at great distances, and use of weapons does not have to account for terrain or structures between the shooter and the target. There also is not much in the way of commercial shipping that would clutter a radar picture. In undersea warfare, the open ocean is also much less complicated than nearshore undersea topography.

Near coastlines and among island clusters, the opposite conditions exist. Room to maneuver is constricted, and detection ranges shrink. As a result, less time is available between detecting a target and either engaging or fleeing from it; ships have to be concerned about running aground in shallow waters, striking underwater features like coral atolls, or drawing too near to a coastline harboring enemy weapons that are able to target the fleet. Then there is the danger of being spotted by enemy coastal patrol craft or a shore-based observation post. The force that is better skilled at masking its presence and movements has the advantage of operating unseen to conduct surveillance or to surprise an enemy in attack. Ship traffic is markedly higher and denser near coasts and in key areas of the world where shipping channels pass through narrow straits, and this makes detecting a military vessel among hundreds or thousands of commercial and private vessels quite difficult.

States like China will naturally occupy coastal areas and islands within their territorial waters (and even in international waters) to extend their reach and surveillance capabilities as far as possible. This has the effect of creating a protected area within which they can move goods, materials, and military assets with minimal interdiction opportunities available to an enemy. Conversely, during war, an opponent will want to interdict such movement for several reasons, including to:

 Deny him freedom of movement (prevent him from placing, repositioning, reinforcing, or resupplying military positions);

- Restrict his ability to shape the battlespace (radar/ sensor coverage and weapons ranges);
- Deny him the ability to bring needed resources from distant sources (like energy, parts, and finished products);
- Cut him off from sources of revenue (usually from trading partners);
- Deny him the ability to support or receive support from allies: and
- Enable one's own forces to get closer so that they can target the enemy in ways not possible from farther away.

The Marines would contribute to the prosecution of a naval campaign by taking from the enemy the ability to use the littorals and making it possible for the U.S. Navy to exploit them. This would not necessarily have to be accomplished exclusively by conventional amphibious means (moving Marines from ships to shore, whether by surface craft or aircraft). Marine Corps forces could be delivered by air from a support base on land directly to the piece of key terrain from which they would frustrate the enemy and enable other U.S. forces. They would be contributing to a naval campaign but would be moved into position to do so by non-amphibious means. However, once emplaced, this Marine force would still have to be able to operate in the contested littorals, would likely still require logistical support, and would have to integrate into the larger naval force assembled for the operation or campaign: In other words, the Corps would still need to be adept and competent in naval matters.

The challenges for the Marine Corps and Navy become inserting forces into areas where the enemy does not want them to be and perhaps already has forces of his own in place, operating in ways that minimize the enemy's ability to detect and interrupt operations, resupplying forces, reinforcing forces, moving forces from one place to another, understanding what the enemy is doing, and coordinating all friendly activities so as to defeat the enemy's plans. This implies an ability to:

- Move and operate with minimal signature;
- Be tactically present in many locations with a unit at each location sufficiently armed to prompt the enemy to dedicate resources to dealing with it (thus thinning and consuming his resources) or sufficiently equipped to surveil the enemy to enhance the situational awareness of the larger U.S. force;
- Sustain the overall operation even as combat attrition takes a toll on force capacity; and
- Leverage technologies so that the human component of the force is optimally employed.

As currently structured, manned, equipped, and supported, the Marines have significant shortfalls in all of these areas.

- The supporting amphibious fleet is limited to a small number of large ships and only a portion of these ships would be available for an operation in one part of the world. Consequently, the Marines are limited to a very few big ships from which to conduct widely distributed operations involving several small units.
- The Marines have few options for inserting and sustaining forces; current platforms are limited to tiltrotor and helicopter aircraft and surface landing craft that are very limited in capability and capacity.
- Their organizational structure may have relevance (platoons and companies), but until its components are tested in experiments and exercises specifically focused on distributed operations in contested littorals, the service cannot be sure.
- The Corps does not yet possess enough of the weapons or surveillance systems that would help a naval force to gain and exercise sea control in littoral/archipelagic waters. All recent programs to increase the lethality of ground forces are improved versions of current equipment: a better rifle and ammunition, better weapons optics, better crew-served weapons, etc. These are essential for winning in the ground combat for which the Marines would be put ashore, but the Corps needs

- other capabilities that pose a threat to an enemy in addition to a similar ground combat force.
- The Corps has minimal short-range and no medium-range air defense capabilities. It is limited to the old Stinger antiaircraft missile, first introduced well over 30 years ago in the early 1980s (though significantly updated in the mid-1990s). If it is to help a naval force achieve advantage in the littorals, it will need an ability to interdict enemy air without having to depend exclusively on friendly air.
- The Corps has only one small-boat company, stationed in Japan and associated with the 31st MEU, and it has no real-world combat mission experience. It is typically deployed from the well-deck of a large amphibious ship and has limited range. A small-craft fleet that provides the ability to insert and move Fleet Marine Forces in coastal and inland waters would seem to be essential.
- The Corps' ability to move combat vehicles and heavy fires capabilities (such as artillery) is limited to what can be loaded internally or carried externally by a helicopter or carried to shore by current landing craft (the previously mentioned LCU and LCAC). More options would increase the utility of Marine forces, to include acquiring equipment better suited to movement by small craft and/or more, larger craft such as a beachable, heavy-lift vessel that can deliver USMC equipment across the shore.

These are only a few examples of material short-falls that must be addressed in order to field a Fleet Marine Force that is able to perform amphibious functions as described or implied by LOCE, EABO, or any other employment concept related to the Corps' contribution to the prosecution of a naval campaign. Nonmaterial elements—tactics, doctrine, organizational designs, training protocols, and institutional knowledge—are effectively nonexistent, which is a significant shortfall because, if present, they would represent the clearest manifestation of an actual capability to do what the Corps' concept says it needs to do to compete in future naval/amphibious warfare.

As gloomy as this is, the fact that discussions such as these are occurring is actually encouraging because it derives from the fact that the general problem and

aspirational capabilities thought to be needed have in fact been expressed in concepts such as LOCE. Consequently, such shortfalls and their operational context do suggest possible solutions and exploratory efforts that are being pursued to some extent by the Corps. These include:

Experimentation. Experimentation is key to characterizing problems in sufficient detail so that potential solutions can be developed and tested to see whether they merit further development. The Corps' experimentation effort in this regard—that is with a specific focus on the conduct of distributed operations as discussed here—is taking place but is slow and has been limited in scale.⁷⁸ A substantial level of effort commensurate with the importance of the objective is necessary to develop institutional momentum that garners sustained support from leadership, to include prioritization of funding, and a real interest within the operating forces and supporting agencies.

More important, the level of effort put toward experimentation must lead at some point to programmatic changes in the things the Corps is buying. This means they must gain higher priority than major programs for which the Corps has been advocating for many years and in defense of which well-developed and firmly rooted constituencies always rally. These efforts must also be sufficiently compelling to force a shift in thinking from 17-plus years of counterinsurgency and stability operations to combat operations directly associated with amphibious warfare. It must drive generational change in Marine Corps thinking.

This would not be new ground for the Marines to plow. In fact, it should be quite familiar. During the early 2000s, the Corps undertook a series of efforts to understand the challenges of distributed operations. The Director of the Experiment Division of the Marine Corps Warfighting Laboratory (MCWL), Colonel Vincent J. Goulding, Jr., USMC (Ret.), authored a series of articles for the Marine Corps Gazette from 2001 through 2016 to provide periodic updates on the effort. Goulding described what distributed operations are,79 explained how organizational and capability adaptations would be needed, 80 and identified specific problems that the Corps would need to solve⁸¹ to realize a credible distributed operations capability. Through various experiments, such as the Sea Viking series,82 a consistent set of challenges was repeatedly identified, including the ability to communicate and share information among widely separated units; exercising command and control of the various

elements of a distributed force; the appropriate organization architecture for such a force (who reports to whom); logistically supporting a force in this setting; and the critical role unmanned systems would play in making this a viable concept.

