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The incorporation of maneuver warfare into every aspect of the Marine Corps as an institution has been affected since its introduction by the propensities of human nature, the western traditions of warfare, and a failure to recognize the impacts these have on the programs and systems that support the Marine Corps' operational concepts. These issues can be rectified if the service is willing to reconsider its existing industrial-era paradigm and adapt its officer selection, education, and evaluation systems to better reflect the concepts found in MCDP 1 and the underlying philosophy of maneuver warfare

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An Unfavorable Mismatch

The Inherent Conflict Between the Marine Corps' Maneuver Warfare Doctrine and its Manpower Systems

SUBMITTED IN PARTIAL FULFILLMENT
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Executive Summary

Title: An Unfavorable Mismatch: The Inherent Conflict Between the Marine Corps' Maneuver Warfare Doctrine and its Manpower Systems

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Thesis: The Marine Corps' adoption of maneuver warfare as service doctrine has been only partially successful due to its failure to consider maneuver warfare a holistic philosophy; instead remaining wedded to a system of industrial-era manpower programs emphasizing uniformity and interchangeability rather than updating those systems to parallel an operational philosophy based upon flexibility and adaptability.

Discussion: Since the adoption of maneuver warfare as service doctrine in 1989, the Marine Corps has struggled to achieve the operational and organizational flexibility required for its full implementation. While the new doctrine held significant promise for success in future conflicts, it was built upon a foundation of hundreds of years of western military tradition that relied upon uniformity and control to bring order to the battlefield. The source of much of the content of *Warfighting*, retired Air Force Colonel John Boyd, conceived a view of conflict in terms survival and dominance based upon the concepts of variety, rapidity, harmony, and initiative – all employed and exploited to create an environment in which the enemy cannot function as an organic whole. The successful practitioner of maneuver warfare must continuously adapt to an ever-changing enemy and environment while working to undermine and overwhelm the enemy's ability to do the same. The pursuit of order in a chaotic world is an inherently human characteristic; however, order can breed predictability and complacency – both of which are deadly to a military organization. The desire for control and uniformity in the Marine Corps, while anathema to the concept of maneuver warfare, is the product of a deeply-rooted western military culture constructed over thousands of years. Viewed through the lens of Boyd's OODA Loop construct, the institutional "orientation" of the Marine Corps has been affected by the "genetic heritage," cultural traditions, and past experiences of the service, which further affected the incorporation of the "new information" represented by maneuver warfare doctrine into the Corps' institutional decision-making cycle. The desired flexibility and adaptability of Marine Corps tactics and operations via the officer corps has been limited by entry-level training, professional military education, and the performance evaluation system, through which maneuver warfare leaders are selected, educated, and retained and advanced. As the "brain trust" of the Marine Corps, as goes the officer corps, so goes the organization.

Conclusion: The incorporation of maneuver warfare into every aspect of the Marine Corps as an institution has been affected since its introduction by the propensities of human nature, the western traditions of warfare, and a failure to recognize the impacts these have on the programs and systems that support the Marine Corps' operational concepts. These issues can be rectified if the service is willing to reconsider its existing industrial-era paradigm and adapt its officer selection, education, and evaluation systems to better reflect the concepts found in MCDP 1 and the underlying philosophy of maneuver warfare.

DISCLAIMER

THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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Preface

Four years ago, as I prepared to execute orders to Marine Officer Instructor duty, a mentor – a former Marine infantry officer – sent me a copy of John Boyd's *Patterns of Conflict*. Despite its centrality to MCDP 1 and my having passed through entry-level training and multiple enlisted and officer PME schools in my 17-year career, I had never heard of *Patterns* and all I knew of Boyd was that he had developed the OODA Loop. Reading through it, I was struck by the apparent disparity between our foundational doctrine and our practice of it. Provided the opportunity to study it further, I have sought to identify and understand the reasons for the mismatch between doctrine and practice. This paper is my attempt to explain what I have learned. If Boyd were still alive today, I think he would be pleased to know that a new generation of military professionals is studying his work – and building new "snowmobiles."

