

VISION, EDUCATION AND EXPERIMENTATION: MARINE CORPS
ORGANIZATIONAL BEHAVIOR AND INNOVATION
DURING THE INTERWAR PERIOD

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Art of War

by

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

VISION, EDUCATION, AND EXPERIMENTATION: MARINE CORPS ORGANIZATIONAL BEHAVIOR AND INNOVATION DURING THE INTERWAR PERIOD, by Major Gabriel L. Diana, USMC, 139 pages.

The Marine Corps' development of amphibious warfare doctrine during the Interwar Period provides an example of successful peacetime innovation. The development of amphibious capabilities provides a guide for future innovation. The senior leadership of the Marine Corps provided a centralized vision in the development of amphibious warfare doctrine, training, experimentation, and equipment procurement. In turn, the Marine Corps fostered an intellectualism that critically examined and integrated lessons from World War I, the Army formal school system, emerging educational models, and private industry to professionalize and develop an amphibious warfare capability. Closely related, the Marine Corps empowered relatively junior officers, to include students at the Marine Corps Schools, to solve the most complex problems facing the organization's preparation for WW II. Last, the Navy and Marine Corps conducted a series of experiments that tested the *Tentative Landing Manual* and examined a wide array of tactics and technological solutions.

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ACRONYMS

FLEX	Fleet Landing Exercise
MCS	Marine Corps Schools
NWC	Naval War College
U.S.	United States
USMC	United States Marine Corps
WW I	World War I
WW II	World War II

CHAPTER 1

INTRODUCTION

The history of the United States Marine Corps is essentially a story of institutional survival and adaptation in both peace and war.¹

— Allan R. Millett, *Semper Fidelis: The History of the United States Marine Corps*

These are different times. I mean I've been in the Marine Corps for 41 years and I've seen this ebb and flow and I've seen the budget cycle go up and down in its typical 10-year cycles. I'm probably more concerned now than I ever have been before.²

— General James F. Amos, quoted in Dobson, "The Marine Corps and the Coming Fiscal Austerity"

The Department of Defense faces significant budgetary cuts due to the impending American budget crisis. These budgetary realities also come during a time when the American population is wary of continuation of the war and commitments overseas. The Marine Corps is not immune to the future budgetary cuts or the emerging political and public sentiment. Nonetheless, the Marine Corps must adjust to a new period of fiscal austerity while maintaining a high state of readiness and fostering anticipatory vision to properly posture for the next conflict. Balancing the requirements for personnel, equipment, and operations and maintenance in the new fiscal reality is the premier challenge for the leadership of the Corps. These are not uncharted waters for the Marine Corps. An examination of similar periods of fiscal austerity, growing operational

¹Allan R. Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: The Free Press, 1991), xv.

²Col Robert K Dobson, USMC, "The Marine Corps and the Coming Fiscal Austerity," *Marine Corps Gazette* 95, no. 11 (November 2011): 16.

requirements, and uncertain lessons from major conflicts may provide insights into the Marine Corps' current efforts to rebalance and posture itself for the future.

The contemporary Marine Corps faces many of the same challenges as their predecessors from the Interwar Period. The similarities include political and strategic uncertainties where the threat and future character of conflict remain ambiguous. Drastic budget cuts characterize both periods and create limited resources to apply against competing requirements that influence operations and innovation. Closely related to fiscal austerity is the fight to remain relevant and aligned with American strategic requirements. Analogous to the Interwar Period, division in schools of thought on the future role of the Marine Corps in America's national security strategy are emerging amongst its officers. Frank Hoffman describes today's different factions as the small wars advocates, amphibious traditionalists, and the full spectrum warriors.³

In the coming years, the Marine Corps will conduct substantial discourse on the lessons from the past 11 years of conflict in Iraq and Afghanistan. Concomitantly, it will attempt to forecast the future threat environment and posture the Corps to meet these demands. In the coming "age of austerity," the Marine Corps will need to find and implement creative solutions to meet these requirements while balancing its role as America's crisis response force. An examination of the Interwar Marine Corps provides the current generation context and insight to the necessary institutional behavior to foster innovation.

³LtCol Frank Hoffman, USMC, "Posturing the Corps for the 21st Century: Adapting to the Character of Contemporary Conflict," *Marine Corps Gazette* 96, no. 12 (December 2012): 27-33.

Background

After the successful conclusion of the Spanish American War in 1898, the United States (U.S.) Navy assumed strategic duties to defend the newly gained and vulnerable possessions located in the Caribbean and Pacific. The General Board, in collaboration with the Naval War College (NWC), concluded that the Navy required a system of coaling stations to properly defend American interests against Japanese and European threat. Under these conditions, a new mission for the Marine Corps emerged –the defense of advance naval bases. At the theoretical level, a small contingent of Marine officers recognized the important role advance base operations would play in the future national security environment. Nonetheless, due to the relatively small size, limited resources, and overseas operational commitments, the Marine Corps would not fully embrace the amphibious mission until after the World War II (WW II).

At the conclusion of World War I (WW I), the Treaty of Versailles formally recognized the Japanese ownership or mandate over the former German colonies in the Pacific, most significantly, the island chains of the Marshals, Carolines, and Marianas. These possessions afforded Japan a number of territories capable of influencing the U.S. sea lines of communication to the Philippines and American Samoa. If war occurred with Japan, American war planners began to envision an offensively oriented naval campaign to isolate and economically exhaust Japan. Despite the disastrous landings at Gallipoli during WW I, the seizure of enemy held islands and the defense of advance naval bases became a strategic necessity that provided the Marine Corps its reason for existence. These operational requirements initiated two-decades of innovation and experimentation by the Navy-Marine Corps team to develop an amphibious capability.

The 1920s and 1930s mark a period of significant military budget cuts, American isolationist sentiment, and inter-service rivalry. Externally, the Marine Corps remained in a fight to establish its relevancy within the national defense strategy. Internally, it experienced divisions within its officer corps on the primary mission of the Marine Corps. These debates took place as the Marine Corps' force structure drastically decreased and operational requirements remained steady. Over the next two decades, the Marine Corps incrementally shifted its organizational culture to accept the amphibious mission as its reasons for existence and initiated a process to find and implement solutions to accomplish the task. Although hampered by personnel and equipment shortages, the Marine Corps possessed a viable doctrine and force structure postured to conduct amphibious operations by December of 1941.

Problem Statement

In the last decade, the Marine Corps fought hard with great distinction in Iraq and Afghanistan. Nonetheless, it fought as an adjunct to the Army with near limitless resources at the service level to ensure success. While the Corps' mid-grade officers and staff non-commissioned officers know how to fight in complex environments and lead through loss, they lack experience in the fiscally restrained environment we will soon enter. An examination of a period similar in Marine Corps history will provide context and insight to shape its understanding of the necessary institutional behavior to anticipate future requirements and foster innovation while providing the Nation a crisis-response-force.

Research Question and Methodology

This thesis focuses on the study of one primary and four secondary research questions. The primary research question is: what institutional behavior during the Interwar Period allowed the Marine Corps to effectively innovate and develop an amphibious warfare capability? This led to four secondary research questions. What internal and external factors influenced service priorities during each period? What priorities did each Commandant of the Marine Corps stated during the period? How did the service foster creativity and innovation during the period? What organizational, institutional, and doctrinal reforms occurred during the period? How did the service achieve balance between fiscal efficiency, readiness and innovation during each period?

The primary methodology used for answering these questions was the study of documents outlining the assessments, decisions, and policies of the Marine Corps. The research relied heavily upon articles written in the *Marine Corps Gazette* and *Proceedings* during the period. The author also spent a week at the Marine Corps Research Library in Quantico, Virginia reviewing materials at the archives. This trip provided an opportunity to interview and participate in dialog with several retired and active duty Marines. Additionally, this study used the work of historians and social scientists who have studied the Marine Corps, innovation, and organizational culture.

Thesis

The Marine Corps' development of amphibious warfare doctrine during the 1920s and 1930s provides an example of an organization's ability to successfully innovate and build required capabilities for the next conflict. Its success has multiple components. The Commandants during this period provided a centralized vision and cultivated an

organizational culture that valued professional education and leveraged its talented junior and mid-grade officers to solve the Marine Corps' most complex and demanding problems. In turn, the institution fostered an intellectualism that critically examined and synthesized a wide array of military history, lessons learned, and emerging service doctrines to develop a unique Marine Corps operating concept. The MCS and relatively junior officers were empowered and incorporated into doctrinal development, war planning, live-force experimentation, and equipment procurement. Furthermore, the use of field exercises and wargames reflected experiments used to identify shortcomings within the doctrine, training, and equipment; as well as, potential of the emerging concepts.

Innovation and Military Culture

Two of the themes of this thesis are innovation and military culture. MacGregor Knox and William Murray in *The Dynamics of Military Revolution: 1300-2050* frame innovation as “a complex mix of tactical, organizational, doctrinal, and technological” advancements focused on implementing “a new conceptual approach to warfare.”⁴ These developments allow military organizations to more effectively destroy their enemy. Murray further asserts in *Military Innovation in the Interwar Period* that “specificity” in the security environment serves as a common theme in a military organization's ability to innovate. He also argues that most innovation occurs in an evolutionary process that

⁴MacGregor Knox and Williamson Murray, *The Dynamics of Military Revolution, 1300-2050* (Cambridge, MA: Cambridge University Press, 2009), 11-12.

involves long-term debate, experimentation, and cultural change.⁵ Additionally, political, social, and strategic context of the period informs and influences innovation.⁶ Murray outlines the following measures to change service culture and encourage innovation:

1. Focus efforts on defeating a real opponent based on their ends, ways, and means.
2. Conduct realistic exercises against a “thinking” enemy that challenges current doctrine and operating concepts.
3. Define measures of effectiveness focused on desired outcomes against the enemy.
4. Maintain the professionalism of the military organization.
5. Foster intellectual curiosity, creativity, and problem-solving within the professional military education system.
6. Encourage nonlinear analysis focused on concept development vice technological improvement.⁷

John Kotter, a Harvard Business School Professor, provides another approach to analyze military innovation in his book *Leading Change*, which outlines an eight-step process to guide organizational change. The study discusses Kotter’s observations of over 100 businesses as they attempt implement change and regain a complete advantage within their respective markets. Kotter argues that the change process requires a considerable period of time and strong leadership to steward the organization through eight distinctive phases. Each step corresponds with the common failures he observed.

The first four phases of the Kotter Model focus on developing shared understanding and vision within the organization, while phases five through seven concentrate on translating these concepts into action. The final phase places emphasis on

⁵Williamson Murray, “Innovation: Past and Future,” in *Military Innovation in the Interwar Period*, eds. Williamson Murray and Alan R. Millett (Cambridge, UK: Cambridge University Press, 1996), 308-310.

⁶Ibid., 310-312.

⁷Ibid., 326-328.

maintaining momentum and achieving a lasting cultural change within the organization. Each phase is sequential, and according to Kotter, a misstep at any stage can produce less than optimal results.⁸ The initial phase of the plan places emphasis on establishing a sense of urgency within the organization by communicating the requirement for change. The second step focuses on establishing a guiding coalition, or small team, to lead change within the organization. The next phase in Kotter's model centers on collaboration to create a shared vision and strategy amongst the members of an association to identify objectives and priorities. The last step within this part of the model concentrates on communicating the vision for change within the organization.

The next two phases of the Kotter model exploit the previous efforts to create a shared vision within an organization. Step five emphasizes decentralizing and empowering subordinates to find and implement solutions to problems within the framework of the strategy for change. The next two stages focus on generating short-term wins to show progress and consolidate gains for long-term implementation of the change vision. The final phase of the Kotter model looks to infuse the organization's positive behavior into its institutional culture.

The other theme of this thesis addresses organizational culture. In *Military Innovation in the Interwar Period*, Murray defines military culture as "the sum of the intellectual, professional, and traditional values of an officer corps" that shape the organization's understanding of war.⁹ Military culture provides the lens through which an

⁸John P. Kotter, *Leading Change* (Boston, MA: Harvard Business School Press, 1996), 21-23.

⁹Murray, 3312-3313.

organization views the threat environment and identifies requirements to meet the anticipated security environment. Subsequently, it also drives the command culture, operating concepts, and preparation for war. Key indicators of a military organization's culture are the manner in which they recruit, train, promote, and assign its personnel. Additionally, the level of honest introspection and open dialog to examine organizational effectiveness provide keen insight into its culture. These models then, will be used to provide criteria to both analyze and assess military innovation by both individuals and organizations inside the Marine Corps during the Interwar Period.

Purpose and Organization of Study

This study provides an understanding of the Interwar Period Marine Corps' organizational culture that allowed it to develop and implement an amphibious warfare doctrine. The intent of the thesis is to provide insight into the necessary institutional behavior to foster innovation during a period of fiscal austerity and competing requirements. This study does not intend to serve as a comprehensive history of the institutional behavior of the Marine Corps during the Interwar Period. It neglects to discuss the innovations associated with Marine Corps aviation as well as the development of the *Small Wars Manual*. The thesis focuses on the institutional behavior that forced the Marine Corps to accept amphibious operations as its reason for existence and those subsequent actions to develop it as capability. This study is organized categorically to examine the strategic context and institutional behavior of the Marine Corps as it relates to innovation during the Interwar Period.

Chapter 2 examines the post-World War II (WW II) strategic environment that established the seizure and defense of advance naval bases as a requirement within in

War Plan Orange. The chapter also briefly discusses the disastrous landings at Gallipoli that convinced many that an opposed amphibious assault is not a viable option in the Industrial Age. In an effort to foreshadow successful innovation, it also looks at the Marine Corps' first opposed amphibious assault at Tarawa that served as a proof of concept for the doctrinal development and experimentation conducted in the 1920s and 1930s.

Chapter 3 focuses on the role the Commandant of the Marine Corps played in innovation and modernization within the Corps. The chapter discusses the tenure of John Lejeune, John Russell, and Thomas Holcomb and the respective challenges, priorities, and institutional reforms of each Commandant. It also examines the level of personal involvement of each of these three Commandants in experimentation, doctrinal development, and equipment procurement. Additionally, the chapter will investigate the command culture established by each of the Commandants.

Chapter 4 examines the command climate that empowered junior officers, and their role in addressing the most daunting doctrinal and technological challenges facing the Marine Corps. The study discusses the specific contributions of Earl Ellis, Victor Krulak, and the MCS as a small sampling of the broader effort by junior officers to contribute to the modernization of the Marine Corps. Additionally, the chapter investigates the curriculum reforms at the MCS that developed a collective learning environment focused on critical thinking and problem-solving.

Chapter 5 sums up key findings and provides the author's perspective on the relevancy of the Interwar Period Marine Corps and their efforts to develop an amphibious warfare capability.

Literature Review

The history of military innovation and the Marine Corps are topics that have been extensively studied by both historians and social scientists. The works of five authors stand out as definitive examinations of innovation during the Interwar Period. Williamson Murray and Allan R. Millett's *Military Innovation in the Interwar Period* is a compilation of comparative essays that examines how and why innovation occurred or did not occur in 1920s and 1930s using the experience of WW II to examine military effectiveness.¹⁰ Mark D. Mandeles' *Military Transformation Past and Present: Historic Lessons for the 21st Century* summarizes a variety of efforts to reform and transform the Department of Defense by examining how military organizations learn, experiment, and innovate.¹¹ A comparable study is Stephen P. Rosen's *Winning the Next War: Innovation and the Modern Military* that investigates the social process of innovation during peace and wartime as well as the factors that allow militaries to posture for the future security environment.¹² Mandeles' other work, *The Future of War: Organizations as Weapons* examines the organizational reforms necessary to fully exploit technological and doctrinal advancements on the battlefield.¹³ Most recently, John T. Kuehn published *Agents of Innovation: The General Board and the Design of the Fleet that Defeated the*

¹⁰Murray, "Innovation: Past and Future," 300-328.

¹¹Mark D. Mandeles, *Military Transformation Past and Present: Historic Lessons for the 21st Century* (Westport, CT: Praeger Security International, 2007).

¹²Stephen P. Rosen, *Winning the Next War: Innovation and the Modern Military* (New York: Cornell University Press, 1991).

¹³Mark D. Mandeles, *The Future of War: Organizations as Weapons* (Washington, DC: Potomac Books, 2005).

Japanese Navy that illuminates the role the General Board played in fostering innovation within the U.S. Navy during the Interwar Period and provides insightful context to the development of War Plan Orange.¹⁴

Numerous books and studies provide insight into the Marine Corps' institutional behavior during the Intewar Period. Lieutenant General Krulak's book *First to Fight: An Inside View of the U.S. Marine Corps* provides a memoirs of the Marine Corps' fight for existence and offers keen insight into the Corps' organizational culture and modernization efforts during the 1920s and 1930s.¹⁵ Millett's *Semper Fidelis: The History of the United States Marine Corps* remains the most comprehensive institutional history of the Marine Corps, but is general in nature due to the sheer size of the study.¹⁶ Although dated, Kenneth J. Clifford's *Progress and Purpose: A Developmental History of the United States Marine Corps* is an excellent synopsis of the Marine Corps' institutional modernization during the Intewar Period. The study also provides valuable details on the development of amphibious warfare doctrine and the personalities involved.¹⁷

¹⁴John T. Kuehn, *Agents of Innovation: The General Board and the Design of the Fleet that Defeated the Japanese Navy* (Annapolis, MD: Naval Institute Press, 2009).

¹⁵LtGen Victor H. Krulak, USMC, *First to Fight: An Inside View of the United States Marine Corps* (Annapolis, MD: Blue Jacket Press, 1999). Krulak originally published *First to Fight* in 1984.

¹⁶Allan R. Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: The Free Press, 1991).

¹⁷LtCol Kenneth J. Clifford, USMCR, *Progress and Purpose: A Developmental History of the United States Marine Corps, 1900-1970* (Washington, DC: Headquarters Marine Corps, History and Museums Division, 1973).

Additionally, Donald Bittner's *Curriculum Evolution: The Marine Corps Command and Staff College* serves as a comprehensive examination of the development of the Marine Corps Intermediate Level Education course throughout its history. His research provides detailed look at the Corps' efforts to infuse naval subjects within the curriculum and encourage critical analysis and problem-solving during the 1920s and 1930s.¹⁸ Most recently, Leo J. Daugherty uses an extensive list of primary and secondary sources in his 2009 book, *Pioneers of Amphibious Warfare: Profiles of Amphibious Warfare, 1898-1945*, which focuses on the contribution of several individuals in the Marine Corps' institutional development of amphibious warfare.¹⁹ In his doctoral dissertation, "To Fight Our Country's Battles': An Institutional History of the United States Marine Corps During the Interwar Era, 1919-1935," Daugherty illustrates the impact of WW I on not only the Corps' advance base force doctrine but more so the day to day operations of the Marine Corps in terms of training, education, recruitment, and administration.²⁰ This study is incomplete and only covers the reforms under the Lejeune Commandancy.

Several memoirs, reminiscences, and autobiographies by Marine officers of the period shed additional light on the institutional behavior of the Corps during the period.

¹⁸LtCol Donald F. Bittner, "Curriculum Evolution Marine Command and Staff College, 1920-1988" (Occasional Paper, History and Museums Division, Headquarters Marine Corps, Washington, DC, 1988).

¹⁹Leo J. Daugherty III, *Pioneers of Amphibious Warfare 1898-1945: Profiles of Fourteen American Military Strategists* (London, UK: McFarland & Company, 2009).

²⁰Leo J. Daugherty III, "To Fight Our Country's Battles': An Institutional History of the United States Marine Corps During the Interwar Era, 1919-1935," vol. I (Ph.D. diss., The Ohio State University, Columbus, OH, 2001).

Major General John A. Lejeune's *Reminiscences of a Marine* provides insights into one of the most influential Marines of the period despite a relatively terse chapter discussing his commandancy.²¹ General Alexander A. Vandegrift's *Once a Marine* and General Holland M. Smith's *Coral and Brass* both provide candid narratives of the Corps' during the interwar era.²² Smith's account remains biased towards the Marine Corps and instigates inter-service rivalry, which overall weakens his arguments. The autobiography by Vandegrift mostly focuses on operations in the Central Pacific and the post-WW II Defense Unification Act debate.

As for biographies, Merrill L. Bartlett's *Lejeune: A Marine's Life* outlines the challenges of the era but fails to provide an in-depth account of Lejeune's policies and vision for the Corps.²³ Dirk Ballendorf and Bartlett's *Pete Ellis: An Amphibious Warfare Prophet 1880-1923* offers a fair account of Ellis' personal and professional life; however, falls short in examining the state of the Marine Corps during the Interwar Period.²⁴ Millett's, *In Many a Strife: General Gerald C. Thomas and the U.S. Marine Corps 1917-1956* provides an excellent account of Thomas' career and detailed discussion on the

²¹John A. Lejeune. *The Reminiscences of a Marine* (Quantico, VA: Dorrance and Company Publishers, 1930).

²²Gen Holland M. Smith, USMC (Ret.) and Percy Finch, *Coral and Brass* (New York: Bantam Books, 1987); Alexander A. Vandegrift, *Once a Marine: The Memoirs of General A. A. Vandegrift, Commandant of the U.S. Marines in WWII* (New York: Ballantine Books, 1964).

²³Merrill L. Bartlett, *Lejeune: A Marine's Life, 1867-1942* (Columbia, SC: University of South Carolina Press, 1991).

²⁴Dirk Anthony Ballendorf and Merrill Lewis Bartlet, *Pete Ellis: An Amphibious Warfare Prophet, 1880-1923* (Annapolis, MD: Naval Institute Press, 2010).

Corps' modernization efforts during the 1920s and 1930s.²⁵ David J. Ulbrich's *Preparing for Victory: Thomas Holcomb and the Making of the Modern Marine Corps, 1936-1943* not only examines General Thomas Holcomb's life, it also highlights many of the challenges the Corps faced on the eve of WW II.²⁶ One of the most recent biographies is James Coram's *Brute: The Life of Victor Krulak, U.S. Marine* that chronicles Lieutenant General Victor Krulak's life and presents a detailed account of his contribution to the development of a suitable landing craft during the period.²⁷

Numerous primary sources provide important details to the institutional modernization of the Marine Corps as well as the development of an amphibious warfare doctrine during the Interwar Period. Articles from the *Marine Corps Gazette* and *Naval Institute Proceedings* are the most helpful to understand each Commandant's priorities as well as the tone of the officer corps during this era. These journals are also the most accessible for quick research.

This chapter provided the purpose and framework for the thesis while providing an overview of relevant literature on the subject matter. It also discussed models to examine innovation and organizational culture. The following chapter will investigate the strategic context of the Interwar Period as well as the challenges the Marine Corps faced in the development of amphibious warfare doctrine.

²⁵Allan Millett, *In Many a Strife: General Gerald C. Thomas and the U.S. Marine Corps 1917-1956* (Annapolis, MD: Naval Press Institute, 1993).

²⁶David J. Ulbrich, *Preparing for Victory: Thomas Holcomb and the Making of the Modern Marine Corps, 1936-1943* (Annapolis, MD: Naval Institute Press, 2011).

²⁷Robert H. Coram, *Brute: The Life of Victor Krulak, U.S. Marine* (New York: Little Brown and Company, 2010).

CHAPTER 2

ONE TOUGH NUT TO CRACK

The Marine Corps' story of interwar innovation begins with the ill-fated Gallipoli Campaign by a combined British, French, Australian, and New Zealand force against the Ottoman Turks during WW I. "Gallipoli" is synonymous with military failure and marks the first modern amphibious assault. The aftermath of this operation led many military leaders and theorists to assert that amphibious operations against a contested beach were ineffective in the Industrial Age. Nonetheless, after the end of WW II, the Treaty of Versailles formally recognized the Japanese ownership or mandate over the former German colonies in the Pacific, most significantly, the island chains of the Marshalls, Carolines, and Marianas. These possessions afforded Japan a number of territories capable of influencing the U.S. sea lines of communication to the Philippines and American Samoa.