These issues were repeatedly identified a decade and more ago. The Corps needs a sense of urgency to solve these problems, and this means committing the necessary resources and institutional attention.

Unmanned Systems. Several of the desired capabilities could be provided effectively by unmanned systems. Unmanned systems have the potential to reduce the workload on Marines and sailors, improve the effectiveness of the force, and complicate matters for the enemy. They can expand a small unit's ability to monitor, understand, and act within a zone and confuse the enemy's effort to determine the disposition and activities of the U.S. force. Unmanned air, surface, and subsurface platforms could surreptitiously effect resupply to dispersed units, conduct reconnaissance, jam enemy surveillance systems, and serve as decoys by radiating relevant energy signatures to distract enemy attention.

In addition, unmanned systems can be used to expand the envelope of attack or strike options by targeting an enemy force, platform, or installation from multiple directions. This would force the enemy to dilute his attention, surveillance, and defensive fires by spreading them over a wider area and lead him to empty his munitions stockpile more rapidly than would otherwise be the case.

Used in combination, unmanned systems can jam an enemy's surveillance, targeting, and communications systems, distract him from a main attack, or mask the movement of U.S. forces, thereby reducing their vulnerability to attack and setting conditions for surprise actions against the enemy. Unmanned systems can also be used as communications relay nodes, a critical capability for widely dispersed units that need to coordinate actions and/or share situational awareness.

The Marine Corps is thinking of these capabilities as it pushes ahead with development of a variety of unmanned aircraft systems (UAS),⁸³ including the MAGTF UAS Expeditionary (MUX) aircraft,⁸⁴ a Class V UAS⁸⁵ (the largest type that operate at high altitudes and possess great speed and endurance) that would provide direct support to ground units and work in conjunction with manned aircraft such as the MV-22 Osprey and CH-53K King Stallion.⁸⁶ Similar attention

should be paid to surface, semisubmersible, and subsurface craft, preferably with the Navy but independently if necessary.

Flotilla Navy and Small Support Craft. Getting sailors and boats from the Navy Expeditionary Combat Command and Marines, their equipment, and supplies (and effecting resupply) to where they need to be in contested littorals will likely require smaller movement and support platforms of the sort one would find in a coastal or flotilla navy in order to minimize their signature and thus lessen risk to the force. These could be produced at less cost per unit than is possible with larger ships, and the result would be more vessels that would distribute risk across the force compared with a fleet of fewer, large vessels.

Smaller vessels have a great potential to hide within the traffic patterns of local commercial and civilian/pleasure craft. They are also able to access small, shallow harbors and approaches to coastlines that are unreachable by a larger vessel of deeper draft. And if a small vessel is lost from enemy attack, mechanical failure, weather, or navigational error, only a very small percentage of force capability is lost rather than the much larger amount contained in a conventional, multipurpose amphibious ship.

A modern "amphibious transport dock" (LPD) of the *San Antonio* class can carry upwards of 800 Marines and various combinations of boats, landing craft, and combat vehicles⁸⁷ and costs approximately \$1.4 billion per ship. ⁸⁸ Such a ship packs a terrific combat punch, but if taken out of action, it takes with it all of the combat power that it represents.

Organizational Design. As noted, the Corps endeavors to ensure that deployed forces have all necessary functions/capabilities organic to them: ground, air, logistics, and a common senior commander. The MAGTF organizing principle is well known throughout the Corps and has been proven in multiple applications across several decades. However, this approach may not be relevant to the type of operations implied by LOCE and related concepts: highly distributed forces conducting operations with minimal signature to deny the enemy freedom of maneuver while maximizing the same for U.S. forces. This is the purpose of experimentation designed to solve specific problems.

It is quite possible that new formations will be needed. For example, it could be that a LOCE Operations Group⁸⁹ will consist of a headquarters element commanding several companies or specialized platoons that are different in number, size, structure, and equipment from a current battalion of three line companies and a supporting heavy weapons company. A LOCE Task Element may have a primary mission of local sea and air interdiction, implying employment of modular, highly expeditionary anti-ship and anti-air missiles.

A surreptitious surveillance mission would be different from a typical reconnaissance mission. Rather than scouting enemy positions and activities on a short-term iterative basis, a persistent surveillance mission might be very lengthy and employ different equipment if meant to track and report enemy naval and air activities or even the enemy's own surveillance capabilities so that U.S. forces know what to avoid or deceive. The units needed, how they might be organized and equipped, and how they would integrate into a larger operational effort can be determined only through experimentation and exercises of various types over time.

Training and Exercise Regimes. At some point, as insights developed through experimentation and concept development translate into new equipment, organizational designs, and the tactics, techniques, and procedures needed to conduct amphibious operations in contested littoral/archipelagic waters, the Corps' operating units must train to learn and become proficient in them. Obviously, this means that the necessary equipment and naval platforms with which to train are available, but it also means that the service makes a shift in prioritizing this training over other tasks and that units themselves are available to conduct such training, all of which leads to force capacity and workload—the things the Corps elects to do or not to do with the force it has.

Force Capacity. Having several smaller units in various places pursuant to the implied demands of LOCE and distributed operations does not necessarily mean that more Marines are required. ⁹⁰ A single large amphibious force organized to seize a heavily defended objective or to push inland to seize and hold key terrain, defeating enemy forces along the way, would number tens of thousands. But whether a few large units or numerous small units are involved, the ability to mount and sustain operations concentrated in one area or spread across a very large area does call for capacity in the force: to conduct the operation in the first place, to reinforce efforts as the operation unfolds, and to replace combat losses.

Capacity also matters in experimentation and training when not at war. The service will always have operational tasks to perform, but it must also devote people to solving anticipated problems. If all of the force is effectively committed to current operations all of the time, the service has no capacity to do other things like prepare for the future. This means that a part of the force must be fenced from operational tasks so that it can train and conduct the exercises necessary for potential future operations. The smaller a force is without reducing its workload in proportion, the greater difficulty it has in fulfilling operational commitments while also attending to these other things.

In the mid to late 1930s, the Marines undertook seven major exercises to test various tactics and pieces of equipment needed to develop a landing operations capability. Each of the exercise periods lasted approximately two months and involved multiple iterations of experiments. The Corps was small at that time in its history—less than 20,000 Marines —so dedicating such time and resources reveals how important the effort was and the seriousness with which the Corps approached it. Without such a commitment, the Pacific War might very well have turned out much differently (and the European War as well, because the amphibious landing techniques were derivative of what the Corps had developed for the Pacific).

As noted earlier, the Corps is very busy, not just with operational deployments, but also with the number of activities and capabilities—like cyber warfare and special operations—to which it has devoted resources. Each thing it undertakes necessarily precludes doing something else with those assets: Marines, dollars, and time. Reorienting to amphibious operations will demand that the Corps reprioritize its efforts from some of the things it is currently doing to things it must do to prepare for the future, informed by its primary role and contributing functions. Within its budget, it must assess the extent to which each thing it is buying is related to its primary role and, if not, whether the opportunity cost it represents is worth it.

In short, the Corps must compare what it is doing against the implications of what it will need to do in the world it has already described to itself in its key documents since the end of the Cold War. This will be difficult.

