

Institutional Adaptation in the Marine Corps 1978-1993

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I. Introduction

The Marine Corps exited the Vietnam War saddled with numerous problems ranging from personnel issues to doubts as to the viability of their foundational doctrine. Reaching a peak strength of 350,000 during the war, the Marine Corps had become bloated and was faced with persistent issues regarding personal conduct, including drug use, racism, and unauthorized absences.¹ The force reductions of the late-1970s and increased internal pressure to clean up the Corps led to many beneficial changes leading into the 1980s. With most of the draftees and malcontents removed from the Marine Corps, the overall quality of the service improved, and with newer, tougher anti-drug rules and mandatory testing, drug abuse also fell. However, the memories of the American defeat in the Vietnam War led to tougher questions regarding the manner in which the Marine Corps should wage war. From 1978 to 1991 the US Marine Corps changed the manner in which it thought about war, and how it intended to wage war. The innovative adaptations undertaken by the Marine Corps, especially the adoption of maneuver warfare as its capstone doctrine, caused a quantifiable increase in the effectiveness of its internal structures and its operational performance.

According to *Marine Corps Doctrinal Publication 1, Warfighting (MCDP 1)*, “maneuver warfare is a warfighting philosophy that seeks to shatter the enemy’s cohesion through a series of rapid, violent, and unexpected actions which create a turbulent and rapidly deteriorating situation with which he cannot cope.”² The debate over the adoption of maneuver warfare -- a

¹ Edwin Howard Simmons, *The United States Marines: A History*, 4th ed., (Annapolis, MD: Naval Institute Press, 2003), 258-259.

² United States Marine Corps, *MCDP 1: Warfighting*, (Washington D.C.: Headquarters United States Marine Corps, 1997), 73. *MCDP 1* is a reserialization of the original *FMFM 1*; while the title was altered, the content was only subject to very minor changes.

methodology for warfighting championed by theorists like Col John Boyd, USAF, and William S. Lind -- raged from 1978 until the commandancy of General Alfred M. Gray starting in 1987. As General Tony Zinni observes, “there was a lot of controversy and many camps; and all kinds of people misunderstood the new ideas; but the Marine Corps eventually grasped them and adopted them – though it took several years for that to happen.”³ For his part, General Gray was a well-known maneuverist, as proponents of maneuver warfare doctrine self-described, and quickly directed the formulation and implementation of new Marine Corps doctrine based on the principles of maneuver warfare. He also refocused the Corps towards education by creating the Marine Corps University, Marine Corps Combat Development Command, and the Marine Corps Warfighting Center during his commandancy. While Gray proved to be instrumental in the Marine Corps’ acceptance of maneuver warfare as its capstone doctrine, numerous Marines participated in the doctrinal debate.

This debate centered on the belief that dependency upon firepower and attrition, usually referred to as attrition warfare or firepower-attrition warfare, had caused the United States to fail in Vietnam. The new doctrine of maneuver warfare shifted from prescriptive to descriptive ideas, because according to Terry Pierce, “it rejects the attrition mind-set that contributed so much to the ‘body count’ mentality that led to disaster in Vietnam.”⁴

In addition to the rise of maneuver warfare during the 1980s, a struggle ensued both internal and external to the Marine Corps about the functional identity of the service. Following the disastrous rescue attempt during the Iranian hostage crisis, Operation Eagle Claw, and the

³ Tom Clancy, Gen. Tony Zinni, and Tony Koltz, *Battle Ready*, (New York: Berkley Books, 2004), 146.

⁴ Terry C. Pierce, *Warfighting and Disruptive Technologies: Disguising Innovation*, (London: Frank Cass, 2004), 87.

subsequent requirement for a special operations capability, the Marine Corps developed the Marine Amphibious Unit (Special Operations Capable), later Marine Expeditionary Unit (Special Operations Capable), in order to fulfill that requirement. The change in verbiage from amphibious to expeditionary, which occurred across the Marine Corps, represented more than window dressing; it reflected an institutional refocus on a broader spectrum of specialization.

During the period examined the Marine Corps greatly reduced in size, changed its foundational doctrine, and greatly expanded the breadth of their operational specialization. Indeed, many of the constructs used by the Marine Corps of today, both conceptual and organizational, were developed during this period. Even the MV-22 Osprey was developed during this time, an aerial platform that became the Marine Corps' most important transport aircraft. While numerous innovations occurred during the period examined, the adoption of maneuver warfare exemplified the Marine Corps' transition towards greater institutional efficacy.

This capstone will cover the period from 1978 to 1993, starting with the problems faced by the Marine Corps following the Vietnam War, and then moving on to the subject of maneuver warfare. Starting with an explanation of its advent as theory espoused outside the Marine Corps, this capstone will then cover the maneuver warfare debate and its codification as Marine Corps doctrine. Finally, this capstone will evaluate the success of innovation in the Marine Corps by assessing its effectiveness as applied to actual operations, including Operation Desert Storm.

Both the process of adopting maneuver warfare and its results are worthy of analysis, and the connection between the internal changes and the performance of Marine units in actual operations is a topic which has received little attention. This capstone will provide context for the state of the modern Marine Corps and the origins of their warfighting methodology today.

Additionally, the analysis of institutional innovation in a military organization during peacetime can reveal insights into the manner in which positive change can be achieved during peacetime. Institutional innovation in the Marine Corps was not without obstacles, and took nearly two decades to reach a culminating point.

Historiographical Overview

The most well-known popular histories of the Marine Corps contain virtually no reference to the maneuver warfare debate or the fundamental shift in doctrinal thought that came out of it. Simmons' section from *The United States Marines: A History* on the period examined actually contains no references to the debate or adoption at all. Simmons does include some information on the commandancy of Al Gray, and generally presents a favorable picture of him, however, Simmons inexplicably ignores the maneuver warfare debate and subsequent adoption in totality. Moskin marginalizes the entirety of the debate in a single paragraph in his *The U.S. Marine Corps Story*, "some observers claimed that the Gulf war displayed a new invention: maneuver warfare. It is supposed to emphasize surprise, deception, multiple thrusts and bypassing strong points. But Marines had never preached fighting a static battle."⁵

Allen R. Millett briefly discusses the changes wrought in the Marine Corps during the 1980s in *Semper Fidelis: The History of the United States Marine Corps*, but mentions maneuver warfare as a concept only once, though he does skirt around the edges of the topic several other times.⁶ Millett does not make mention of the debate about or adoption of maneuver warfare as Marine Corps doctrine. While maneuver warfare represents only part of the process of

⁵ J. Robert Moskin, *The U.S. Marine Corps Story*, 3rd Ed., (London: Back Bay Books, 1992), 801.

⁶ Allen R. Millett, *Semper Fidelis: The History of the United States Marine Corps*, Revised and Expanded Edition, (New York: The Free Press, 1991)

institutional adaptation demonstrated during by the Marine Corps during that period, ignoring it in its entirety is inexplicable.

Despite these oversights, there is a significant amount of literature on the development of maneuver warfare in the Marine Corps, the most important of which is Terry Pierce's previously cited work. Though *Warfighting and Disruptive Technologies* is primarily a study on organizational adaptation rather than a history, it includes in-depth information regarding the Marine Corps' doctrinal adaptation. The work is also useful because it combines an analysis of the origins of innovation with an assessment of its effectiveness. Pierce, however, concludes that it was the personal actions of General Al Gray as commander of the 2nd Marine Division prior to becoming the commandant that began the change towards adopting maneuver warfare.

General Gray's biographer, Col. Gerald H. Turley, also assigns responsibility for the rise of maneuver warfare to him. While the focus of Turley's narrative is General Gray's career, the factual data included regarding the institutional adaptation being discussed is very useful for constructing the narrative. Turley shows Gray's role in the rise of maneuver warfare leading up to his commandancy as the Commanding General of the 2d Marine Division and in other leadership roles throughout the 1980s.

No single work is as useful for assessing the impact of maneuver warfare on Operation Desert Storm as LtCol H. T. Hayden's *Warfighting: Maneuver Warfare in the Marine Corps*. Though the book is primarily made up of Marine Corps doctrine republished for civilian consumption, Hayden's commentary on maneuver warfare during Desert Storm is one of the few sources of analysis on the subject.

The significance of the maneuver warfare debate is clear, but it has all too rarely been studied in sufficient detail. Admittedly Fideleon Damian's 2006 master's thesis, "The Road to

FMFM 1: The United States Marine Corps and Maneuver Warfare Doctrine, 1979-1989,” does an excellent job of describing the history of the debate that led to the publication of FMFM 1 (now MCDP 1) Warfighting. Moreover, Damian’s study does an excellent job of showing the “thriving dynamic intellectual culture,”⁷ of the Marine Corps, as well as addressing the problems of implementing the new doctrine. Nevertheless, the significance of the debate cannot be studied in a vacuum, for it was one of several innovative adaptations that occurred simultaneously. Technological advances like the Landing Craft Air Cushioned (LCAC) and the VM-22 Osprey program may not have been directly caused by the shift in doctrinal thought, but in the case of the Osprey especially, maneuverists were some of the loudest proponents of the new technology.