If war occurred with Japan, American war planners began to envision an offensively oriented naval campaign to isolate and economically exhaust Japan. The seizure of enemy held islands and the defense of advance naval bases became a strategic necessity that provided the Marine Corps its reason for existence. The 1920s and 1930s, marked a period of deep intellectual thinking, doctrinal development, and experimentation by the Navy and Marine Corps to untie the "Gordian Knot" of modern amphibious operations. Nearly 28 years after Gallipoli, the Marine Corps validated its

doctrine and training against a determined enemy in the first successful storm landing at Betio Island, Tarawa Atoll, in the Gilbert archipelago.²⁸

Gallipoli

The seeds of the Gallipoli Campaign were sown on 31 October 1914, when Turkey declared war on Great Britain. By the end of 1914, the western front battle lines solidified and the war of grand maneuver ground to a halt leaving each side searching for a way to break the deadlock. Winston Churchill, First Sea Lord of the Admiralty (the analog to the U.S. Secretary of the Navy), proposed a naval attack on the Dardanelles with the strategic goals to remove Turkey from the war, open sea lines of communication with Russia, and entice Greece, Bulgaria, Rumania, and Moldova to join the war on the Allies side.²⁹ Additionally, the British hoped the campaign would bolster home-front morale and serve as the catalyst to break the stalemate on the western front.³⁰

²⁸Marine Corps historian Joseph H. Alexander uses the term ‘storm landing’ to classify amphibious assaults against a heavily defended and contested beach. The Battle of Tarawa marked the first serious Japanese opposition to an amphibious landing during WW II. Tarawa is an atoll with a series of coral islets that stretch through the ocean in a hook-like fashion. The 2nd Marine Division received the task to seize Tarawa. Approximately 4,700 Japanese defended Tarawa. On 20 November 1943, the 2nd Marine Division conducted a ‘storm landing’ and a fierce three-day battle occurred. American casualties totaled 978 killed and 2,188 wounded; only 17 Japanese survived.

²⁹United Kingdom, *Great Britain, Dardanelles Commission, Final Report* (London, UK: His Majesty’s Stationery Office, 1917), 14.

³⁰Peter Hart, *Gallipoli* (Oxford, UK: Oxford University Press, 2011), 1-22; Robin Prior, *Gallipoli: The End of the Myth* (New Haven, CT: Yale University Press, 2009), 1-20. It is important to note that the Gallipoli Campaign was envisioned largely as a naval operation with limited ground forces to achieve operational objectives with minimal risk and cost.

On 18 March 1915, the Eastern Mediterranean Fleet, consisting of British and French warships, attempted to force the Dardanelle Straits to threaten Constantinople, Turkey.³¹ At the completion of the day, the French battleship *Bouvet* struck a mine and sank within two minutes killing 700 of her 748 crew members. Shortly thereafter, the battleships HMS *Irresistible* and HMS *Ocean* sank, while the battlecruiser HMS *Inflexible*, and French battleships *Souffren*, and *Gaulois* sustained heavy damage.³² At this point, the Allied commander, Vice Admiral John de Robeck, withdrew his forces and announced to the Admiralty that a ground campaign must capture the peninsula to allow the Fleet to proceed through the strait with any degree of safety.³³

General Ian Hamilton, Commander-in-Chief of the Mediterranean Expeditionary Force (MEF), and his staff, devised an aggressive plan to enable fleet operations by landing nearly 78,000 troops on the Gallipoli Peninsula with the mission to neutralize the Turkish coastal defenses controlling the straits. The plan envisioned the main thrust at Cape Hellas, the southern-tip of the peninsula, with the 29th Division conducting

³¹Many believed the site of the powerful Anglo-French naval force off the shore of Constantinople would be enough to knock Turkey out of the war. General Sir Ian Hamilton held this assumption throughout the initial stages of the Gallipoli land campaign. See Gen Sir Ian Hamilton, G.C.B., *Gallipoli Diary* (New York: George H. Doran Company, 1920), 115. The operations began with a sweeping effort to clear Turkish minefields blocking the straits, but the Turks laid an additional line of mines parallel to the channel that remained undetected. The Anglo-French naval force also bombarded the coastal defense positions protecting the straits.

³²Peter Hart, 23-44. Note six capital ships, one third of the combined Fleet, became casualties on 18 March 1915.

³³Allan Moorehead, *Gallipoli* (New York: Harper and Brothers Publishers, 1956), 79; T. A. Gibson, "Gallipoli, 1915," in *Assault from the Sea: Essays on the History of Amphibious Warfare*, ed. LtCol Merrill L. Bartlett, USMC (Ret.) (Annapolis, MD: Naval Institute Press, 1983), 143-144.

simultaneous landings at five separate beaches—Y, X, W, V, and S. Upon the establishment of a beachhead, the force would move inland and seize the Kilid Bahr Plateau that dominated the Narrows.³⁴ The Australian and New Zealand Army Corps (ANZAC) would conduct a supporting attack to the north in vicinity at Gabe Tepe and move inland to isolate Cape Hellas.³⁵

The actions on 25 April 1915 at V-Beach were representative of the other landings that day. The tactical plan called for the 1st Royal Dublin Fusiliers to land via lighters towed by steam pickets, and seize key defensive positions overlooking the beach. Upon landing, the SS *River Clyde*, would intentionally run aground and disembark the 2nd Hampshire and 1st Royal Munster Fusiliers through open bay doors onto a gangway connected to a pontoon causeway.³⁶ In execution, the SS *River Clyde* ran aground approximately 100 yards below the ruins of Sedd-el-Bahr castle, a strong defensive position, as the first wave of Dubliners began to row ashore. Similar to the other beaches, the enemy employed mass surprise fires from well concealed positions with repeating artillery and machine guns, as the steam pickets released their lighters.³⁷ The 1st Royal Munster Fusiliers also sustained heavy casualties as they disembarked from SS *River*

³⁴The Kilid Bahr plateau, whose elevation rises between 600 and 800 feet above the beach, served as decisive terrain within the ground campaign; its seizure would enable the fleet's ability to transit the straits.

³⁵Hamilton, 2-10; Peter Hart, 1-22; Prior, 72-88. The tactical plan also specified that French forces would conduct amphibious raids at Kum Kale to deny the Turks the ability to interfere with main landings on the peninsula. Additionally, the Royal Navy would conduct demonstrations in vicinity of Bulair.

³⁶Joseph H. Alexander, *Strom Landings: Epic Amphibious Battles in the Central Pacific* (Annapolis, MD: Naval Institute Press, 1997), 10-12.

³⁷Prior, 99-104.

Clyde. At the completion of the day, nearly 1,000 soldiers remained on the *River Clyde* with 200 culminated at the seawall.³⁸

The initial landings of 25 April 1915 illuminated the extreme challenges and risk associated with modern amphibious operations. Following this experience, there was a considerable skepticism about whether there could ever be a successful amphibious landing where mines, torpedoes, artillery, pillboxes, and airpower served as a barrier to landing troops and supplies on a contested beach. The prominent British military historian B. H. Liddell Hart stated:

A landing on a foreign coast in the face of hostile troops has always been one of the most difficult operations in war. It has now become much more difficult, indeed almost impossible, because of the vulnerable target which a convoy of transports offer to the defender's air force as it approaches the shore. Even more vulnerable to air attacks is the process of disembarkation in open boats.³⁹

In *First to Fight*, Lieutenant General Krulak reinforced the impact of Gallipoli on contemporary military thinking of the time and highlights doubt, even within the Marine Corps regarding the feasibility of amphibious operations:

After Gallipoli, the amphibious assault, never taken too seriously, was largely discounted. Offshore mines, beach obstacles, heavy artillery in fortified emplacements, integrated air defense, aircraft for both observation and attack were all seen as favoring the defense, making such an assault difficult, indeed almost impossible.

It is at this point the Marine Corps entered the historical scene. In truth, however, both before and after Gallipoli only a few Marines were convinced of the feasibility of amphibious assault operations or even interested in them –until the

³⁸Peter Hart, 157. Under the cover of darkness, the *River Clyde* disembarked the remainder of its ground combat units in preparation for the following day's operations. The Turks conducted limited harassment that night.

³⁹B. H. Liddell Hart, *The Defense of Britain* (New York: Random House, 1939), 130.

1920s, there was no real institutional dedication in the Corps to the idea of an assault landing attack against organized defenses.⁴⁰

Interwar Period Strategic Setting

After the successful conclusion of the Spanish American War in 1898, the U.S. Navy assumed strategic duties to defend the newly gained and vulnerable possessions located in the Caribbean and Pacific. In 1900, the Secretary of the Navy established the General Board of the Navy to make recommendations on the nation's strategic challenges. The General Board, in collaboration with the Naval War College (NWC), concluded that the Navy required a system of coaling stations—specifically, in the Pacific—to properly defend American interests against Japanese and European threat. Under these conditions, a new mission for the Marine Corps emerged—the defense of advance naval bases. At the theoretical level, a small contingent of Marine officers recognized the important role advance base operations would play in the future national security environment.⁴¹ As early as 1915, future Commandants, John A. Lejeune and John H. Russell assert that the Marine Corps should surrender some of its traditional duties to focus on the defense of advance naval bases as its true mission.⁴² Despite some institutional resistance, the Marine Corps slowly established the foundation for an advance base force. Nonetheless, due to the relatively small size, limited resources, and

⁴⁰Krulak, 73-74.

⁴¹Millett, *Semper Fidelis*, 272.

⁴²Col John A. Lejeune, “The Mobile Defense of Advance Base,” *Marine Corps Gazette* 1, no. 1 (March 1916): 1:18; Maj John H. Russell, “A Plea for a Mission and Doctrine,” *Marine Corps Gazette* 1, no. 2 (June 1916): 109-122.

overseas operational commitments, the Marine Corps would not fully embrace the amphibious mission until after the WW I.⁴³

The U.S. strategic position in the Pacific was weakened following WW I due to the Japanese acquisition of the former German colonies in Micronesia and the Washington Naval Treaty limitations. American national interests in the Pacific remained to prepare the Philippines for independence, keep Chinese markets open to American traders (the Open Door), maintain the flow of raw materials from Southeast Asia, and deter further Japanese expansion.⁴⁴ During this period, Japan emerged as the primary adversary as far as the Department of the Navy was concerned and the focus of war planners. The Joint Board - old Army Navy Board - began to refine War Plan Orange, the plan to defeat Japan and protect American interests in the Far East.

On 23 August 1914, Japan entered WW I as a member of the Allied Powers, based on treaty obligations with Great Britain, and began to seize German colonial possessions, including the Pacific islands of the Caroline, Mariana, Marshall, and Palau groups.⁴⁵ The aftermath of WW I left the Japanese the dominant power in the Western

⁴³Institutional resistance continued throughout the Interwar Period with some continuing to ascribe to former Commandants Heywood's and Elliott's belief that the Marine Corps' primary mission is service aboard naval vessels. While others, like two-time Medal of Honor recipient, BGen Smedley Butler advocated for an independent Marine Corps, divorced from the Navy, for colonial infantry duties.

⁴⁴Clayton James, "American and Japanese Strategies in the Pacific War," in *Makers of Modern Strategy, from Machiavelli to the Nuclear Age*, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 709.

⁴⁵John Keegan, *The First WW I* (New York: Vintage Books, 2007), 205. The Japanese entered the war to improve its strategic position within the Pacific. The Japanese also conducted operations to seize Tsingtao.

Pacific.⁴⁶ Under the terms negotiated at the Versailles Peace Conference, the Japanese received League of Nation mandate over the Micronesian islands. Japan's acquisition of the mandates expanded their navy's sphere of influence and posed a significant threat to the American coaling stations in Midway, Guam, Samoa, and Wake. Additionally, the Caroline, Mariana, Marshal, and Palau groups lay directly across the shortest route between Hawaii and the Philippines and endangered any advancing U.S. Fleet.

The U.S. grew increasingly concerned with Japanese territorial ambitions in mainland Asia, as well as the security of the Philippines. These fears mounted with suspicions that the Japanese were secretly constructing military bases on the Caroline, Mariana, Marshal, and Palau islands.⁴⁷ In truth, the Japanese did not fortify these islands until 1940.⁴⁸ Nonetheless, the General Board began to review and refine War Plan Orange under the assumption the Japanese would challenge the American Fleet in the Central Pacific using its territories in Micronesia to base surface raiders, submarines, and aircraft. Navy contingency planners began to envision a campaign across the Central

⁴⁶Allan R. Millett and Peter Maslowski, *For the Common Defense: A Military History of the United States of America* (New York: The Free Press, 1994), 380-382.

⁴⁷Fortification of the islands violated the League of Nation's mandate. The American paranoia was fueled by the Japanese government who restricted trade and travel to the Caroline, Mariana, Marshal, and Palau islands shortly after their occupation in October 1914.

⁴⁸Thomas Wilds, "How Japan Fortified the Mandated Islands," *Proceedings* 81, no. 4 (April 1955): 401-407. Wilds points out that the Japanese did not begin to fortify the mandates until 1940. The improvements to airfields, harbors, communications, and fuel repository supported local economies. Japanese secrecy and restrictions of foreign travel to the mandates helped fuel suspicions.

Pacific, which included the seizure of defended islands, to protect the Philippines and defeat the Japanese navy in their home waters.⁴⁹

Between 12 November 1921 and 6 February 1922, the U.S. hosted the Washington Conference, the first international diplomatic conference ever held in the U.S., with the goal to limit naval armament among the five leading naval powers—Great Britain, the U.S., Japan, France, and Italy. The conference resulted in the Five Power Treaty that created a tonnage ration for battleships and battle cruisers at 532,000 tons for the United States and Great Britain, 315,000 tons for Japan, and 175,000 ton for France and Italy.⁵⁰ Article XIX also specified “that no new fortifications or naval bases shall be established in the territories and possessions specified; that no measures shall be taken to increase the existing naval facilities for the repair and maintenance of naval forces, and that no increase shall be made in coast defenses of the [specified] territories and possessions.”⁵¹ In essence, the treaty recognized the status quo of American, British, and Japanese bases in the Pacific but prohibited their improvement and expansion.

The ratification of the Washington Treaty had significant consequences for the 1914 version of Plan Orange. The plan assumed the Philippine garrison could successfully hold the capital city of Manila until the arrival of the Pacific Fleet. This required strong fortifications to allow the garrison to defend against a numerically

⁴⁹James, 45-52.

⁵⁰Kuehn, 25-29, 184.

⁵¹U.S. Senate. *Treaties and Resolutions Approved and Adopted By the Conference on the Limitation of Armament*, 67th Cong., 2d Sess., Senate document no. 124, article 19, in Raymond Leslie Buell, *The Washington Conference* (New York: Russell and Russell, 1922), 378.

superior enemy force and the *status quo* provision imposed upon coastal defense reduced the likelihood of successful resistance. The inability to improve the facility at Manila Bay, as well as Guam as an intermediate coaling stations, denied the U.S. Fleet the advance naval bases envisioned in the 1914 plan. Moreover, shorter lines of communication could allow the Japanese to reinforce the mandates with troops and equipment prior to the U.S. Fleet's arrival.⁵² This gave birth to the requirement to seize enemy held bases along the line of advance.⁵³ The increased risk of methodical attrition by, and advance through the Japanese mandates also complicated the original plan's intent for a rapid thrust by the U.S. Fleet to relieve the Philippine garrison. The strategic situation in the Pacific Ocean drastically changed in the early 1920s and the both the General and Joint Boards focused on revising their war plans with Japan.

The 1924 rewrite of the Basic War Operating Plan (WPL-9), served as the most significant modification to War Plan Orange due to the potential implications of the fortification clause on the original premise. The planners envisioned three courses of actions if the U.S. went to war with Japan. The first plan called for the U.S. Fleet to "thrust" across the Pacific and link up with the Asiatic Fleet prior to a decisive battle with the Japanese fleet. If the fleet experienced an engagement in route to the Philippines, they would reconstitute at Hawaii or Guam and seek decisive battle at a later time. The third

⁵²Wilds, 401-407. Wilds highlights that the perception of threat was unfounded and exaggerated.

⁵³Kuehn, 32.

action proposed a cautionary “step-by-step” approach that included seizing mandate islands to serve as a mobile base for the fleet.⁵⁴

The inter-service report “Joint Action of the Army and Navy of 1927” concurred with the 1926 revision of War Plan Orange. The report further designated the Marine Corps “fundamental” duties as “land operations in support of the fleet for the initial seizure and defense of advance bases and for such limited axillary land operations as are essential to the successful prosecution of the Naval campaign.”⁵⁵ As a result of the revised War Plan Orange, the seizure of defended islands became an operational requirement despite a general sentiment that amphibious operations were doomed to fail based on the British experience at Gallipoli. Under these strategic conditions, the Marine Corps established an essential role in American naval strategy in the Pacific. These realities initiated two decades of innovation and experimentation to develop the doctrine, tactics, and technology necessary to prepare for amphibious operations in the Central Pacific.

The Marine Corps’ early training exercises experienced the same deficiencies as the Gallipoli landings. During the February 1924, Fleet Operation Number 4, Brigadier

⁵⁴Kuehn, 127-135. See also Edward S. Miller, *War Plan Orange: The U.S. Strategy to Defeat Japan, 1897-1945* (Annapolis, MD: Naval Institute Press, 1991), 101-121. In his book, Miller argues military planners belonged to one of two broad categories, “thrusters” and “cautionaries.” The ‘thrusters’ advocated for an immediate journey to the Philippines to establish a naval base within striking distance of Japanese waters. While the “cautionaries” envisioned a methodical step-by-step advance to establish mobile bases on intermediate islands; most notably, the mandate. Dr. John Kuehn points out that Article XIX of the Washington Naval Treaty eliminated the reality of the “thruster” strategy. Subsequent *War Plan Orange* revisions reflected a methodical advancement across the Central Pacific.

⁵⁵David J. Ulbrich, “Clarifying the Origins of Strategic Mission of the US Marine Corps Defense Battalion, 1898-1941,” *War and Society* 17, no. 2 (October 1999): 81-109.

Dion Williams, Commander of 4th Marine Brigade and amphibious warfare advocate, conducted simulated landings with approximately 1,600 Marines on Culebra Island. Brigadier General Eli Kelly Cole and his 1,781 Marines defended the island against the assault. The exercise did not go well. The single transport ship was poorly loaded and the Marines went without food the first night ashore while medical supplies, at the bottom of the holds, took nine days to deliver. Several of the Naval boat officers landed on the wrong beach and out of sequence.⁵⁶ Brigadier General Cole stated, “chaos reigned” throughout the exercise.⁵⁷

In the shadow of Gallipoli, the post-WW I strategic environment and war plans required the Navy-Marine Corps team to develop an amphibious warfare capability geared towards seizing contested islands and defending bases against enemy attacks. The 1920s and 1930s marked a period of deep intellectual debate and experimentation to find and implement the solution to these demands. On 20 November 1943, the Marine Corps tested this doctrine and training at Tarawa.

Tarawa

The amphibious assault on Tarawa served as a proof of concept for the amphibious doctrine developed by the Navy-Marine Corps team during the 1920s and

⁵⁶MajGen Eli K. Cole, USMC, “Joint Overseas Operations,” *Proceedings* 55, no. 321 (1929): 927-929; Edgar F. Puryear Jr., *Marine Corps Generalship* (Washington, DC: National Defense University Press, 2009), 148-149.

⁵⁷Alexander, *Strom Landings*, 13. See also Smith and Finch, 55-56. Smith states, “Army and Navy exercises on a smaller scale had been held off Hawaii before and the 1925 operations actually based upon Gallipoli” and “revealed our total lack of equipment for such an undertaking, our inadequate training, and the lack of coordination” to conduct an amphibious assault. In short, the early exercises were a “dismal exhibition.”

1930s, even though major portions of this doctrine had been tested earlier in November at the Bougainville landings in the Solomon Islands.⁵⁸ For the first time, the Marines received serious opposition to an amphibious landing on a remote Pacific island as envisaged in War Plan Orange. Few battles in history match the concentration of violence at point-blank range as experienced during the 76-hour fight where nearly 6,400 Japanese, Koreans, and Americans died while another 3,166 Americans became casualties.

The Tarawa Atoll is approximately 2,100 miles southwest of Pearl Harbor and characterized by a two-sided necklace of small, islands linked by a barrier reef that forms a lagoon. Betio, the key island within the atoll and main objective for the Marines, is barely two miles long and 700 yards wide and ringed by a coral reef, over which tides move unpredictably. The island was defended by the *rikusentai*, a special Naval Landing Force, under the command of Rear Admiral Tomanari Saichiro. The force of nearly 4,500 Japanese and 1,200 Korean laborers prepared the island defenses for nearly 15 months. The hydrography and terrain favored the defender. The Japanese augmented the reef barrier with concrete tetrahedrons, double-apron barbed wire and mines.⁵⁹ While onshore, 500 mutually supporting and reinforced pillboxes armed with machineguns and

⁵⁸For an account of Bougainville, see David C. Fuquea, "Bougainville: The Amphibious Assault Enters Maturity," *Naval War College Review* (Winter 1997): 104-121.

⁵⁹Alexander, *Strom Landings*, 40-44.

anti-boat weapons possessed excellent fields of fire on the lagoon and beach.”⁶⁰ Saichiro boasted, “a million Americans could not take Tarawa in 100 years!”⁶¹

The 2nd Marine Division, under the command of Major General Julian C. Smith, received the mission to seize Betio as part of Operation Galvanic, a larger operation to secure the Gilberts Islands in preparation for the follow-on assault of the Marshall Islands.⁶² At 0610 on 20 November 1943, a three-hour sustained air and naval bombardment supported the ship-to-shore movement of the initial assault waves. Despite early confusion with the transfer and coordination problems with naval gunfire support, the first three waves of Landing Vehicle Tracked (LVT) arrived at the beach with acceptable casualties. While the naval bombardment destroyed the Japanese communications network and neutralized most of the heavy artillery, the Japanese

⁶⁰Millett, *Semper Fidelis*, 393.

⁶¹Joseph H. Alexander, “Tarawa: The Ultimate Opposed Landing,” *Marine Corps Gazette* 77, no. 11 (November 1993): 53.

⁶²Operation Galvanic served as the first vital step in seizing advance air and naval bases in the Central Pacific campaign. The 5th Amphibious Corps, commanded by MajGen Holland M. Smith, consisting of the 2nd Marine Division and Army’s 27th Infantry Division, served as the landing force. The operational plan called for simultaneous amphibious assaults to secure Tarawa and Makin. Possession of the Gilberts placed aircraft within striking distances of the Marshall Islands. The operation relied on strategic surprise and speed in tactical execution, preventing the use of demonstrations and extended preparatory bombardments. The division tactical plan avoided the most formidable beach defenses by attacking Betio from within the lagoon. The decision required the Marines to travel from their transports through six miles of water to enter the lagoon and implied detailed synchronization of air and naval fires. The division would use 125 of the newly fielded amphibian tractors (LVT) to land three battalions abreast and move inland to capture the airfield and pin the enemy down the west side of the islands. The Betio reef posed a significant challenge to the landing. At high tide the Higgins boat, Landing Craft Vehicle and Personnel (LCVP), could deliver the vital artillery, tanks, logistics, and reinforcement to the beach. If the landing force experienced erratic tide, the subsequent waves would have to transfer to the LVTs or wade the 600 to 1000 yards ashore.

infantry sustained minimal losses and retained their tactical integrity, crew-served weapons, and fighting spirit.⁶³

The erratic tide created another problem for the landing force because the LVTs only brought half of the three assault battalion's troops ashore and critical reinforcements and heavy weapons in landing boats were unable to clear the reef. The Marines quickly devised a plan to shuttle the subsequent waves from the reef to the shore with the emptied LVTs. The Japanese defenders concentrated their fires on the lightly-armored tracks and Marines wading ashore with great effectiveness, accounting for the majority of casualties on D-Day.⁶⁴

Many of the survivors arrived on the wrong beach and separated from their units, some without weapons. Nonetheless, the ad hoc small units maneuvered to reduce Japanese pillboxes with flamethrowers, demolition charges, and hand grenades. By the end of the night, the situation remained tenuous with two shallow enclaves held by the Marines.⁶⁵ The anticipated Japanese nighttime counterattack did not occur, most likely, because naval gunfire destroyed the communication network and killed Rear Admiral Shibasaki.⁶⁶

Still impeded by erratic tides on D+1, the 2nd Marine Division began to methodically flow reinforcements ashore as their initial assault waves expanded the

⁶³Millett, *Semper Fidelis*, 397; Alexander. *Strom Landings*, 49-51.

⁶⁴The 2d Amphibian Tractor Battalion sustained 50 percent casualties, to include Maj Henry Drewes, the battalion commander, and 90 LVTs during the battle for Batio.

⁶⁵Millett, *Semper Fidelis*, 397.

⁶⁶Alexander, *Strom Landings*, 54-55.

beachhead. At 1600 on D+1, Colonel Shoup, the senior commander ashore, reassured Major General Julian Smith the battle turned in the Marines' favor with his famous dispatch: "Casualties many; percentage of dead not known; combat efficiency: We are winning."⁶⁷ By the evening, the Marines pushed the Japanese force into less formidable and isolated positions. Betio remained a dangerous place on D+2 and D+3 but the Marines, reinforced with organized fresh units, successfully coordinate tanks, air, and naval gunfire to secure the remainder of the island.⁶⁸

The amphibious landing at Tarawa was not flawless and the knowledge gained by the operation led to substantial improvements in air and naval gunfire support, shore party control, ship-to-shore movement, logistics, and assault tactics. The bloody three-day battle did validate an untested amphibious doctrine developed during the 1920s and 1930s under the absolute worst tactical and hydrographic conditions.⁶⁹ General Alexander Vandegrift discussed the significance of Tarawa within his memoirs, stating:

At Tarawa we validated the principles of the amphibious assault, a tactic proclaimed impossible by many military experts. Of course it was costly—we all knew it would be, for war is costly. But hereafter the enemy could never know where or when we would strike. Hereafter no matter the strength of his bastion the enemy could never feel secure.⁷⁰

⁶⁷James Stockman, *The Battle of Tarawa* (Washington, DC: Historical Section, Division of Public Information, U.S. Marine Corps, 1947), 40.