The Marine Corps is captured within an iron triangle of experiences—types of battle in which it has

excelled at various periods in its history—from which it must break free so that it can prepare effectively for its future. Across its history, it has dealt with sustained small wars, high-intensity land battle, and naval or amphibious battle. Each presents a challenge that inhibits the Corps from easily adjusting as it must to reorient to its primary role of contributing to the prosecution of naval campaigns.

Small wars blind the Corps because they tend to dominate the Corps' history of employment since its establishment. They also characterize much of what the Corps does today. In its role as a crisis response force, the Corps is postured to respond quickly to emergent crises that are far short of "big war." It also routinely works with partner countries for whom internal security challenges constitute the bulk of concern rather than a large-scale attack from a neighboring country. Small wars call for a force that is expeditionary in mindset and tuned to operate in austere conditions, usually independent of larger land forces like the U.S. Army, large-scale air operations undertaken by the Air Force, or the fleet operations of the Navy. One of the Corps' enduring legacies is its Small Wars Manual and the culture that is infused with it. Amphibious combat operations are the opposite of small wars. So, too, is large-scale land battle.

Land battle blinds the Corps because of the service's preference for such combat. It is easy to envision. It creates an environment for the maximum use of all of the skills a combat-focused service spends so much time developing. It generates funding, attention, glory, stories, and career advancement. It also provides a great deal of independence, enabling the Corps to conduct multiunit, large-scale combat operations in a way that leverages the full power of the MAGTF. It is high intensity with rather clear outcomes as opposed to the slower, frustrating, indecisive conditions of small wars or the entangling dependence on the Navy that accompanies naval/amphibious battle.

Naval battle blinds in the sense that it creates the most friction for the service. It is more complex, messier, and more troublesome because it demands tight integration with the Navy to execute and dependence on the Navy to sustain until conditions convert the battle to sustained land operations. Naval/amphibious operations are platform intense and platform limiting. They cannot be performed without amphibious ships and landing craft, which the Corps does not acquire, own, or control. Yet naval/amphibious

REBUILDING AMERICA'S MILITARY: THE UNITED STATES MARINE CORPS

battle is essential to the nation's ability to project power abroad and is the primary purpose for which the Corps exists.

The return of "great power competition," with China being one of the two named primary competitors, implies that the Corps must reorient to the most challenging vertex of its experience triangle, that of naval battle. There are specific steps, outlined in the following section, that it can take to do so.

Recommendations

Tn "Rebuilding America's Military: Thinking About $oldsymbol{1}$ the Future," we argued that revolutionary outcomes are achievable through evolutionary improvements that focus on solving actual problems against known or presumed adversaries. We argued further that such problems and possible solutions are determined with aggressive and repetitive experimentation.93 Solutions to problems are found in many forms and include changes in organizations, equipment, and doctrine, among others. Provided below is a set of recommendations that, if implemented, would enable the Corps to contribute as effectively as possible to the prosecution of a naval campaign in contested littorals, with a particular focus on Asia as the region of primary interest and China as the pacing threat.

Recommendation #1: Commit to intensive and sustained experimentation. Specifically, the Corps should:

- Assign a dedicated force to the MCWL to enable continuous, iterative experimentation, which would be less likely to be interrupted and would gain both efficiency and effectiveness with a force attuned to the methods and objectives of the Warfighting Laboratory;
- **Discipline** experimentation efforts to focus on the challenges of conducting distributed operations in a contested littoral environment; and
- **Increase** the budget for experimentation, perhaps to 1.0 percent of the total USMC budget from the current 0.4 percent, along with reevaluating spending priorities to ensure that they are aligned and commensurate with the Corps' unique responsibilities.

The Corps has undertaken a series of experimentation efforts to better understand the challenges associated with evolving operational concepts. Under the direction of the Marine Corps Warfighting Laboratory, the Corps is engaged in a multiyear effort known as Sea Dragon 2025. 4 Initiated in 2016, 5 Sea Dragon 25 is meant to explore concepts such as LOCE and EABO, test new technologies for their functional utility, and inform related research and development efforts through three phases of experimentation.

The first phase focused on small unit lethality; it leveraged the deployment of an infantry battalion equipped with new gear (from unmanned systems to communications devices) and tested alternative infantry squad configurations.⁹⁷ The second phase, currently underway, is a sequential look at logistics, information environment operations, and expeditionary advanced base operations that would contribute to the establishment of sea control with the Navy.98 On the surface, this is what the Corps needs to do. In particular, Sea Dragon 20 (to take place in fiscal year 2020) "will address fleet marine force contributions to a maritime component sea control campaign" and will include exploring options to threaten an enemy fleet with "long-range ground-based antiship missile[s]."99

But the Corps' approach is problematic. Phase I focused on a single unit involved in a real-world, scheduled deployment. Its ability to experiment was constrained by the time and opportunities presented in predeployment training and on-deployment exercises. This precludes the sort of iterative, stopand-restart approach that is possible in an experimentation program that uses a dedicated force in a nonoperational status. Phase II is linear, focusing narrowly on one primary issue per year (directly related to LOCE/EABO) before moving on to the next. While insights gained would certainly be carried over to subsequent efforts, the approach intentionally emphasizes one aspect at a time, causing people and organizations to shift attention and priorities accordingly.

MCWL's attention and resources are also dispersed within this effort. Although Sea Dragon 2025 Phase II focuses linearly on one major aspect of littoral operations at a time, it "also includes dynamic concurrent experiment efforts focused on dense urban operations, 21st century fires, an adaptive threat force, and the continuation of the Marine Corps Experiment Operational Advisory Group (EXP OAG)." This is another example of trying to do too many things at once, which usually results in not doing any one thing especially well. In practical terms, every topic gets some attention, but no one topic gets as much attention as it likely needs, especially when resources are limited.

As repeatedly emphasized in this paper, the Marines need to determine what their most important

role is and allocate their efforts accordingly. The Corps needs to commit to an Advanced Base Force–like development effort¹⁰¹ to solve the LOCE problem, making a clear statement that this is its top priority. Amphibious operations are a singular specialty that only the Corps can provide and that the U.S. will desperately need in the event of conflict in the Asian littorals.¹⁰²

In 2017, the Corps dedicated \$10 million to this experimentation. While this sounds significant, on closer inspection, it is not that impressive, spread as it was across so many issues. As a measure of relative importance, this spending was the equivalent of 1.3 percent of investments in research and development (\$10 million vs. \$787 million)¹⁰⁴ and a mere 0.4 percent of the Corps' total budget (\$10 million vs. \$23 billion). 105

The Corps should reevaluate its priorities to ensure that it is making investments commensurate with its unique responsibilities.

Recommendation #2: Develop new ranges for experimentation and training. Specifically, the Corps should:

■ **Look** to U.S. territories in the Pacific for new ranges for experimentation and training. Surrogate environments in the U.S. proper can take the Corps only so far.

The use of map and table-top exercises, computer-based modeling and systems simulation, and land-based training facilities such as those located at the Marine Corps Air Ground Combat Center in Twenty-nine Palms, California, and Marine Corps Base Camp Pendleton as surrogate environments can take the Corps only so far in its experimentation and training efforts. The Marine Corps needs ranges/exercise areas that replicate as closely as possible the conditions in which Marines will have to execute operations as envisioned in LOCE and EABO.

The Corps should look to U.S. territories¹⁰⁶ in the Pacific, specifically the Minor Outlying Islands¹⁰⁷ that include Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Palmyra Atoll, and Wake Island. The Northern Mariana Islands¹⁰⁸ should also be explored, and the Marines could base their experimentation, training, and exercise efforts out of U.S. military facilities on Guam.¹⁰⁹

The conditions present among these islands and atolls would enable the Corps and the Navy to

characterize the challenges of landing and sustaining forces in remote, widely dispersed locations in a true maritime setting and determine what is needed to conduct the types of operations envisioned by conceptual documents like LOCE and EABO. The services could leverage the opportunities presented by ships and military aircraft from all of the services transiting the Pacific to test systems, tactics, and techniques relevant to expected operations in ways that are not possible in the continental United States or possibly even among the Hawaiian Islands. Attempting to do so from U.S. bases in Japan or from locations in Australia, for example, would likely be limited by domestic political sensitivities and concerns about observation by China or other states in the region.