Fortunately for posterity, the maneuver warfare debate took place largely in the pages of periodicals like the *Marine Corps Gazette*, *Amphibious Warfare Review*, and *Proceedings of the U.S. Naval Institute*. Consequently, the content and evolution of the debate is very much evidenced by numerous articles written on the subject. These articles vary from descriptive to argumentative in nature, and the authorship varied from civilians like Bill Lind to Marine officers ranging from captains to generals. The existence of an open forum for debate that, to a certain extent, transcended the regimented rank structure of the Marine Corps, proved to be essential to the growth of institutional thought on the idea. These are obviously the primary sources for outlining the growth of maneuver warfare thought in the Marine Corps, and are also useful for the analysis of the effectiveness of the Marine Corps’ implementation strategy. The process repeated what has been a hallmark of the Marine Corps in the twentieth century – self-reflection, debate, and evolution to meet new challenges.

⁷ Fideleon Damian, “The Road to FMFM 1: The United States Marine Corps and Maneuver Warfare Doctrine, 1979-1989,” (Master’s thesis, Kansas State University, 2006), 3.

Political scientist Terry Terriff identifies the beginning of the debate as a series of articles written in 1978-1979 by Captain Steven W. Miller, during which he put forward the idea that maneuver warfare was the answer to the numerous confounding questions confronting the Marine Corps.⁸ According to Terriff, “What Miller was proposing was that the concept of maneuver warfare furnished a way for the Marine Corps to improve its combat effectiveness while retaining its distinctive amphibious warfare role, and it could do so without having to become overburdened with ‘heavy metal’ and thereby being transformed into little more than a second army.”⁹ From there, advocates of maneuver warfare like Col Mike Wyly, Bill Lind, and others began writing prolifically in the *Marine Corps Gazette*.

In addition to the pages of the *Gazette*, the effect of the debate can be seen in the student papers from the Command and Staff College (CSC) of the Marine Corps University (MCU) from 1988-1991. During this period the students at the CSC (generally senior majors) explored the possibilities of maneuver warfare as it pertained to everything from air operations to logistics. While each of the IRPs selected are individually interesting, cumulatively, they represent clear evidence of the changes in conceptual thought that were occurring in the Marine Corps at that time. Prior to 1988, maneuver warfare was rarely referenced in the papers being produced at the CSC. Starting in 1988 however, the number of papers on the subject exponentially increased. Additionally, the papers are not rote regurgitation of the ideas being promulgated from the top down, and often stand in opposition or at least present criticism of certain concepts involved in the debate. As an important officer school, CSC papers represent the military thought of a

⁸ Terry Terriff, “Innovate or Die’: Organizational Culture and the Origins of Maneuver Warfare in the United States Marine Corps,” *The Journal of Strategic Studies*, Vol. 29, No. 3, June, 2006, 477. Terriff wrote several articles on the subject in 2006, all of which provide valuable insight into the topic from a political science perspective.

⁹ *Ibid.*, 497.

generation of officers, and are fascinating inasmuch as they demonstrate the changing perspectives of the more junior officers in the Marine Corps. Essentially, the Marine Corps used the CSC course curriculum to generate thoughtful opinions related to maneuver warfare, not all of them positive, and not all of them well-received, but all contributing to the intellectual process which drove the conceptual adaptation.

The first and most important area of focus for this capstone essay is the debate and subsequent adoption of maneuver warfare by the Marine Corps. Sub-topics of this include the manner in which maneuver warfare came to the forefront via external (John Boyd, Bill Lind) and internal (Mike Wyly, Al Gray, and many others) proponents. The examination of this process leads to the conclusion that the innovation seen during the period was both externally and internally driven, and both bottom-up and top-down in origin.

The establishment of the MCU and the MCCDC represented an important shift in the manner in which the Marine Corps approached both individual and organizational learning. Analysis of the changes indicates that education of individual Marines became a higher priority, especially in regards to the subjects stressed by maneuver warfare pioneers,¹⁰ and in particular, military history. In terms of organizational learning, the various sections of MCCDC were empowered to ensure that training exercises, wargaming, and real-world operations were analyzed to gain the maximum amount of relevant lessons from the events. This represents an important and fundamental shift in both higher echelon (organizational) and lower echelon (individual) learning. The shift in learning can be directly tied to the maneuver warfare debate

¹⁰ Maneuver warfare pioneers advocated an approach to Professional Military Education (PME) that emphasized military history, case study methodology, and exercises designed to promote the decision making ability of Marine officers.

and is another piece of evidence in favor of the bipolar innovation taking place in the Marine Corps during the period examined.

Establishing the significance of Marine Corps innovations during the period is the next step in the analytical process. To determine the importance of internal change when dealing with a military organization, the most useful barometer for establishing practical utility must always be the real-world application of those changes. To do so, several operations must be examined. Desert Storm is the operation that most clearly shows the application of maneuver warfare, Moskin's argument to the contrary aside. However, not just in desert storm but also during Operations like Provide Comfort, Sea Angel, Restore Hope, and others, there is evidence that the internal changes of the 1980s manifested themselves in the way those operations were carried out.

By examining the manner in which an organization conducts a primarily internally driven change it is also possible to make observations as to that organization's institutional character. In the case of the Marine Corps several important observations can be made. According to LtGen Victor Krulak, the Marine Corps is an organization deeply rooted in its traditions,¹¹ a statement which is supremely uncontroversial. However, based on the analysis of this period, the role of traditions in the Marine Corps seem to be relegated to determining the proper behavior and character of the institution and its members. Rather than answering the question of "how do we accomplish our mission," it appears that tradition in the Marine Corps answers the question of "how do we comport ourselves in carrying out our mission." For it is ironic that the organization

¹¹ LtGen Victor Krulak, *First to Fight: an Inside View of the United States Marine Corps*, (Annapolis: Naval Institute Press, 1999), 4.

whose claim to fame was the frontal assaults of the World Wars would claim a concept such as maneuver warfare for their own.

II. Background

That the Marine Corps exited the Vietnam War in a less than optimal state is unarguable. As Millet puts it, “staggered by its Vietnam experience and confused by the drift in national Security Policy, the Marine Corps faced serious external criticism and internal debate about its missions, force structure, and personnel policies that put unusual stress upon the service.”¹² Equally disturbing was the dubious quality of the individuals who entered the Corps using the criteria established by Commandant General Robert E. Cushman Jr. Almost half of them failed to complete even a single enlistment due to disciplinary problems.¹³

Cushman’s successor, General Louis H. Wilson, faced these problems in the post-war years. A Medal of Honor recipient for heroism on Guam during World War Two and a cancer survivor,¹⁴ Wilson was a perfect choice to institute the reforms. Due to his popularity as a “hero Commandant,” he started the administrative campaign that eventually rid the Marine Corps of the most of its subversive elements and allowed it to regain its former level of quality. Additionally, Wilson took advantage of an opportunity to finally make the Commandant a full member of the Joint Chiefs of Staff, an action that aided his successors in accomplishing the adaptations that followed in the 1980s.¹⁵

While the administrative concerns in the immediate aftermath of the end of the Vietnam War were pressing, many Marines expressed doubt regarding the manner in which their Corps,

¹² Allen R. Millet, *Semper Fidelis*, 607.

¹³ *Ibid.*, 612.

¹⁴ *Ibid.*, 613.

¹⁵ Edgar F. Puryear Jr., *Marine Corps Generalship*, (Washington D.C.: National Defense University Press, 2009), 245-248.

and on a larger scale, the United States, carried out the conduct of war. In reflecting on this time, General Zinni noted that while the younger officers wanted to talk about warfighting and strategy, the higher ranks had no interest. In Zinni's opinion this was partially due to the amount of administrative problems facing the Corps, however, many Marines also believed that there were more pressing matters related to how the Marine Corps thought about war.¹⁶

The writings and ideas of two innovators outside of the Marine Corps, Col. John Boyd, USAF, and William S. Lind, greatly influenced the Corps' development. Col. Boyd never wrote a book, a fact that William Lind ascribed to his love of giving briefs.¹⁷ However, Boyd gave a number of highly influential briefs on military theory, including *Patterns of Conflict* and *A Discourse on Winning and Losing*, and was the creator of the Observing-Orienting-Deciding-Acting (OODA) Loop concept. According to Boyd's *Patterns of Conflict* brief, the goal of his new conception of war making was to, "collapse (the) adversary's system into confusion and disorder by causing him to over and under react to activity that appears simultaneously menacing as well as ambiguous, chaotic, or misleading."¹⁸ Marines took notice of Boyd's ideas. They resonated with the likes of General Charles Krulak, the 31st Commandant of the Marine Corps, who said of Boyd:

He was one of the central architects in the reform of military thought which swept the services, and in particular the Marine Corps, in the 1980s.

¹⁶ Tom Clancy, *Battle Ready*, 134-136.

¹⁷ William S. Lind, "The Book John Boyd Would Have Written," *CounterPunch*, October 4, 2007.

¹⁸ Col John Boyd, *Patterns of Conflict*, December, 1986, 7. Boyd's briefings primarily exist in the form of his presentations, which are written in a clipped, powerpoint style, therefore it is often necessary to make some minor grammatical alterations to quotes from these presentations.

From John Boyd we learned about competitive decision making on the battlefield-compressing time, using time as an ally.¹⁹

Boyd's briefs on his conception of maneuver warfare also influenced the man who became the 29th Commandant of the Marine Corps in 1987, General Alfred M. Gray, who first heard Boyd speak as a Colonel in the late 1970s.²⁰ Around the same time, then-Col Gray met William S. Lind, another external innovator who became part of the Marine Corps' institutional adaptation.