⁶⁸Joseph H. Alexander, *Utmost Savagery: The Three Days of Tarawa* (New York: Ivy Books, 1995), 193-223.

⁶⁹Alexander, "Tarawa: The Ultimate Opposed Landing," 61. Joseph Alexander stated, "simply put, if amphibious doctrine worked there, it would work anywhere."

⁷⁰Vandegrift, 223-224.

Summary

In summary, this chapter provided critical background information to illuminate the challenges associated with modern amphibious operations and frame the post-WW I strategic environment that required the Navy-Marine Corps team to develop an amphibious warfare capability. Following the disastrous landings at Gallipoli, many military theorists deemed that opposed amphibious landings were ill-advised, if not impossible. The elevated strategic position of Japan in the Pacific directly threatened American national interests and forced the Joint Board to reexamine War Plan Orange. The revised Plan Orange, abandoned the notion of a direct thrust from Hawaii to the Philippines, and specified a methodical “step-by-step” strategy where the Marine Corps would seize and defend advance naval bases in support of the fleet. This operational requirement drove nearly two decades of successful innovation to develop the organization, doctrine and equipment necessary for amphibious operations in the Central Pacific. The chapter also briefly examined Tarawa, the first successful modern amphibious assault against a contested beach that validated the Marine Corps’ interwar preparation. The subsequent chapters examine those reasons that allowed the Marine Corps to successfully innovate during the Interwar Period.

CHAPTER 3

ROLE OF THE COMMANDANTS IN INNOVATION

The Commandants of the Marine Corps during the Interwar Period played a critical role in providing a centralized vision to build a viable amphibious warfare capability. Commandants Lejeune, Russell, and Holcomb shared a common vision to provide the nation a unique amphibious expeditionary force with each building off his predecessor's progress. Lieutenant General Brute Krulak describes this evolutionary process in *First to Fight*:

Commandant John A. Lejeune (1920-29) saw the task of not just defending but of seizing advanced bases for the fleet as a logical Marine Corps mission, central to our national security. With vision, he proposed the reorganization of the Corps as one organic whole to do the advanced base force job. Major General John H. Russell (1934-36) nourished the Fleet Marine Force to health, emphasizing its function of seizing advanced naval and air bases and thus establishing the foundation for the Marines' air and ground triumphs in WW II and thereafter. General Thomas Holcomb (1936-43), as much as any other, saw the virtue of comprehensive, quality education.⁷¹

Accordingly, this chapter focuses on the level of personal involvement of each of these three Commandants in experimentation, doctrinal development, and equipment procurement. Additionally, the chapter will investigate the command culture established by each of the Commandants.

John A. Lejeune

Lieutenant General John A. Lejeune served as the Commandant during a period of tremendous challenges with significant military budget cuts, American isolationist sentiment, implementation of the Washington Naval Treaty (1922), and inter-service

⁷¹Krulak, 4-5.

rivalry following the aftermath of the WW I. The Marine Corps, in a fight for relevancy after serving as a second land army during the WW I, was uncertain on the roles and functions it should assume. One faction, led by two-time Medal of Honor recipient, Smedley Butler, advocated an independent Marine Corps, divorced from the Navy performing in a colonial infantry role. Some officers believed the Marine Corps should return to its traditional duties aboard naval vessels while others promoted mirroring Army functions. Another group believed the future role of the Marine Corps was tied to amphibious operations as part of a larger naval campaign.⁷² These debates took place as the Marine Corps' force structure drastically decreased and operational requirements remained steady.

Lejeune's leadership during this period of fiscal austerity and turbulence defined amphibious warfare as the primary wartime mission and slowly reoriented the Marine Corps onto this task. One of his most significant and lasting accomplishments as Commandant was the institutional reorganization of Headquarters Marine Corps (HQMC). These reforms provided impetus to establish the MCS and enable the Marine Corps to participate in post-WW I contingency planning. Lejeune made use of Major, later Lieutenant Colonel, Earl "Pete" Ellis to develop the Marine Corps' role in War Plan Orange and set the intellectual framework for amphibious operations. He also created a viable reserve force and pursued an aggressive public relations campaign to maintain support with the Congress and American people.

⁷²Bartlett, 6-8, 151-156; Krulak, 72-80.

The lessons of WW I demonstrated to Lejeune the necessity of having a modern headquarters and a staff of well-educated officers able to handle the complexities of modern war.

The staff Lejeune inherited from Major General Barnett, his predecessor, was inadequate and ill equipped to modernize and develop the Marine Corps into an expeditionary force-in-readiness. There were no definitive plans for personnel and material procurement, and limited capacity for contingency planning.⁷³ In a short period, with the assistance of Ellis, Colonel Robert Dunlap, Lieutenant Colonels Thomas Holcomb and Stover Keyes, Lejeune implemented a series of reforms to organize HQMC along modern lines and serve as the nucleus for greater institutional transformation.⁷⁴

The newly formed Operations and Training Division consisted of Operations, Training, Intelligence, Aviation, and Material sections operating under the direct authority of the Commandant.⁷⁵ In subsequent additions, Personnel, Recruiting, Education, Public Affairs, and Reserve sections were added to the organization. One of the most important functions assigned to the Division of Operations and Training was war planning. Although initially falling solely on Ellis, the section would include over 60 Marine officers as part of the joint Navy and Marine Corps war planning before WW II.⁷⁶

⁷³Kenneth W. Condit, Maj John Johnstone, USMC, and Ella W. Nargle, *A Brief History of Headquarters Marine Corps Staff Organization* (Washington, DC: Historical Division, Headquarters Marine Corps, 1970), 9.

⁷⁴Daugherty, *Pioneers of Amphibious Warfare*, 177-180.

⁷⁵Condit, Johnstone, and Nargle, 7-10; Daugherty III, "To Fight Our Country's Battles," 121-131.

⁷⁶Millett, *Semper Fidelis*, 325.

The 1922 “Annual Report of the Major General Commandant,” under the heading “Reorganization of Headquarters Marine Corps,” outlined the roles and responsibilities of the new section and highlighted the potential benefits of the reorganization:

Under the Director, the Division of Operations and Training is charged with the collection of military information, the preparation of intelligence and operations plans and orders, the supervision of military education of officers and enlisted men (schooling and training), the selection and adoption of military materiel, the distribution of the personnel of the Marine Corps, and with the development of general policies looking to increasing the efficiency of the service. By means of this organization the Major General Commandant is relieved of a mass of detailed work, with the assurance that steady progress can be expected in carrying out his policies and those of the Department in respect to the Marine Corps.⁷⁷

The realignment of the staff eliminated the dual authority by the Chief of Naval Operations over Marine aviation, placing it solely under the Commandant.⁷⁸ More importantly, it freed subsequent Commandants from day-to-day administrative functions, rationalized command and control, and enabled the Marine Corps to participate in war planning vis-a-vis Japan.⁷⁹

One of the most substantial and immediate outputs of the HQMC modernization was the development of Operation Plan 712 –Advance Base Operations in Micronesia (1921). In the latter part of 1920, Major General Lejeune tasked Major Pete Ellis with

⁷⁷Anonymous, “The Annual Report of the Major General Commandant,” *Marine Corps Gazette* 7, no. 1 (March 1922): 31-40. Budgetary issues prevented the printing and mass distribution of “The Annual Report.” A summation of the report is found in the March 1922 *Marine Corps Gazette*.

⁷⁸BGen Logan Feland, USMC, “The Division of Operations and Training Headquarters U.S. Marine Corps,” *Marine Corps Gazette* 7, no. 1 (March 1922): 42; Daugherty, *Pioneers of Amphibious Warfare*, 177-180. Prior to the HQMC reorganization, the Chief of Naval Operations shared responsibility for training, personnel, and logistics.

⁷⁹Daugherty, “To Fight Our Country’s Battles,” 121-131. The staff realignment also eliminated dual command authority over Marine aviation.

examining the Marine Corps role within War Plan Orange. The study accurately forecast the Marine Corps' strategy in the Central Pacific and established the baseline for amphibious doctrine.⁸⁰ On 23 July 1921, John A. Lejeune approved Ellis' study in its entirety and ordered that henceforth the Marine Corps would use it to guide war planning, field exercises, equipment development, and officer education.⁸¹

Lejeune was a longtime advocate for the Marine Corps' expanded role as a naval expeditionary force. In a 1916 *Marine Corps Gazette* article, "The Mobile Defense of Advance Bases," Lejeune argued that the U.S. might go to war with a nation of great naval power where the two fleets would have to fight for supremacy at sea before the Army could conduct sustained operations ashore. If the Marine Corps did not assume advance base work, it "would in all probability be divided up into small detachments assigned to the vessels of the fleet, or held on shore in a state of inactivity as guards to navy yards, naval magazines while waiting for the war at sea to reach a decision." However, if the Marine Corps assumed an active role in advance base operations, "it would have the opportunity to share with the Navy the glory always resting on those who strike first blows at the enemy, and it also would have the satisfaction of feeling that it had an important, semi-independent duty." He continued:

All, I believe, will agree that our training as an Advance Base organization, both as a mobile and as a fixed defense force, will best fit us for any or all of these

⁸⁰Earl H. Ellis, "Advance Based Operations in Micronesia," Department of the Navy, Washington, DC, 1921.

⁸¹Millett, *Semper Fidelis*, 326.

roles, and that such training should, therefore, be adopted as our special peace mission.⁸²

Lejeune's early writing illuminates his long belief that the Marine Corps should serve as an efficient naval expeditionary force capable of operating across the spectrum of conflict.⁸³

As Commandant, Lejeune reemphasized the seizure and defense of advance bases within the framework of a naval campaign as the true wartime mission of the Marine Corps.⁸⁴ In 1923, Lejeune stated the Marine Corps' mission was "to accompany the Fleet for operations ashore in support of the Fleet" which provides "the real justification for the continued existence of the Marine Corps."⁸⁵ Furthermore, he believed the Marine Corps should focus on amphibious training to provide the most prepared expeditionary force to the Fleet.⁸⁶ In a 1923 *Gazette* article, Lejeune reinforced this message to the Marine Corps:

The seizure and occupation or destruction of enemy bases is another important function of the expeditionary force. On both flanks of the fleet crossing the

⁸²Col John A. Lejeune, "The Mobile Defense of Advance Bases by the Marine Corps," 1-2.

⁸³Lejeune, *The Reminiscences of a Marine*, 115.

⁸⁴John A. Lejeune, "The United States Marine Corps," *Marine Corps Gazette* 8, no. 4 (December 1923): 243-254. It is important to note that, at least on paper, the Marine Corps' primary mission during WWI remained to provide forces for the seizure and defense of advance bases. Both Barnett and Lejeune believed the experience and manpower from WWI would benefit the advance base force; however, demobilization and contingency operations prevented the desire from becoming a reality.

⁸⁵MajGen J.A. Lejeune, "The Marine Corps, 1926," *Proceedings* 52, no. 284 (October 1926): 1961-1969.

⁸⁶Jeter A. Isely and Philip A. Crowl, *The U.S. Marines and Amphibious War: Its Theory, and Its Practice in the Pacific* (Princeton, NJ: Princeton, 1951), 28-30.

Pacific are numerous islands suitable for utilization by an enemy for radio stations, aviation, submarine, or destroyer bases. All should be mopped up as progress is made. Furthermore, the presence of an expeditionary force with the fleet would add greatly to the striking power of the Commander-in-Chief of the fleet. . . . The maintenance, equipping, and training of its expeditionary force so that it will be in instant readiness to support the Fleet in the event of war, I deem to be the most important Marine Corps duty in time of peace.⁸⁷

Lejeune's efforts represent a deliberate effort to reorient the Marine Corps on expeditionary operations and establish itself within U.S. maritime strategy.

Throughout Lejeune's tenure as Commandant, he remained committed to establishing a permanent organization specifically manned, trained, and equipped as an expeditionary and amphibious force-in-readiness. Upon assumption of his duties as Commandant, he stationed the 5th Marines and the skeleton organization of 6th Marines with a headquarters element to established 4th Brigade at Quantico to revitalize the pre-war advance base force concept. In February 1922, Lejeune advised the General Board of the Navy "there were tremendous advantages" in possessing a "highly mobile force of Marines" to conduct "offensive landing operations against a hostile base" and further recommended "sufficient personnel and equipment maintained in complete readiness for such a venture."⁸⁸ In a testimony before Congress, on 5 January 1925, Lejeune further emphasized the requirement to "organize and train two Marine Corps expeditionary forces in readiness for the various classes of naval expeditionary duty in the Atlantic and Pacific" that conducted "frequent exercises and maneuvers" with the fleet.⁸⁹

⁸⁷Lejeune, "The United States Marine Corps," 243-254.

⁸⁸Daugherty, *Pioneers of Amphibious Warfare*, 182.

⁸⁹Major General John A. Lejeune, "For Report of Special Board of Policy Advance Bases Including Marine Corps Expeditionary Forces for Shore Operations Essential to the Prosecution of the Naval Campaign," Marine Corps Advance Base Force

In early January 1921, these efforts resulted in the re-designation of the advance base force as the East Coast Expeditionary Force with the subsequent establishment of a similar unit on the west coast in 1925. The activation of these units marked an expansion in mission from seizure and defense of undefended naval bases to the additional responsibility for offensive land operations against hostile naval bases and territories. It also denoted that Marine forces might temporarily detach from the fleet and conduct operations in conjunction with Army formations.⁹⁰ For the first time, all Marine units fell within the East and West Coast Expeditionary Forces and Lejeune's emphasis on preparedness focused their training.⁹¹ Lejeune discusses this aspect in his memoirs:

The adoption of this precept brought about renewed training activity everywhere. This was especially the case at Quantico with reference to the Expeditionary Force which, after periods of intensive training, undertook maneuvers on an extensive scale during four successive summers in Virginia, Maryland, and Pennsylvania, and during two winters with the Fleet on the island of Culebra and in the West Indies, and on the island of Oahu in the Hawaiian Islands.⁹²

Nonetheless, the landings at Culebra and Oahu demonstrated the Marine Corps remained unprepared to provide the fleet with an amphibious operations capability.⁹³ The critical inhibitor to Lejeune's vision to establish a viable amphibious force-in-readiness remained available forces as the Marine Corps maintained presence in Haiti and the

Folder, History and Museums Division, HQMC, Reference Section, Marine Corps Historical Center, Washington, DC, 5 January 1925, 5-7.

⁹⁰Daugherty, *Pioneers of Amphibious Warfare*, 180-183.

⁹¹See John A. Lejeune, "Preparation," *Marine Corps Gazette* 7, no. 1 (March 1922): 53-55.

⁹²Lejeune, *The Reminiscences of a Marine*, 463.

⁹³Daugherty, *Pioneers of Amphibious Warfare*, 183.

Dominican Republic, as well as contingencies in China (1923 and 1927) and Nicaragua (1926-1933). One of the most important legacies of the Lejeune commandancy was his emphasis on professional military education (PME). The lessons of WW I demonstrated to Lejeune that the Marine Corps must establish a professional education system to develop the officers and noncommissioned officers within the organization. In 1920, Lejeune stated to Congress “you know there used to be an old theory that the soldier ought to be ignorant and illiterate and like dumb, driven cattle. I think our experience in this war shows the more intelligence, the more educated, and the more initiative he has the better soldier he is.”⁹⁴ Thus, the Lejeune commandancy placed great emphasis on the establishment of a strong educational system to prepare Marines for the complexities of modern war.⁹⁵

In 1921, Lejeune established the MCS to implement the concept that education of each Marine should continue progressively throughout his service career. Prior to the establishment of MCS, other than the School of Application for new officers, Marine Corps professional education relied upon the Army and Navy school systems and on-the-job training. Lejeune discussed the importance of education and the establishment of the MCS within his memoirs:

The military education of its officers is essential to the efficiency of a military organization. The acceptance of this dictum caused the establishment of the Marine Officers’ Schools at Quantico, and the school for newly appointed Second Lieutenants at the Marine Barracks, Philadelphia. The Quantico schools embraced both the Field Officers’ School and Company Officers’ School. Each officer was informed that he would be required to take the course appropriate to his rank and

⁹⁴U.S. House, Committee on Naval Affairs, *Naval Appropriations Bill*, 66th Cong., 2d sess., H. Hearing 1920-NAH-0025 (1920), 1830.

⁹⁵Lejeune, *The Reminiscences of a Marine*, 463.

length of service, or else to take an equivalent course at the school of an Army branch. In addition, selected officers were detailed annually to the Army and Navy War colleges, the Army School of the Line at Fort Leavenworth, and to the Army technical schools.⁹⁶

The Marine Corps now had cognizance and authority over its own personal education system designed specifically to instruct officers up to the field grade officer rank. The MCS provided the Corps a critical institutional way station to inculcate the officer corps with policies and emerging concepts. It also provided a centralized pool of faculty and students to address the development of amphibious warfare doctrine.⁹⁷ Major Alexander Vandegrift, the future commanding general of the 1st Marine Division during the Guadalcanal Campaign and 18th Commandant of the Marine Corps, described the atmosphere at Quantico and the MCS in the mid-1920s in his memoirs:

Thanks to John A. Lejeune, Commandant since 1920, it [Quantico] housed the flourishing Marine Corps Schools consisting of a Field Officers Course, a Company Officers Course, and a Basic Course. In addition to teaching standard curriculums, instructors were worrying about the problems of what years later would be called the amphibious assault.

Lejeune's interest in amphibious development stemmed in part from the Versailles Treaty, which mandated the formally held German island in the Pacific to Japan. Both Navy and Marine planners now began to think in terms of a Pacific war against Japan.⁹⁸

The Lejeune commandancy established the framework for an education system capable of redirecting the Marine Corps focus on amphibious operations. More importantly, he

⁹⁶Lejeune, *The Reminiscences of a Marine*, 463.

⁹⁷Millett, *Semper Fidelis*, 323.

⁹⁸Vandegrift, 60-61. The Guadalcanal Campaign (7 August to 9 December 1942) served as the first large-scale offensive against the Japanese. For outstanding service as the Commanding General of the 1st Marine Division, Gen Vandegrift would receive both the Medal of Honor and Navy Cross.

established an organizational culture that established professional military education as priority within the Marine Corps.⁹⁹

Lejeune also placed a great deal of importance on public relations due to the draconian budget cuts of the 1920s. He believed the only way the Marine Corps could survive was through increased efficiency in performance of its duties while highlighting those efforts to the proper Government officials and the American people. Lejeune stated “the Marine Corps is dependent on the confidence and affection of the American people for its maintenance and support” and emphasized to the “officers and men to conduct themselves as to gain and to keep the good opinion and the friendship of the good Americans with whom they might come in contact.”¹⁰⁰

In 1924, Lejeune established the publicity office at HQMC and appointed Major Joseph C. Fegan as the first publicity officer in an effort to highlight the noteworthy accomplishments of the Marine Corps and its personnel. He also leveraged Smedley Butler and the Marine Barracks Quantico’s combined resources to enhance public perception with competitive athletic teams. The Marine Corps even conducted Civil War battle enactments, three of which, President Harding attended.¹⁰¹ Lejeune’s public relations campaign promulgated a positive image of the Marine Corps and ensured institutional survivability during austerity. Moreover, it established an organizational

⁹⁹Lejeune, “Preparation,” 55.

¹⁰⁰Lejeune, *The Reminiscences of a Marine*, 465.

¹⁰¹Bartlett, *Lejeune: A Marine’s Life*, 154-156.

culture that understood its survival depended on efficiency and the deference of the American people and Congress.

While the Lejeune Commandancy did much to modernize the Marine Corps and set favorable conditions for future innovation, it fell short of fully adopting and preparing for amphibious operations. Lejeune failed to secure the required manpower to fully re-orient the Marine Corps towards the establishment of a viable expeditionary force organized and trained to support the naval campaign. During his commandancy, the Marine Corps' force structure dropped from 19,200 in 1920 to 13,000 eight years later. These man-power shortages were further complicated by steady operational requirements abroad. During this period, nearly two-thirds of the Marine Corps' total force structure remained deployed overseas in Nicaragua, China, and Santo Domingo.¹⁰² These operational realities coupled with resource and budget constraints prevented the full implementation of Lejeune's vision.¹⁰³ In an effort to mitigate the impacts of personnel shortages, Lejeune focused on building a viable Marine Corps Reserve to provide the active duty with additional man-power in times of war. He also abolished two-year enlistments to stabilize the force with using three- and four-year enlistment contracts. Lejeune believed longer enlistments would provide better trained and experienced Marines.

Lejeune also failed to replace the antiquated promotion system that advanced Marine officers based on seniority vice merit. Upon assuming his duties as Commandant,

¹⁰²Ibid., 146-168.

¹⁰³The Marine Corps operational commitments remained high until the 1930s when the Marine Corps reduced presence in China, Central American, and the Caribbean.

Lejeune established the goal “to secure the enactment of a law providing for a modified form of promotion by selection, combined with an annual, automatic elimination of a certain percentage of non-selected officers” consisting mostly of those who became too old to lead troops in combat.¹⁰⁴ The high number of veteran campaigner and politically powerful veterans like Smedley Butler ensured that promotion by selection would not pass the House Naval Affairs Committee.¹⁰⁵ Despite early efforts by Lejeune to implement promotion reforms, he abandoned the project in an effort to prevent alienating Congressional support for the Marine Corps during a period of budgetary cuts.¹⁰⁶ These shortcomings translated into delays to modernize the Corps’ wartime mission and underscore the cleavages that existed between different factions within the Marine Corps.¹⁰⁷

¹⁰⁴Lejeune, *The Reminiscences of a Marine*, 473-474. Lejeune admitted within his memoirs that he failed to reform the Marine Corps Promotion system.

¹⁰⁵Smedley Butler’s father, Congressman Thomas Butler, served as the Chair of the House Naval Affairs Committee during the Harding and Coolidge administrations.

¹⁰⁶Bartlett, *Lejeune*, 150-156; Daugherty, *Pioneers of Amphibious Warfare*, 191.

¹⁰⁷Following WW II, clichés formed within the Marine Corps around personal experiences and beliefs pertaining to the future role and mission of the Corps. MajGen Logan Feland, a veteran of the American Expeditionary Force (AEF), believed the bulk of the Marine Corps’ efforts should focus on fighting as an adjunct of the Army. MajGen Smedley Butler and LtCol Harold H. Utley advocated the Marine Corps divorce itself from the Navy and assume a ‘small wars’ force-in-readiness. These factions permeated into the promotion and assignment system. In one board to decide retention, led by Assistant Commandant of the Marine Corps, Wendell C. Neville, Butler argued in favor of prior-enlisted officers with small wars experience. While BGen Harry Lee, former commander of 6th Marines during WWI, advocated for veterans of the Fourth Brigade (Marine), AEF. The board favored those officers with combat decorations. According to Marine historian Merrill L. Bartlett, the board demonstrated the inadequacies of the Marine Corps officer promotion system.

Lejeune's efforts to focus the Marine Corps on preparation for amphibious operations fell short due to overseas commitments, limited resources, and institutional resistance. Nonetheless, under the Lejeune Commandancy, the Marine Corps implemented several institutional reforms that would prove critical in enabling innovation and the development of amphibious warfare. The Marine Corps' progress during this period ensured institutional survivability and provided the foundation for future innovations in amphibious warfare. Lieutenant General John H. Russell would provide the next critical step in building a real amphibious capability.

John H. Russell

Lieutenant General John H. Russell delivered the most significant institutional and doctrinal advancements in the development of a Marine Corps amphibious warfare capability. He served as Commandant from 1 March 1934 to 30 November 1936, and many of the successes of his Commandancy built upon the work of his predecessors. During Russell's tenure, his vision and force of personality redirected the full weight of the Corps towards amphibious operations and compelled its senior leadership to embrace the naval expeditionary role, something it had long resisted. Russell's personnel reforms eliminated the antiquated promotion by seniority system that stifled previous modernization efforts. He also authorized the MCS to cease classes and develop the *Tentative Landing Manual*, an effort that indoctrinated a generation of officers to the nuances and challenges of amphibious operations. The shift in organizational culture and institutional reforms proved essential to the Marine Corps' ability to innovate and develop an amphibious capability.