Recommendation #3: Adjust acquisition efforts to account for tools and platforms directly related to conducting distributed operations in a contested littoral/archipelagic environment. Specifically, the Corps should:

- Acquire anti-ship and medium-range antiair systems.
- Acquire (in conjunction with the Navy) new landing craft, small boats, and combat vehicles relevant to combat operations in contested littoral and archipelagic waters.
- **Continue** to invest in unmanned systems, both ground and air.
- Continue its efforts to field new capabilities for logistical support to distributed, low-signature forces.

To be fair, the Corps would be hard-pressed to make substantive changes in its acquisition portfolio if it has not yet determined what it needs to have an effective amphibious capability in the modern age. It cannot purchase capabilities that it has not yet defined; hence, the criticality of a robust experimentation program.

The Marines have determined to stop spending money on obsolescing equipment like the 1970s-vintage Amphibious Assault Vehicle (AAV). After years of failed attempts to develop a high-speed replacement for the AAV, the Corps opted to acquire a lowrisk, wheeled amphibious combat vehicle to augment the AAV fleet until an appropriate replacement can

be found. 110 The Corps has aggressively updated its ground combat capabilities, which is good because its ultimate role in naval warfare is the landward extension of naval power. And parting with the Navy, the Corps has elected to fully convert to the F-35 fighter rather than pursue an updated version of the F/A-18 fighter/attack aircraft.

But a naval campaign against China in the Asian littorals will likely be more peripheral and maritime-based than centered on clashing, land-based armored and air forces. It will be a campaign of constriction and area denial for the purpose of getting strike assets closer to China, cutting China off from resources, and denying it military options external to its borders. Thus, the Marine Corps should be acquiring anti-ship and anti-air systems and the landing craft, small boats, and combat vehicles that are most useful to getting Fleet Marine Forces ashore and positioned so that they can contribute to a naval campaign.

General Robert B. Neller, Commandant of the Marine Corps, said as much during his March 2018 testimony to Congress:

Sea control has become more important now than in past decades, and the Marine Corps must further develop and integrate force capabilities in support of the Navy. This will require measured shifts from a focus on a near symmetric landbased enemy to an asymmetric view in which Marine forces ashore threaten enemy naval and air forces from expeditionary advanced bases....

[T]he naval force must be distributable, resilient, and tailorable, as well as employed in sufficient scale and for ample duration. Due to existing shortfalls within our amphibious, maritime, and expeditionary ship capacity, the naval force currently struggles to satisfy these basic requirements....¹¹¹

To this end—better preparing itself for operations in the littorals—the Corps should continue its investment in unmanned systems and not just in air platforms. The Marines did early work in investigating the potential for support machines like the robomule. It needs to do more to include expanding into maritime efforts. Landing craft and small boats could be accompanied by unmanned vessels that carry cargo, defend manned craft, serve as decoys, or serve as picket vessels.

The Marines have already indicated that they intend to invest in anti-ship weaponry. This should expand to include medium-range anti-air systems that can deny the enemy the ability to move freely by sea and air. The Corps should also develop a sea-air surveil-lance capability that enables it to contribute to naval battlespace awareness from its position on key land terrain in the littorals.

Logistics is always the linchpin for sustained operations of any sort, and the Corps must continue its efforts to field new capabilities in this area: more resilient and flexible sources of power, unmanned options for resupply, local manufacturing of critical parts and material enablers, and an ability to harvest raw materials locally rather than having finished supplies delivered from external sources.

Recommendation #4: Redefine amphibious shipping and support capability requirements to account for combat operations in a contested littoral environment in support of a naval campaign. Specifically, the Corps should:

- **Work** with the Navy to develop smaller, lower-cost ships that are better suited to the type of dispersed operational posture implied by LOCE.
- **Regain** its ability to conduct small-boat operations.

The Navy is committed to increasing the size of its amphibious fleet from the current 32 ships to 38 ships, an objective that will not be reached until 14 years from now in 2033. 114 As General Neller recalled, "The Navy possessed 62 amphibious ships in 1990...." 115

Numbers matter. The fewer ships there are in the amphibious fleet, the fewer places the Corps can be with an amphibious force and the fewer options it has once it arrives. Staying power is also limited because each loss of a ship (battle casualty, engineering or system failure, or retasking to a higher-priority mission) more rapidly erodes combat power. Included in this is everything associated with a large amphibious ship, such as aircraft on the flight deck and landing craft in the well-deck. When the ship is lost, so too is all of the support it provides.

The low number of hulls has a ripple effect across the ability of the Marines to conduct distributed operations in the littorals. Landing craft, such as LCUs and LCACs, are carried to the theater by amphibious ships, and their number is necessarily tied to the

fleet of ships able to carry them as well as the land force, its equipment, and supplies that the landing craft would place ashore. Thus, the Navy's program to replace LCU 1610-class craft with the LCU-1700 class is limited to a one-to-one replacement count. There is currently no reason to procure more than the amphibious fleet can support. By extension, this limits options for the naval force.

The absence of any program to acquire something other than the current mix of amphibious ships—LHAs, LPDs, and LSDs—is also limiting. The Navy and, by extension, the Marine Corps have all of their littoral operations eggs in one amphibious basket. As noted, the Corps likewise has an extremely limited small-boat capability.

Both of these situations must change. The Corps must work with the Navy to develop smaller, lower-cost ships that are better suited to the type of dispersed operational posture implied by LOCE. These ships might carry a single platoon and its key equipment. It might be that the LCU-1700 class meets the requirement, but an intensive experimentation program, augmented with computer-based simulations, would reveal needed capabilities that inform design characteristics. Until such insights are derived, it is hard to know what such an alternative craft might be.

One can envision a landing craft transport vessel, the sole function of which would be to carry these craft to the theater and perhaps serve as a "mother ship," stationed beyond the range of enemy weapons, that provides fuel, maintenance, provisions, and such. Again, this is something to be determined through experimentation.

The Corps also needs to regain its ability to conduct small-boat operations, useful for landing a force, moving along coastlines, and conducting riverine operations. This is a specialty that requires expertise not only in boat handling and maintenance, but also in navigating waters and conducting operations in this environment, just like becoming proficient in desert, mountain, and urban warfare. If the Corps intends to operate on islands in the Western Pacific, it will need the ability to operate on the waters that come with islands.

Recommendation #5: Create relief in the operating forces. Specifically, the Corps should:

 Discipline its appetite for action, learning to say "no" to operational but noncombat requests for support and to reduce its habit of offering capabilities for use in order to lessen the strain on its forces and thereby create capacity to reorient to naval warfare in the Pacific.

Marine Corps officials have noted the strain on Marines as they work to handle operational commitments, ¹¹⁸ training requirements, education needed as they progress along their careers, and service with the institutional Marine Corps (head-quarters, bases and installations, training and maintenance depots, recruiting duty, etc.). As the Corps adjusts from 17-plus years of irregular warfare to preparation for "great power competition," it must find the ability to rethink, retrain, and reposture the force accordingly. This demands capacity in people, time, and material resources that are not otherwise obligated to ongoing missions.