Lind differed from Boyd in that he never served in the military. Colonel John C. Studt recalls in his foreword to Lind's *Maneuver Warfare Handbook* the resentment he initially felt towards, "a mere civilian expressing criticism of the way our beloved Corps did things."²¹ However, Studt's resentment quickly turned to excitement, "(f)or the first time I was personally hearing someone advocate an approach to war that was based on intellectual innovation rather than sheer material superiority..."²² Lind, a congressional staffer for Senator Gary Hart when Al Gray was introduced to him, was a member of the Military Reform Movement. He was a constant force in the maneuver warfare debate from 1978 until the adoption of maneuver warfare during Gray's commandancy.

From the start of the debate, Marine reformers used the pages of the *Marine Corps Gazette* in order to promulgate their views and defend against their detractors. In 1978-1979 captain Steven W. Miller published three articles advocating maneuver warfare. The first,

¹⁹ C.C. Krulak, "Eulogy," quoted in, Cowan, Maj Jeffrey E. (U.S. Air Force) "Warfighting Brought to You By..." *Proceedings: U.S. Naval Institute*, November, 2001, 2.

²⁰ Terry C. Pierce, *Warfighting and Disruptive Technologies*, 88.

²¹ William S. Lind, *Maneuver Warfare Handbook*, (Boulder, CO: Westview Press, 1985), xi.

²² *Ibid.*

entitled “It’s Time to Mechanize Amphibious Forces,” was published in June of 1978, and used several recent events, including the Yom Kippur War, in order to justify the mechanization of the Marine Corps’ amphibious forces.²³ Terry Terriff notes that while Miller’s first article did not ignore tanks, Miller focused on mechanization through the acquisition of light, wheeled armored personnel carriers, an idea that was a precursor to the beginning of Light Armored Vehicle (LAV) procurement in 1980.²⁴ It is fitting that Miller chose to open the maneuver warfare debate by tying it to a controversial argument familiar to Marines: “is the amphibious assault feasible?”²⁵ In 1979 Miller published a two-part study entitled, “Winning through Maneuver,” which continued to stress the utility of maneuver warfare to amphibious operations. Part one focused on countering an assault on the landing force; to do this, Miller asserted that, “from the time it hits the beach, the landing force must maintain mobility and react with speed and superior firepower on the enemy’s most vulnerable points.”²⁶ This is an example of concept that later was codified in the capstone doctrine of the Marine Corps as “critical vulnerabilities.”²⁷ In part two, according to Terry Terriff, “what Miller was proposing was that the concept of maneuver warfare furnished a way for the Marine Corps to improve its combat effectiveness while

²³ Capt Steven W Miller, “It’s time to mechanize amphibious forces,” *Marine Corps Gazette*, June, 1978, 40.

²⁴ Terry Terriff, “Innovate or Die” 495.

²⁵ Capt Steven W Miller, “It’s time to mechanize,” 39. The LAV is a light, eight-wheeled amphibious/reconnaissance vehicle.

²⁶ Capt Steven W Miller, “Winning through maneuver: Part I – Countering the offense,” *Marine Corps Gazette*, October, 1979, 30.

²⁷ *FMFM-1: Warfighting*.

retaining its distinctive amphibious warfare role.”²⁸ When executed properly, an amphibious assault was simply maneuver warfare from the sea.

In 1980 William Lind added depth to the debate in the pages of the *Gazette* by publishing “Defining Maneuver Warfare for the Marine Corps,” in March of that year. Lind’s article attempted to cut through the pervading confusion about the meaning of the term. He clarified the meaning by comparing maneuver warfare to what he referred to as firepower-attrition warfare.²⁹ Using military history in order to stress his points, Lind compared maneuver warfare to the campaigns “of Genghis Khan, the German blitzkrieg, and almost all Israeli campaigns.”³⁰ Juxtaposed to this, he employed the historical example of the firepower-attrition warfare model during Verdun in World War One.

Equally important to framing maneuver warfare against its conceptual opposite, Lind also introduced John Boyd’s concepts related to maneuver warfare, going as far as to say that, “the Boyd Theory is the theory of maneuver warfare.”³¹ In addition to referencing a respected military officer and theorist, Lind also used his knowledge of the Marine Corps in order to make the message of maneuver warfare as appealing as possible to his target audience. According to Lind, “unlike the Army, the Marine Corps can develop a strategically responsive force to fight maneuver war in Third World areas.”³² The importance of this article is shown by the increased

²⁸ Terry Terriff, “Innovate or Die” 497.

²⁹ William S. Lind, “Defining Maneuver Warfare for the Marine Corps,” *Marine Corps Gazette*, March, 1980, 55.

³⁰ *Ibid.*, 56.

³¹ *Ibid.*

³² *Ibid.*, 57.

influence of William Lind after its publication, and the method of its execution was perfectly tailored to the Marine Corps.³³ In concluding his article, Lind stated that:

There is no question Marines can meet the challenge. By adopting a maneuver concept of war, they can give the United States the capability it needs to defend its vital interests outside Europe. And by performing that task, the Marine Corps can assure itself a solid mission of unquestionable value.³⁴

In 1979 Lind met Col Mike Wyly, who was about to become the head of the tactics department at the Marine Corps' Amphibious Warfare School (AWS) and is identified by Terry Pierce as "a key 'Young Turk' of maneuver warfare."³⁵ Wyly became familiar with Boyd's work through Lind, and in 1980 invited Boyd to speak at AWS. According to Fideleon Damian, "Boyd's initial visit to Wyly's tactics class sparked an interest among his students, but it was students from his second class in 1980-1981 who would play a key role in developing and spreading the new maneuver warfare ideas to the rest of the Marine Corps."³⁶

Wyly was also a prolific writer in the pages of the *Gazette*, co-writing a series of articles with William Lind, Capt G. I. Wilson, and MajGen B. E. Trainor in 1981 that expanded on Lind's 1980 article explaining the nature of maneuver warfare. The article tied together the many arguments made in the pages of the *Gazette* from 1979 and 1981, and came to two basic conclusions: first, the Marine Corps needed "a doctrinal publication on maneuver warfare," and second, the Marine Corps could "no longer wait to develop an effective maneuver warfare

³³ Lind assisted in the writing of *FMFM 1 Warfighting*, as well as performing numerous advisory functions related to the implementation of maneuver warfare.

³⁴ *Ibid.*, 58.

³⁵ Terry Pierce, *Warfighting and Disruptive Technologies*, 89.

³⁶ Fideleon Damian, "The Road to FMFM 1," 33.

capability.”³⁷ Wyly’s distaste for attrition warfare extended even to the use of attrite as a verb, referring to such use Wyly wrote that, “we may have to live with bad English, but bad tactics will kill us.”³⁸

The sheer volume of writing on the topic of maneuver warfare from 1981-1984 is staggering, as maneuverists like Wyly, Lind, Woods, Wilson, Scharfen, and numerous others expounded upon the concepts of maneuver warfare and the merits of those concepts. However, their proclamations did not go unchallenged, otherwise it couldn’t rightly be called a debate. In 1982 LtCol Gordon Batcheller wrote that the maneuverists were either loudly advocating something obvious and already part of Marine Corps doctrine, or advocating something so crazy as to imply that they “may be candidates for processing under ALMAR 246-81,”³⁹ the order concerning drug use in the Marine Corps. Marines like LtCol R. H. Voigt and others like LtCol W. Kross (USAF) continued to attack the perceived contradictions of maneuver warfare theory, as well as the qualifications of the maneuverists.⁴⁰ Not that the maneuverists were above name-calling either, Fideleon Damian bemoaned the intense nature of the debate, stating that, “it is unfortunate that the dialog that took place within the Corps resulted in statements that bordered on the polemical.”⁴¹

³⁷ Capt G. I. Wilson et.al., “The ‘Maneuver Warfare’ Concept,” *Marine Corps Gazette*, April, 1981, 51.

³⁸ *Ibid.*, 52.

³⁹ LtCol Gordon Batcheller, “Reexamining Maneuver Warfare,” *Marine Corps Gazette*, April, 1982, 22.

⁴⁰ LtCol R. H. Voigt, “Comments on Maneuver Warfare,” *Marine Corps Gazette*, March, 1982, 20.

⁴¹ Fideleon Damian, “The Road to FMFM 1,” 5.

While articles continued to be written for and against maneuver warfare, the debate largely cooled starting in 1984, however, the adaptive process centered on its adoption was not the only example of innovation occurring in the Marine Corps during the early 1980s. In the summer of 1981 then Major General Al Gray became the commanding general of the 2nd Marine Division (2nd MARDIV) putting him in control of “the state of readiness of the East Coast ground combat force that supported East Coast MAGTF deployments, and in position to influence virtually all pre-deployment training programs.”⁴² Gray relentlessly pursued the expansion of maneuver warfare within the division, and made maneuver warfare the official doctrine of 2nd MARDIV. First, he created the Maneuver Warfare board, a small innovation group designed to spread the ideas of maneuver warfare throughout the division.⁴³ Additionally, he aggressively pushed maneuver warfare in a series of exercises called Command Post Exercises (CPXs). During these exercises General Gray used atypical scenarios to force his subordinate commanders to follow the basic tenants of maneuver warfare. According to Turley, during his tenure as Commanding General of 2d Marine Division, “there was an endless array of practical-application exercises, each serving as a teaching tool to acquaint the division units with the maneuver warfare philosophy.”⁴⁴

In 1984 William Lind published his book, *Maneuver Warfare Handbook*. Lind began his work by emphasizing that, “although this book has been written to be helpful to anyone

⁴² Col. Gerald H. Turley, *The Journey of a Warrior: The Twenty-Ninth Commandant of the Marine Corps (1987-1991): General Alfred M. Gray*, (Bloomington: iUniverse, Inc., 2010), 135.