Russell's early professional writings provide insight into his vision to redirect the focus of the Marine Corps towards amphibious operations as its permanent wartime mission and role. Serving as a brigade commander in Haiti, Russell submitted an article to the *Gazette* in 1916 titled, "A Plea for Mission and Doctrine," that remained a cornerstone in his efforts to modernize the Marine Corps. Within the document, he argued that the primary mission of the Marine Corps remained "to cooperate with the Navy, in peace and war" and "in the event of a war the Marine Corps could be of greatest value to the Navy." Russell further argued that many of the officers of his era lost sight of this mission for less substantial peace-time tasks like small wars and non-naval duties. He submitted "such an impression is worse than misleading, it is dangerously false, and if allowed to permeate the service would result in its failure to properly prepare itself for the real issue and cause it to fight at an enormous and perhaps decisive disadvantage."¹⁰⁸ Russell also believed HQMC was aware of these problems but remained apathetic in defining a clear mission supported by a pragmatic doctrine.

Within the remainder of the article, Russell provides the framework to modernize the Marine Corps that ultimately foreshadows his Commandancy. He proposed a board of senior officers to identify the primary war-time mission, what he termed "General Mission," of the Marine Corps. He continued:

¹⁰⁸Russell, "A Plea for a Mission and Doctrine," 116. Within the article, Russell states: "The "General Mission" represents the purpose for which the organization was created and exists and never, for a moment, must it be permitted to become smothered by the introduction of "Minor Missions." The trail once lost is hard to regain." He further proclaimed his belief that the Marine Corps' primary mission is tied to service with the U.S. Fleet and asks "how many officers of the Marine Corps , if interrogated separately, would give you the same answer?"

The results of the Board's work to be submitted to a Conference of Field Officers of the Corps, or as many as might be available, for discussion, amendment, if necessary, and ratification. The Conference to be presided over by the Major General Commandant of the Marine Corps. Every officer on entering the Corps would be at once instructed in the Mission of the Marine Corps and Commanding Officers would preach it to all their subordinates.¹⁰⁹

Russell further articulated the importance for the development of a "clear, concise, and founded" doctrine directed towards the accomplishment of the "General Mission" in an efficient manner. He continued by stating, "such a work as the formulation of a doctrine, however, is not the task for one man but is rather a labor for a General Staff, or lacking a General Staff for a Conference, a reflective body."¹¹⁰ Russell concluded that with a defined "General Mission" supported by doctrine and policies, the Marine Corps "would greatly increase the usefulness, efficiency, and prestige" and "unite the organization into one organic whole."¹¹¹

Russell also served tours as an instructor, to include an appointment to the faculty of the Naval War College, where he developed into a prolific writer and advocate for the advance base force mission.¹¹² During this period, he became a supporter of the Marine

¹⁰⁹Russell, "A Plea for a Mission and Doctrine," 112.

¹¹⁰Ibid., 116. Within the essay, Russell highlighted the importance of possessing a capstone doctrine, something the Marine Corps did not possess at the time, to guide the organization. He also underscored the danger of competing inter-service doctrines, stating, "With doctrines covering "Sub-Missions" confusion is certain to arise and we would have some officers indoctrinated for one situation and some for another—a grave error. This warning very much described the post-WWI Marine Corps as the various groups within the officer corps attempted to define its role within American national security.

¹¹¹Ibid., 122.

¹¹²Major Russell's tour at the Naval War College coincided with President T. R. Roosevelt and Capt William F. Fullam's removal of Marines on naval vessels. This provided the concept to use Marines to seize and defend advance naval bases in support

Corps creating “a strike force, well equipped, well-armed and highly trained working as a unit of the Fleet” under the direct orders of the Commander in Chief.¹¹³ Following assignments in both command and staff positions, Russell assumed duties as the assistant to Commandant Ben H. Fuller on 1 February 1933, placing him in a position to implement many of his ideas to modernize the Marine Corps.

As Assistant Commandant, Russell drafted a letter to the Chief of Naval Operations that discussed the frustrations felt by the Marines and outlined a proposal to permanently focus the Corps on naval expeditionary duties. Within the letter, he explained that “U.S. Naval Policy assigns the Marine Corps (4) tasks” the fourth and most important is to “provide expeditionary forces in immediate readiness” for service with the fleet; however, “due to a shortage of enlisted men” the Corps did not possess a

of Fleet action. As an instructor, Russell wrote three major reports examining requirements and employment considerations for an advance base force. See Daugherty, *Pioneers of Amphibious Warfare*, 245-253 for a detailed discussion regarding Russell’s writing during this period.

¹¹³John H. Russell, “The Birth of the FMF,” *Proceedings* 72, no. 515 (January 1946): 51. The concept of forming well-trained and cohesive Marine units for service afloat dates back to 1890 when, then LT William F. Fullam, argued in favor of removing Marine Detachments from naval vessels. In an award winning article, “The System of Naval Training and Discipline Required to Promote Efficiency and Attract Americans,” that appeared in *Proceedings*, he stated, “The Marine Corps is needed for duty at the navy yards and shore stations. If withdrawn from service afloat, the Corps would reach even a higher degree of discipline and efficiency than that for which it is justly noted today, because battalions would be more permanent, and instruction of drill could be made more thorough and progressive. The Corps would be invaluable as a highly trained, homogeneous, and permanently organized body of infantry, ready at all times to embark and co-operate with the navy in service like that at Panama a few years ago. The education of Marine officers at Annapolis fits them perfectly for service in connection with the navy. Both the Marine and the sailor will be rendered more efficient by such a course.” See LT William F. Fullam, USN, “The System of Naval Training and Discipline Required to Promote Efficiency and Attract Americans,” *Proceedings* 16, no. 4 (1890): 473-536.

“satisfactorily trained nucleus” to perform such duties. He continued by supporting Lejeune’s belief that the “the Marine Corps exists for the fleet” and provides it “essential striking power against land objectives that it would otherwise would not possess” within its current organization. Russell also believed Lejeune’s 1921 re-designation of the advance base force to the expeditionary force was a misnomer and recommended a name change to either Fleet Base Defense Force or Fleet Marine Force. Lastly, he proposed “that the expeditionary force be included in the fleet organization” and “subject to the orders, for tactical employment, of the Commander-in-Chief, U.S. Fleet” to provide an expeditionary force-in-readiness.¹¹⁴

Admiral D. F. Sellers, Commander-in Chief, U.S. Fleet, and Rear Admiral Samuel W. Bryant, Director, War Plans Division, “quickly and favorably” endorsed the term Fleet Marine Force and “proposed instructions for establishing appropriate command and administrative relations between” the two organizations. The last paragraph of the Chief of Naval Operation’s reply stated:

It is the hope and expectation of the undersigned that eventually the Marine Corps will be in a position to maintain at Quantico and San Diego the full Fleet Marine Force available at all times for operations with the Fleet and under the full control of the Commander-in-Chief.¹¹⁵

Bryant also responded with the additional guidance to ensure the command relationship guaranteed a close relationship between the Commander-in-Chief and the Commanding General, Fleet Marine Force (FMF), and their units through regular and continuous

¹¹⁴Daugherty, *Pioneers of Amphibious Warfare*, 258-259.

¹¹⁵Russell, “The Birth of the FMF,” 51.

training with each other. He also underscored the criticality of maintaining a FMF in a state of high-readiness capable of immediate deployment in support of the fleet.¹¹⁶

In a memorandum dated 4 October 1933, Russell drafted a response for the Commandant, that acknowledged the endorsement and recommendations provided by Bryant and outlined command relationships and employment consideration for the FMF in peace and war. The letter stated the Commandant will maintain a force of Marines in a “state of readiness for operations with the Fleet” and “shall constitute part of the organization of the U.S. Fleet and be included in the Operating Force Plan” each fiscal year. It also specified the Commandant shall also maintain the FMF “at such strength as is warranted by the general personnel situation” within the Corps and assign a Commanding General with an appropriate staff to head the organization. The Commander-in-Chief will exercise command over the FMF when engaged in the operations or exercises afloat or ashore and any other time fall under the direction of the Commandant. Lastly, the document directed the Commanding General, FMF to keep the Commandant and Commander-in-Chief informed of the strength, readiness, and adequacy of the force to accomplish successfully the tasks assigned to it. Russell also highlighted the continued problems of inadequate funding and lack of sufficient personnel to fully man the FMF.¹¹⁷

On 7 December 1933, Secretary of the Navy Claude A. Swanson, acting on the recommendation of the Chief of Naval Operations and the General Board, signed into law. General Order No. 241 codified the term Fleet Marine Force and mandated the

¹¹⁶Daugherty, *Pioneers of Amphibious Warfare*, 257-260.

¹¹⁷*Ibid.*, 260.

Marine Corps to organize, train, and equip a force in a high state of readiness for service with the Fleet. The following day, Russell issued Marine Corps Order 66 that set forth guidance on the organization and doctrine of the FMF. The order specified the Commanding General, FMF and his staff establish a headquarters at Quantico, Virginia. He was to assume responsibility for training, preparing plans for employment, and maintaining a high-state of readiness of the force. The order also directed the establishment of two stabilized brigades at San Diego, California, for service in the Pacific and the other at Quantico, Virginia, to support the Atlantic Fleet. Each brigade consisted of a rifle regiment augmented by light artillery, service troops, signal communication, and antiaircraft units.¹¹⁸

The establishment of the FMF unequivocally committed the Marine Corps to the wartime mission of seizing and defending bases for naval operations and preparing for the successful execution of that function in peacetime.¹¹⁹ This served as a significant step in preparations for operations in the Central Pacific because it provided an expeditionary force-in-readiness exclusively organized, trained, and equipped for landing operations in support of a naval campaign.¹²⁰ Moreover, it served as a critical event to shift the

¹¹⁸MajGen John H. Russell, Jr., USMC, Marine Corp Order 66, *Fleet Marine Force: Compliment to Navy Department*, General Order No. 241, United States Marine Corps History Division, 8 December 1933, <https://www.mcu.usmc.mil/historydivision/Pages/Speeches/Marine-Corps-Order66.aspx> (accessed 1 April 2013).

¹¹⁹Isely and Crowl, 34.

¹²⁰Col Robert D. Heinl Jr., USMC (Ret.), “The U.S. Marine Corps: Author of Modern Amphibious Warfare,” in *Assault from the Sea: Essays on the History of Amphibious Warfare*, ed. Merrill L. Bartlett (Annapolis, MD: Naval Institute Press, 1983), 186-189. This essay points out the Fleet Marine Force provides a “singly and openly organized, trained, and equipped for landing operations,” a force, although small,

institutional mindset of the Marine Corps towards adopting the amphibious mission as its reason for existence.

In a 1934 *Gazette* article, Lieutenant Colonel Ralph Keyser stated “the Fleet Marine Force, in its present very favorable status, does more definitely fix our place in the national defense scheme” and “the very name of the force itself, as compared to the former titles of ‘Advance Base Force’ and ‘Expeditionary Force,’ is indicative of the improvement.”¹²¹ Lieutenant Colonel Charles J. Miller further illuminated the impact of the FMF on the MCS:

Probably no single or combination of factors has contributed so much to crystalizing school opinion, and forcing a change in our ideas as to the educational requirements and needs of the Marine Corps as the establishment of the Fleet Marine Force. This force, as a component part of the U.S. Fleet organization, is lending color and purpose to every Marine Corps activity, and has already served to amplify and clarify the mission of the Marine Corps Schools . . . Consequently, it would appear that our educational system should be predicated primarily on fitting ourselves for service with the Fleet Marine Force in one capacity or another.

The creation of the Fleet Marine Force has had the salutary effect of removing the last vestige of doubt as to the real objective of the Marine Corps Schools, which, after all, is to increase our knowledge of the art and science of war as applicable to Marines, and thereby train ourselves to execute more efficiently our probable tasks in peace and war.¹²²

capable of “very rapid embarkation in useful combat units for movement by sea,” and contributed to the requirement for a high degree of preparedness.

¹²¹LtCol Ralph S. Keyser, USMC, “The Fleet Marine Force,” *Marine Corps Gazette* 18, no. 1 (February 1934): 51. During this period he served as the director of the division of plans and operations at HQMC. He was a veteran of the Caribbean campaigns and commanded a battalion with the 4th Brigade (Marine), American Expeditionary Force. Keyser received the Navy Cross, Army Distinguished Service Medal, two Silver Stars, and the Purple Heart. Upon his return to the U.S. he learned Japanese and became a central figure at HQMC during the Interwar Period.

¹²²LtCol Charles J. Miller, USMC, “Marine Corps Schools 1934-1935,” *Marine Corp Gazette* 19, no. 2 (August 1934): 57.

These comments highlight the institutional resistance towards fully embracing the amphibious warfare mission in the decade following WWI. They also demonstrate the impact the FMF had in eliminating any uncertainty to the real mission of the Marine Corps and the shift in organizational culture to fully embrace it.

Russell's greatest contribution to the development of the FMF centered on his initial letter to the Chief of Naval Operations that served as a catalyst to codify into law the Marine Corps' organization and mission.¹²³ The concept to employ the Marine Corps as a mobile strike force in support of the fleet dates back to Fullam's 1890 proposal outlined in "The System of Naval Training and Discipline Required to Promote Efficiency and Attract Americans."¹²⁴ Furthermore, the origins of the FMF relied upon the previous efforts to establish the advance base force and Marine expeditionary force and the debates occurring within the officer corps regarding the role of the Marine Corps within national defense. Much like its predecessors, the FMF remained undermanned, underequipped, and partially mission capable during this period. Nonetheless, Russell's success was not only in the establishment of the FMF but rather the force of personality to change the organizational culture of the Corps and direct its full-weight towards building an amphibious capability. All policies during his commandancy focused on creating a strong and viable FMF.

Russell's first significant institutional reform focused on eliminating the antiquated promotion system that allowed for stagnation in advancement and modernization. Prior to Russell assuming the Commandancy, the Marine Corps relied

¹²³Daugherty, *Pioneers of Amphibious Warfare*, 259-263.

¹²⁴Fullam, 473-536.

upon a seniority system to promote its officers except in the advancement of colonels to the rank of general officers. The law allowed for the involuntary retirement at age 56 for those colonels not eligible for selection to brigadier; however, this was largely nullified by the practice of placing colonels on the eligible list when they reached the age. Few faced forced retirement and promotion rates reached a low of 2.5 percent per year.¹²⁵

Russell set out to reduce the so-called WW I hump of older and less qualified officers from the active service. In testimony before the Naval Affairs subcommittee, Russell explained the growing concern regarding the age of the officer corps:

At present the colonels range in age from 52 to 62, the lieutenant colonels range in age from 49 to 57, the majors from 38 to 56. Seventy percent of the captains are over 40 years of age and 37 percent of the first lieutenants are over 35 years of age. There are 43 captains over 50 and 18 first lieutenants over 40.¹²⁶

Virginian Congressman Colgate Darden, also a retired Marine Officer, echoed Russell's apprehension, stating "the Marine Corps finds itself subject to the most dangerous disease that can affect any military organization, and that is that its officers are well over age" and further emphasized the requirement for younger officers.¹²⁷ The inadequacy of the seniority system created an officer corps "beyond the age for useful employment" with a large population of captains and lieutenants physically unable to lead their units.¹²⁸ A

¹²⁵Russell, "Final Report of Major General Commandant," 16.

¹²⁶Anonymous, "Legislation: Personnel and Pay," *Marine Corps Gazette* 19, no. 1 (May 1934): 18.

¹²⁷*Ibid.*

¹²⁸Russell, "Final Report of Major General Commandant," 16. Within the report, Russell stated, "There were captains 50 to 60 years old, and lieutenants proportionately over age. Many officers suffered from physical ailments grave enough to reduce their mental alertness and physical stamina, while not sufficient to retire

congressional study further indicated that the situation would grow worse over the following decade with a preponderance of Marine officers on active duty reaching their age limitations by 1943.¹²⁹

The seniority system, not only contributed to elderly officers, it stagnated promotions and prevented the Marine Corps from advancing talented officers over the less-qualified.¹³⁰ Russell highlighted the Marine Corps promotion system shortcomings to a Naval Affairs subcommittee, stating:

The present method of promotion in the Marine Corps, with slight variation is one of seniority. An officer can be promoted to the next higher pay grade only when a vacancy occurs therein. The rate of promotion depends entirely upon the number

them.” The report further highlighted the situation with company grade officers as the most dangerous because they were physically unable to lead their men.

¹²⁹See Anonymous, “Legislation: Personnel and Pay,” 18-21 for details of Congressman Darden’s study. In short, the study conducted in 1933, indicated the average age for colonels was 55; lieutenant colonels, 52, majors 45, captains, 42, first lieutenants 34, and second lieutenants, 27. Based on the 1933 promotion trends, the report further specified the Marine Corps officer would continue filled with over-aged officers and predicted the following age distribution by 1943: 100 percentage of officers from first lieutenant to lieutenant colonel at their respective age limitations and 88 percent of colonels. Ages limitations by rank were: colonel, 56; lieutenant colonel, 49; major, 42; captain, 35; and first lieutenant 28.

¹³⁰It is important to note that promotion by seniority also protected many of the Marine officers who advocated for modernization of the Marine Corps. Colonel E. B. Miller, executive officer of the Marine Corps Schools, is a good example of this. Miller is one of those most responsible for the intellectual work on amphibious operations and the development of the *Tentative Landing Manual*. He received superior fitness reports throughout his career, many from general grade officers to include Butler, Breckinridge, and Russell. However, due to his demanding and unaccommodating personality, his name remained off the eligible list for selection to BGen when the Marine Corps transitioned to the promotion board system. It is impossible to say with certainty, but under the board system, Miller may not have been promoted as far as Colonel due to his reputation. Additionally, in the promotion by seniority system, Miller would have received promotion to BGen. See Daugherty, *Pioneers of Amphibious Warfare*, 213-242 for a detailed account of Col E. B. Miller’s service and role in the development of amphibious warfare doctrine.

of vacancies, caused by such variable factors as retirement, death, resignation, discharge, and authorized increase or decrease in strength or change in distribution. One of the inherent faults of this method of promotion is its dependence upon the variable factors just mentioned, and, further, as a result of experience, the inability to promote the smart, efficient officers over others who lack these qualifications.¹³¹

The promotions rates prior to 1934 meant that many excellent and able young officers would reach their age limitations while still serving as a captain or major.¹³²

Additionally, the system caused mediocre officers to receive promotions as rapidly as the most capable Marine, which stifled the incentive to excel. Furthermore, the combination of these factors discouraged junior officers and harmed the overall morale of the organization.

Russell believed the Marine Corps required more receptive and better educated officers to modernize and embrace the new mission. He urged the House Naval Affairs Committee, led by Congressman Carl Vinson, to reexamine legislation to make future officer promotions a matter of board selection, not seniority. On 29 May 1934, Congress passed the Marine Corps Personnel Act of 1934 (P.L. 263), that stipulated for promotion by selection for field grade officers and directed non-selected colonels, lieutenant

¹³¹Anonymous, "Legislation: Personnel and Pay," 19.

¹³²Congressman Thompson of Texas pointed out during a hearing regarding Marine Corps personnel reforms: "During the last 10 years, the average promotion rate to pass through each grade was as follows: Second lieutenant 5.4 years; first lieutenant, 10.4 years; captain, 18.2 years; major 5.5 years; lieutenant colonel, 7 years; and colonel 9 years— a total of more than 25 years beyond the time when an officer must be retired for age. Last year there were so few promotions that, in future at the same rate, it would require 55 years to pass through the grade of captain and 25 years to pass through the grade of major." For details see Anonymous, "Legislation: Personnel and Pay," 21-22.

colonels, and majors to retire at the completion of 30, 28, and 21 years respectively.¹³³

The new system resulted in a 10 percent increase in younger and more talented officers within the field grade officers ranks.¹³⁴ Russell indicated in his 1936 final report:

After a little more than two years of operations, the selective system has already increased the efficiency of the Corps. The age-in-grade conditions, although not entirely correct, is improved and Marine officers generally exhibit a keener interest in their profession and display eagerness to fit themselves for further advancement.¹³⁵

The legislation allowed Russell to remove the oldest and least talented officers that served as an obstacle to fully orienting the Marine Corps towards creating a resilient and capable FMF. It also provided a mechanism to recognize and reward talent within the officer corps.¹³⁶

In an effort to poise the Marine Corps for rapid expansion if war arose, Russell appropriated funds in 1935 to establish the Platoon Leaders' Course focused on recruiting

¹³³Millett, *In Many a Strife*, 110-112. Additionally, the year's legislation enlarged the field grade officer strength within the Marine Corps as part of a larger effort to improve Naval readiness. Millett also highlights the impact of Marine Corps Personnel Act of 1934, stating, "In practical terms, the Marine Corps could now prune the WW II 'hump' of its oldest and least accomplished officers." He also alluded to the new sense of purpose amongst junior officers based on the board selection process, expressing Thomas' view, "no longer would the old criteria apply: 'all you had to do was live and not get a general court'" He continued, "no temperance man himself, Jerry [Thomas] recognized that many Marine officers would rather drink than study, and he hoped that the new system would prune the ranks of the problem drinkers."

¹³⁴Millett, *In Many a Strife*, 111; Daugherty, *Pioneers of Amphibious Warfare*, 264.

¹³⁵Russell, "Final Report of Major General Commandant," 16.

¹³⁶Rosen, 83-84. One officer to receive the benefit of Russell's promotion reform is Gen Holland M. Smith who served as the first Commanding General of Fleet Marine Force, Pacific during WW II. Gen Smith would also play a critical role in the development of Marine Corps amphibious capability during the Interwar Period.

and training prospective second lieutenants for service in the Marine Corps Reserve. The program focused on recruiting young men, ages 17 to 23, attending universities without Reserve Officer Training Corps (ROTC) on their campuses. The training consisted of two consecutive six-week summer training sessions at Quantico, Virginia or San Diego, California focused on physical conditioning, tactics, leadership, and military customs. Upon successful completion of the two-year course and graduation from college, the young men received their commission and assigned to a drilling Marine Corps Reserve Unit.¹³⁷ Brigadier General R. P. Williams, the commanding general of the Marine Reserve, wrote, “the purpose of the Platoon Leaders’ Course is not to train officers for continuous service, but to train outstanding American young men for efficient, capable service with troops in time of emergency.”¹³⁸ Concomitantly, Russell secured pay and benefits for the Marine Reserves. Previously, these officers and men did not receive pay or benefits for drill. These efforts established more favorable conditions for war-time mobilization. Additionally, the recruitment and education of the next generation of

¹³⁷Russell, “Final Report of Major General Commandant,” 19-20; Daugherty, *Pioneers of Amphibious Warfare*, 264-265.

¹³⁸BGen R. P. Williams, USMC and D. L. Dickson, “Platoon Leaders’ Class,” *Marine Corps Gazette* 20, no. 4 (November 1936): 22-23. Also see BGen Thomas Holcomb, USMC, “Eastern Platoon Leader’s Class-1935-Reserve,” *Marine Corps Gazette* 19, no. 4 (November 1935): 30. Holcomb, serving as the Commandant, Marine Corps Schools, states, “The purpose of this legislation was to supply the Marine Corps with a reserve of young, carefully selected, and well trained platoon leaders, available to be called to the colors promptly, in the event of mobilization for war. The Marine Corps does not have time to select and train platoon leaders between a declaration of war and its first active service.” The training schedule included 70 hours of instruction on discipline (drill, inspections, history, and physical conditioning, etc.); 94 hours on technical subjects (Pistol, Rifle, Bayonet; First Aid, Scouting and Patrolling, etc.); 46 hours on tactics (combat principles of the squad, section, and platoon, weapons employment, communications, etc.).

officers served as another mechanism to cultivate acceptance of the FMF concept.

Russell's next priority focused on developing a capstone doctrine to support the newly formed FMF. He directed the Marine Schools to cease classes in 1933 and develop a comprehensive amphibious doctrine to guide the organization in execution of its war-time mission. Previous work on the subject, mostly by Ellis and a small group of officers, had been completed and the MCS began to slowly re-orient its curriculum towards landing operations beginning in 1926. Nonetheless, the framework for amphibious operations remained absent in the Marine officer corps' vernacular and the development of its doctrine a secondary effort. Russell's vision was to "mass the total talent of the MCS - faculty and student - to produce, in a single volume, a full exposure of everything involved in the amphibious assault."¹³⁹

Under the sponsorship of Brigadier General James C. Breckinridge, Commanding Officer of MCS, and the direction of Lieutenant Colonel Ellis B. Miller, the faculty and students formed working groups to examine the critical elements of amphibious operations. Over the next six months, the group studied command and control, fire support, ship-to-shore movement, beach assaults, and logistics required to conduct successful landings. Their efforts garnered greater specificity to the challenges identified by Ellis and resulted in the development of the *Tentative Landing Manual*.