My acknowledgement and thanks are due to several people who helped me through this project. First and foremost, to John Stann, who sparked my interest in Boyd and set me on this path of discovery. Thanks are also due to LtCol Shawn Callahan, who introduced me to Chuck Spinney and indirectly helped me shape the direction of this paper. I'm also in debt to Ian Brown, whose book provided a foundation upon which I could build, and who provided additional references and suggestions along the way. To my MMS advisor, Dr. Paul Gelpi, I owe a debt of gratitude for his recommendations, insights, and above all patience throughout this process. Lastly, my deepest thanks and appreciation go to my wife, Heidi, who (mostly) tolerated the time and energy I've poured into this project, discussed ideas (certainly her favorite role), and bore the burden of the homefront while we prepared for an overseas PCS. Likewise to the Wildelings, who grudgingly accepted that daddy had homework to do. When you're bigger, I'll teach you all about OODA Loops, shaping and adapting, and all the rest of it.

Introduction

> *The Marine Corps can talk about maneuver warfare but has not institutionalized an ability to do maneuver warfare.*[1]
>
> – Report on TECOM Workshop 2017-01: *Reinvigorating Maneuver Warfare through Education and Training*

Since the adoption of maneuver warfare as service doctrine in 1989, the Marine Corps has struggled to achieve the operational and organizational flexibility required for its full implementation. While the new doctrine held significant promise for success in contemporary and future conflicts, it was constructed upon a foundation of hundreds of years of western military tradition that relied upon uniformity and control to bring order to the battlefield. Retired Air Force Colonel John Boyd, whose studies and theories informed much of the content of Fleet Marine Force Manual (FMFM) 1 *Warfighting*, conceived a warfighting philosophy based upon the concepts of variety, rapidity, harmony, and initiative, which could be employed together to create an environment in which the enemy could not function as an organic whole – a concept that would become known as maneuver warfare.[2] While the debate about the value and legitimacy of maneuver warfare philosophy continues, contributing to that debate is not within the scope of this paper; rather, it simply examines how well the Marine Corps practices its established doctrine and offers explanations for the mismatches between expectation and reality.

The successful practitioner of maneuver warfare must continuously adapt to an ever-changing enemy and environment while working to undermine and overwhelm the enemy's ability to do the same. Flexibility is a central requirement of maneuver warfare, and yet the Marine Corps' practice of this method of fighting has been plagued by tendencies that are rigid, linear, and systematic – the very traits maneuver warfare was intended to exploit and overcome. This disparity, while far from ideal, is understandable given the biological and sociological factors that affect individual and collective human behavior. The pursuit of order in a dangerous

and chaotic world is an inherently human characteristic; however, such order can be a two-edged sword to a military organization. On one hand, organized violence and predictable responses are far more effective at achieving war's intended political purposes. On the other hand, order tends to breed predictability and complacency – both of which can be deadly to a military organization.

The institutional desire for strict control and uniformity in the Marine Corps, while anathema to the concept of maneuver warfare, is the product of a deeply-rooted western military culture constructed over hundreds of years. The desired flexibility and adaptability of Marine Corps tactics and operations have been blunted by rigid and linear entry-level training, manpower systems, planning processes, field exercises, equipment procurement, and many other areas critical to the effectiveness of the force. The current Commandant, General Robert Neller, has petitioned his service for innovative ideas and concepts, but has overlooked the fact that existing doctrine assumes innovation as a normal part of Marine Corps culture. If innovation is lacking across the Marine Corps, it is a systemic shortcoming that must be corrected by an institutional change. While painful and disruptive, such a change is required if the Marine Corps is to be successful on and off the battlefield and prepared for an uncertain future.