⁴³ Terry Pierce, *Warfighting and Disruptive Technologies*, 89.

⁴⁴ Col. Gerald H. Turley, *The Journey of a Warrior*, 139.

interested in land warfare, it is addressed primarily to Marines.”⁴⁵ Lind wrote the book with the aid of several Marines, including Col Mike Wyly, who wrote the appendix on tactics based on his AWS lectures,⁴⁶ and Col John Studt, who wrote the foreword. Writing for Marines as Lind was, he immediately pointed out that maneuver warfare was not merely an academic study, as it had recently been used in Grenada by LtCol Ray Smith.⁴⁷ This opinion was not held by Lind alone, as Smith was a known maneuverist and disciple of Al Gray, Terry Pierce even refers to him as the “maneuver hero of Grenada.”⁴⁸ By 1984 not only had the 2nd MARDIV established maneuver warfare as its official doctrine, but on the West Coast the Junior Officers Tactical Symposium had formed to study maneuver warfare and decide the best manner in which to implement it in 1st MARDIV.

Additionally, the Marine Corps was aggressively pursuing technologies that had been advocated by maneuverists, including Vertical/Short Takeoff and Landing (VSTOL) attack aircraft, light, wheeled armored vehicles, and automatic weapons at the fire team level.⁴⁹ This was accomplished through the procurement of the British made Harrier, designated the AV-8A, the Canadian built LAV series of wheeled vehicles which boasted a 25mm chain gun, and the Squad Automatic Weapon (SAW). These technological additions, though not directly attributable to the maneuver warfare movement, played into the hands of maneuverists by

⁴⁵ William S. Lind, *Maneuver Warfare Handbook*, (Boulder, CO: Westview Press, 1985), 1.

⁴⁶ This appendix, titled *Fundamentals of Tactics*, is actually slightly longer than the book itself.

⁴⁷ *Ibid.*

⁴⁸ Terry Pierce, *Warfighting and Disruptive Technologies*, 89.

⁴⁹ The smallest element in the Marine rifle company, a fire team consists of four members, three fire teams make up a squad. The Marine Corps briefly switched to a squad with two five-Marine fire teams, but quickly switched back.

providing technological capabilities that enhanced the Marine Corps' ability to conduct maneuver warfare.

In the wake of the disastrous attempt to rescue American hostages held in Tehran code named Operation Eagle Claw, the US Government pushed the services towards enhancing their special operations capability. For the Marine Corps, this presented a problem because of an inherent desire within the organization not to create an elite within a force that often self-described as "all elite." To avoid this, the Marine Corps set about using an existing structure, the Marine Amphibious Unit (MAU), in order to fulfill the special operations capability being mandated by the congress. In 1985, the 26th MAU, based in Camp Lejeune, NC and under the supervision of East Coast Marine Amphibious Force Commanding General Al Gray, became the first Marine unit to bear the Special Operations Capable (SOC) designator.⁵⁰ This designator was earned through the completion of a rigorous training pipeline culminating in the Special Operations Training Exercise (SOCEX) which ensured that the MAU was capable of performing the missions designated as special operations.⁵¹

In order to counter the decreasing number of amphibious vessels in the US Navy's arsenal 28th Commandant of the Marine Corps General Paul X. Kelley undertook the completion of the Maritime Prepositioning Ship (MPS) program. This program enabled large stockpiles of equipment to be stored aboard mobile platforms, enabling large contingents of well-supplied Marines to be assembled overseas faster.⁵² "By 1986, the MPS program had in place 13 ships, with one squadron in the eastern Atlantic, a second at Diego Garcia in the Indian Ocean and a

⁵⁰ Edwin Howard Simmons, *The United States Marines*, 276.

⁵¹ *Ibid.*, 276-277.

⁵² J. Robert Moskin, *The U.S. Marine Corps Story*, 757.

third at Guam and Tinian in the Western Pacific.”⁵³ The MPS program reduced the severity of the lack of amphibious shipping, but did not completely alleviate it. In order to make use of an innovative new technology, the Landing Craft Air-Cushioned (LCAC), the Marine Corps, in particular General Kelley, were able to convince the Navy to purchase a new class of Landing Ship Dock (LSD) that could support the use of LCACs. This over-the-horizon amphibious assault capability later became part of the justification for the project that eventually became the MV-22 Osprey.

It is important to remember that some beneficial knowledge had been gained by the Marine Corps in Vietnam, most of it having to do with small wars and asymmetric warfare. Throughout the 1980s the Marine Corps tried to move away from the single-minded approach to conflict and produce a manner of thinking which was applicable to both conventional and unconventional warfare. The answer that the Marine Corps arrived at was maneuver warfare. However, implementing this new concept would require more than just articles in the *Gazette* and the initiative of individual commanders; change had to occur at the institutional level. From the bleak days of the mid-1970s, the Marine Corps had come a long way and had accomplished much by 1987, when the process of innovation was rapidly accelerated by the ascension of Alfred M. Gray to the position of Commandant of the Marine Corps

⁵³ Ibid.

III. Main Points of Analysis

When asked by Edgar Puryear if he had ever aspired to becoming commandant, General Alfred M. Gray responded by saying that, “I didn’t have any intention of even being a general.”⁵⁴ This was a statement typical of the Marine who had already delivered his retirement letter before being surprised by the news that he had been selected to succeed General Kelley as the Commandant. Gray later became the only Commandant to have his official photograph taken in his camouflage utility uniform. His method of leadership was chaotic and intensely personal, often using phone conversations where previous Commandants would have used written orders. In the decade previous to becoming Commandant, he vigorously pushed maneuver warfare, and immediately set about the task of making it the Marine Corps’ official doctrine.

The first step was to create a doctrinal publication that put down in writing the tenants of maneuver warfare. Written by Capt John Schmitt under General Gray’s direction, *FMFM-1 Warfighting*⁵⁵ was the most widely heralded doctrinal publication in the Marine Corps since the 1934 publication of the *Tentative Manual for Landing Operations*.⁵⁶ Not since the *Tentative Manual* was published had the Marine Corps formally codified its doctrine in an innovative manner. By 1990 Col John Greenwood stated that the manual had “been widely circulated and discussed. Its impact is being felt in every area of Marine Corps activity.”⁵⁷ It is worthy of note that Col Greenwood, retired from the Marine Corps, was the editor of the *Marine Corps Gazette*,

⁵⁴ Edgar F. Puryear Jr., *Marine Corps Generalship*, 47.

⁵⁵ Later re-serialized as *MCDP-1*

⁵⁶ Greenwood, Col John E. Greenwood, “FMFM1: The Line of Departure,” *Proceedings: U.S. Naval Institute*, Vol. 116/5/1,047, May, 1990, 155.

⁵⁷ *Ibid.*

and as such was instrumental in the maneuver warfare debate by allowing and even encouraging the continuation of the debate in the pages of his publication. The impact of the manual was widely discussed as well in the *Marine Corps Gazette*, *Amphibious Warfare Review*, and *Proceedings: U.S. Naval Institute*. While generally well-received, *FMFM I* did have detractors, but no one could seriously challenge its basic tenants. Although a few minor revisions have been made, *FMFM I* (now titled *MCDP I*) serves as the Corps' capstone doctrinal publication to this day.

Terry Pierce describes the manner in which Al Gray championed maneuver warfare as “disguising innovation,” a concept which is the subject of his book, *Warfighting and Disruptive Innovation: Disguising Innovation*. In essence, in order to gain acceptance for the idea, Gray used language make a radical change seem more like a return to traditional Marine Corps ideas. Gray's attempted to demonstrate that maneuver warfare was not indeed some new concept but one that had been used extensively throughout the past. Indeed, one of the criticisms leveled at maneuver warfare was that it brought nothing new to the table.⁵⁸ Gray responded to these criticisms by pointing out that while the concepts themselves were not new, “what is new... is the process of codifying it in our manuals, training for it in our exercises and in our approach to leadership.”⁵⁹ Pierce reinforces Gray's words with his own:

Essentially, Gray attempted to promote maneuver warfare as a resurgence of Sun Tzu's ancient way of looking at conflict, but indirectly he was promoting the idea as different from attrition warfare. What he was trying to accomplish by such an approach was to prevent the attrition advocates from blocking the shift to maneuver warfare until it was too late.⁶⁰

⁵⁸ Ibid.

⁵⁹ Terry Pierce, *Warfighting and Disruptive Technologies*, 96.

⁶⁰ Ibid., 97.

Beyond getting the senior leadership of the Marine Corps to accept maneuver warfare, Gray also initiated reforms to return the Marine Corps to its traditional position of being able to deploy non-infantry Marine in combat roles.⁶¹ In order to do this, major revisions to the Marine Corps' training pipeline had to occur, the first of which was to develop Basic Warrior Training (BWT) which gave all recruits training in the fundamentals of combat.⁶² By removing exceptions for certain jobs in the Marine Corps, Gray ensured that every Marine was indeed basically trained as a rifleman. His view that this would become important as asymmetric and unconventional warfare became more common would be proven correct after his retirement in places like Somalia. Essentially, Gray believed that for maneuver warfare to be implemented in the Marine Corps, every Marine needed to buy into the concept and accept his role in it. For non-infantrymen, this required not only applying the concepts of maneuver warfare to their fields of specialization, but understanding that maneuver warfare might demand that they directly participate in combat.