Russell's employment of the MCS to solve the Corps' most critical problem not only produced a comprehensive doctrine, more importantly it inculcated the officer corps with an amphibious operations mindset. Many of these officers would serve in key positions of command and staff during WW II. Additionally, the *Tentative Landing*

¹³⁹Krulak, 80-81.

Manual provided a doctrinal foundation to begin meaningful live-force experimentation as part of the Fleet Landing Exercises (FLEX). After WW II General Holland M. Smith discussed the importance of the *Tentative Landing Manual*:

The publication of the doctrine brought about for the first time a standardization of policy, method, and terminology and gave direction and bias to the study and continuous development of amphibious tactics in the naval service. The manual discussed the peculiar characteristics of landing operation, their problems, purpose, and various types, the forces necessary for conducting them, the respective missions of the landing force and the naval attack force, and the phases of an amphibious attack. It set forth in detail techniques for coordinated planning, organization, training, embarkation, command relations, control and communications, logistical support, air and naval gunfire support, the employment of field artillery, tanks, engineer, and smoke. It covered the choice of landing areas and frontages, timing, the characteristics and employment of landing craft, and all aspects of a coordinated landing and continued attack ashore.¹⁴⁰

During Russell's tenure, the Marine Corps made significant gains in building an amphibious capability to meet the challenge of combat in the Central Pacific. He provided a centralized vision to form an expeditionary force-in-readiness with the singular focus of amphibious operations in support of the fleet. Guided by his earlier article "A Plea for a Mission and Doctrine," the Marine Corps now possessed a "General Mission" codified into law with a comprehensive doctrine to direct the actions of the newly formed FMF. Russell fostered innovation by leveraging the MCS - faculty and students - to develop a comprehensive amphibious doctrine. Moreover, his forceful leadership reinvigorated the officer corps to accept amphibious warfare as its reason for existence.

¹⁴⁰LtGen Holland M. Smith, "The Development of Amphibious Tactics in the United States Navy, Part III," *Marine Corps Gazette* 30, no. 8 (August 1946): 26-46.

Thomas Holcomb

The Russell Commandancy did much in two years to develop amphibious doctrine and properly organize the Marine Corps to meet its wartime mission. Nonetheless, General Thomas Holcomb, Commandant from 1 December 1936 to 31 December 1943, would build a properly trained Fleet Marine Force prepared for combat in the Central Pacific. During this period, Holcomb drove amphibious training and experimentation during the annual Fleet Landing Exercises, steered equipment procurement, and continued personnel assignment reforms in preparation for WW II. These reforms took place against the backdrop of massive expansion in manpower. During the Holcomb Commandancy, the Corps grew from 17,239 in 1936 to 27,925 by 1940.¹⁴¹ By 1940, the Marine Corps possessed a viable combat force capable of executing the requirements identified in War Plan Orange.

The Marine Corps' primary challenge during this period remained translating amphibious warfare concepts and doctrine into an operational capability. Holcomb desired to shape the FMF into a viable combat formation capable of either conducting an assault on a contested beach or holding a friendly island against an enemy attack.¹⁴² Under his direction, the FMF resumed landing exercises to test the tactical foundations established in the *Tentative Landing Manual*. In 1935, the Navy and Marine Corps initiated the series of annual exercises, FLEX. These exercises fostered an innovative spirit within the FMF and served as a laboratory for amphibious warfare

¹⁴¹Millett, *Semper Fidelis*, 654.

¹⁴²Ulbrich, *Preparing for Victory*, 11.

experimentation.¹⁴³ It was here that the Navy and Marine Corps began to rectify the problems of command and control, embarkation, naval gunfire, close air support, ship-to-shore movement, debarkation, and securing the beachhead.¹⁴⁴

The lack of a reliable and combat effective landing craft became a recurring theme during the FLEX and represented the principal technology gap in Marine Corps amphibious capability.¹⁴⁵ Holcomb, understanding the criticality of this problem, steered the development, testing, and procurement of landing craft capable of conducting ship-to-shore movement. He not only empowered the Marine Corps Equipment Board to address this issue, he also relied on an eclectic collection of people, both inside and outside his organization, to solve this problem. On one occasion, he listened to Lieutenant Victor Krulak, armed with a one-foot model of a landing craft; discussed his observations of a Japanese amphibious assault during the Second Sino-Japanese War.¹⁴⁶ Impressed with the design, Holcomb ordered Krulak to share the model with Louisiana boat designer and entrepreneur Andrew Jackson Higgins. After observing Donald Roebing's "Alligator" in a 1937 *Life* article, Holcomb ordered the Marine Corps Equipment Board to investigate the amphibian tractor originally designed for rescue missions in the Florida swamp-

¹⁴³Millett, "Assault From the Sea," 75-78.

¹⁴⁴Millett, "Assault From the Sea," 70-78; Millett, *Semper Fidelis*, 337-340.

¹⁴⁵The development and procurement of a suitable landing craft was further complicated by the bureaucratic inertia caused by the Navy's Bureau Ships. Lt Brute Krulak's Chapter 5: Ideas but No Boats and Chapter 6: Breaching the Coral Reef in *First to Fight* provides a first-hand account of the Marine Corps' search for, and procurement of suitable landing craft.

¹⁴⁶Krulak, 93-95; Coram, 75-80.

lands.¹⁴⁷ Holcomb's direct involvement catalyzed the energies of Higgins, Roebling, Krulak and the Marine Corps Equipment Board. Moreover, these innovative efforts provided the Marine Corps a suitable landing craft capable of transporting personnel and equipment during amphibious operations.

The growing international tensions caused in Europe and the Far East slowly reduced American isolationism and increased military funding. The U.S. Navy convened the Hepburn Board in December 1938 to examine the evolving strategic situation in the Pacific. The Board strongly recommended the fortification of Guam, Wake, Palmyra, Johnston, and Midway. They further recommended the Marine Corps form defense detachments to fulfill the defensive mandate of advance bases theory.¹⁴⁸ To fulfill the base defense role, Holcomb ordered the establishment of the FMF's 1st and 2nd Battalions, 15th Marines to fulfill the requirement. By March 1941, the Marine Corps formed seven defense battalions with elements of the 1st Defense Battalion stationed on Midway, Wake, and Palmyra by July of that year. Much like the rest of the FMF, the defense battalions remained 50 percent under its authorized strength, deficient on ammunition and equipment, and lacked experienced officers and non-commissioned officers within its ranks.¹⁴⁹

Holcomb's vision proved essential in translating amphibious concepts and doctrine into a viable and effective Marine Corps capability on the eve of war. Under his

¹⁴⁷Ulbrich, *Preparing for Victory*, 55.

¹⁴⁸David J. Ulbrich, "Thomas Holcomb and the Advent of the Marine Corps Defense Battalion" (Occasional paper, History and Museum Division, Marine Corps University, Quantico, VA, 2004), 16-19, 25-27.

¹⁴⁹Ibid.

Commandancy, the resumption of landing exercises served as a laboratory to refine and validate the doctrine and tactics of amphibious warfare. Holcomb helped stimulate, develop and procure suitable landing craft for amphibious operations which fostered an innovative spirit amongst men in and outside the Marine Corps. Additionally, he continued to implement personnel reforms to further modernize the Marine Corps.

In summary, each Commandant was intimately involved in steering experimentation, doctrinal development, and equipment procurement. Additionally, these senior leaders were directly responsible for establishing an organizational culture that valued critical thinking and leveraged relatively junior officers to solve the most critical problems in the development of amphibious operations. Lejuene's leadership during a period of fiscal austerity and turbulence defined amphibious warfare as the primary wartime mission and slowly reoriented the Marine Corps onto this task. The reorganization of HQMC set favorable conditions for future innovation and allowed the Marine Corps to participate in contingency plans vis-à-vis Japan. Lejeune also established a command culture that valued education. Next, Russell's vision and leadership redirected the full weight of the Corps towards amphibious operations and compelled its senior leadership to embrace the naval expeditionary role, something it had long resisted. During his tenure, the Marine Corps established the FMF, implemented a merit-based promotion system, and developed the *Tentative Landing Manual*. Finally, Holcomb translated the previous intellectual work into a capability. He drove amphibious training and experimentation during the annual FLEX, steered equipment procurement, and continued personnel assignment reforms in preparation for WW II. Despite

significant personnel and equipment shortages, the Marine Corps possessed a force organized and trained to conduct amphibious operations by December 1941.

The next chapters will discuss the role junior officers played in experimentation, doctrinal development, and equipment procurement. It will also examine the MCS reforms.

CHAPTER 4

EDUCATION, CRITICAL THINKING AND EMPOWERED JUNIOR OFFICERS

The centralized vision of the Commandants discussed in the previous chapter established an essential role for the Marine Corps in American naval strategy during the Interwar Period. The command culture created by the Commandants coupled with an organizational intellectualism that valued education fostered innovation by empowering junior officers to overcome the most daunting doctrinal challenges of the 20th century. These factors allowed the Marine Corps to build a viable amphibious capability poised for combat in the Central Pacific. Accordingly, this chapter focuses on the level of the role junior officers played in experimentation, doctrinal development, and equipment procurement. Additionally, it will investigate the reforms at the MCS that developed a collective learning environment focused on critical thinking and problem-solving.

During this period, Lieutenant Colonel Pete Ellis prophetically developed the strategic framework for the Marine Corps' Central Pacific campaign during WW II and outlined a list of challenges associated with amphibious operations that guided generations of Marines in preparation for war in the Central Pacific. In the early 1930s, the MCS underwent significant curriculum reforms to foster a collective learning environment conducive to the development of critical thinking and problem-solving skills. The schools ceased classes in 1933 and directed the full weight of the institution towards the development of amphibious doctrine. These efforts produced the *Tentative Landing Manual* (1934), formed the basis for future MCS curriculum, and inculcated a generation of Marine officers to amphibious warfare. As a lieutenant, Victor Krulak's efforts to assist with the development of a suitable landing craft to transport personnel

and equipment from ship-to-shore is representative of the empowerment junior officers possessed during this period. His efforts proved critical in the design of Andrew Jackson Higgins' famous Landing Craft Vehicle and Personnel (LCPC), as well as, the testing of Donald Roebling's LVT.

Lieutenant Colonel Earl 'Pete' Ellis the Amphibious Warfare Prophet

Lieutenant Colonel Pete Ellis, a protégé of General John A. Lejeune, provides the first example of a relatively junior officer who significantly contributed to Marine Corps innovation and preparation for war in the Central Pacific. Ellis was among the first Marines to examine the strategic and operational consequences of a future war with Japan.¹⁵⁰ His two definitive works, "Naval Bases: Their Location, Recourses, and Security" (1921) and "Operation Plan 712—Advance Base Operations in Micronesia" (1921) solidified the Marine Corps' role in U.S. Naval strategy and served as the framework for operations in the Central Pacific.¹⁵¹ Within the reports, Ellis also outlines

¹⁵⁰Alexander. *Storm Landings*, 9.

¹⁵¹"Naval Bases: Their Location, Recourses, and Security" (1921) and "Operation Plan 712—Advance Base Operations in Micronesia" (1921) are mutually supporting documents that serve as the Marine Corps' framework for defensive and offensive operations in support of the evolving Plan Orange. Marine Corps history primarily focuses on the offensive component of Ellis' work outlined in "Operation Plan 712—Advance Base Operations in Micronesia" (1921). David J. Ulbrich's recent works on Marine Corps Defense Battalions begin to fill the historical void in the Marine Corps support to the other half of their strategic purpose—defense of advance naval bases. Ulbrich asserts that because Ellis envisioned an offensive war against Japan, the amphibious assault component grew in relation to base defense. Nonetheless, the base defense mission still represented half of the Marine Corps' strategic mission. It is this author's belief that reading both Ellis reports side-by-side provides better context to the Marine Corps' comprehensive plan to support a naval campaign. See also Ulbrich, "Clarifying the Origins and Strategic Mission of the U.S. Marine Corps Defense Battalion," 81-109; Ulbrich, "Thomas Holcomb and the Advent of the Marine Corps Defense Battalion."

the challenges, training, and equipment requirements for advance base defense and seizure that guided the Marine Corps preparation for nearly two decades prior to WW II.¹⁵²

Earl Hancock ‘Pete’ Ellis born in Pratt, Kansas, enlisted in the Marine Corps in 1900 and received a commission a year later. His service prior to the WW I involved garrison assignments in the U.S., Guam, and the Philippines. In 1908, Lejeune recognized the talents of Ellis, one of his detachment commanders in the Philippines, beginning a long and trusted relationship between the two. In 1911, Ellis attended the Naval War College and served on the faculty for two years where he was exposed to the intellectual currents sweeping the Navy and wrote a series of papers on advance base forces. He also participated in planning for War Plan Orange and grew convinced that conflict with Japan was inevitable. In 1918, Ellis served in France with the 4th Marine Brigade, 2nd Marine Division and participated in the Saint Mihiel, Mont Blanc, and Meuse Argonne campaigns—atypically, he received the Navy Cross for superior staff work.

Upon his return from Europe, Ellis was assigned to the Plans Section at HQMC where he drafted both “Naval Bases: Their Location, Recourses, and Security” (1921) and “Operation Plan 712—Advance Base Operations in Micronesia” (1921).¹⁵³ At the completion of these studies, Ellis received permission to travel to the Japanese-held mandates to conduct personal reconnaissance of the Central Pacific under the guise of a

¹⁵²Millett, *Semper Fidelis*, 324-326; Isley and Crowl, 26-28; John J. Reber, “Pete Ellis: Amphibious Warfare Prophet,” in *Assault from the Sea: Essays on the History of Amphibious Warfare*, ed. Merrill L. Bartlett (Annapolis, MD: Naval Institute Press, 1983), 157-167.

¹⁵³For more information on Pete Ellis see: Ballendorf and Bartlett; and Reber, 157-167.

German trader. On 12 May 1923, Ellis died under mysterious circumstances on the Japanese-held Island of Palau in the Caroline Islands.¹⁵⁴ “Naval Bases” and “Advance Base Operations” still serve as a critical case study in strategic forecasting at the Marine Corps University. Pete Ellis remains a mythical and legendary figure within Marine Corps for his visionary prophecies, hard-drinking, and total dedication to the Marine Corps.¹⁵⁵

Following WW I, Japan emerged as a dominate power within the Far East and threatened American strategic and commercial interests in the region. The mandate of former German colonies within Micronesia provided the Japanese a significant position of advantage that endangered the U.S. Navy’s lines of communications and waypoints of Midway, Guam, and Wake Islands. These strategic realities coupled with Japanese territorial ambitions presented potential risk to America’s Open Door Policy with the Far East and further jeopardized post-war European reconstruction. As early as 1919, Navy contingency planners began to envision a campaign across the Central Pacific that required the seizure and defense of advance bases in support of a naval campaign to protect the Philippines and defeat the Japanese fleet in their home waters. In 1920, Lejeune, aware of the Navy’s planning, and anxious to solidify the Marine Corps’ place

¹⁵⁴On 12 May 1923, LtCol Earl Ellis died under mysterious circumstances on the Japanese-held island of Palau. Due to the intelligence gathering nature of Ellis’ mission, conspiracy theorists allege that the Japanese assassinated him. However, it is more likely that Ellis died from an alcohol-related illness.

¹⁵⁵Today, the amphibious training building for the Marine Corps’ Command and Staff College, Quantico, Virginia is named Ellis Hall. The *Marine Corps Gazette* hosts the LtCol Pete Ellis annual writing contest focused on preparing the Marine Corps for future conflict. Additionally, the Marine Corps Combat Development Command’s future initiatives group is also named after Ellis.

in American strategy, assigned Ellis to examine the role of the Marine Corps within War Plan Orange.

Even more obsessed with the Japanese threat than before WW I, Ellis went into monastic isolation at Headquarters, surrounded by maps and intelligence reports.¹⁵⁶ Working until exhaustion, Ellis developed the prophetic “Naval Bases” and “Advance Base Operations in Micronesia” reports to “serve as guide for the coordination of all the peace activities and training of the Marine Corps towards readiness to execute” operations in the Central Pacific.¹⁵⁷ The reports represented the defensive and offensive components of a comprehensive plan to incorporate the Marine Corps within American maritime strategy and outlined a framework for the organization, tactics, and equipment necessary to conduct each type of operation.

Ellis’ work first frames maritime strategy and articulates the role of the Marine Corps within the context of a naval campaign. Heavily influenced by Bahamian thought, he states “the United States, in the case of national wars, cannot impose her will upon any nation outside of the Americas without the control of the sea.”¹⁵⁸ The basis for any naval war is to “seek out, overhaul, and destroy the fleet.”¹⁵⁹ To achieve this action the fleet

¹⁵⁶Millett, *Semper Fidelis*, 325.

¹⁵⁷Maj E. H. Ellis, “Advance Base Operations in Micronesia,” Operation Plan 712D, HAF 73, Archives and Special Collections Branch, Library of the Marine Corps, Quantico, VA; U.S. Marine Corps, Fleet Marine Force Reference Publication 12-46, *Advanced Base Operations in Micronesia* (Washington, DC: Headquarters Marine Corps, 1992), 3.

¹⁵⁸Ellis, “Naval Bases; Location, Resources, Denial of Bases, Security of Advance Base,” 8.

¹⁵⁹*Ibid.*

requires secure bases within the theater of operations to extend the range of operations, maintain stores of supplies, and accommodate logistical vessels. In “Naval Bases,” he succinctly conveys the requirements for a naval war:

A modern fleet is capable of self-sustaining strategically activity only to the extent that it can carry the necessities of that activity in its own bottoms. Within the limit it is bound to certain fixed points or bases where in safety it may be resupplied with fuel, ammunition and food, and be docked, overhauled and refitted. With the increase in the size of fleets and the increased variety and complexity of its units the question of maintenance and supply has become of greater importance and the limit of fleet activity more strictly defined.¹⁶⁰

Within this context, the “Naval Bases” and “Advance Base Operations” specify the Marine Corps’ role as the defense, seizure, and denial of advance naval bases.¹⁶¹

Both “Naval Bases” and “Advance Base Operations” identify Japan as the primary threat to American national interest and likely adversary due its “power and position” as “the only purely Pacific world power.”¹⁶² Despite the strengthened position

¹⁶⁰Ellis, “Naval Bases; Location, Resources, Denial of Bases, Security of Advance Base,” 1.

¹⁶¹Within “Naval Bases,” Ellis asserts the increased costliness and vulnerability of ships, development of the torpedo and its carrier, development of the battle cruiser, and the increased size and comparative cheapness of modern armies places greater emphasis on the Defense of Advance Base. The purpose of the defense in the regard is to protect the base (stage or anchorage) for the use of the fleet during the entire war. In “Advance Base Operations,” Ellis argues the Japanese mandate of key islands chains pose a significant risk to fleet action and require Marine forces to conduct offensive operations to seize and defend to extend the range of the U.S. fleet. Within “Naval Bases,” Ellis characterizes the denial mission as last option and economy of force (applying minimum forces) for the purpose of denying the enemy anchorage or entrance to the anchorage.

¹⁶²Ellis, “Naval Bases; Location, Resources, Denial of Bases, Security of Advance Base,” 10-13. The report also identifies Germany as the likely adversary in the Atlantic. Ellis contended the Germans would not initiate a war until she possessed sufficient naval superiority to project a fleet into the Western Atlantic and defeat the U.S. Navy in home waters. The action would require the Germans to establish advance bases in the Caribbean.

within the Pacific, Ellis believed the Japanese navy remained inferior to the U.S. Fleet and would leverage its vastly superior land force to assume a strategic defensive in the Central Pacific. He accurately predicted in both studies that Japan would initiate a war against the U.S. Ellis wrote in “Advance Base Operations” “considering our consistent policy of non-aggression, she [Japan] will probably initiate the war; which will indicate that, in her own mind, she believes that, considering her natural defensive position, she has sufficient military to defeat our fleet.”¹⁶³ In “Naval Bases,” he reaffirms this notion and expands upon the Japanese strategy to capture American outlying bases to set favorable conditions to defeat the U.S. Fleet:

Her first mission will therefore be to reduce the naval superiority of the United States and thereby secure for herself as favorable conditions as possible for the decisive fleet action. . . . It may be expected then that she will immediately occupy the Eastern possessions of the United States in great strength and endeavor to capture and deny all points which might aid enemy naval operations.¹⁶⁴

The Japanese would use these bases to attack the U.S. Fleet’s lines of communication with mines, submarines, and aircraft, as well as exploit opportunities for further offensive actions.

The reports then outline a strategy to defeat the Japanese. Ellis believed sea power alone could “isolate Japan from the world” and “reduce her to a state of helplessness.”¹⁶⁵

The most viable route for the U.S. Fleet to traverse and wage a naval campaign in

¹⁶³Ellis, “Advance Base Operations in Micronesia,” 37.

¹⁶⁴Ellis, “Naval Bases; Location, Resources, Denial of Bases, Security of Advance Base,” 17.

¹⁶⁵Ibid., 18.

Japanese waters required the fleet to refuel at least once.¹⁶⁶ In “Naval Bases,” Ellis proclaimed “the only practicable solution to those logistics problems is the securing of points along the line of approach where the fleet may refuel with certainty and security.”¹⁶⁷ Within the study, he identified three critical bases to establish reserves of fuel and stores of supply to support fleet operations—Pearl Harbor Hawaii and Apra, Guam as waypoints and Polillo, Philippines as the terminal base to support decisive operations against the Japanese fleet.¹⁶⁸ These bases also represented the locations that required significant improvements to coastal defenses and fortifications to repel likely attacks.

Ellis also developed a strategy for the seizure and defense of islands in the Pacific, including the Japanese-held Marianas, Marshall, Caroline, and Pelew island chains. In “Advance Base Operations,” he outlined a three-phase operation to enable power projection across the Pacific and defeat the Japanese navy within their home waters. The plan called for Marine units to conduct “opposed landing and attacks on denial positions” to seize advance coaling stations in support of fleet activities. The

¹⁶⁶Ellis states, “After an exhaustive study of the various available lines of approach to the Far East it is agreed that the line via Hawaii and Guam is by far the most practicable one, if not the only practicable one,” for the fleet to travel. He also deemed the reliance on supply trains as too hazardous and troublesome.

¹⁶⁷Ellis, “Naval Bases; Location, Resources, Denial of Bases, Security of Advance Base,” 18.

¹⁶⁸Within “Naval Bases,” Ellis states, “Every consideration seems to point toward the necessity of collecting at the Pacific bases a reserve of fuel and stores sufficient to project the fleet to the terminal base and support its operations there for a period of at least two months. . . . Of this reserve, the major part should, of course, be at the terminal base. The reserve at the way-points need be only that necessary for the use of the fleet enroute, plus that likely to be required for the support of minor operations in the vicinity of those bases during the period stated.”

concept demonstrated a divergence from the conventional base defense strategy and represented the Marine Corps offensive role within Plan Orange. Ellis discussed the emergence of the requirement in Advance Base Operations:

In order to impose our will upon Japan, it will be necessary for us to project our fleet and land forces across the Pacific and wage war in Japanese waters. To effect this requires that we have sufficient bases to support the fleet, both during its projection and afterwards. As the matter stands at present, we cannot count upon the use of any bases west of Hawaii except those which we may seize from the enemy after the opening of hostiles. Moreover, the continued occupation of the Marshall, Caroline and Pelew Islands by the Japanese (now holding them under mandate of the League of Nations) invests them with a series of emergency bases flanking any line of communications across the Pacific throughout a distance of 2300 miles. The reduction and occupation of these islands and the establishment of the necessary bases therein, as a preliminary phase of the hostilities, is practically imperative.¹⁶⁹

Ellis' reports, went beyond strategy, he also outlined a range of tactical and technical problems the Marine Corps would face in the Central Pacific. "Naval Bases" forecasted that Japanese forces, possessing superior local knowledge, would attack American bases with "efficient, determined forces in great strength."¹⁷⁰ At the tactical level, Ellis believed the Japanese would attempt a landing in force at night to destroy material and secure temporary positions for the main force landing at dawn. To protect bases for use by the fleet, he proposed the defenders establish a main line consisting of well entrenched infantry, mountain artillery, siege artillery, and a reserve to delay ship-to-shore movement, defeat an amphibious assault at the shoreline, and deny the landing force's ability to move inland. A second line of defense would serve as supplementary positions if the first line failed to defeat the enemy's attack. Ellis also suggested the use

¹⁶⁹Ellis, "Naval Bases; Location, Resources, Denial of Bases, Security of Advance Base," 29.