When the Marine Corps adopted *Warfighting* as its capstone doctrine in 1989 it promulgated an entirely new understanding of not only how the Marine Corps should fight, but of the very nature of war itself. Drawing concepts from a plethora of sources from Clausewitz to Sun Tzu, it represented a hybrid of eastern and western thought about war and sought to distill an understanding of conflict common to all of humanity across all eras and locations. As Major Ian Brown explains in the introduction to his book *A New Conception of War*, "…the Marine Corps stood alone among the other Services in having as their capstone doctrine something that was not really doctrine at all but a theory of conflict with all the temporal endurance that the most

valuable theories enjoy…"[3] This achievement is all the more noteworthy in that much of the language and conceptual framework found in FMFM 1 (revised and republished as MCDP 1 in 1997) came from a retired Air Force colonel.

In the years following his retirement from active duty in 1975, John Boyd immersed himself in extensive study and thought about conflict; drawing from an incredible array of intellectual disciplines that included philosophy, psychology, history, military theory, biology, physics, and mathematics. More significant than the simple content of the subject matter was the web of interrelations Boyd found to connect them. Compiling his discoveries into what began as a 5-hour brief entitled *Patterns of Conflict*, Boyd delivered the presentation to an audience that grew and diversified to include military officers, civilian officials, congressional staffers, writers, and anyone else who was willing to sit through it. Two particular recipients of the brief would go on to play significant roles in the Marine Corps' introduction to Boyd's ideas and the adoption of maneuver warfare as its definitive operating concept: congressional staffer and military historian Bill Lind and the future 29th Commandant of the Marine Corps, Colonel Alfred M. Gray Jr.

Patterns of Conflict is a wide-ranging study of military history and theory built upon the more abstract foundation of Boyd's attempts to understand the workings of his own mind – particularly how he had developed the Energy-Maneuverability Theory (with mathematician Tom Christie) that had offered a new and better way to evaluate and design fighter aircraft, while Air Force aeronautical experts had not.[4] His studies of learning theory and cognition took him far afield intellectually and into the worlds of mathematical theory, quantum physics, and thermodynamics to arrive at the conclusion that in order to "comprehend and cope with our environment, we develop mental patterns or concepts of meaning" that must be repeatedly destroyed and recreated "to permit us to both shape and be shaped by a changing environment."[5]

Boyd expanded the concept of coping with one's environment to include the biological pursuits of survival and an increased capacity for independent action, and then into an exploration of the theories of Charles Darwin and a conception of conflict as the result of competition between organisms in a constrained environment.[6] He captured these groundbreaking theories in his only written work: a short paper entitled *Destruction and Creation*.

When Boyd's work met with the wartime experiences of Marine Vietnam veterans and maneuver warfare practitioners like Colonel Al Gray and Major Mike Wyly, theory reconciled with practice to yield a working philosophy that captured the barest fundamentals of war and the Marine Corps' best answer as to how it could operate within those fundamentals. As the Marine Corps struggled to reinvent itself in the aftermath of Vietnam, its defining characteristics would evolve from a history of raw courage and tenacity into an intelligent and adaptive warfighting organization that could meet the demands of war and the requirements of the nation in the modern era. For an organization working to remain useful in the post-Vietnam world, maneuver warfare made effective use of the Corps' Marine Air Ground Task Force construct, expeditionary mindset, and emphasis on leadership throughout the ranks, while also offering a means by which the smallest service in the Department of Defense could fight above its weight class and win.

Despite the revolutionary conceptualization and adoption of maneuver warfare by the Marine Corps, this doctrinal leap was not accompanied by an equally revolutionary overhaul of the institutional systems required to support its operating concepts. No deliberate overhaul of entry-level training, manpower management, equipment procurement, planning processes, or even service ethos took place within the Marine Corps at that time. Boyd's conception of maneuver warfare focused heavily on the workings of the human mind, nonlinearity, and the necessity of adaptability to survive and dominate, yet many of the systems identified above are

firmly anchored in the history of industrial-era mass armies, in which standardization, rigidity, and linear assembly-line processes were embraced as the highest representation of military efficiency. In this context, a new philosophy rooted in the art of war was limited by an institutional preference for the science of war.