In order to further ensure that basic rifleman skills were taught to every Marine, Gray established the School of Infantry in 1989.⁶³ This school was charged with the implementation of a course titled Marine Combat Training, a four week course on basic infantry skills specifically designed for non-infantry Marines that continues to function to the present day. Support units were directed to conduct training in infantry skills to further instill the idea that "every Marine is a rifleman," a quote that predates General Gray, but is most commonly associated with his commandancy. The retraining of non-infantrymen to be able to fulfill infantry roles was also

⁶¹ Col. Gerald H. Turley, *The Journey of a Warrior*, 301.

⁶² Ibid.

⁶³ Ibid., 303.

important to maneuver warfare, as supporting units could now, in theory, be used to free more maneuver elements to conduct combat operations. Additionally, non-infantrymen could now be drawn from support units in order to form provisional rifle squads, platoons, and even companies.

Continuing his focus on training and education, General Gray sought to overhaul the Professional Military Education (PME) system of the Marine Corps. At the same time as Captain Schmitt was writing *FMFM-1*, Gray directed another young maneuverist, then-Captain Tim Jackson, to begin rewriting the Basic School Nonresident Program.⁶⁴ The resultant program, the Warfighting Skills Program, was written with the aid of a small innovation group that included Col John Boyd and William S. Lind, and was more in line with the ideas of maneuver warfare. Gray would later comment that he believed that Jackson's program had made a bigger impact on the Marine Corps than even *FMFM-1*.⁶⁵ In developing the course Jackson relied heavily on John Boyd's *Patterns in Conflict* lecture and William Lind's *Maneuver Warfare Handbook*, especially the appendix on tactics written by Col Mike Wyly.⁶⁶

The crowning jewel of Gray's plan to overhaul the Marine Corps' PME system was the creation of a Marine Corps University (MCU). The largest obstacle in the way of establishing such an institution was the lack of a meaningful research center/library at Marine Corps Base (MCB) Quantico in Quantico, Virginia. In order to determine the best course of action concerning the creation of MCU, Gray directed that a two-man team (one that included Gray's future biographer, Col Gerald Turley) analyze the other service's military libraries and report

⁶⁴ Terry Pierce, *Warfighting and Disruptive Technologies*, 91.

⁶⁵ Ibid.

⁶⁶ Ibid.

back on their findings.⁶⁷ The resultant report, along with Gray's personal knowledge of the subject, was used to design the new MCU along with the attendant research facility, later named in honor of Gray. In March of 1989 the MCU was stood-up on an interim basis with then-Colonel Paul K. Van Riper as the Vice President of the university.⁶⁸ The MCU became the overarching body responsible for all the major education and training courses at Quantico, including The Basic School, Amphibious Warfare School, and Command and Staff College. Essentially, in addition to providing the context from which to formally alter the officer training pipeline, Gray had also put all officer education into the hands of a well-known maneuverist and educator, Paul Van Riper. By reforming the Marine Corps' education and training processes Gray ensured that future generations of Marines would be inculcated with the tenants of maneuver warfare.

The impact of Gray's changes to the PME system can be seen in the production that came out of the schools, particularly Command and Staff College (CSC). The number of Individual Research Papers (IRPs) written at CSC on the topic of maneuver warfare increased exponentially starting in 1989, with several topics being examined by multiple students.

For example, a ripple effect occurred beyond the officers trained in ground warfare. Several CSC students (usually senior Majors) approached the subject of the role of the aviation community in maneuver warfare. Maj Steven Donnel approached the subject in 1989 by suggesting that the Aviation Combat Element (ACE) of the Marine Air-Ground Task Force (MAGTF) be used as another maneuver element rather than being subordinated to the Ground

⁶⁷ Col. Gerald H. Turley, *The Journey of a Warrior*, 305.

⁶⁸ *Establishment of the Marine Corps University*, Marine Corps University Archives, Collection 3746: Studies and Reports, Box 55, Folder 12.

Combat Element (GCE). According to Donnel, “Aviation maneuver elements can operate as the focus of effort, supporting attack or in a reserve capacity.”⁶⁹ Writing on a similar subject that same year, Maj Michael Karnath asserted that one of the biggest problems facing maneuver warfare in the aviation community was a fundamental misunderstanding its nature.

The (sic)majority of past and present discussion, whether written or verbal, focuses on maneuver warfare as centering on the ground combat element (GCE) since a ground unit within the GCE is normally designated as the POME. This has led to a general perception within the aviation community that the term "maneuver warfare" is a ground (sic)warriors term. Because of this, maneuver warfare is currently less understood by aviators than by their ground counterparts.⁷⁰

The role of aviation assets in maneuver warfare was far from the only topic related to maneuver warfare explored by the students of the CSC. The previously cited Terry Pierce, then a LtCdr in the US Navy, attended CSC during this period. In 1989, he wrote an IRP analyzing how maneuver warfare should be applied in over-the-horizon amphibious assaults. Pierce wrote that, “The Navy's inability to view an amphibious assault by any other means than at the tactical level has left it unaware that there is a need to conceptualize the OTH assault at the operational level of war in order to successfully coordinate the battle.”⁷¹ Pierce recognized the level of cooperation necessary between Navy and Marine forces during an amphibious operation. Perhaps more important, he advocated that his own service, the US Navy, use the Marine Corps’

⁶⁹ Maj Steven B. Donnell, *The Ace as a Maneuver Element*, Marine Corps University Command and Staff College, Marine Corps Base Quantico, VA, 1989, 1.

⁷⁰ Maj Michael W. Karnath, *The Ace's Role in Maneuver Warfare and the Marine MAGTF*, Marine Corps University Command and Staff College, Marine Corps Base Quantico, VA, 1989, 3.

⁷¹ Pierce, LtCdr. Terry Pierce (U.S. Navy), *Maneuver Warfare and OTH Amphibious Assaults*, Marine Corps University Command and Staff College, Marine Corps Base Quantico, VA, 1989, 1.

approach to warfare in planning and conducting amphibious assaults. This kind of coordination can be seen in World War II in the Pacific.

US service members were not the only students attending CSC, and the effect of the switch to maneuver warfare is evident in the writings of foreign officers as well. Maj P. B. Retter of the Australian Army, writing on the best course of action for the Marine Corps to continue institutionalizing maneuver warfare, said that, “While most current unit training programmes appear adequate, the advent of Maneuver Warfare will necessitate development of training programmes which are more realistic and challenging.”⁷²

After the initial adoption of maneuver warfare as official doctrine in 1989, Gray used the CSC as a think-tank from which to garner fresh perspectives and ideas related to maneuver warfare. In 1989 and 1990 alone more than 30 IRPs were written on a variety of maneuver warfare subjects ranging from company level tactics to historical examples of maneuver warfare. Simultaneously, the CSC was being used to inculcate the students with the ideas of maneuver warfare, spreading knowledge of the subject throughout the Fleet Marine Forces (FMFs).

General Gray reorganized not only PME the manner in which the Marine Corps organized itself for training. The establishment of Marine Corps Combat Development Command (MCCDC) in November of 1987 was more than just an organizational reshuffling. After MCCDC Commanding General LtGen W. R. Etnyre directed him to conduct a special individual study of MCCDC,⁷³ Col C. J. Del Grosso wrote that, “not since the National

⁷² Maj P. B. Retter(Australian Army), *Embracing Maneuver Warfare and Preparing for War*, Marine Corps University Command and Staff College, Marine Corps Base Quantico, VA, 1989, 20.

⁷³ *MCCDC Integration Issues in Post-Establishment Period: Looking Ahead; Conduct of a Study Requirement*, Marine Corps University Archives, Collection 3746: Studies and Reports, Box 55, Folder 10.

Reorganization Act of 1947, has the Marine Corps undertaken such a radical organizational departure as to how it conducts business in preparation for conflict...”⁷⁴ The MCCDC helped expand the Marine Corps’ capabilities in wargaming, intelligence, and networking, while simultaneously standardizing doctrine and training throughout the Marine Corps.⁷⁵

The concept of operations behind MCCDC was very much in line with maneuver warfare, for MCCDC streamlined a formerly chaotic system of isolated endeavors into a single command, thereby reducing the bureaucratic drag associated with the numerous centers included in MCCDC. Most importantly, MCCDC was given a broader charter that included direct interfacing with the FMF.⁷⁶ This would become critically important during the preparation for Operation Desert Storm.

Although a relatively new organization, MCCDC proved its worth by providing intellectual and procurement support to the FMF during the planning and preparation stages of Desert Storm. In 1990 General Gray visited Marine forces in the Persian Gulf, and returned with the certainty that the Marine Corps needed a general plan for amphibious operations. Gray, along with the leadership of MCCDC, recognized that maneuver warfare could be executed from the sea. Indeed, the options that an amphibious assaults make available to a commander are perfectly suited for maneuver warfare. MCCDC was tasked with coming up with such a plan. Initially focusing on a large scale amphibious assault, the Wargaming Center and General Gray quickly

⁷⁴ *Integration Issues in Post-Establishment Period: An Independent Review (T&E Center)*, Marine Corps University Archives, Collection 3746: Studies and Reports, Box 55, Folder 10.