¹⁷⁰Ibid., 17-24, 48-49.

of Strongpoints, as a last resort, to deny the enemy's fleet usage of the harbor if the first and second lines of defense failed.¹⁷¹

In "Advance Base Operations," Ellis argued amphibious assaults required careful and detailed tactical and logistics planning. To avoid confusion, Ellis believed landings should occur during the day-time and use a series of feints to maintain surprise and disperse the enemy's defense. He also stressed that opposed landings required rapid ship-to-shore movement with support from naval gunfire and aerial support. He further believed "the landing would entirely succeed or fail practically on the beach" and the assault waves required a balanced combined arms team consisting of infantry, artillery, machineguns, tanks, and engineers. Ellis accurately predicted the difficulty of amphibious operations in the Central Pacific and insisted on tough peacetime training in preparation stating:

To affect a landing under sea and shore conditions obtaining and in the face of enemy resistance requires careful training and preparation, to say the least; and this along Marine Corps lines. It is not enough that the troops be skilled infantry men or artillery men of high morale: they must be skilled water men and jungle men who know it can be done –Marines with Marine training.¹⁷²

On 23 July 1921, John A. Lejeune approved Ellis' "Advance Base Operations" in its entirety and ordered that it guide war planning, training, equipment procurement, and education.¹⁷³ Ellis' "Naval Bases and Advance Base Operations" truly represented the first step in providing an intellectual framework for amphibious operations and a map

¹⁷¹Ellis, "Naval Bases; Location, Resources, Denial of Bases, Security of Advance Base," 49-53.

¹⁷²Ibid., 41.

¹⁷³Millett, *Semper Fidelis*, 325; Isley and Crowl, 25-28.

that accurately depicted future battlefields. His work provided the seed corn to evolve coastal defense tactics, amphibious assault landing techniques, and test new equipment. According to Lieutenant General Victor Krulak, “Ellis not only contributed to the philosophical ‘what’ of the Marines’ amphibious future, he clearly identified the more troublesome ‘how,’ opening the way for others to address the details.”¹⁷⁴

No analysis of Ellis is complete without a brief discussion of his personal and professional character flaws that eventually led to his death. In short, Ellis possessed a severe alcoholism problem that he was unable to conceal from his professional life. Biographers, Dirk Ballendorf and Merrill Bartlett, highlight many examples of neurotic behavior indicative of Ellis’ life. On one account, he ended a dinner engagement with the post chaplain by shooting the dishes off the table with his service pistol.¹⁷⁵ Another WW I story alludes that Ellis, serving as Lejeune’s Brigade Chief of Staff, was severely intoxicated the night prior to the attack on Blanc Mont. When told Ellis was indisposed, Lejeune reportedly replied “Ellis drunk is better than anyone else around here sober.”¹⁷⁶ Despite these character flaws and regular stints in the hospital to recover, his superiors chose to overlook these errs in behavior and never mentioned them within his fitness reports. These types of stories underscore an organizational culture that condoned drinking and erratic behavior within its officer corps. Moreover, one can imply that Ellis’ career mostly like would not survive in any other modern period of Marine Corps history.

¹⁷⁴Krulak, 90-99; Coram, 78.

¹⁷⁵Ballendorf and Bartlett, 4-5.

¹⁷⁶Ibid., 90.

The Marine Corps continues to immortalize Pete Ellis as an amphibious warfare prophet; his story provides insight into the Marine Corps' ability to foster innovation during this period. First, Lejeune recognized the talents of Ellis and leveraged a relatively junior officer to provide the framework for the Marine Corps role in War Plan Orange and outline the critical tasks associated with amphibious operations. Second, while Lejeune provided a broad vision for the Marine Corps to assume landing operations as its primary wartime mission, he relied on Ellis to translate those concepts into concrete plans. Third, the "Naval Bases and Advance Base Operations" reports provide a cohesive strategy and operating concept for offensive and defensive operations that spans the spectrum of conflict. Fourth, Ellis' time as a student and instructor at the Naval War College exposed him to higher level academic thinking and afford the time to study and reflect on the nature and evolving character of war. His intellectual development during this period impacted his ability to innovate. Last, senior leaders within the Marine Corps used Ellis' work to guide institutional reforms in terms of education and training.

The Corps Schools and the *Tentative Landing Manual*

The MCS highlights a command culture that valued education and empowered junior leaders. In the 1920s, The MCS struggled to divorce itself from formal Army curriculum. Additionally, it applied a dogmatic teaching methodology that stifled the development of critical thinking and analysis. Beginning in 1928, Brigadier General James Carson Breckinridge, an unconventional and cerebral commander, vastly changed

the direction of school by infusing Marine and Navy subjects into the curriculum and applying a progressive teaching method to the classroom.¹⁷⁷

The MCS, established in the spring of 1920, relied heavily upon the U.S. Army formal school's curriculum for its field and company grade courses and emphasized rote memorization over active problem-solving. The reduction in force coupled with a lack of clear-cut mission and institutional debate on the role of the Marine Corps suppressed the necessary reforms within the curriculum for nearly a decade. The state of the MCS began to draw criticism from faculty and students in the late 1920s.

Writing to the *Marine Corps Gazette* in 1929, Breckinridge, serving his first tour as the Commanding Officer, disparaged the MCS for poorly mimicking the Army schools and stifling "fresh and creative thought" by emphasizing a single-answer "school solutions" to problems.¹⁷⁸ He describes the dogmatic system and consequences to the student body:

They conform to a school ritual of what should be irrespective of what is needed in a particular case. Officers become adept in the ritual, and can turn out the required number of papers, but their originality, initiative, independence of thought and action and of official prerogative, have been so scholastically smothered and encroached upon that they lack perspective.¹⁷⁹

¹⁷⁷See Troy R. Elkins, "A Credible Position: James Carson Breckinridge and the Development of the Marine Corps Schools" (Master's thesis, Kansas State University, Manhattan, KS, 2011), 53-89 for a comprehensive analysis of Breckinridge's role in reviving the Marine Corps Schools during this period. Elkin's argues that Breckinridge incorporated an educational system that developed critical thinking and analysis skills.

¹⁷⁸Col J. C. Breckinridge, USMC, "Some Thoughts on Service Schools," *The Marine Corps Gazette* 14, no. 4 (December 1929): 230.

¹⁷⁹*Ibid.*, 237.

Samuel B. Griffith II, a faculty member at the U.S. Naval War College during this period, agreed with Breckinridge's assessment, stating the Marine curriculum "smothered individuality and initiative rather than encourage it."¹⁸⁰ The design of the school promoted the mechanical application of procedures and failed to foster the intellectual stimulus necessary to develop an agile and reasoning mind.

Supporting Breckinridge and Griffith's criticism, Lieutenant Commander H. S. Jeans, a graduate of the Navy's Command and Staff and student at the Marine Corps Field Officers' Course, considered the work-load and evaluation system counter to "the desired cultivation of originality, initiative, and independence of thought." He further described his experience:

The student is kept in a swirl which is dizzying. He cannot give considered thought to any one subject. About the time he gets himself oriented, the subject is dropped until next day or next week and a new subject confronts him. It is the method used in schools where the object is the mechanical absorption of facts, rules and procedure and where the reasoning and applicatory powers of the student are not especially desired . . . Truly quality in this case is paramount to quantity. Even if this system prevented study of all the subjects now scheduled, the final results would be more beneficial.¹⁸¹

Lieutenant Commander Jeans also believed the school failed to infuse the students with naval subjects, over-emphasizing topics purely germane to the Army. During this period, much of the school's 1,016 hours of instruction remained focused on Army

¹⁸⁰BGen Samuel B. Griffith, II, USMC (Ret.), interview by Benis M. Frank, Marine Corps Oral History Program, United States Marine Corps History Division, Quantico VA. 1976, 11. BGen Griffith served as the commanding officer of 1st Raider Battalion during the Guadalcanal Campaign. He is also translated the works of Mao Tse-Tung's *On Guerrilla Warfare*. BGen Griffith is the recipient of the Navy Cross, Distinguished Service Cross, and Purple Heart. Within the Marine Corps he is viewed as one of the intellectual elites of this period.

¹⁸¹LCDR H. S. Jeans, USN, "Field Officer's Course at Marine Corps School," *Marine Corps Gazette* 15, no. 3 (November 1930): 105.

doctrine, organization, and equipment.¹⁸² In 1931, Major John A. Gray, a student at the Field Officers' Course, also articulated the requirement for reforms in the *Gazette*:

The Field Officers' Course patterns itself closely to the corresponding courses of the Army schools, which, admirable as they are for the purpose of the Army, have neither the flexibility nor the scope that a course of instruction for Marine officers should have, and which in fact contains material better eliminated and replaced by subjects of far more value in a course designed for the education of Marine officers.¹⁸³

Breckinridge, well aware of the MCS deficiencies, knew the current teaching methodology could not develop the level of critical thinking and problem solving required of a MCS graduate. In a *Marine Corps Gazette* article, he described the type of officer the Marine Corps required and the role of MCS in this endeavor:

We need officers who are trained to reason briefly, clearly, decisively, and sanely. Above everything they must have complete faith in their own ability to master whatever they may be confronted with. That calls for confidence both up and down the scale of rank and responsibility. To meet these requirements and to develop this type of officer, is the ambition of the MCS.¹⁸⁴

The MCS possessed great potential; however, in its current state, did not promote the level of academic rigor required to achieve these ambitions.

Breckinridge began to examine alternate educational models to develop the intellectual capacities of the student body. During his personal studies, he became exposed to Alexander Meiklejohn's theories on advanced adult learning, termed the Experimental College, which advocated for a broad liberal arts education to train the

¹⁸²Bittner, 17.

¹⁸³Maj John A. Gray, USMC, "A Plea for Revision of the Field Officers' Course," *Marine Corps Gazette* 15, no. 4 (February 1931): 64.

¹⁸⁴Breckinridge, "Some Thoughts on Service Schools," 238.

mind to parse problems and develop timely solutions.¹⁸⁵ The method showed great promise because students were not “taught to learn what is handed to them” but rather to “dissect, to analyze, and to think.”¹⁸⁶ Breckinridge envisioned an environment that stimulated intellectual curiosity where students and instructors collectively learned through research, analysis, discourse, and criticism. He explained:

There is no progress without criticism. Every improvement is born of criticism that resulted in a discard. The process seems to run in the wise: Curiosity leads to investigation, which opens discussion, which gives rise to opinion, which breeds criticism, which results in improvement. Therefore we must cultivate curiosity, encourage investigation, stimulate discussion, and inspire criticism that will result in improvement . . . Military reasoning should be analytical and critical above everything, because military problems are not susceptible of academic proof; and that which has been proven by force of arms in one place has been disproven in another.¹⁸⁷

In 1931, Breckinridge received orders to legation duty in China and relinquished command to Brigadier General Randolph Berkeley. During his short tenure, Berkeley made strides to divorce MCS curriculum from Army doctrine and refocus on advance base operations and small wars.¹⁸⁸ He also established the Landing Operations Text

¹⁸⁵The Experimental College served as an experiment at the University of Wisconsin where students received a two-year liberal arts education. The program radically altered teacher-student relationships, abolished examinations, and provided unprecedented freedom to its students. Breckinridge conducted a trip to the University of Wisconsin and spent time with Alexander Meiklejohn. His article, “Some Thoughts on Service Schools,” provides an overview and interpretation of the Experimental College. See also Alexander Meiklejohn, *The Experimental College*, Board of Regents of the University of Wisconsin System, uwpress.wisc.edu/books/2103.htm (accessed 14 April 2013) for greater details on Alexander Meiklejohn and the Experimental College.

¹⁸⁶Breckinridge, “Some Thoughts on Service Schools,” 232.

¹⁸⁷*Ibid.*, 231.

¹⁸⁸The Field Officers’ Course curriculum students examined Gallipoli (4.5 hours), the British raid on Zeebrugge in 1917 (1.5 hours), German landings on the Russian

Board under the leadership of Major Charles D. Barrett and Lyle H. Miller to begin the preliminary work to examine doctrine, training, and equipment required for amphibious operations.¹⁸⁹ Berkeley subsequently tasked them with writing a manual on small wars. The projects made limited progress due to the day-to-day operations of the MCS faculty.¹⁹⁰

In April 1932, Breckinridge returned as the Commandant of the MCS, and with the support of his executive officer, Lieutenant Colonel Ellis Bell Miller, began to implement real reforms that brought the school to the forefront of academic and intellectual institutions. The establishment of the FMF in 1933 also served as the impetus to focus the Marine Corps on its wartime mission - the seizure and defense of advance naval bases - and removed “the last vestige of doubt as to the real objective of the MCS.”¹⁹¹ Miller, a long-time advocate for amphibious operations and graduate of the Army formal school system, proposed “the prime objective of the MCS for the year

islands in the Baltic in 1917 (1.5 hours), as well as maritime strategy in the Caribbean and Pacific (1.5 hours).

¹⁸⁹Maj Charles Barrett would attain the rank of MajGen and serve as the first commander of the 3rd Marine Division during WW II. He died in an accident on 8 October 1943. Camp Barrett, home of The Basic Course, located at Quantico Virginia is named in his honor. Berkeley also assigned Maj Pedro A. del Valle and LT Walter C. Ansel, USN to the board. Maj Pedro A. del Valle would serve as the 1st Marine Division Commanding General during the landings on Okinawa in 1945 and serve as the first Hispanic to attain the rank of LtGen within the Marine Corps.

¹⁹⁰Clifford, 43-45.

¹⁹¹Charles Miller, “Marine Corps Schools 1934-1935,” 57.

1933-34 based on Marine Corps doctrine, organization, and equipment.”¹⁹² In a letter to Breckinridge, he outlined the specific measures to accomplish this task:

- By developing a Marine Corps doctrine.
- By a study of Marine Corps organization.
- By a study of Marine Corps equipment and armament peculiar to our needs.
- By a greater expansion in our study of Landing Operations in conjunction with and in support of the Navy.
- By a study of Naval-Marine communications peculiar to our type of operations.
- By a study of the joint and separate preparation to be made by the Marine Corps and the Navy prior to embarking on a Naval-Marine operation or expedition.
- By writing our own tactics and techniques for our own units, and our own armament and equipment.
- By preparing problems based on our own probable mission and our own organization.
- By writing, as far as we can go in the time, our own text books for guidance of both instructors and students.
- By collecting available data, at Headquarters and elsewhere, on past expeditions and past maneuvers, in which Marines have taken a part.¹⁹³

Miller received full support from Breckinridge, who ordered the removal of all Army classes from the curriculum forcing instructors to tailor their periods of instruction to Marine Corps requirements.¹⁹⁴ Breckinridge also believed the MCS served as a mechanism to foster cultural change within the Marine Corps and played a critical role in the development of emerging doctrine. In a memorandum to Lieutenant General Russell, he stated “realize that if a change of attitude and of doctrine is needed (and I believe it is

¹⁹²Bittner, 20.

¹⁹³Ibid., 20-21. Bittner points out within the notes that these “objectives listed are phrased and quoted as they appear in letter” to Breckinridge.

¹⁹⁴Clifford, 45.

a dire need), the Schools are the only place where it can be brought about. It will be done in the School or it will not be done.”¹⁹⁵

In a reply, Russell pledged his full support for curriculum reforms; however, rebuked Breckinridge, asserting HQMC served as the proponent for doctrinal development, while the MCS served as the vehicle to inculcate the student body with doctrine.¹⁹⁶ Nonetheless, on 30 October 1933, the Commandant directed the MCS to “prepare a manual on landing operations as expeditiously as possible and to commence work not later than 15 November.”¹⁹⁷ The directive served as the catalyst to divorce the MCS from its dogmatic approach and implement Breckinridge’s vision for a community-based progressive educational model focused on fostering intellectualism and creativity.

Largely under the direction of Miller and Major Charles D. Barrett, the MCS ceased classes on 14 November and directed the full weight of the institution towards developing a formal doctrine. The methodology to complete this task is quite amazing

¹⁹⁵Breckinridge, “The Marine Corps and their Future.”

¹⁹⁶J. C. Breckinridge, Letter to General Russell, File 11-H-4, Box 3, Folder 5, United States Marine Corps Archives, Quantico, VA, 13 February 1934; Elkins, 78-81. MCS reforms underway at the time included: school problems based on Marine Corps tables of organization and equipment, faculty members assigned to develop books and pamphlets on field services where texts did not exist, greater cooperation with the Naval War College to expand instruction on naval gunfire and other naval agencies germane to naval campaigns, and the development of more detailed classes in landing operations and small wars.

¹⁹⁷Clifford, 46. Additionally, the establishment of the FMF committed the Marine Corps to preparing for its wartime mission to seize advance naval bases. Commandant Russell understood the FMF required a basic doctrine to guide its training. He also believed the Marine Corps required an institutional mind-set shift from small wars and garrison duties to amphibious operations to build the capabilities necessary for war in the Central Pacific. Breckinridge’s persistence for the MCS to take the lead on doctrinal development paid off and on 14 November 1933 classes were discontinued and faculty and students began work on the manual.

and provides insights into the Marine Corps organizational behavior during this period. All members of the faculty and student body receive a thorough exposure to the Gallipoli and Baltic Sea amphibious expeditions. Each officer then wrote out a chronological list of critical events from inception to completion of an amphibious operation. An intermediary subcommittee of nine, embraced the recommendations of the group, and after careful examination, each member formed their own refined list and ideas on each step. A steering committee of five studied and further consolidated the work by the intermediary subcommittees.¹⁹⁸ According to Krulak, “Miller drove the group with apostolic fervor; he set deadlines and was merciless in his criticism.”¹⁹⁹ The efforts of the study groups outlined the principles of amphibious operations and provided greater specificity to command relationships, naval gunfire support, aerial support, ship-to-shore movement, securing the beachhead, and logistics, to include embarkation and debarkation.²⁰⁰

On 9 January 1934, MCS hosted a conference with officers from the FMF and HQMC to socialize their results and foster greater collaboration within the Marine Corps. After an exhaustive seven-month period, the MCS, in conjunction with the FMF, produced the *Tentative Landing Manual* (1934). This effort resulted in the development of the *Tentative Manual for Landing Operations*, formed the basis for future Marine Corps School’s curriculum, and inculcated a generation of Marine officers to amphibious warfare doctrine.²⁰¹

¹⁹⁸See Isley and Crowl, 37-44; Clifford, 45-47; Krulak, 80-82.

¹⁹⁹Krulak, 81.

²⁰⁰Millett, *Semper Fidelis*, 330-332; Isley and Crowl, 37-44.

²⁰¹Bittner, 22.

In a short period, the MSC, under the leadership of Breckinridge, developed a curriculum and learning environment that intellectually prepared the Marine Corps for combat operations in the Central Pacific. The development of the *Tentative Landing Manual* served as the mechanism to create a collective learning environment that promoted critical analysis, creativity, and problem-solving. Captain Arthur T. Mason, a student at the Field Officer's Course in 1936, characterized the educational system as "modern and progressive" and "fully oriented" towards the Marine Corps wartime task. He further classified the reforms under Breckinridge as a "Renaissance, a re-birth in form and spirit."²⁰² During this period, the MCS and FMF also formed a critical and mutually supporting link between each other as the Marine Corps developed an amphibious warfare capability. Mason described in a *Gazette* article the relationship that still exists today:

The relation between the Schools and the Fleet Marine Force is very close in more than the mere geographical sense . . . The action and reaction of the Schools and Fleet Marine Force, one on the other, is very constant. We may characterize the Schools as the research unit which seeks and develops the principles and data relating to our task; the Fleet Marine Force as the experimental laboratory which translates these principles into action and tests their practicality.²⁰³

The MCS curriculum reforms and development of the *Tentative Landing Manual* during this period illuminate several points regarding organizational culture and innovation. Breckinridge and MCS faculty and student-body, recognized the value and requirement for a progressive and broad liberal arts education to develop critical thinking skills over mechanical memorization to meet the challenges of the future operating

²⁰²Arthur T. Mason, "The Role of the Marine Corps Schools," *Marine Corps Gazette* 20, no. 2 (May 1936): 9.

²⁰³*Ibid.*

environment. The contemporary writings demonstrate a high-degree of intellectualism that assigned value to the MCS as a center of rigorous academic preparation for war. Furthermore, the number of highly talented and intelligent instructors further reveals the value the Marine Corps assigned to its formal schools. Breckinridge's self-study of educational methods led him to the Experimental College model and subsequent vision for MCS that also exhibits a broadminded and progressive approach to problem-solving.

Moreover, the senior leadership of the Marine Corps listened to the call for radical change in the MCS curriculum showing a genuine trust within the organization. The Commandant's bold vision to leverage the talents of the faculty and student body to develop the doctrinal foundations to train the newly formed FMF further validates this trust. In turn, the vision served as a mechanism to inculcate a generation of officers to the challenges of amphibious operations and their future role in the Central Pacific. Finally, the MCS unique methodology to develop the *Tentative Landing Manual* (1934) demonstrates the utility of incorporating a broad audience in a collaborative forum to address complex problems.

Lieutenant Victor 'Brute' Krulak and Amphibious Landing Craft

The story of Brute Krulak and his contribution to the development, testing and procurement of amphibious landing craft provides another example of a junior officer empowered to solve the Marine Corps' most vexing problem. The annual FLEX during the mid-1930s continued to highlight the requirement for a reliable landing craft to conduct ship-to-shore movement. The inability to efficiently and effectively transport personnel and equipment ashore represented the most significant obstacle in the development of an amphibious capability. As a lieutenant, Krulak proved instrumental in

the development of the drop-bow Higgins boat—a tactical innovation widely recognized as the most significant tactical innovation during Interwar Year Period—as well as the testing and evaluation of Donald Roebling’s amphibian tractor. The Higgins’ Landing Craft Vehicle Personnel and Roebling’s LVT provided the Marine Corps the solution to a long identified capability gap. Brute Krulak, empowered by both Lieutenant General Holcomb and Brigadier General H.M. Smith, served a critical role in this process.

Lieutenant General Krulak, standing a bit over five foot and weighing in at less than 125 pounds, is one of the most notable officers in Marine Corps history. An Annapolis graduate and highly decorated combat veteran of four wars, Krulak would play a central role in the Marine Corps’ survival during the defense unification debates following WW II. In the context of Interwar Marine Corps innovation, Krulak’s story begins in 1937 as young lieutenant serving as 4th Marines’ assistant intelligence officer in Shanghai, China.

The summer of that year marked the beginning of the Second Sino-Japanese War and on 13 August, Japanese ships began to shell Shanghai. In September, the Japanese naval attaché informed Krulak they planned to conduct an amphibious assault on Chinese positions defending the Liuho area at the mouth of the Yangtze River.²⁰⁴ Krulak arranged a U.S. Navy tug boat to observe the amphibious operation. Krulak recounted his observations:

We watched troops debarking into boats from transports. We watched destroyers deliver naval gunfire on the beach prior to the landing and in support of the advancing troops afterwards. Most important, we got near enough to take close-up photographs of the Japanese assault landing craft. And there we say, in action, exactly what the Marines had been looking for—sturdy, ramp-bow-type boats

²⁰⁴Krulak, 90; Coram, 60.

capable of transporting heavy vehicles and depositing them directly on the beaches. What we saw was that the Japanese were light years ahead of us in landing craft design.²⁰⁵

Krulak immediately prepared a report titled “Japanese Landing Operations Yangtze Delta Campaign 1937” supplemented with sketches and photographs of the Japanese landing craft.

In late summer 1939, Krulak returned to the U.S. to attend the Junior School and would eventually become the aide to Brigadier General H. M. Smith, Commanding Officer 1st Marine Brigade in Quantico, Virginia. Krulak, annoyed not to see American ramp-bow landing craft, traveled to the Bureau of Ships to locate his report only to find a hand written note on the cover “prepared by some nut out in China.”²⁰⁶ That evening, he built a foot-long model of the Japanese landing craft and took it to Brigadier General H. M. Smith the following day. Smith, impressed with the model and report, phoned General Holcomb and notified Krulak that he would brief the Commandant the following day. As Krulak’s biographer points out, “this may have been the only time in Marine Corps history that a mere lieutenant briefed the Commandant on the most critical problem facing the Marines.”²⁰⁷

Holcomb ordered Krulak to socialize the designs with New Orleans boat-builder Andrew Jackson Higgins. According to Krulak, he requested Higgins “redesign his Eureka boat to incorporate a ramp for landing small vehicles” and “design a steel tank-

²⁰⁵Krulak, 90-91.

²⁰⁶Ibid., 91.

²⁰⁷Coram, 78.

carrying lighter capable of carrying an eighteen-ton tank.”²⁰⁸ Higgins accepted both ideas and began redesign of the Eureka boat. In April 1941, a joint Navy and Marine Corps testing and evaluation board accepted the design and granted Higgins a \$3 million contract for 200 of the Landing Craft Vehicles and Personnel (LCVP).