There are two ways to generate the capacity that provides such relief, or "space," within the force: Workload can be reduced so that fewer units are needed to manage it, or the force can be expanded so that more units are available to shoulder the work (without taking on more work). The Corps needs to discipline its appetite for action, to learn how to say "no" to every request for support, and to reduce its habit of offering capabilities for use. This will be very hard for the Corps to do. Operational demands are insatiable. Every combatant command¹¹⁹ has more things it needs or wants to do than there are forces available across all of the services combined, including Guard and Reserve elements. The Corps is also in the habit of detecting shortfalls in national capability or opportunities to contribute a capability that would improve a combatant commander's set of options. The formation and deployment of SPMAGTFs¹²⁰ and Marine Rotational Forces¹²¹ are examples.

All of these initiatives are value-added and serve a national security interest, but the Corps must assess what it needs to do to prepare for the future it envisions and determine whether the opportunity costs of sustaining a 1:2 deployment-to-dwell ratio outweigh the importance placed on these efforts. General Neller has highlighted the damage being done to the force at its current workload. **Dules the Corps is successful in getting additional funding to increase its end strength, it must start pulling back from operational commitments.

Recommendation #6: Recoup resources committed to secondary, collateral, and additional duties or functions. Specifically, the Corps should:

- Strongly consider disestablishing Marine Corps Special Operations Command (MARSOC).
- **Review** its level of investment in Marine Forces Cyberspace Command (MARFORCYBER).
- **Reconsider** its SPMAGTF commitment.
- Reevaluate its investment in specific types of climate-specific warfighting.

There is a third option for creating relief in the operating forces: Redirect Marines from doing one thing to doing another. Everything the Corps decides to do, it does well. The Marines involved invest themselves in the task. Resources are dedicated, which means the new task has been prioritized over other tasks. Sometimes, new career fields are created, new schools are established, facilities are built, and equipment is purchased. The new effort becomes established, and the Marine Corps becomes vested. This makes it very difficult to change. If it were not important in the first place, it would not have been done, and this makes the decision not to do it a very challenging one.

In these cases, the Corps must ask hard questions:

- How does the initiative, program, or capability relate to the Marine Corps' *primary* mission?
- Is it redundant to the same function being performed by others?
- If the capability is needed but the opportunity cost is high, can it be obtained from another service, command, or agency in the same way medical and chaplain support are provided by the Navy or operational/strategic air support is provided by the Air Force?

With this in mind, the Marine Corps should:

■ Strongly consider disestablishing Marine Corps Special Operations Command (MARSOC).¹²³ MARSOC was established because of a shortage of special operations teams, not because the Marine Corps wanted a special operations force. U.S. Special Operations Command was hard-pressed to meet the operational demand for its capabilities as U.S. global war on

terrorism efforts expanded in Afghanistan, Iraq, and many other locations worldwide. Then-Secretary of Defense Donald Rumsfeld noted that the Corps was not a service component contributor to SOCOM and directed that the Marines correct that. ¹²⁴ The Corps responded by creating an initial capability from its Force Reconnaissance elements, eventually establishing a fully credentialed special operations capability and associated career field. ¹²⁵

Since its formation, MARSOC has grown in capability, reputation, and utility to SOCOM. Marines who have joined have fully invested themselves in the necessary training, schools, deployments, and personal commitment. Remaining competent in this highly demanding function and being accepted by the larger special operations forces community¹²⁶ requires that those who are in the field remain in the field. Serving as a Marine special operator, leaving the command to do "regular" Marine Corps things, and then coming back to the command does not work. Consequently, in 2011, the Marine Corps established a military occupational specialty (MOS) for critical skills operators (CSOs) to enable them to remain in the SOCOM enterprise for the entirety of their careers.127 This not only provided a professional career track for the individual, but also benefitted the service and SOCOM by retaining personnel in whom they have made substantial investments and further enhanced the credibility of MARSOC within the special operations community. Though it remains within the Marine Corps, thus counting against service end strength, MARSOC takes its mission orders from SOCOM.

Consequently, the 2,700 Marines committed to MARSOC benefit SOCOM, performing special operations tasks in specific locations in the Middle East, Africa, and Asia. MARSOC has little direct value for the Corps, especially with regard to the Corps' primary mission as stipulated in 10 U.S. Code and DOD directive. The Corps' commitment to MARSOC, while a boon to SOCOM and the good work it does for the country, is an opportunity cost for the Corps and the work that only it can do, as opposed to SOCOM's role and the contributions long made to its mission by the Army, Navy, and Air Force.

■ Review its level of investment in Marine Forces Cyberspace Command (MARFORCYBER). 128

The world of cyber warfare and related cyber operations has come to symbolize the future of war for many defense professionals.¹²⁹ The defense and intelligence communities are critically dependent on cyberspace to surveil the enemy, exchange information among U.S. and allied/partner forces, and conduct operations. 130 Defending one's own computer-based systems and capabilities against enemy attempts to damage them is as important as having the ability to use cyber tools to do the same to the enemy. Understandably, each military service thinks it important to have an organic cyberware capability, and the Corps is no different from its sister services. The Corps also needs the ability to access higher-level capabilities and make its cyber requirements known, and it is very useful to have Marines who possess the expertise and credentials to make such connections possible.

That said, is the opportunity cost worth having a Marine-specific community of cyber-warriors? Perhaps cyber is different from medical expertise, but Marine Corps medical support requirements are met effectively by the U.S. Navy. Would it be such a leap to have augmentation from the Navy or any other military service or Defense organization to support Marine Corps cyber requirements? At present, the Corps is short of capacity to handle all of its commitments and prepare for the future. 131 It is not trained, equipped, or organized to perform its primary role as a component of naval power. The manpower commitment to MARFORCYBER might be better reallocated to the Corps' unique role if the function/support can be obtained elsewhere. It is certainly an issue worth exploring.

■ Reconsider its SPMAGTF commitment. Admittedly, geographic combatant commands want SPMAGTFs, but they will always make the case for additional capabilities that help them to mitigate risk in their respective regions. The Marine Corps also benefits because the organization in general, and the Marines involved specifically, gain the experience of deploying, planning, training, and executing crisis response operations, the type of mission for which the Corps has long postured and provided value. Again, however, as with its other non-amphibious/naval warfare commitments, the

Corps should reassess the value it gains and provides from permanent SPMAGTF commitments when compared with the challenge it faces in readying for future war in the contested littorals.

Reevaluate its investment in specific types of climate-specific warfighting. The Marine Corps recently doubled its investment in coldweather training in Norway, moving from 350 to 700 Marines engaged in such training.132 The Corps has long maintained a cold-weather training program, begun in 1951 to prepare for operations in Korea. 133 During the Cold War, the Corps was included in NATO response plans, intended to reinforce NATO's northern flank by deploying into Norway. It makes sense for a general-purpose force that is focused on operating in austere environments in "ev'ry clime and place" 134 and possessed of a celebrated history of valorous conduct in the most trying cold-weather conditions of the Korean War¹³⁵ to retain expertise in cold-weather/mountain warfare. The Corps certainly found itself operating at high elevations in Afghanistan, and those experiences are frequently referenced in its manual on mountain warfare operations. 136

That said, changes in geostrategic conditions often call for changes in force preparation and focus. If, as this paper has argued, the U.S. military has shrunk to a size that the Army should focus on the Russian threat in the European theater while the Navy and Marine Corps focus on the challenge that China poses in the Indo-Pacific region, perhaps the Corps should dedicate as much of itself as possible to solving the challenges of conducting distributed operations in the contested littorals instead of training several hundred Marines each year to fight in snowy, mountainous terrain. On the one hand, this is a small commitment relative to the size of the Corps; on the other, it is a commitment to a theater in which the Corps is less likely to be engaged compared to the Asian littorals, and the benefit gained does not appear to be significantly related to the Corps' primary role in naval warfare.