By failing to reinvent these and other supporting systems, the Marine Corps essentially built a new warfighting philosophy upon an old foundation with which it was inherently at odds. To understand the characteristics and nuances of maneuver warfare and adapt the service's supporting systems to provide an appropriate foundation for it, significant consideration must be given to human nature, historic military culture, and the circumstances surrounding the Marine Corps' adoption of the new doctrine. The Marine Corps must study how these elements affected and continue to affect its institutional orientation per Boyd's well-known Observation-Orientation-Decision-Action (OODA) cycle, and must understand the complexity of the "many-sided implicit cross-referencing process of projection, empathy, correlation, and rejection" that led it to adopt maneuver warfare and which affect how that philosophy was adopted throughout the force.[7] Its prior failure to accomplish this is the source of the unfavorable mismatch that currently exists between the old and the new, structured rigidity and unpredictable adaptability, linear process and nonlinear complex adaptive systems, which yields an unmitigated inherent conflict between a revolutionary warfighting philosophy on one hand and the fundamentals of human nature and an unchallenged military cultural paradigm on the other.

The Problem of Nature

> *The quest for control is very deeply rooted in the human psyche, and it deserves a prominent place in any account of human motivation. People want to have control; they like to gain it; they resist losing it; and they are better off when they have it.*[8]
>
> – Roy F. Baumeister, *The Cultural Animal*

It seems appropriate to begin this study as Boyd began his: with an understanding of human nature. In *Destruction and Creation,* he argues that the overarching goal of human nature is to improve one's capacity for independent action, which allows one to survive, survive on one's own terms, and ultimately to dominate and conquer in conflict.[9] In humans, as in most organisms, the ability to recognize patterns serves as a survival mechanism that allows them to learn and fulfill their most fundamental needs of survival – including finding sustenance and avoiding or eliminating threats – and continuing their species.[10] Humanity has evolved this ability to a literal science, developing the ability to analyze information gleaned from a diverse set of sensory inputs, fit that information into a mental construct (or paradigm), and synthesize it into a concept necessary for both survival and advancement. The ability to not only identify patterns, but to learn from them and to create and manage them in the pursuit of order is one of the traits that sets human beings apart from the rest of the animal kingdom.

The pursuit of order and stability is present in nearly every human activity, from individual behavior through the layers of collective behavior and organization which form the constructs of human society. In his book *The Cultural Animal*, social psychologist Roy Baumeister offers that "Life is change that yearns for stability, and many human activities seem designed to make the environment more stable."[11] From birth, infants display a predisposition for a regular routine of feeding and sleep. In adulthood people establish regular routines, habits, and relationships, which if disrupted can cause varying levels of distress or anxiety. In old age, the ability to cope with change appears to decline in many people. In human social models, the pursuit of order provides a stable and predictable environment which allows that society to plan ahead and prepare for the future – particularly regarding periods of limited availability of food.[12] As the ability of mankind to organize in ever-larger collections grew from family groups of

hunter-gatherers to modern industrialized nation-states, the desire for greater order, stability, and predictability grew with it.

Further elaborating on human nature in *Patterns of Conflict*, Boyd states that the pursuit of survival, survival on one's own terms, and the improved capacity for independent action in a resource-constrained environment may lead to a diminished capacity for others to do the same, which ultimately results in conflict.[13] While interpersonal and intersocietal conflict is certainly common, it is easily observable that human interaction is not defined by conflict alone. In many cases, human beings find it not only desirable, but necessary to cooperate in order to collectively achieve the goals Boyd describes. Social scientists Jung-Kyoo Choi and Samuel Bowles use the term "parochial altruism" to define the behavior of engaging in self-sacrificial behaviors within a group in order to cooperatively oppose another group.[14] In explaining the sociological aspects of military service in his book *The Soldier and Social Change*, Jacques van Doorn echoes this fundamental concept as he describes the pursuit of organizational battlefield efficiency by individual soldiers, concluding that "what he loses in personal liberty by participating in the collective effort, he regains by sharing in the collective results."[15]

From these points, it becomes evident that the desires for order, control, and predictability are inherent to human nature and that any organization comprised of humans would tend to reflect these proclivities. Since collective security and conquest are most effectively accomplished by cooperative effort, it follows that the organizations established by societies to pursue those goals – their military forces – should follow the same pattern.