Following the successful development and procurement of the LCVP, Krulak became the point man for the Marine Corps on landing craft vehicles. While the Higgins design provided a significant capability, it did not address the requirements to cross coral reefs or rapidly build combat power on the beachhead. Don Roebing’s Alligator, originally designed for rescue missions in the Florida swamp-land, demonstrated promise. Brigadier General Smith direct Krulak to conduct the testing and evaluation of the amphibian tractor during Fleet Exercise 7. At the completion of the Culebra exercise, Krulak compiled the list of criticisms and recommendations to Colonel W. W. Rogers, a member of the Commandant’s staff. Krulak describes:

The list was long. Deficiencies related to the hull, power, track, suspension, controls, communication, and visibility, but there was nothing whatever on our list that condemned the basic idea. Rogers took the critique, returned to the Washington and, in conjunction with the Navy Bureau of Ships and Mr. Roebing, quickly established the design criteria for the production model of what came to be known as the LVT (1) (Landing Vehicle, Tracked Model No.1) . . . Delivery began in July 1941, only six months after the decision to go into production—an incredibly brief time.²⁰⁹

The LVT would make its combat debut in November 1943 at Tarawa where it negotiated a formidable coral reef and rough waters under withering Japanese fire.

²⁰⁸Krulak, 94.

²⁰⁹Ibid., 104.

Brute Krulak's contribution to the development of a landing craft during this period not only speaks to his intellect and energy, but it also illuminates an organizational culture that fostered innovation. There are four unique items that stand out in this story. First, Krulak, a young lieutenant serving as the assistant intelligence officer in Shanghai, China, clearly understood the Marine Corps' broader efforts to develop an amphibious capability, and more importantly, recognized the critical shortfalls that prevented progress. As Robert Coram points out, Krulak was so impressed with the Japanese landing craft during the Yangtze landings that he continued to say "we don't have that!" and "that's it! That's it!"²¹⁰ Second, Krulak displayed a great deal of persistence when he discovered the Navy and Marine Corps did not act upon "Japanese Landing Operations Yangtze Delta Campaign 1937" report. Third, the senior leaders listened to a young lieutenant on the most critical capability gap facing the Marine Corps. And last, these same senior leaders, empowered Brute Krulak to positively influence the development and testing of landing craft that play a significant role in the Central Pacific.

In summary, the Marine Corps' visionary senior leaders fostered a command climate that empowered relatively junior officers to overcome the most daunting doctrinal challenges facing the organization. The work of Lieutenant Colonel Pete Ellis provided the strategic framework for operations in the Central Pacific. "Naval Bases" and its companion, "Advance Base Operations," outlined a baseline doctrine for amphibious operations that guided the Marine Corps' organization, training, and equipment procurement prior to the Second WW I.

²¹⁰Coram, 60-61.

The MCS implemented significant curriculum reforms with a progressive educational model focused on the development of critical thinking and problem-solving skills. The schools subsequent cessation of formal classes to refine Ellis' earlier work highlight the intellectualism, value of education, and empowerment of junior officers by the Marine Corps during this period. These efforts resulted in the development of the *Tentative Landing Manual* and inculcated a generation of Marine Officers to the challenges of amphibious warfare.

Last, Brute Krulak, then a lieutenant, proved instrumental in the development and testing of both Andrew Jackson Higgins' famous LCPC, and Donald Roebing's LVT. These examples highlight a command culture that demanded critical thinking and problem solving by its junior officers.

CHAPTER 5

CONCLUSION

The Gallipoli Campaign served as one of the most disastrous Allied defeats of WW I. The aftermath of this operation led many military leaders and theorists to assert that amphibious operations against a defended beach were ineffective in the Industrial Age. Nonetheless, after the end of WW I, the Treaty of Versailles formally recognized the Japanese ownership or mandate over the former German colonies in the Pacific, most significantly, the island chains of the Marshalls, Carolines, and Marianas. These possessions afforded Japan a number of territories capable of influencing the U.S. sea lines of communication to the Philippines and American Samoa.

If war occurred with Japan, U.S. war planners began to envision an offensively oriented naval campaign to isolate and economically exhaust Japan. The seizure of enemy held islands and the defense of advance naval bases became a strategic necessity that provided the Marine Corps its reason for existence. These operational requirements initiated two-decades of innovation and experimentation by the Navy-Marine Corps team to develop an amphibious capability geared towards a “step-by-step” advance across the Central Pacific.

Nearly 28 years after the catastrophic landings at Gallipoli, the Marine Corps conducted opposed landings at Tarawa as a proof of concept for the amphibious doctrine developed during the 1920s and 1930s. While not flawless, the bloody three-day battle did validate an untested amphibious doctrine under the absolute worst tactical and hydrographic conditions. The Marine Corps’ Interwar innovation and performance during World War II led American military historian Russell F. Weigley to state, “simply by

defining the specific problems into which amphibious operations divided themselves, the Marine Corps made it evident that the problems most likely were not insoluble; and the Corps went on to delineate many of the solutions.”²¹¹

Analysis

The Interwar Marine Corps met Knox and Murray’s criteria for successful innovation. During the 1920s and 1930s, the Corps developed the correct “mix of tactical, organizational, doctrinal, and technological” advancements that allowed them to apply “a new conceptual approach to warfare” during World War II.²¹² These developments facilitated the “step-by-step” approach outlined within later versions of War Plan Orange and allowed the Marine Corps to overcome resolute resistance throughout the Central Pacific. The “specificity” of the anticipated threat environment allowed the Corps to shift its organizational culture and place the full weight of the institution behind developing and implementing solutions to build an amphibious capability. The Marine Corps’ development of amphibious warfare doctrine followed an evolutionary process characterized by open dialog, intellectual rigor, and experimentation focused on defeating a specific adversary—the Japanese. Moreover, the process to shift the Corps’ organizational culture and develop the required capabilities to meet these challenges took nearly two decades.

The story of Marine Corps innovation also closely followed the Kotter Model for organizational change. As early as 1916, both Lejeune and Russell clearly articulated the

²¹¹Russell F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (Bloomington, IN: Indiana University Press, 1973), 264.

²¹²Knox and Williamson, 11-12.

requirement for change and vision to modernize the Corps into an amphibious force-in-readiness. Following World War I, Marines like J. C. Breckinridge, E. B. Miller, and R. H. Dunlap began to form a guiding collation that proselytized the amphibious mission as the Corps reason for existence. Each Commandant communicated a clear vision to implement organizational change and posture the Marine Corps towards amphibious operations. Additionally, they created a command climate that empowered subordinates and encouraged broad-based action to create a series of short-term wins. These small victories included the establishment of the FMF, development of the *Tentative Landing Manual*, and a series of experiments that incrementally improved amphibious tactics. These collective efforts permanently imbued the amphibious mission into the Corps' ethos.

The Marine Corps' ability to innovate and develop principles of the amphibious assault possesses multiple components relevant to its current efforts to re-posture the force. First, the Commandants during this period provided a centralized vision to define the seizure and defense of advance naval bases as the Marine Corps' primary wartime mission. Each Commandant subsequently, steered experimentation, doctrine development, and equipment procurement. Additionally, these senior leaders fostered an organizational culture that valued professional education and leveraged its talented junior and mid-grade officers to solve the Marine Corps' most complex and demanding problems. Each Commandant, starting with Major General John A. Lejeune and ending with General Thomas Holcomb, possessed the same goal of building a modern Marine Corps capable of providing the nation a unique amphibious expeditionary force.

Lejeune served as the Commandant from 1 July 1920 to 4 March 1929 during a period characterized by significant military budget cuts, American isolationist sentiment, and inter-service rivalry. His leadership during this period of fiscal austerity and turbulence defined amphibious warfare as the primary wartime mission and slowly reoriented the Marine Corps to this task. One of his most significant and lasting accomplishments as Commandant was the institutional reorganization of HQMC. These reforms provided impetus to establish the MCS and enable the Marine Corps to participate in post-WW I contingency planning. One of the immediate and tangible outputs of the HQMC reorganization was the development “Operation Plan 712 – Advance Base Operations in Micronesia” (1921). Lieutenant Colonel Earl Ellis’ work helped define the Marine Corps’ role in War Plan Orange and established the intellectual framework for amphibious operations. Lejeune also pursued an aggressive public relations campaign to maintain deference with Congress and the American people.

Lejeune’s efforts to focus the Marine Corps on preparation for amphibious operations fell short due to overseas commitments, limited resources, and institutional resistance. Nonetheless, under the Lejeune Commandancy, the Marine Corps implemented several institutional reforms that proved critical in enabling innovation and the development of amphibious warfare. These efforts coupled with an aggressive public relations campaign ensured institutional survivability and provided the foundation for future innovations in amphibious warfare. Lieutenant General John H. Russell provided the next critical step in building a real amphibious capability.

Russell, serving as Commandant from 1 March 1934 to 30 November 1936, delivered the most significant institutional and doctrinal advancements in the

development of a Marine Corps amphibious warfare capability. Advancing on the success of his predecessors, Russell's vision and leadership redirected the full weight of the Corps towards amphibious operations and compelled its senior leadership to embrace the naval expeditionary role, something it had long resisted. His personal involvement served as a catalyst to establish the FMF and codify the Marine Corps' mission as an amphibious force-in-readiness into law. The creation of the FMF unequivocally committed the Marine Corps to the wartime mission of seizing and defending bases for naval operations. The majority of policies during the Russell commandancy focused on creating a strong and viable FMF to fulfill its wartime mission.

The first significant institutional reform focused on eliminating the antiquated promotion system that frustrated earlier modernization efforts by Lejeune. The promotion reforms empowered Russell to remove the oldest and least talented officers that served as obstacles to the amphibious mission. Moreover, it provided a mechanism to advance talented young officers like H. M. Smith, A. A. Vandegriff, and G. C. Thomas within the organization who would otherwise remain stagnant within the seniority promotion system. Russell also authorized the MCS to cease classes and develop the doctrine necessary to guide the FMF. These efforts produced the *Tentative Landing Manual* and inculcated a generation of officers to the nuances and challenges of seizing and defending advance naval bases. The institutional reforms under the forceful leadership of Russell fostered a shift in organizational culture that explicitly accepted amphibious warfare as its reason for existence. General Thomas Holcomb provided the next step to test the doctrine and train the FMF in preparation for war.

Holcomb served as Commandant from 1 December 1936 to 31 December 1943. During his Commandancy, he drove amphibious training and experimentation during the annual FLEX and steered equipment procurement. The Marine Corps' primary challenge during this period remained translating amphibious warfare concepts and doctrine into a viable operational capability. Under his direction, the FMF resumed landing exercises to test the tactical foundations established in the *Tentative Landing Manual*. In 1935, the Navy and Marine Corps initiated the series of annual exercises, called FLEX that fostered an innovative spirit and served as laboratory for amphibious warfare experimentation. Holcomb also helped develop and procure suitable landing craft for amphibious operations by encouraging innovative spirit amongst men inside and outside the Marine Corps. Additionally, he continued to implement personnel reforms to modernize the Corps prior to WW II. Holcomb's vision proved essential in posturing the Corps for operations in the Central Pacific.

The second factor that enabled Marine Corps' innovation is an organizational culture that integrated a broad range of experiences to modernize the Corps. Marines of the period judiciously examined and integrated lessons from the WW I, the Army formal school system, emerging educational models, and private industry to professionalize and develop an amphibious warfare capability. Additionally, the Marine Corps placed great emphasis on professional education and the MCS served as a mechanism to cultivate creativity and problem-solving skills.

The Marine Corps' participation in WW I established the foundation for its concept of planning, staff organization, and combined arms maneuver on the battlefield. The lessons of WW I demonstrated to Marine officers the requirement for a modern

headquarters and staff consisting of well-educated officers to handle the complexities of modern war. Beginning in 1920, the Marine Corps implemented a series of reforms to organize HQMC along modern lines that served as the nucleus for greater institutional transformation. The newly formed Operations and Training Division freed subsequent Commandants from day-to-day administrative functions, rationalized command and control, and enabled the Marine Corps to participate in war planning vis-a-vis Japan.

The next indicator of an organizational intellectualism and broadmindedness is the curriculum reforms at the MCS. In an effort to modernize the school's teaching methodology, Breckinridge examined alternate educational models to develop the intellectual capacities of the student body. His personal studies led him to Alexander Meiklejohn's theories on advanced adult learning, termed the Experimental College, which advocated for a broad liberal arts education to train the mind to parse problems and develop timely solutions. Breckinridge envisioned a collective learning environment that stimulated intellectual curiosity through research, analysis, discourse, and criticism. The development of the *Tentative Landing Manual* served as the mechanism to implement his vision to promote critical analysis, creativity, and problem-solving.

Additionally, the contemporary writings by both students and faculty demonstrate a high degree of critical thinking that assigned value to the MCS as a center of rigorous academic preparation for war. The number of highly talented and intelligent instructors suggests the value the Marine Corps assigned to its formal schools. The MSC, under the leadership of Breckinridge, developed a curriculum and learning environment that intellectually prepared the officer corps to address complex problems.

Another sign of a broadminded approach to cultivate innovation was the Marine Corps' cooperation with private industry. In one example, the Marine Corps worked closely with private businessmen Andrew Jackson Higgins and Donald Roebling to develop landing craft capable of conducting ship-to-shore movement during amphibious operations. Ironically, the Marine Corps incorporated Japanese amphibious assault tactics and landing craft design into their doctrine and equipment procurement based on Victor Krulak's observations of operations during the Second Sino-Japanese War in 1937. The Marine Corps' ability to create a climate of intellectualism enabled it to examine an expansive array of experiences that established favorable conditions for innovation.

The third factor that facilitated innovation was a command culture that empowered junior officers to overcome the most daunting doctrinal and technological challenges of the 20th century. This thesis examined Ellis, Krulak, and the MCS student-body as a small sampling of the broader effort by junior officers to contribute to the modernization of the Marine Corps. Lejeune entrusted Ellis to examine the Marine Corps' role in the emerging strategic environment. His "Naval Bases" and its companion "Advance Base Operations" outlined a baseline doctrine for amphibious operations that guided the Marine Corps' organization, training, and equipment procurement prior to the WW II. Russell's bold vision to leverage the MCS to develop the doctrinal foundations to train the FMF resulted in the production of the *Tentative Landing Manual* and inculcated a generation of officers to amphibious operations. Last, Victor Krulak, a lieutenant at the time, proved instrumental in the development and testing of both Andrew Jackson Higgins' famous LCPC, and Donald Roebling's LVT. These examples highlight a

command culture that not only demanded critical thinking and problem solving from its officer corps, but also one that provided the trust and freedom to empower it.

The last factor that allowed the Marine Corps to innovate during the Interwar Period was a commitment to aggressive experimentation. Beginning in 1933 and ending in 1940, the Marine Corps conducted a series of live-force experiments, called FLEX, to test the *Tentative Landing Manual*, training, and equipment. During the course of the FLEX, the Navy and Marine Corps used the experiments to examine a wide array of tactical techniques and equipment solutions to develop an amphibious warfare capability. These training exercises served as a laboratory to investigate ship-to-shore movement, weapons and landing craft effectiveness, and naval gunfire and aviation integration to name a few. The FLEX illuminated many of the problems associated with amphibious operations and contributed to an incrementally better trained and equipped Marine Corps postured for operations in the Central Pacific. The combination of professional education, initiative, and experimentation created conditions for successful innovation.

Areas for Continued Research

This thesis identified several areas for continued research that will further illuminate institutional behavior necessary to foster innovation. First, this author's research identified early institutional resistance to the amphibious mission as a unique Marine service competency. A study of the advocates for a counter-amphibious mission within the Marine Corps during this period warrants attention. This research should examine how both the small war and second-land army factions affected modernization within the Corps.

Second, several officers within the Interwar Period demonstrated an ability to operate effectively across the spectrum of conflict. A detailed investigation of officers like Merritt A. Edson and Evan Carlson in the context of building a hybrid force capable of full spectrum operations is also highly valuable to the Corps. Third, this era experienced educational reforms focused on developing critical analysis, creativity, and problem-solving skills. Further research on Breckinridge's curriculum reforms and vision to implement a broad liberal arts education is also warranted. This study should analyze current adult educational models and curriculums at Marine Corps University to identify potential areas for improvement. Last, this thesis identified several less known Marines who proved essential in the development of amphibious warfare. Detailed research and analysis of men like Colonel Ellis B. Miller, Lieutenant Colonel Alfred A. Cunningham, and Colonel Robert W. Huntington may provide further insights into mid-level agents of innovation during periods of fiscal austerity.

Relevance

The contemporary Marine Corps faces many of the same challenges as their predecessors from the Interwar Period. The similarities include political and strategic uncertainties where the threat and future character of conflict remain ambiguous. Drastic budget cuts characterize both periods and create limited resources to apply against competing requirements that influence operations and innovation. Closely related to fiscal austerity is the fight to remain relevant and aligned with American strategic requirements. Analogous to the Interwar Period, division in schools of thought on the future role of the Marine Corps in America's national security strategy are emerging amongst its officers.

Today, according to a Center for a New American Security study led by Lieutenant General David W. Barno, USA (Ret.), “the Marine Corps is wrestling with three conflicting identities: the nation’s amphibious force in readiness, deployed afloat around the world ready to respond to crisis; its small wars force of choice, specializing in irregular warfare; and a middleweight force that serves as the nation’s second land army, backing up the U.S. Army during prolonged conflicts.”²¹³ Lieutenant Colonel Frank Hoffman, USMC (Ret.) supports Burno’s assertion in his *Gazette* article, “Posturing the Corps for the 21st Century,” where he describes the emerging factions within the officer corps as small war advocates, amphibious traditionalists, and the full spectrum warriors.²¹⁴ This crisis in identity comes after 11 years of successfully fighting as adjunct to the Army in support of major ground-combat operations in Iraq and Afghanistan. In a recent *Naval War College Review* essay, Robert P. Kozloski argues the Marine Corps must find the “sweet spot” to provide the joint force unique capabilities that bridge the gap between special operations and conventional army units while balancing its obligation to provide America a crisis response force.²¹⁵

These debates on the role and posture of the Marine Corps occur in an uncertain security environment and in the face of significant budgetary constraints. In their first official publication, the Ellis Group characterized the contemporary operating

²¹³David Barno et al., *Sustainable Pre-eminence: Reforming the U.S. Military at a Time of Strategic Change* (Washington, DC: Center for a New American Security, 2012), 39.

²¹⁴Hoffman, 27-33.

²¹⁵Robert P. Kozloski, “Marching Toward the Sweet Spot: Options for the U.S. Marine Corps in a Time of Austerity,” *Naval War College Review* 66, no. 3 (Summer 2013): 11-36.

environment as an era of “persistent conflict” with threats that ranged from small guerrilla non-state actors to large-scale regional conflicts.²¹⁶ In addition to budgetary reductions, the Corps will experience a reduction in force structure from 202,000 to 182,000 in the next five years.

In the coming years, the Marines will conduct a substantial discourse on the lessons of the past 11 years of conflict in Iraq and Afghanistan. It will also attempt to forecast the future threat environment and posture the Corps to meet these demands. The changing security environment and fiscal realities will force the Marine Corps to reexamine its organizational structure and eliminate those nonessential or unaffordable capabilities. The Corps must avoid groupthink and encourage an honest and open dialog that welcomes a wide array of views as they examine these subjects. Additionally, it is essential the Corps place greater intellectual rigor in developing creative solutions to meet the challenges of the anticipated security environment while balancing its operational commitments abroad. As the Corps identifies the “sweet spot” in its posture, an examination of the Intewar Period Marine Corps provides the current generation context and insight to the necessary institutional behavior that fosters innovation during an age of fiscal austerity.

²¹⁶Headquarters, U.S. Marine Corps, *U.S. Amphibious Forces: Indispensable Elements of American Seapower* (Quantico, VA: Ellis Group, 2012), 7-9.

APPENDIX A

COMMANDANTS OF THE MARINE CORPS

George Barnett	1914-1920
John A. Lejeune	1920-1929
Wendell C. Neville	1929-1930
Ben H. Fuller	1930-1934
John H. Russell	1934-1936
Thomas Holcomb	1936-1943

*Source: Allan R. Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: MacMillian Publishing Co., 1982), 653.*

APPENDIX B

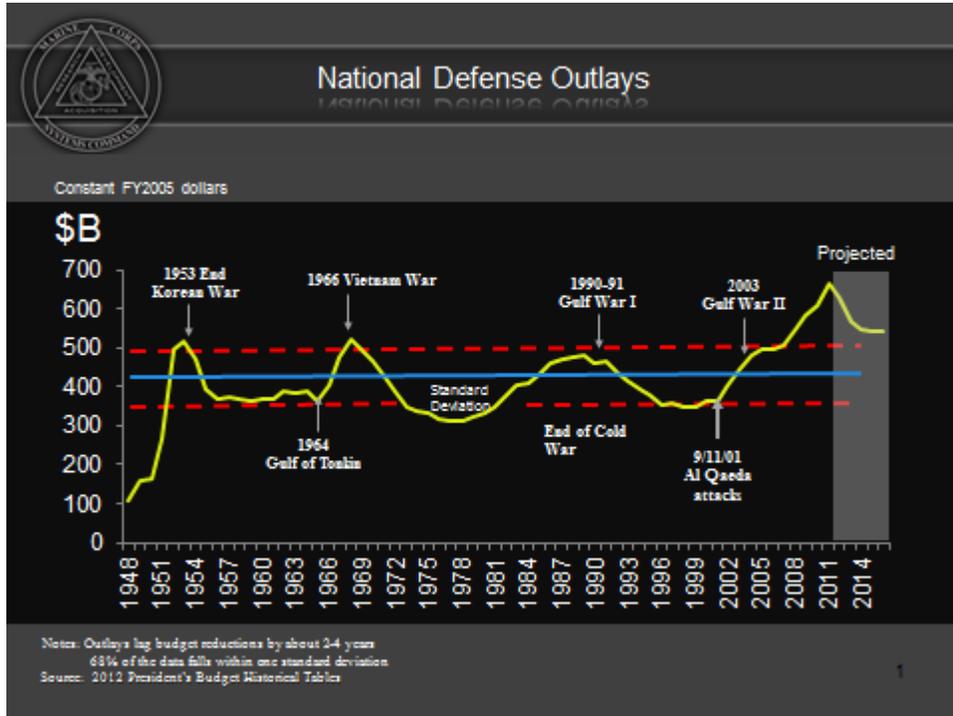
STRENGTH OF THE MARINE CORPS

Year	Officers	Men
1916	341	10,056
1918	2,462	72,639
1920	962	16,085
1926	1,177	17,976
1936	1,199	16,040
1940	1,556	26,369
1943	21,938	287,621

*Source: Allan R. Millett, *Semper Fidelis: The History of the United States Marine Corps* (New York: MacMillian Publishing Co., 1982), 654.*

APPENDIX C

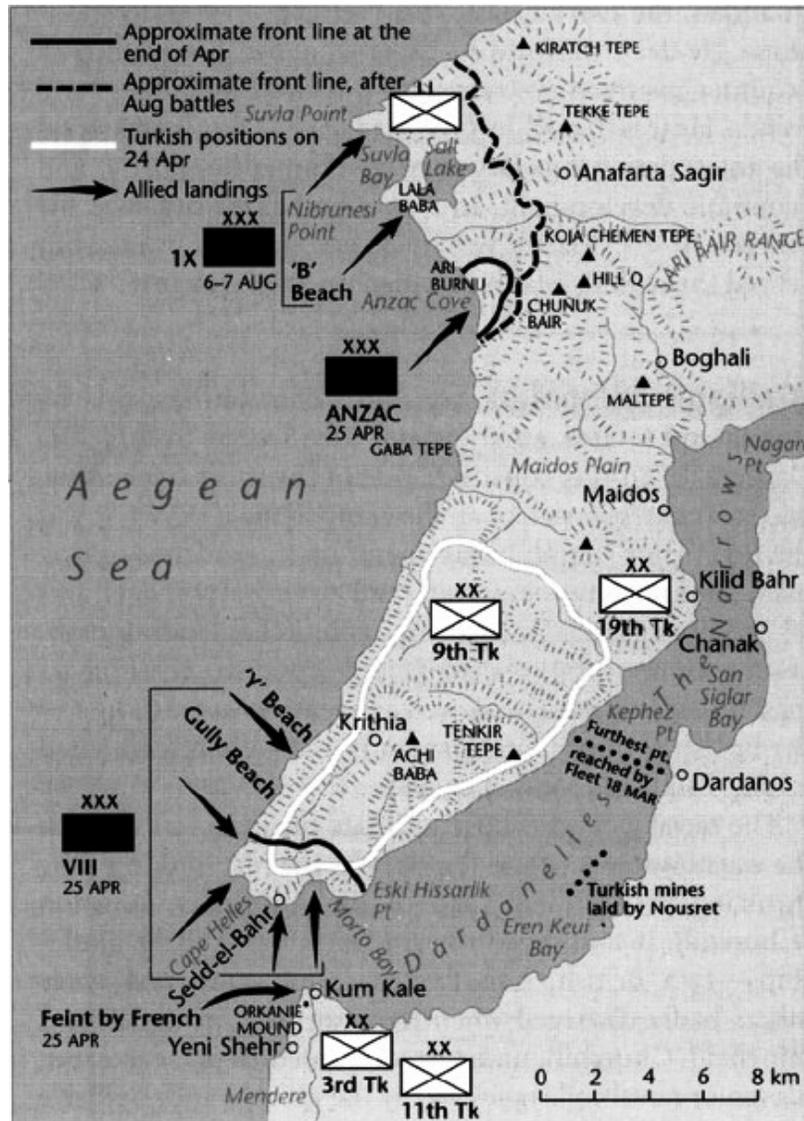
MARINE CORPS BUDGET



Source: United States Marine Corps, "National Defense Outlays," 2012 President's Budget Historical Tables (Quantico, VA: Marine Corps Systems Command), 1.