⁷⁵ *Marine Corps Combat Development Command Reorganization Brief for Mr. Bill Lind 15 Jan 88*, Marine Corps University Archives, Collection 3746: Studies and Reports, Box 55, Folder 1.

⁷⁶ Col. Gerald H. Turley, *The Journey of a Warrior*, 311.

determined that a series of amphibious raids would be a better option, and these plans were later put forward.⁷⁷ These ideas developed into the amphibious Operation Desert Sting.

Later, MCCDC was again called upon to produce a time-critical solution to an operational problem. This time, it was the shortage of mine-breeching equipment in the I Marine Expeditionary Force (MEF). Bypassing numerous layers of procurement procedures, MCCDC and General Gray arranged to procure the vehicles from the Israeli military, and then arranged for them to be rapidly delivered to I MEF.⁷⁸ With sufficient breeching equipment now available, I MEF could focus on planning for the attack against Saddam Hussein's Iraqi forces with the 1st and 2nd MARDIVs.

⁷⁷ Ibid., 399.

⁷⁸ Ibid., 422.

IV. Evaluation

Operations

Doctrinal changes, structural reorganization, and other peacetime changes undertaken by the Marine Corps cannot truly be evaluated without looking into the actual operational effect of those adaptations. Innovation without quantitative results is just change for the sake of it. In the case of the Marine Corps, the peacetime changes appear to have translated into genuine innovation on the battlefield. Three instances during the Persian Gulf War demonstrate this, the first being the conduct of the 7th Marine Amphibious Brigade (MAB) under MajGen John I. Hopkins. Facing 7 Iraqi divisions, Hopkins defensive plan of action involved:

Using maneuver warfare tactics each task force would trade space for time until the main thrust of an enemy attack was drawn into a ‘fire sack’ (almost like an ambush where all the combined arms have preselected targets if an enemy stumbles into the trap) where the Marine combined arms team could use maximum maneuver with firepower to halt the enemy attack.⁷⁹

These plans, though completely in the spirit of maneuver warfare, were never executed as the Iraqi attack never materialized and the remainder of I MEF arrived to bolster the Marines’ defensive stature. However, when I MEF launched the assault against the Iraqi Army, maneuver warfare was put on display in reality as well as on paper. The 1st MARDIV assault into Kuwait was launched with such rapidity and violence that the rest of the coalition forces could not keep up with their operational tempo.⁸⁰ The pace of the advance was so fast that Gen Norman Schwarzkopf accelerated his operational timetable and cancelled a planned drop of the 82nd

⁷⁹ *Warfighting: Maneuver Warfare in the U.S. Marine Corps*, ed. LtCol H.T. Hayden, (London: Greenhill Books, 1995), 26.

⁸⁰ *Ibid.*

Airborne Division.⁸¹ On February 25th, the day after the initial invasion, MajGen Mike Myatt, the Commanding General of 1st MARDIV, realized that the division's command post was too far forward in the battlespace,⁸² this had the unfortunate consequence of putting the division HQ directly in the path of the Iraqi counterattack. Luckily for the HQ, the counterattack was repulsed and the Iraqi units involved disintegrated as they were struck by numerous attacks that destroyed their cohesion. A microcosm of the 1st MARDIV use of maneuver warfare were the actions of Company B of the 1st Light Armored Infantry (LAI) battalion. Tasked with the mission-type order of covering the division's right flank, the company commander, Captain Ray, used his LAVs to pin Iraqi armor in place despite not having sufficient anti-armor capabilities, then used close air support to repulse the Iraqi counterattack.⁸³

Along the coast of Kuwait numerous Iraqi units, about 40,000 troops altogether, were pinned in place by an enormous amphibious deception using 13 amphibious vessels and thousands of embarked Marines of the 4th MEB.⁸⁴ One of the specific amphibious feints was that executed against Ash Shuaybah on February 25th, which was so effective that "electronic intelligence indicated that the Iraqi commander flashed messages to Baghdad indicating an amphibious landing was underway, he was taking tremendous casualties, and had begun to

⁸¹ J. Robert Moskin, *The U.S. Marine Corps Story*, 793.

⁸² LtCol H. T. Hayden, *Warfighting*, 26. Hayden points out that this is also in accordance with the maneuver warfare tenant of pushing the commander as far forward as possible.

⁸³ *Ibid.*, 27.

⁸⁴ LtCol Ronald J. Brown, *U.S. Marines in the Persian Gulf, 1990-1991: With Marines Afloat in Desert Shield and Desert Storm*, Washington D.C.: History and Museums Division, Headquarters, U.S. Marine Corps, 1998, 154-156.

withdraw.”⁸⁵ Hussein responded by sending even more troops to reinforce the coastal defenses. Another deception operation was launched early the next day which pinned three Iraqi divisions in place in the vicinity of Bubiyan Island; Iraqi forces again were baited into revealing their positions in the face of a possible amphibious assault.⁸⁶

According to Hayden, it was the combination of the rapidity of the Marine advance combined with the deceptive actions of Marine forces ashore which “got inside the ‘Boyd Cycle’ or ‘OODA Loop’ of the Iraqis and created a total collapse of Iraqi command and control.”⁸⁷ Terry Pierce and William Lind both identified the 1st MARDIV as the true practitioner of maneuver warfare in the conflict, with the 2nd MARDIV using a rigid command structure that led Lind to dub them the ‘French’ division.⁸⁸ It is important to note that the 2nd MARDIV also faced the only point along the front where Iraqi artillery was largely untouched and was used effectively.⁸⁹ Along the rest of the front, the Iraqi artillery had either been decimated, or was used in a hugely ineffectual manner. However, as Pierce points out, it is remarkable that in such a short period of time (under four years) the Marine Corps was able to perform an operational transformation of that magnitude, even if it was pessimistically viewed as having been only 50 percent effective.⁹⁰

⁸⁵ Ibid., 155.

⁸⁶ Ibid., 156.

⁸⁷ LtCol H. T. Hayden, *Warfighting*, 27.

⁸⁸ Terry Pierce, *Warfighting and Disruptive Technologies*, 100-101.

⁸⁹ Maj James Blackwell (US Army), *Thunder in the Desert: The Strategy and Tactics of the Persian Gulf War*, (New York: Bantam Books, 1991), 189-190.

⁹⁰ Terry Pierce, *Warfighting and Disruptive Technologies*, 100-101.

William Lind argued that the 2nd MARDIV was successful because everything worked against the Iraqis, however, the stunning successes of the Marine units involved cannot be attributed to the incompetence of their opponent alone. Of the 50,000 prisoners-of-war taken in the 100-hour ground war, 22,000 of them had been taken by Marines, and the 2nd MARDIV, moving at a slower pace than 1st MARDIV, accounted for 16,376 of them.⁹¹ Indeed, it is often forgotten that the Marine attack was supposed to be a supporting effort, but ended up becoming the primary assault due to its success. MajGen James Myatt, Commanding General of the 1st MARDIV, encapsulated the maneuver warfare philosophy used by his division when he stated that, “(o)ur focus was not on destroying everything. Our focus was on the Iraqi mind and getting in behind them.”⁹²

At the same time as the build-up for Desert Shield/Desert Storm, Marines executed another mission, Operation Eastern Exit. 4th MEB, in the Persian Gulf preparing for the invasion of Kuwait, detached a contingency MAGTF aboard two amphibious vessels in order to conduct a Non-combatant Evacuation Operation (NEO) in Mogadishu, Somalia. The operation, a nighttime evacuation of American and allied civilians by helicopter, was so well executed that Gen Gray later described it as ‘flawless.’⁹³ In total, the Marines evacuated 282 foreign and American personnel, including numerous ambassadors and charges d’affaires from numerous nations. No American casualties were sustained. It is difficult to overstate the difficulty inherent to the rapid transition from preparing for conventional warfare to conducting a NEO, something that, in this case, was made to look easy. Causality in that case is difficult to prove, but part of the purpose of

⁹¹ J. Robert Moskin, *The U.S. Marine Corps Story*, 797.

⁹² LtCol G. I. Wilson, “The Gulf War, Maneuver Warfare, and the Operational Art,” *Marine Corps Gazette*, June, 1991, 24.

⁹³ Quoted in, LtCol Ronald J. Brown, *U.S. Marines in the Persian Gulf*, 80.

the adaptations promulgated by Al Gray and the maneuverists was to increase the operational flexibility of Marine forces abroad. In the immediate aftermath of the Gulf War, the Marine Corps was given another opportunity to demonstrate its proficiency in operations other than war.

In April of 1991 the 24th Marine Expeditionary Unit (MEU) was conducting landing operations exercises in Sardinia when it was ordered to take part in Operation Provide Comfort. Provide Comfort was aimed at averting the humanitarian disaster unfolding in Northern Iraq to the Kurds. A multinational task force was built around the MEU and used separate the Iraqi forces from the Kurdish population and provide badly needed humanitarian aid to the Kurdish refugees, an estimated 600 of whom were dying of exposure, malnutrition, and disease on a daily basis.⁹⁴ MajGen Garner (US Army) was in command of the overall task force, named Joint Task Force Bravo, but had no command staff to control the various disparate elements. Because of this, the Commanding Officer of the 24th MEU, future Commandant of the Marine Corps Col James L. Jones, offered the use of the MEU Command Element in order to fill the gap.⁹⁵ Essentially, the scalability and adaptability of the MEU meant that without enlarging its existing command staff, it was able to control a unit that eventually hit divisional troop levels. According to Jones, “from a Marine Corps standpoint, we validated MAGTF doctrine.”⁹⁶ Operation Provide Comfort was considered a success insomuch as it severely curtailed the effect of Saddam Hussein’s campaign against the Kurds at that time.