Recommendation #7: Expand integration with the Navy. Specifically, the Corps should:

■ Work with the Navy to establish a formal office, with permanently assigned personnel, for the

express purpose of developing solutions to the challenges of conducting a distributed naval campaign in contested littoral waters.

The Marine Corps maintains a robust relationship with the Navy. The Corps' Combat Development and Integration office, responsible for developing future operational concepts and determining how best to prepare the Corps for the future,137 works closely with the Navy's office for warfare systems, CNO-N9,138 and both offices are led by three-star generals or flag officers who report directly to their respective service chiefs. The Marine Corps Warfighting Laboratory¹³⁹ works closely with the Navy Warfare Development Command (NWDC),140 and both entities explore material and tactical issues related to executing operations in various conditions and settings. Through staff working groups, exercises, and regularly scheduled forums, the two services work to develop a mutual appreciation of challenges and potential solutions.

All of this is good, but each of these mechanisms is episodic and/or periodic, and the involvement of each service's participants is a collateral duty, not their primary job.

The Corps should work with the Navy to establish a formal office, with permanently assigned personnel, that is highly visible to the Commandant of the Marine Corps and Chief of Naval Operations and has the specific purpose of developing solutions to the challenges of conducting a distributed naval campaign in contested littoral waters. At first glance, this might seem to compete with the work of MCWL and its NWDC counterpart, but the value of such an office would derive from its constant focus on the shared problem, and it would serve as a formal liaison connecting the service-focused efforts of the Marine Corps and the Navy. The various forums, working groups, and related activities would continue but would be improved by the daily involvement and continuity provided by this naval staff.

Conclusion

In 1946, the Corps was under assault by the Department of War (the Army), which sought its reduction if not its outright elimination. There were many reasons for this, but suffice it to say that the Corps' leadership was compelled to make a last-ditch defense of the service before Congress voted on legislation being pushed by the Army and its supporters. In testimony before the Senate Committee on Naval Affairs, General Alexander A. Vandegrift, Commandant of the Marine Corps, made an impassioned case for the importance of the Corps based on its history of serving national interests with a capability that is possessed by no other service, specifically in the technical field of amphibious operations:

The heart of the Marine Corps is in its Fleet Marine Force.... The strength of that Fleet Marine organization lies in its status as an organic element of our fighting fleet, prepared at any time and on short notice to extend the will of the naval commander ashore in the seizure of objectives which are vital to the prosecution of a naval campaign or in the protection of American interests abroad....

A significant corollary to the fighting function of the Fleet Marine Force, and actually the one which has required the most sustained effort, is the task of developing the techniques, doctrines, equipment and procedures which relate to the amphibious specialty.¹⁴¹

General Vandegrift went on to explain how the Corps had assessed the potential for operations against Japan and dedicated itself for 20 years "to the complexities of the amphibious subject" and "development of the detailed techniques, doctrines and equipment, which later proved of such value to the armed forces of both our own and allied nations."

The Corps' decision to undertake this effort in the 1920s and 1930s was especially notable given that the Dardanelles campaign of World War I had proven to most observers that landing operations were a fool's errand. The battle of Gallipoli, referenced by Vandegrift, was the British-led amphibious landing on the southern tip of the Gallipoli peninsula, the long, narrow bit of land that forms the northwestern side of the Dardanelles Strait. Launched in April 1915, it dragged on until January 1916 because of its extraordinarily

poor execution. It was such a colossal failure that militaries in general concluded that such an operation was impossible. Yet the Corps looked across the Pacific and realized that if war with Japan did occur, this type of operation was going to be a necessity.

This same situation faces the Marine Corps today. For a quarter-century or more, it has assessed that landing operations in the modern era will be difficult but necessary. Unfortunately, however, it has done little to develop the ability to execute such operations successfully. Its concepts for doing so are sound, but its programs and efforts have not followed accordingly.

If the U.S. is indeed entering a new period of competition with great powers, then every effort must be made by the U.S. military to ensure that it is up to the task. Given the reductions in force size, readiness, and modernity since the end of the Cold War, the Army will have its hands full trying to regain its ability to confront Russia in the European theater and tackle the challenges of operations in the Middle East or even back on the Korean Peninsula. That leaves the Marine Corps and the U.S. Navy to solve the problem of how to defeat China in any conflict that may unfold in the Indo-Pacific littorals.

The Corps has been busy with irregular warfare, crisis response, and special operations missions since September 11, 2001. As it has done throughout its history, it has devoted itself to excelling in every challenge assigned to it and has sought additional ways to contribute to securing U.S. national security interests—even at the risk of breaking the force. Its challenge now is to make the hard decisions necessary to ensure that it succeeds in the one area for which it is obligated, the one thing for which it is uniquely qualified and that no other service can do.

In every assessment and decision to commit its limited resources, the Corps must return to its "mission statement" and ask how the specific thing relates to contributing to the prosecution of a naval campaign and whether it helps or hinders developing the capability to fight and win in the contested littorals of the Indo-Pacific region. If the answer is "yes," then the Corps should move ahead as aggressively as possible. If the answer is "no" or is in that muddling, ambiguous middle of "maybe," then it should be disciplined enough to dispense with it and redirect those resources where they will matter most.

REBUILDING AMERICA'S MILITARY: THE UNITED STATES MARINE CORPS

The Marines have demonstrated such discipline in the past. They need to do so now and for however long is necessary to solve the contested littoral challenge.