APPENDIX D

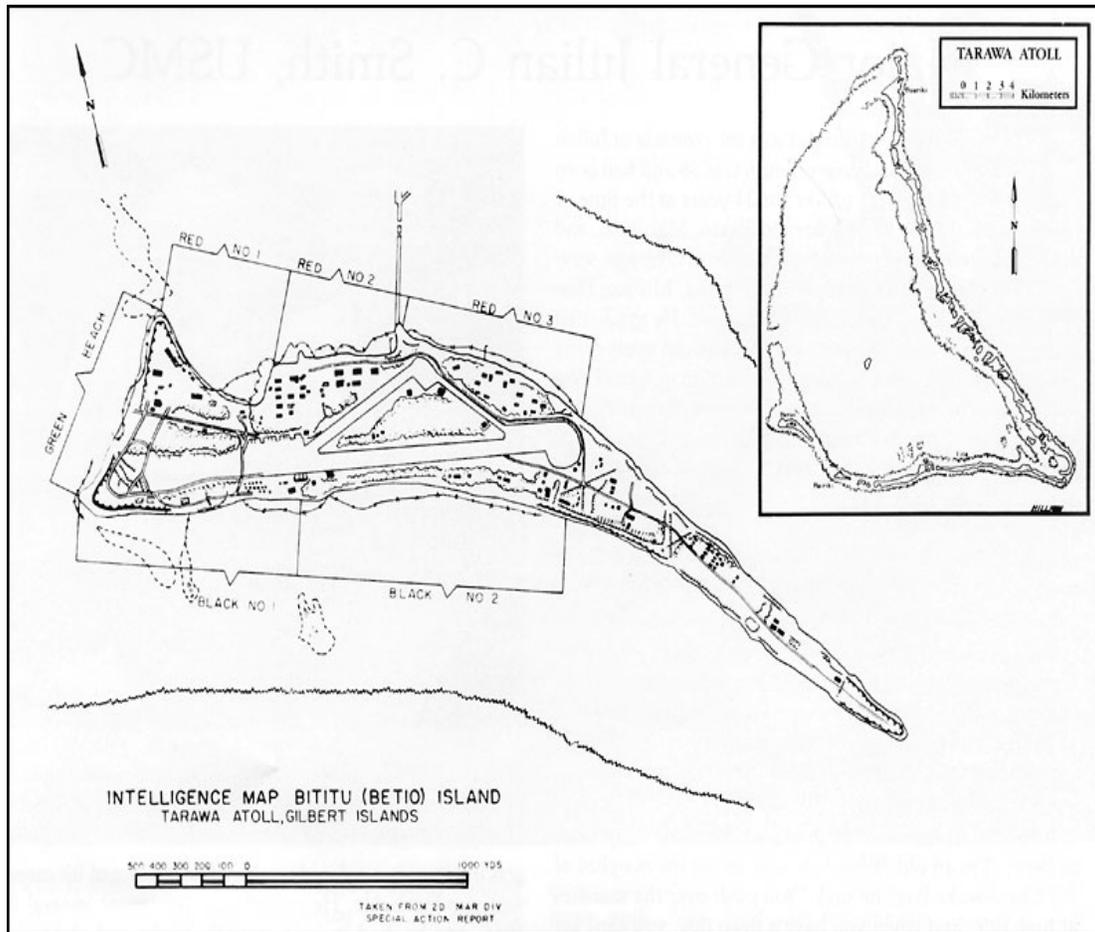
GALLIPOLI MAP



Source: Google Maps, "Gallipoli Map," http://www.google.com/imgres?imgurl=http://www.1914-1918.net/PIX/gallipoli_beaches1.jpg&imgrefurl (accessed 15 May 2013).

APPENDIX E

TARAWA MAP



Source: Google Maps, "Tarawa Map," <http://www.google.com/imgres?imgurl=http://www.ibiblio.org/hyperwar/USMC/USMC-C-Tarawa/maps/USMC-C-Tarawa-1.jpg&imgrefurl> (accessed 15 May 2013).

APPENDIX F

SUMMARY OF FLEET LANDING EXERCISES

From 1934 to 1941, the Navy and Marine Corps conducted a series of live-force experiments, called Fleet Landing Exercises (FLEX), to validate the *Tentative Landing Manual* and included extensive landings, naval gunfire tests, and aviation operations.²¹⁷ The exercises served as a laboratory to examine a wide array of tactical techniques and technological solutions associated with amphibious operations. These annual experiments illuminated many of the shortfalls in tactics, training, and equipment that allowed the Fleet Marine Force (FMF) to incrementally improve and enhance its amphibious warfare capabilities.

In 1934, General Thomas Holcomb resumed the landing exercises to translate the recently written amphibious doctrine by the Marine Corps Schools into a capability. Shortly thereafter, the Chief of Naval Operations authorized Rear Admiral C. S. Freeman, Commander of Special Service Squadron, to participate in an experimental problem involving landings with the Fleet Marine Forces. From 21 January to 8 March 1935, the Navy and Marine Corps conducted FLEX 1 off the coast of Culebra and Puerto Rico. The naval force, consisted of the *Trenton*, *Taylor*, *Claxton*, *Woodcock*, *Arkansas*, *Wyoming*, and the *Antares*. The Landing Force under the command of Brigadier General C. H. Lyman consisted of 91 officers and 1,476 enlisted men from Headquarters, Fleet Marine Force and 5th Marine Regiment reinforced with artillery, heavy machineguns, anti-aircraft, and an aviation unit.

²¹⁷Millett, *Semper Fidelis*, 337.

The exercise involved the daily landing of troops from the *Arkansas*, *Wyoming*, and *Antares* for training ashore that mostly consisted of small arms and machinegun live-fire events. The 1st Battalion, 10th Marines, the supporting artillery unit, with VO-9M, Aircraft One disembarked and established camps on Culebra to practice defense operations.²¹⁸ The exercise force also conducted several tactical landings of various sized units up to a battalion reinforced sized element and employed Marine aviation in strafing, bombing, and smoke missions to support the operation.

The Navy and Marine Corps also conducted tests to “determine the destructive and anti-personnel effects of naval ordnance, the effect of gunfire on reverse slopes and the particular missions for which caliber projectiles and fuses were best suited.”²¹⁹ The experiment involved nine separate tests over a three-day period that employed “indirect fire with air spot, indirect fire controlled by observers ashore, and direct fire” methods of fire to gain “reliable data as the efficacy of naval gunfire against irregular shore terrain.”²²⁰ The tests showed the limitations of naval gunfire ordinance and identified the requirement for armor-piercing shells to reduce fortified defensive positions.²²¹ It also demonstrated air spot and fire-control parties ashore could rapidly and effectively

²¹⁸1st Battalion, 10th Marines consisted of Battery A–155-mm guns, Battery B-- .50 caliber anti-aircraft machine guns, and Battery C–75mm pack howitzers. VO-9M, Aircraft One consisted of nine VO and three VJ planes.

²¹⁹Holland M. Smith, “The Development of Amphibious Tactics in the U.S. Navy, Part IV,” *Marine Corps Gazette* 30, no. 9 (September 1946): 43-47.

²²⁰LT William F. Royall, USN, “Gunfire Support in Fleet Landing Exercises,” HAF 73, United States Marine Corps Archives, Quantico, VA, September 1939.

²²¹Royall; and Smith, “The Development of Amphibious Tactics in the U.S. Navy, Part IV,” 43-44.

leverage naval gunfire on land targets. Furthermore, it showed the responsiveness of naval gunfire to shift targets.²²²

FLEX 1 identified shortcoming, in terms of both quantity and quality, of landing craft available to conduct ship-to-shore movement. In total, twenty-one landing craft ranging from fifty foot launches to twenty-six foot whaleboats transported Marines ashore during the exercise.²²³ The FLEX 1 also identified the requirement for the development and use of experimental cargo nets to assist in loading landing craft. Most of all, FLEX 1 showed the Navy and Marine Corps the utility in “future exercises of a similar character” to build an amphibious capability.²²⁴

The following year, from 4 January to 24 February 1936, the Navy and Marine Corps conducted FLEX 2 at Culebra and Puerto Rico. Rear Admiral Hayne Ellis, commanded the exercise. The naval force consisted of the of the *Arkansas*, *Wyoming*, *Claxton*, *Taylor*, *Antares*, and *Woodcock*. The landing force, commanded by Brigadier General D. C. McDougal consisted of 1st Marine Brigade and the 5th Marine Regiment augmented with artillery, and engineers. VO-9M, Aircraft One, on temporary duty at Saint Thomas, also supported the exercise.

The landing force, consisting of 99 officers and 1,686 men, who remained billeted aboard ship, conducted daily ship-to-shore movements for training and testing. The

²²²Royall, 3-5.

²²³The landing craft composition consisted of four 50’ motor launches, six 40’ motor launches, two 36’ motor launches, five 26’ motor whaleboats, and one 50’ motor launches, one Artillery lighter, one self-propelled target boat, and one towed target boat.

²²⁴B. W. Gally, “A History of U.S. Fleet Landing Exercises,” HAF 73, 4, United States Marine Corps Archives, Quantico, VA, 3 July 1939.

training remained focused on patrolling and small arms combat firing. The testing consisted of landing exercises against “constructive units represented by flags” with umpires to “designated casualties” during the assaults. Additionally, the various exercises conducted “considerable experimentation in firing boat guns against shore targets.”²²⁵

The Navy and Marine Corps again conducted extensive tests with naval gunfire to include munitions effectiveness against reverse slope targets, use of special grip maps for target location, and the employment of aerial spotters to register and adjust naval gunfire. The test revealed air spot could effectively use a “mosaic and grid maps to designate targets, call for, and adjust naval gunfire.”²²⁶ Additionally, the ships also proved effective in using the grid maps to register and shift naval gunfire onto targets both on the reverse slope and screened by smoke. FLEX 2 demonstrated an improvement in communications and procedures between the firing ships, aerial spotters, and ground fire control parties.

The exercise identified that Naval vessels were not “well adapted to transport landing forces, the crowded conditions, the lack of adequate boats” cause “great handicap” in amphibious operations.²²⁷ FLEX 2 also highlighted inadequate personnel strength within the Fleet Marine Force and recommended that increased troop strength “receive immediate and serious consideration” to build a force capable of meeting a “determined and resourceful opposition.”²²⁸ In several tests, the landing craft proved

²²⁵Gally, 4.

²²⁶Royall, 6.

²²⁷Gally, 4.

²²⁸Ibid., 5.

unstable gun platforms, dangerous to disembark troops, and unable to cross coral reefs.²²⁹

The final FLEX 2 report stated the “ships’ boats are not entirely suitable for such purposes due to their slow speed and vulnerability” and identified the requirement for a “fast well-protected boat with suitable gun mounts.”²³⁰ One landing exercise confirmed the feasibility of landing through a mangrove with little trouble. However, the conduct of night landings proved confusing and difficult, confirming Ellis’ assertion that first-light provided the optimum time to conduct an amphibious assault. In short, the exercise relearned many of the lessons of FLEX 1.

From 27 January to 10 March 1937, FLEX 3 under the command of Rear Admiral W. T. Tarrant, occurred off the coast of San Clemente Island, California. The naval force consisted of the *Wyoming*, *New York*, a Battleship Division One, Cruiser Division Four, Destroyer Division Eight and the transports, *Utah*, *Bridge*, *Holland*, *Antares*, and the United States Army Transport *St. Mihiel*. The landing force, much larger in size than the previous exercises, under the command of Brigadier General D. C. McDougal, included 251 officers and 24,79 enlisted men from 1st and 2nd Marine Brigades. Marine aviation included 52 aircraft from both Aircraft One and Aircraft Two. Additionally, the 1st Expeditionary Brigade, U.S. Army, participated in the exercise with 61 officers and 731 enlisted men.

The FLEX 3 possessed limited time for training and consisted of several minor day and night landings. For the first time, the Fleet Marine Force conducted offensive live-fire amphibious assaults using all organic weapons and fire support assets available

²²⁹Millett, *Semper Fidelis*, 337.

²³⁰Gally, 6.

to include mortars, artillery, aircraft, and naval gunfire. The original FLEX plan included two large joint landings that included the use of airborne operations to secure deep objectives; however, due to rough seas, the exercise force only conducted one iteration of the operation.²³¹ Due to the large number of Navy ships, there were ample landing craft available to conduct ship-to-shore movement.

The test for naval gunfire focused on refinement of air spot procedures to locate and neutralize hostile forces located on reverse slopes, examine the battleships ability to provide broadside gun fire while moving, compare the accuracy and munitions effectiveness in delivering close in fires through smoke.²³² Additionally, the Navy studied the ability to mass fires from multiple ships onto a target and refine procedures for shore control parties to locate and adjust fires onto inland targets. The tests revealed the ability to deliver “long range counter-battery fire against targets on reverse slopes,” confirmed any type of naval vessel can provide “effective close and deep fire against beach defenses,” and validated aerial and shore party naval gunfire procedures.²³³

The Navy conducted experiments with three landing craft that fell short of the required capability to conduct effective ship-to-shore movement. “The real need for fast, maneuverable, surf-riding landing craft was again clearly indicated, and valuable recommendations were contributed for the development of special crafts as a result of the

²³¹Gally, 6.

²³²Royall, 6.

²³³Ibid.

exercise.”²³⁴ The rough seas provided boat crews excellent training in heavy surf conditions. The exercise also identified deficiencies in casualty evacuation, use of proper attack headings for aircraft to avoid fratricide with ground units, and the requirement for detailed planning and training for embarkation and debarkation of personnel and equipment. FLEX 3 experienced significant improvements in the employment of cargo nets to disembark, the use of new Army radios to enhance command and control, and the Marine pack howitzer battery’s ability to become fire capable during landing operations.²³⁵ The test of the 81mm Stokes-Brandt Mortar also proved an effective close supporting weapon for the infantry battalion.²³⁶

From 13 January to 15 March, the Navy and Marine Corps returned to the Caribbean for FLEX 4. The force designated the Hepburn Attack Force, commanded by Rear Admiral A. W. Johnson. The Navy force included the *New York*, *Arkansas*, *Wyoming*, *Atares*, Destroyer Squadron Ten (8 destroyers), Submarine Eleven (4 submarines), two Coast Guard cutters, and a naval patrol plane squadron. The FMF exercise force included 1st Marine Brigade under the command of Brigadier General R. P. Williams and consisted of 153 officers and 1,200 men from the 5th Marine Regiment augmented with artillery, tanks, engineers, and a chemical unit. Marine aviation unit, Aircraft One and VMS-3, encamped at the Pan American Field at San Juan

²³⁴Smith, “The Development of Amphibious Tactics in the U.S. Navy, Part IV,” 45-46.

²³⁵Millett, *Semper Fidelis*, 339.

²³⁶Gally, 8.

and Saint Thomas respectively. Additionally, 42 officers and 547 enlisted men from the 2d Provisional Army brigade, also participated in the exercise.

The exercise consisted of three distinct phases of training, one-sided landing operations, and a two-sided free-play operation. The training phase consisted of offensive and defensive live-fire exercises and an experiment focused on the transfer of company-sized elements between battleships and destroyers using developmental skiffs. The second phase consisted of large-scale amphibious landings against a constructive enemy represented by control flags and umpires. The subsequent operation added a degree of realism by conducting a free-play landing exercise on Vieques against a defending battalion without knowledge of the attacking forces scheme of maneuver.

The third phase consisted of a free-play umpired operation between defending and attacking forces. The defending force, under the command of Army Brigadier W. C. Short, composed of two National Guard regiments and one regular Army regiment defending a portion of the south coast of Puerto Rico. The attacking element consisted of the entire Hepburn Attack Force composed of the remainder of Navy and Marine Corps forces. The “operation was extremely realistic in that the approach of the attack force was made under cover of darkness and the troops landed when 9,000 yards off-shore one hour before daylight.”²³⁷

During this period, the Navy also conducted a series of tests to further refine data on munitions effectiveness against point, area, and reverse slope targets. The experiments also developed procedures to “support initial landing of the assault waves against opposition,” examined “the fire effect necessary to establish and maintain neutralization

²³⁷Gally, 8.

of beach defense areas,” and studied the “comparative effectiveness of naval gunfire at various ranges by battleships and destroys.” The test demonstrated the value of accurate and rapid fire to support landing operations and identified the requirement for “special bombardment shells to gain maximum effects against troops.”²³⁸

FLEX 4 marked a significant advancement in the development of amphibious operations because it eliminated the use of constructive forces and employed all elements necessary to conduct landing operations. The FMF used “various reconnaissance agencies for first time and the tested specialized landing equipment such as light tanks, tank lighters, special land transportation, emergency rations, and litter hoists” during the exercise.²³⁹ The Navy also conducted tests on four experimental boats, one tank lighter and an artillery lighter. These crafts performed better than previous models; however, lacked adequate armor protection, demonstrated mechanical issues, and fell short of expectations. The use of free-play umpired operations, fueling competition between the Army and Marine units and interjected much realism into the exercise. H. M. Smith recounted the value of FLEX 4 in the *Marine Corps Gazette*:

There was far more realism and less use of constructive force than had been necessary in the past. Reconnaissance elements were landed. Special landing equipment was tried for the first-time. Light tanks were used to destroy defensive obstacles in the landing area. Special motor transportation and litter hoist were tried out in actual shore-to-ship casualty evacuation. And the value of aviation for reconnaissance and photographic missions was clearly established.²⁴⁰

²³⁸Royall, 4.

²³⁹Gally, 6.

²⁴⁰Smith, “The Development of Amphibious Tactics in the U.S. Navy, Part IV,” 45-46.

From 13 January to 19 March 1939, the Navy and Marine Corps conducted FLEX 5, under the command Admiral A. W. Johnson, and once again used the Caribbean islands of Culebra and Puerto Rico for the experimental landings. The Navy force included the *New York*, *Arkansas*, *Wyoming*, *Atares*, Destroyer Squadron Ten (8 destroyers), Cruiser Division Eight, Destroyer Division Four, five submarines, and the *New York*, *Wyoming*, *Arkansas*, and *Texas*. The landing force, under command of Brigadier General R. P. Williams, consisted of 160 officers and 1,968 enlisted men of the 1st Marine Brigade and 5th Marine Regiment augmented with artillery, engineers, tanks, and Aircraft One.

The FLEX consisted of three major landing operations along the same lines as the 1938 exercise but stressing supply and logistics within the exercise construct. The first phase focused on a landing battalion reinforced with 24 hours of rations and ammunition. The second phase landed forces against a constructive enemy represented by flags and umpires. The third phase conducted a free-play exercise where one battalion defended Vieques and a regiment reinforced conducted an amphibious assault. The exercise employed a wide array of reconnaissance assets, naval feints, and simulated naval gunfire and aviation delivered fires to support the landings.

The Navy practiced “control and spotting of ships’ gunfire by shore fire control parties and individual ships, designation of targets of opportunity, and placing fire from ships without previous knowledge of range and bearing to target.”²⁴¹ They also conducted standard tests to determine effectiveness of munitions in support of landing

²⁴¹Royall, 5.

operations. Additionally, the Navy and Marine Corps continued to develop and refine techniques to support assault waves with effective naval gunfire.

During FLEX 5, the Navy and Marine Corps tested 19 experimental landing craft, to include rubber boats, five tanks, and 81 motor vehicles. The exercise placed great emphasis on ship-to-shore movement and logistical support that provided the Navy and Marine Corps invaluable experience in handling supplies and casualties during amphibious operations.²⁴² Additionally, naval gunfire began to use point-target counterbattery instead of previously relied upon area bombardment techniques. Once again, the landing boats proved inadequate. Nonetheless, the Navy and Marine Corps emerged from FLEX 4 and FLEX 5 with new confidence in their ability to conduct amphibious operations.

From 11 January to 13 March 1940, the Navy, Marine Corps, and Army conducted FLEX 6, under the command of Rear Admiral Hayne Ellis, Commander, Atlantic Fleet. The Navy force included Battleship Division Five, comprised of the *Texas*, *Arkansas*, and *Wyoming*; Cruiser Division Seven, Destroyer Squadron Ten, and a transport group consisting of the *Capella*, and *Manley*. The force also consisted of Submarine Division Eleven and a naval patrol squadron. The landing force, under the command of Brigadier General Holland M. Smith comprised 151 officers and 2,093 Marines from the 1st Marine Brigade and 1st Marine Air Group. The landing force

²⁴²Smith, "The Development of Amphibious Tactics in the U.S. Navy, Part IV," 47.

consisted of two infantry battalions, artillery battalion, engineer and signal companies, and a supply and tank detachment.²⁴³

The FLEX consisted of three major landing exercises. The 1st Battalion 5th Marines conducted the first landing to accomplish an amphibious reconnaissance mission and subsequently established a defense to oppose the following two landings. The second landing consisted of a company night insert from rubber boats on Vieques prior to the main attack. The last landing consisted of the remaining elements of the regiment arriving ashore and participating in a force-on-force free-play exercise.

The Marine Equipment Board tested and evaluated a number of landing craft and tanks during this exercise. Most notably, they obtained five of Andrew Higgin's Eureka boats for the exercise. The FLEX also tested an experimental five-ton tank designed specifically to meet Marine Corps requirements. According to Smith, FLEX 6 served as the "most advanced and realistic attempt to date" and "a turning point" for the development of amphibious warfare.²⁴⁴

The final FLEX took place from 4-14 February 1941 at Culebra and Veques. The Naval force, under the command of Rear Admiral Ernest J. King, consisted of Battleship Division Five (3 battleships), Cruiser Division even (4 cruisers), Destroyer Squadron Two, and an Air Attack Group including two aircraft carriers, and a transport group (8 ships). The Landing Force, under the command of Major General H.M. Smith, consisted of the 1st U.S. Army Infantry Division and the 1st Marine Division. The purpose of the

²⁴³Smith, "The Development of Amphibious Tactics in the U.S. Navy, Part IV," 48.

²⁴⁴Smith and Finch, 65-66.

FLEX was to “train the Marine and Army divisional units in landing operations, to train the Army and Navy in joint operations and test the efficacy of existing doctrine governing.” landing operations.²⁴⁵ The FLEX served as invaluable training exercise and oriented both the Army and Marine Corps personnel to embarkation, amphibious landing schedules, ship-to-shore movement, and variety of new equipment.

The FLEX show a steady glide path of progress that allowed the Navy and Marine Corps to translate doctrine and concepts into a viable capability geared towards its combat role in the Central Pacific. The FLEX allowed the Navy and Marine Corps to experiment with a wide range of tactical and technical solutions to build an amphibious capability. General Holland M. Smith, the Commander of Fleet Marine Forces Pacific during World War II stated:

The period between 1934 and 1941 was one of application, test, and experimentation in development of amphibious tactics. The doctrine which had been developed in the proceeding fifteen years was put to practical test by the organization for which it had been promulgated, and its efficacy was demonstrated. Organization, weapons, and equipment were scrutinized in actual use, and recommendations were made for new and further developments. Experiments were made with the limited amount of materiel thus developed. Training methods were established. The personnel of the Fleet Marine Force was indoctrinated and training to carry out its mission as part of the Fleet. The doctrine was supplemented with the new techniques which evolved in training. They were largely directed at improving the coordination of participating air, ground, and surface elements. Finally, the first six Fleet Exercises resulted in a more widespread interest in amphibious tactics and a general recognition of their complexity in both services.²⁴⁶

²⁴⁵Smith, “The Development of Amphibious Tactics in the U.S. Navy, Part V,” 45-46.

²⁴⁶Smith and Finch, 65-66.

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