⁹⁴ Col James L. Jones, “Operation Provide Comfort: Humanitarian and Security Assistance in Northern Iraq,” *Marine Corps Gazette*, November, 1991, 99.

⁹⁵ LtCol Ron Brown, 5-31-91, *Interview with Col. Jones, CO, 24th MEU, Operation Provide Comfort*, Marine Corps University Archives, Collection 3708: Operations Other Than War, Box 1, Folder 4.

⁹⁶ *Ibid.*

Another interesting point about Operation Provide Comfort is the fact that the Marine Corps deployed 2nd Remotely Piloted Vehicle (RPV) Company to provide intelligence to the MEU. While the RPVs used at the time were not considered particularly effective, something that 2nd RPV Company Commander Capt Wayne Ouzts freely admitted, the testing of the RPVs in an actual operation added considerably to the development of the program.⁹⁷ The RPVs may not have had a great effect on the actual conduct of the operation, but the continued drive towards innovation, even during live operations, is noteworthy. Though the RPVs were not particularly effective, the fact that the Marines were willing to use them shows the continued influence of maneuver warfare, which advocates avoiding a “zero defects mentality.” In essence, in order for innovation to occur, leaders must not be afraid of failure.

Nearly the same time that the 24th MEU was called to conduct humanitarian operations in Northern Iraq, a cyclone struck the nation of Bangladesh, killing over 100,000 people. The cyclone ravaged the country, destroying infrastructure, livestock, and farmland, leading the Prime Minister of Bangladesh to appeal for international assistance. The 5th MEB, on its return to the United States after participating in Desert Storm, was recalled and sent to Bangladesh to provide humanitarian assistance. Due to the scope of the devastation, some of the coastal regions were judged to be “totally devastated,”⁹⁸ the ensuing challenge was exceptionally difficult. By May 16th, full-scale relief operations were underway, with the 5th MEB utilizing virtually every

⁹⁷ LtCol Ron Brown, *1015 28 May 1991, Interview with Capt Wayne Ouzts, 2d RPV Co, Re; Operation Provide Comfort*, Marine Corps University Archives, Collection 3708: Operations Other Than War, Box 1, Folder 3.

⁹⁸ *Operation Sea Angel: Bangladesh Disaster Relief*, Marine Corps University Archives, Collection 3708: Operations Other Than War, Box 1, Folder 9.

transport asset available in order to move medical supplies and food into the devastated areas.⁹⁹ By May 28th Marines had flown 1431 helicopter sorties moving over 1336 tons of relief supplies to distribution sites not accessible by roads.¹⁰⁰ The rapidity of the redeployment and its associated planning process further indicates the influence of maneuver warfare concepts. Viewed from another perspective, the ideas of maneuver warfare allowed the Marines to carry out non-combat operations in a more effective manner.

Additionally, the MEB used its amphibious landing craft, both the new LCACs and the venerable Landing Craft Utility (LCUs) in order to deliver a further 1456 tons over the course of 43 amphibious sorties.¹⁰¹ In summarizing Operation Sea Angel, the official report on the operation states that, “there are a great many ways to measure success. By any measure – responsiveness in time of need, aggressiveness in accomplishing the mission, uniting diverse organizations, tonnage moved, or lives saved – Operation Sea Angel has proved to be an outstanding success.”¹⁰²

Perhaps the most impressive element of the 5th MEB’s involvement in Sea Angel was the fact that the 5th MEB was returning from combat operation in the Persian Gulf. The cyclone and the devastation it caused was not a foreseeable event, so all of the planning for complex and far-reaching relief operations had to be planned rapidly.

While it is perhaps a stretch to say that Sea Angel directly showcased the effects of maneuver warfare, the second and third order effects of Marine Corps innovation during this

⁹⁹ *Appendix A – Chronology, Operation Sea Angel: Relief Operations in Bangladesh*, Marine Corps University Archives, Collection 3708: Operations Other Than War, Box 1, Folder 18.

¹⁰⁰ *Operation Sea Angel: Bangladesh Disaster Relief*.

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*

period can be seen in the rapid transition from combat operations to military operations other than war. Maneuver warfare focuses on maintaining an adaptable posture in regards to warfighting. While Operation Sea Angel was not warfighting in the classical sense, the Marines approached the mission with the same outlook as if they were conducting combat operations. The flexibility of the MAGTF and its associated doctrine made this possible. Less than two years later, Marines would be called upon to conduct relief and combat operations simultaneously.

In the last case study analyzed in this section, that of Operation Restore Hope in 1992-93, Marines faced what 31st Commandant of the Marine Corps Gen Charles Krulak later referred to as the Three-Block War.¹⁰³ During Operation Restore Hope Task Force Mogadishu, a composite unit made up of over 1800 Marine and over 2300 Coalition soldiers,¹⁰⁴ carried out combat and relief operations simultaneously. According to the command chronology for the first phase of the operation, “Task Force Mogadishu’s mission was to conduct intense peacemaking operations in and around the city of Mogadishu and to restore stability while simultaneously providing security for the Mogadishu airfield and port and providing convoy security in support of humanitarian relief efforts.”¹⁰⁵

The first Marines, from the 15th MEU(SOC) entered Mogadishu on December 9th, 1992 via an unopposed amphibious landing, and quickly secured areas to enable follow-on forces to arrive. As the Marines attempted to bring order to Mogadishu by isolating and clearing problem areas and seizing weapons caches, firefights took place regularly, with Somali gunmen fiercely

¹⁰³ Gen Charles Krulak published an article in *Marines Magazine* on the subject in 1999, he is credited with inventing the term.

¹⁰⁴ *Command Chronology for the Period 21 December 1992 to 22 January 1993*, Marine Corps University Archives, Collection 3708: Operations Other Than War, Box 1, Folder 1, 8.

¹⁰⁵ *Ibid.*, 1.

resisting the Marine efforts to disarm them. Despite the intense pressure on Marine positions, the Marines continued to patrol vigorously, securing parts of the city section by section. By January 22nd Mogadishu had improved dramatically, large scale fighting had been virtually eliminated and violent crime was much reduced.¹⁰⁶

It is noteworthy that, of the 1800 Marines in Task Force Mogadishu, only two companies were comprised of infantrymen, though nearly all of the Marines involved were called upon to act as infantry. In a reflection of the changes in training orchestrated by Al Gray five years earlier, the command chronology states that, “the fact that every enlisted Marine was trained to be a rifleman and each Marine officer was trained to be an infantry platoon commander, regardless of MOS (Military Occupational Specialty), made Task Force Mogadishu possible and helped ensure its success.”¹⁰⁷

The After Action Report from Task Force Mogadishu specifically attributed its success to the infantry/warrior training created by Al Gray. The report specifically noted that non-infantry Marines repeatedly had to perform as infantrymen in low intensity urban conflict.¹⁰⁸ Furthermore, Marine from the 3rd Amphibian Assault Battalion (3rd AAB) were consistently used as a maneuver element, a mission that they carried “flawlessly” despite this being somewhat outside of their normal range of operations.¹⁰⁹ The example of the Marines of 3rd AAB

¹⁰⁶ Ibid., 7.

¹⁰⁷ Ibid., 8.

¹⁰⁸ *After Action Report for Task Force Mogadishu*, Marine Corps University Archives, Collection 3708: Operations Other Than War, Box 1, Folder 32, 4.

¹⁰⁹ Ibid., 14.

exemplifies the ideas of Al Gray and maneuver warfare; by training all Marines to act as infantrymen the operational flexibility of Marine units was drastically increased.

Later in the year the 24th MEU(SOC) entered Southern Somalia near the city of Kismayu and began operations to quell violence in that part of the country. As in Mogadishu, the Marines quickly stabilized the area and greatly reduced violence. An analysis of the 24th MEU's operations in Southern Somalia concluded that, "the operational success of the MEU through the creative use of forces in an ill-defined peacekeeping environment yielded the desired strategic results in their theater of operations."¹¹⁰

With the benefit of hindsight it is clear that the Marines did not bring a lasting peace to Somalia, a nation still riven by internal conflicts today. Though this is undoubtedly true this cannot be placed on the shoulders of the Marine units that operated there, as they accomplished a series of difficult missions in accordance with a new operational doctrine.

In the three primary cases presented, Desert Storm, Sea Angel, and Restore Hope, the operationalization of maneuver warfare in Marine units is demonstrated clearly. In Desert Storm the application of maneuver warfare, at the very least in the case of the 1st MARDIV, is inarguable, and demonstrates the effect that the adoption of maneuver warfare had on the Marine Corps as a whole. In the case of Sea Angel, the functional adaptability stressed by military reformers was put on display, while in Somalia, the Marines demonstrated their ability to use the MAGTF as "the vanguard of the Nation's foreign policy."¹¹¹ In terms of doctrine and

¹¹⁰ Michael R. Richards, *Campaigning in Southern Somalia: Actions of the 24th Marine Expeditionary Unit from 27 March to 25 April 1993*, Marine Corps University Archives, Collection 3708: Operations Other Than War, Box 2, Folder 32, 12.

¹¹¹ *Ibid.*, 1.

employment then, clearly an effective and quantifiable reform had occurred within the Marine Corps, similarly, technological innovation was occurring as well.