Endnotes

- 1. Lawrence Freedman, The Future of War: A History (New York: Public Affairs, 2017), p. 287.
- 2. Dakota L. Wood, "Rebuilding America's Military: Thinking About the Future," Heritage Foundation *Special Report* No. 203, July 24, 2018, p. 1, https://www.heritage.org/defense/report/rebuilding-americas-military-thinking-about-the-future.
- 3. Ibid., p. 24.
- 4. 10 U.S.C. § 8063(a), "United States Marine Corps: Composition; Functions," http://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title10-section8063&num=0&edition=prelim (accessed January 30, 2019). See also Robert M. Gates, Secretary of Defense, "Functions of the Department of Defense and Its Major Components," U.S. Department of Defense Directive No. 5100.01, December 21, 2010, pp. 31–32, https://fas.org/irp/doddir/dod/d5100_01.pdf (accessed February 6, 2019).
- 5. Samuel P. Huntington, "National Policy and the Transoceanic Navy," U.S. Naval Institute *Proceedings*, Vol. 80, No. 5, Whole No. 615 (May 1954), p. 483, https://www.usni.org/magazines/proceedings/1954-05/national-policy-and-transoceanic-navy (accessed February 6, 2019). Available by subscription.
- Nathan S. Lowrey, U.S. Marines in Afghanistan, 2001–2002: From the Sea, U.S. Marines in the Global War on Terrorism (Washington: U.S. Marine Corps, History Division, 2011), pp. 112–120, https://permanent.access.gpo.gov/gpo20162/FROM%20THE%20SEA.pdf (accessed February 6, 2019).
- 7. Alexander A. Vandegrift, testimony presented to the Committee on Naval Affairs, U.S. Senate, May 6, 1946, http://www.patriotfiles.com/index.php?name=Sections&req=viewarticle&artid=7858&page=1 (accessed February 6, 2019). Within the U.S. Marine Corps, this testimony is often referred to as the "Bended Knee" speech because of this passage in Vandegrift's closing paragraph: "Sentiment is not a valid consideration in determining questions of national security. We have pride in ourselves and in our past, but we do not rest our case on any presumed ground of gratitude owing us from the Nation. The bended knee is not a tradition of our Corps. If the Marine as a fighting man has not made a case for himself after 170 years of service, he must go."
- 8. In the case of the Corps, these other things are actually part of its formal mission but with an important caveat: "In addition, the Marine Corps...shall perform such other duties as the President may direct. However, these additional duties may not detract from or interfere with the operations for which the Marine Corps is *primarily* organized." See 10 U.S.C. § 8063(a), "United States Marine Corps: Composition; Functions." Emphasis added.
- 9. Gates, "Functions of the Department of Defense and Its Major Components," pp. 31-32.
- 10. Wayne P. Hughes, Fleet Tactics and Naval Operations, Third Edition (Annapolis, MD: Naval Institute Press, 2018). Fleet Tactics was first published in 1986 as Fleet Tactics: Theory and Practice. It was updated and republished in 2000 as Fleet Tactics and Coastal Combat. Within the naval warfare community, it is regarded as the best reference available for understanding naval warfare and the key factors that make one fleet more likely to win in battle over another.
- 11. U.S. Navy, Naval History and Heritage Command, "US Ship Force Levels, 1886-Present," https://www.history.navy.mil/research/histories/ship-histories/us-ship-force-levels.html#1986 (accessed February 6, 2019). See particularly table, "U.S. Navy Active Ship Force Levels, 1986-1992." Significant historical events that provide context for Navy ship counts include: 1987, Cold War near end of Reagan presidency 594/59; 1990, Berlin Wall falls, 570/59; 1991, USSR dissolves in December, 529/61; 1992, dramatic decline in U.S. Navy surface fleet, 471/58; 2002, one decade after end of Soviet Union, 313/41; 2018, current, 286/32.
- 12. U.S. Marine Corps, Concepts and Programs, "Marine Air Ground Task Force," https://www.candp.marines.mil/Organization/MAGTF/ (accessed February 7, 2019).
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- 16. T. T. Parish, "31st MEU Spearheads Multi-Service, FEMA-led Yutu Response on Tinian—USS Ashland Arrives," U.S. Marine Corps, November 7, 2018 https://www.marines.mil/News/News-Display/Article/1684363/31st-meu-spearheads-multi-service-fema-led-yutu-response-on-tinian-uss-ashland/ (accessed February 7, 2019).
- 17. U.S. Marine Corps, Concepts and Programs, "Marine Air Ground Task Force."
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REBUILDING AMERICA'S MILITARY: THE UNITED STATES MARINE CORPS

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- 20. U.S. Marine Corps, "The Organization of Marine Air-Ground Task Forces," U.S. Marine Corps Order 3120.3, December 27, 1962, copy maintained by Historical Reference Branch, Marine Corps History Division, Marine Corps Base, Quantico, VA.
- 21. John H. Russell, "The Fleet Marine Force," U.S. Naval Institute *Proceedings*, Volume 62, No. 10, Whole No. 404 (October 1936), https://www.usni.org/magazines/proceedings/1936-10/fleet-marine-force (accessed February 7, 2019). Available by subscription.
- 22. This is not an indictment of the Corps. Rather, it is an indicator of the mission-resources mismatch with which all of the services have had to contend since the attacks of September 11, 2001. The military has been directed to conduct a variety of operations all over the world—many of them sustained for nearly two decades (the operation in Afghanistan being a prime example)—without being provided the commensurate level of funding necessary to maintain a force large enough to handle everything at rational levels of workload for the individual and key items of equipment. Though this mismatch levies a great burden on the military, it also reveals the extraordinary work being done by servicemembers who "get the job done" anyway.
- 23. General Robert B. Neller, Commandant of the Marine Corps, statement on "The Posture of the United States Marine Corps" before the Subcommittee on Defense, Committee on Appropriations, U.S. House of Representatives, March 7, 2018, p. 15, https://docs.house.gov/meetings/AP/AP02/20180307/106932/HHRG-115-AP02-Wstate-NellerR-20180307.pdf (accessed February 7, 2019).
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- 28. Ibid., pp. 4 and 7.
- 29. Joseph Logan, "Last U.S. Troops Leave Iraq, Ending War," Reuters, December 17, 2011, https://www.reuters.com/article/us-iraq-withdrawal/last-u-s-troops-leave-iraq-ending-war-idUSTRE7BH03320111218 (accessed February 8, 2019).
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- 31. Joseph Composto, "Desert Storm and the Amphibious Assault," paper submitted to the Faculty of the Naval War College, May 20, 1991, p. 12, https://apps.dtic.mil/dtic/tr/fulltext/u2/a240240.pdf (accessed February 21, 2019).
- 32. U.S. Marines in the Persian Gulf, 1990-1991: Anthology and Annotated Bibliography, comp. Charles D. Nelson, Evelyn A. Englander, and David A. Dawson (Washington: U.S. Marine Corps, History and Museums Division, 1992, reprinted 1995), p. 17, https://www.marines.mil/Portals/59/Publications/U.S.%20MARINES%20IN%20THE%20PERSIAN%20GULF%2090-91%20ANTHOLOGY%20AND%20ANNOTATED%20BIBLIOGRAPHY%20%20PCN%20%2019000316000_1.pdf (accessed February 21, 2019).
- 33. The total ship count was derived from separate references to the amphibious squadrons (PHIBRONs) on which the Marines were embarked. PHIBRON 6 and PHIBRON 8 totaled 15 ships, PHIBRON 3 was composed of 13 ships, PHIBRON 5 sailed with five ships, and MAGTF 6-90 was embarked on three ships. See ibid., pp. 10, 14, and 20.
- 34. Military end strength and the number of people deployed abroad vary from year to year. However, there are rough averages that reflect general levels of investment in military capabilities across many years, and these do not change much unless a dramatic change occurs in the geostrategic environment, such as the collapse of the Soviet Union. The International Institute of Strategic Studies (IISS) has tracked military statistics for major countries since 1958. A review of its annual publication, *The Military Balance*, provides snapshots of force levels. In 1977, the U.S. Army had an end strength of 789,000 soldiers in its active component and maintained 196,000 soldiers in Europe and 30,000 soldiers in South Korea. International Institute for Strategic Studies, *The Military Balance 1977–1978* (London: International Institute for Strategic Studies, 1978), pp. 5 and 6. In 1988, those numbers had shifted slightly to 776,400 total soldiers, with 212,410 in Europe and 29,100 in South Korea. International Institute for Strategic Studies, *The Military Balance 1988–1989* (London: International Institute for Strategic Studies, 1989), pp. 19, 27, and 28.

- 35. Any student of military affairs should be aware that all aspects of U.S. military power have been essential to military operations, in planning for major wars, and certainly in deterrence measures. Air power is an essential component across the board, whether delivered by the U.S. Air Force, U.S. Navy, or U.S. Marine Corps and even by the U.S. Army when accounting for attack helicopters. The Air Force is the only service that provides strategic lift through its long-range cargo aircraft and aerial refuelers, aircraft that are specialized for reconnaissance, communications, and battlespace coordination tasks, bombing missions particularly at extended ranges and deep into defended airspace. The focus on land combat capabilities in this paper is meant only to highlight the unique contributions of the Marine Corps as a land power force in comparison with the Army.
- 36. International Institute for Strategic Studies, *The Military Balance 2017: The Annual Assessment of Global Military Capabilities and Defence Economics* (London: Routledge, 2017), pp. 58–59. The size of the U.S. Army also plummeted, from 776,400 in 1988 to 475,350 in 2017. Ibid., p. 46.
- 37. U.S. Navy, Naval History and Heritage Command, "US Ship Force Levels, 1886-Present."
- 38. U.S. Navy, Naval Sea Systems Command, Naval Vessel Register, "Fleet Size," updated February 19, 2019, http://www.nvr.navy.mil/NVRSHIPS/FLEETSIZE.HTML (accessed February 25, 2019).
- 39. Cary B. Russell, Director, Defense Capabilities and Management, U.S. Government Accountability Office, "Navy and Marine Corps Training: Further Planning Needed for Amphibious Operations Training," testimony before the Subcommittee on Readiness, Committee on Armed Services, U.S. House of Representatives. December 1, 2017, p. 2, GAO-18-212T, https://www.gao.gov/products/GAO-18-212T (accessed February 25, 2019).
- 40. Megan Eckstein, "Marines See Future for Special Purpose MAGTFs Even As Ship Count Rises," U.S. Naval Institute News, October 30, 2018, https://news.usni.org/2018/10/30/marines-see-future-for-special-purpose-magtfs-even-as-ship-count-rises (accessed February 25, 2019), and Dan Lamothe, "3-Star Details New Marine Crisis-Response Force," *Marine Corps Times*, April 21, 2013, https://web.archive.org/web/20130426050823/http://www.marinecorpstimes.com/article/20130421/NEWS/304210007/3-star-details-new-Marine-crisis-response-force (accessed February 25, 2019).
- 41. The author joined the Corps in 1985 at a time when U.S. planning focused on countering Soviet designs. Amphibious operations were as much a part of regular discussions and training as were those focused on how to defeat Soviet-styled forces in land/air combat. The author spent nearly two years aboard ship in one form or another, to include two deployments in the Mediterranean, as well as staff work dealing with USMC assets prepositioned aboard squadrons maintained in key regions. Executing amphibious operations of any sort is a complex process that requires specialized knowledge and a great deal of practical experience for both the Navy crews and the Marine Corps units involved. Embarking aboard, living on, and deploying and sustaining operations from amphibious ships are experiences that few militaries in the world are able to obtain, and they generate an appreciation for projecting land combat power across the seas that is quite difficult to obtain otherwise.
- 42. The Corps routinely deployed three MEUs at a time, one each in the Mediterranean, Indian Ocean, and Western Pacific. Each deployment area effectively accounted for three battalions: the one deployed, the one getting ready to deploy, and the one that had just returned from deployment. In similar manner, the Corps maintained a three-battalion presence on Okinawa, with each major home base contributing a battalion per cycle: Camp Lejeune, North Carolina; Camp Pendleton, California; and Kaneohe Bay, Hawaii. Consequently, MEU rotations accounted for nine battalions, and deployments to Okinawa accounted for nine more.
- 43. 10 U.S.C. § 8063(a), "United States Marine Corps: Composition; Functions."
- 44. Allan R. Millett, Semper Fidelis: The History of the United States Marine Corps (New York: The Free Press, 1991), pp. xvi-xvii. "[T]he Corps has used the amphibious assault mission as the foundation (but not the limit) for this function [of responding to international crises]. Its greatest organizational challenge has been not only to preserve its amphibious warfare mission but also to create forces that will be adequate for duties other than short-lived attack from the sea." Ibid., p. xvii.
- 45. Victor H. Krulak, First to Fight: An Inside View of the U.S. Marine Corps (Annapolis, MD: Naval Institute Press, 1999), p. 5.
- 46. Edwin N. McClellan, *The United States Marine Corps in the World War*, Marine Corps Historical Reference Pamphlet (Washington: Historical Branch, G-3 Division, Headquarters, U.S. Marine Corps, 1920; facsimile reprinted 1968), p. 38, https://www.marines.mil/Portals/59/Publications/The%20United%20States%20Marine%20Corps%20in%20the%20World%20War%20%20PCN%2019000411300.pdf (accessed February 26, 2019).The Armistice that brought World War I to an end came into effect on November 11, 1918.
- 47. Ibid., pp. 36 and 57.
- 48. This was a very busy period for the Corps. Its involvement in foreign events included action in the Philippines, Puerto Rico, Cuba, Panama, North Africa, China, Haiti, Nicaragua, Mexico, and the Dominican Republic, among others. The Corps also began practicing landing, or amphibious, operations just after the turn of the century and established the Advanced Base Force, along with a related school, which became the forerunner of the Fleet Marine Force. Finally, the Corps began developing its own aviation capability in 1912, sending Lieutenant Alfred Cunningham to the naval aviation school in Annapolis, MD, to learn how to fly.
- 49. Tentative Manual for Landing Operations (Quantico, VA: Marine Corps Schools, 1934). See David C. Emmel, The Development of Amphibious Doctrine, thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements for the degree Master of Military Art and Science, Military History, November 6, 2010, https://apps.dtic.mil/dtic/tr/fulltext/u2/a524286.pdf (accessed February 26, 2019).

REBUILDING AMERICA'S MILITARY: THE UNITED STATES MARINE CORPS

- 50. Small Wars Manual, United States Marine Corps, 1940, Fleet Marine Force Reference Publication No. 12-15 (Washington: United States Government Printing Office, 1940), https://www.marines.mil/Portals/59/Publications/FMFRP%2012-15%20%20Small%20Wars%20 Manual.pdf (accessed February 26, 2019). "It is this type of routine active foreign duty of the Marine Corps in which this manual is primarily interested. Small wars represent the normal and frequent operation of the Marine Corps. During about 85 of the last 100 years, the Marine Corps has been engaged in small wars in different parts of the world. The Marine Corps has landed troops 180 times in 37 countries from 1800 to 1934. Every year during the past 36 years since the Spanish-American War, the Marine Corps has been engaged in active operations in the field." Ibid., p. 1-2.
- 51. Shawn Snow, "The Corps' Largest Rotational Deployment to Norway Kicks Off," *Marine Corps Times*, October 1, 2018. https://www.marinecorpstimes.com/news/your-marine-corps/2018/10/01/the-corps-largest-rotational-deployment-to-norway-kicks-off/ (accessed February 26, 2019), and Stephen Carlson, "Expended Marine Rotational Force Deploys to Norway," United Press International, October 2, 2018. https://www.upi.com/Defense-News/2018/10/02/Expanded-Marine-rotational-force-deploys-to-Norway/5791538493484/ (accessed February 26, 2019).
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- 53. 10 U.S.C. § 8063(a), "United States Marine Corps: Composition; Functions."
- 54. Gates, "Functions of the Department of Defense and Its Major Components," pp. 31-32.
- 55. Millett, Semper Fidelis: The History of the United States Marine Corps.
- 56. U.S. Navy and U.S. Marine Corps, "...From the Sea: Preparing the Naval Service for the 21st Century," U.S. Navy, September 1992, pp. 1–2, https://apps.dtic.mil/dtic/tr/fulltext/u2/a338570.pdf (accessed February 26, 2019). Emphasis in original.
- 57. U.S. Marine Corps, *Operational Maneuver from the Sea*, January 4, 1996, https://www.marines.mil/Portals/59/Publications/MCCP%201%20 Operational%20Maneuver%20from%20the%20Sea.pdf (accessed February 26, 2019).
- 58. U.S. Department of the Navy, Marine Corps Combat Development Command, *Ship-to-Objective Maneuver*, July 25, 1997, https://www.globalsecurity.org/military/library/policy/usmc/stomfinal.pdf (accessed February 26, 2019).
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- 65. U.S. Department of the Navy and U.S. Marine Corps, *Littoral Operations in a Contested Environment*, Unclassified Edition, 2017, p. 5, https://news.usni.org/2017/09/26/document-marine-corps-littoral-operations-contested-environment-concept (accessed February 6, 2019).
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- 67. Ibid., p. 8.
- 68. Ibid., p. 9. Emphasis in original.
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- 73. Wood, "Rebuilding America's Military: Thinking About the Future," p. 18.
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REBUILDING AMERICA'S MILITARY: THE UNITED STATES MARINE CORPS

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