Technology

Maneuver warfare required better vehicles, both on land and in the air, to counter the possibility of wither defensive firepower. This applied to both conventional and amphibious operations. While the Marine Corps adopted many new technologies during the period examined, two innovative technologies stand amongst the rest, the LAV and the MV-22 Osprey. These cases are radically different; the LAV was an established technology that the Marine Corps merely acquired and applied, while the Osprey was a controversial, expensive, and time-consuming research and development project which produced the only major technology of its kind.

Procurement of the LAV was driven almost entirely by one man: Al Gray. Gray had seen German reconnaissance vehicles in action during NATO exercises, and noted that the Marines had no ground equipment that could keep up with it.¹¹² Soon after his return from these exercises, the Commandant released a requirement for the procurement of a light armored vehicle, and Gray set about looking into established technologies. Using the manic energy that shocked his superiors and wore out his subordinates throughout his career, Gray quickly selected General Motors of Canada's Pirana; he then acquired six vehicles for testing, bypassing most of the rules of procurement to save time.¹¹³ After personally taking part in testing the vehicles at Marine Corps Base Twentynine Palms, Gray was able to arrange the procurement of LAVs for

¹¹² Col. Gerald H. Turley, *The Journey of a Warrior*, 122.

¹¹³ *Ibid.*, 126-127.

the Marine Corps, eventually including three regular battalions and one reserve battalion of LAVs.

Gray believed that the LAV had great potential for increasing the Marine Corps' ability to conduct maneuver warfare, and their performance in Operations Just Cause and Desert Storm proved him right. Millett actually refers to the LAV as the, "(t)he most dramatic addition to the Marine Corps' mobile firepower."¹¹⁴ In Just Cause the LAVs, "transformed Marine Forces Panama from a stationary base defense force into a maneuver force..."¹¹⁵ The LAVs also repeatedly executed amphibious crossings of the Panama Canal to demonstrate their capabilities. The LAVs speed and maneuverability, combined with its 25mm Bushmaster Chaingun, made it the perfect platform for executing armored reconnaissance, the role that it played in Desert Storm.

In Desert Storm the Light Armored Infantry (LAI) Battalions were used to screen the heavier forces of the main push. 1st LAI Battalion, designated as Task Force Shepard, was initially used as a forward screen for the initial Marine forces in Saudi Arabia. The first sustained ground combat of the Persian Gulf War occurred when 1st and 2nd LAI Battalions turned back an Iraqi probe in force.¹¹⁶ Where the LAVs specifically fulfilled a maneuver warfare function in Desert Storm was in the location of surfaces and gaps.¹¹⁷ Surfaces and gaps is a maneuver warfare term derived from the German *Flaechen and Luekentaktik*, the study of which is the topic of Mike Wyly's first lecture on tactics in the appendix to William Lind's *Maneuver*

¹¹⁴ Allen R. Millett, *Semper Fidelis*, 619.

¹¹⁵ Edwin Howard Simmons, *The United States Marines*, 282.

¹¹⁶ J. Robert Moskin, *The U.S. Marine Corps Story*, 780.

¹¹⁷ *Ibid.*, 783.

Warfare Handbook.¹¹⁸ While the LAV was not specifically designed for this purpose, nor was it the only armored platform capable of carrying out such a mission, the fact that the LAV was acquired through the actions of a maneuverist, fit into the mechanization advocated by maneuverists, and then was used in a manner consistent with maneuver warfare indicates the level of connection between the vehicle and the conceptual framework. This, combined with the numerous instances of employment of the LAV during the period examined, make it very easy to assess the LAV as a technological innovation tied to the greater institutional adaptation that took place concurrently. This is not the case with the MV-22 Osprey.

The Osprey program, as has been the case with many experimental military technology programs, took an egregious amount of time to go from concept to useful military platform. In 1979 the Marine Corps made the decision to delay the replacement of its aging fleet of CH-46 helicopters in order to pursue the development of a radically new and innovative medium-lift option, called the tiltrotor.¹¹⁹ The tiltrotor platform was to be the air component to complement the existing surface component, the LCAC, in engaging in over-the-horizon amphibious assault.¹²⁰ The Osprey program had significant advantages over the CH-46, most important being speed (approximately 250 knots) and range (round trip capability of over 2000 miles), without sacrificing payload.¹²¹ While these statistics made the Osprey appear to be a dream come true for the Marine Corps, costs skyrocketed as the experimental technology proved much harder to build

¹¹⁸ William S. Lind, *Maneuver Warfare Handbook*, 73.

¹¹⁹ Maj Dean T. Siniff, *MV-22 Osprey Transition: Bridging the Gap in Medium Lift Assault Support*, Marine Corps University Command and Staff College, Marine Corps Base Quantico, VA. 1990, 1.

¹²⁰ Allen R. Millet, *Semper Fidelis*, 623.

¹²¹ *Ibid.*

than to draw on paper. In 1989, then Secretary of Defense Dick Cheney even attempted to cancel the program, but was unable to convince congress to completely drop the Osprey,¹²² at least partly due to aggressive lobbying in congress by Marine leadership. Writing in 1990, Maj Gary Gisold argued that the Osprey was necessary to execute maneuver warfare from the sea in a modern conflict, noting that the survivability and maneuverability of the CH-46 was insufficient for the purpose.¹²³

Before Dick Cheney tried to cancel the program in 1989, then-Secretary of the Navy Jim Webb had announced his opposition to the program in 1988. Gen Gray called a meeting where he and his staff presented their reasoning for procuring the Osprey to Secretary Webb. Turley's description of the meeting makes it seem as though that one meeting was enough to change his mind; regardless of whether or not that was the case, Jim Webb reversed his decision and decided to support the continued development of the Osprey.¹²⁴ While the Osprey program faced many more hurdles over the more than 30 years of its development and deployment, the MV-22 began active operations in 1999 and has been used extensively in Afghanistan, Iraq, and throughout the world aboard MEUs.

The debate as to the cost-effectiveness of the Osprey is beyond the scope of this narrative. What is relevant is that it was a platform designed to fit the needs of maneuver warfare, advocated by maneuverists, and pursued to a successful (at least in terms of acquisition) conclusion by the Marine Corps.

¹²² Maj Dean T. Siniff, *MV-22 Osprey Transition*, 1.

¹²³ Maj Gary Gisold, "The V-22 and the Future Threat," *Amphibious Warfare Review*, Vol. 8. No. 1, Spring 1990, 18.

¹²⁴ Col. Gerald H. Turley, *The Journey of a Warrior*, 323. It is important to note the intensely personal nature of Col Turley's biography of Al Gray, as he was an active participant in many of the events he describes, including that meeting.

The examples of the LAV and MV-22 present radically different technological innovations: one was generally considered painless and cost-effective, the other monumentally difficult and expensive. However, both demonstrate the continued innovation in the Marine Corps stemming from an ideological shift. It is unlikely that the Osprey would have been pursued so vigorously by the Marine Corps had it not been for the fact that its capabilities matched the doctrinal thought of the institution so well. The LAV represents a much more quantifiable example of the influence of maneuver warfare over technological innovation, as it met numerous criteria set by maneuverists for equipping the force to better conduct maneuver warfare.

V. Conclusion

This narrative examined the manner in which the Marine Corps underwent a fundamental shift in thought and action through a top-down, bottom-up approach to innovation. While some would credit Al Gray with the preponderance of responsibility for the adaptation that occurred, this is an oversimplification. Certainly, Al Gray was one of if not the prime mover, but numerous Marines of varying ranks and statures contributed to changing the way the Corps conducted war. Even William Lind, who later became so divisive an influence that Gen Charles Krulak banned him from Quantico, deserves a measure of credit regarding the changes that occurred.

Fideleon Damian observed that, “The publication of *Warfighting* in 1989 ensured that maneuver warfare would guide the future of the Marine Corps into the next decade and it remains to the present day the organizational guiding concept that Gray had envisioned it would be.”¹²⁵ His assessment is correct, and his study of the maneuver warfare movement is excellent. However, no ideological or doctrinal movement in a professional military organization can be adequately assessed without analyzing its effect on that organization’s operations. In the major operations immediately following the adoption of maneuver warfare as capstone doctrine, the effect of the intellectual shift is quantifiable. Additionally, the technological aspects of the intellectual shift cannot be ignored, especially in the technology-centric world of modern militaries.

At the practical level, it is important to note that the doctrinal shift would have been impossible had there been no forum for intellectual debate in which it could occur. The relative openness of the Marine Corps to radical reformers indicates that while discipline and respect for rank are necessary for the maintenance of good order within a military organization, an open

¹²⁵ Fideleon Damian, “The Road to FMFM 1,” 111.

forum for professional, intellectual debate is necessary for new ideas to flourish. In the case of maneuver warfare and its associated innovations, this forum was the *Marine Corps Gazette*, and to a lesser extent *Amphibious Warfare Review* and *Proceedings: US Naval Institute*.

Innovation is difficult in any organization, and the rigidity of military structures often makes armed forces even less open to the concept. It is significant that while the intellectual shift would probably not have occurred without General Gray, it is equally unlikely that he would have been as successful as he was without an existent grassroots movement advocating reform. This indicates the necessity of bipolarity in regards to attempting radical innovation at the institutional level. The adoption of maneuver warfare and its associated innovations significantly altered the way Marines wage war and the way they think about war. The manner in which these adaptations took place indicates that the institution will continue to, to paraphrase Terry Terriff, view innovation as the only alternative to institutional death.

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