Order in the Military

> *Their notion of training was to march the men up and down in parades and reviews: these were nice to look at and gave them the impression of military discipline and precision, but as a preparation for a modern war they had no value whatsoever.*[16]
>
> – Orlando Figes, *A People's Tragedy*

From the earliest days of organized military forces, the importance of establishing order and control has been viewed as an imperative for effectiveness in battle. A review of history reveals that in most cases, the better-ordered forces were able to survive and dominate in times of conflict, or at a minimum were able to maintain the cohesion required to prevent their wholesale destruction. Examples abound, from the phalanxes of the Greeks, to the legions of Rome, to the tradition-bound regiments of the British Empire, to the field armies on both sides of World War II. In one way or another, each was able to succeed or avoid destruction on the battlefield through superior organization in one or more aspects of their military system. This trend for order and control has sustained the paradigm established long ago that equates military success with uniformity of thought, purpose, and action. These qualities mark the difference between a warrior and a soldier – that the former fights as an individual while the latter fights as part of an ordered unit.[17]

Some of the first elements of standardization employed by western military forces were those of discipline and drill. Somewhat counterintuitively, Victor Davis Hanson points out in *The Western Way of War* that drill was not particularly important for the successful employment of the phalanx due to the simplicity of the method of fighting.[18] While intermittent in most of the citizen militia armies of the Greek city-states, even limited amounts of training and drill helped to both ensure that each hoplite had a basic understanding of how to function as part of the organization and to sufficiently enable the basic maneuver of the somewhat unwieldy phalanx formation on the battlefield. In phalanx fighting, simple drill concepts like "cover" and "alignment" had very real consequences if not maintained, and a breach of discipline by a member of the front rank could create a literal breach in their overlapped shields and quickly spell ruin for the entire formation. F. E. Adcock points out in *The Greek and Macedonian Art of*

War that the collective security and potential success of the phalanx depended heavily upon the maintenance of order and cohesion; exemplified by individual courage, endurance, and forbearance in the face of the enemy in order to hold position and maintain the integrity of the formation.[19]

In contrast with their fellow Greeks, the Spartans maintained a standing army and are most remembered for their legendary skill and discipline on the battlefield; a reputation developed and maintained through a system of savage discipline and frequent drill that began in childhood with the *agoge*. Perhaps because such dedication to the military art was unusual in that time and region, the Spartans were able to dominate the Greek battlefields for more than three centuries.[20] Two relevant points may be drawn from the period of Spartan dominance: First, that those who desire success in the future often study others who were successful in the past, and that the discipline and martial skill of the Spartans during that period would serve as an example worth emulating to those building military organizations in later years. Second, that Sparta's success during that time was the product of a holistic political, economic, and social system built to accomplish the single purpose of victory in battle. Like the Spartans, the Marine Corps had a deeply ingrained tradition of discipline and military skill when FMFM-1 was published in 1989; however, it missed the significance of the second lesson to be drawn from Sparta's success when it did not consider its new warfighting concept as part of a holistic system, instead adopting a new operational model without adapting the institutional structures required to support it.

In addition to the uniformity of action sought through rudimentary drill and discipline, a measure of uniformity in equipment and appearance also emerged in the Classical era. The citizen militia model used by early Greek armies began a tradition of property-owners providing their own kit, and while general norms of style and construction existed, variations in quality and

appearance according to economic status were common. In Rome, the responsibility to serve remained restricted to citizens; however, the Marian reforms of the late Republic permanently eliminated the minimum property requirement for enlistment and the pool of *capite censi* – primarily the urban poor and unemployed – was tapped to fill the ranks of the legions.[21] The responsibility to procure one's own equipment remained, but that equipment was often produced by the legion's own smiths or under contract with a local manufacturer and the cost of purchase deducted from the soldier's wages.[22] By these expedients uniformity was relatively localized rather than general, as the manufacture of arms and armor remained the province of artisans and skilled laborers and the equipping of the legion the responsibility of its commander.

Commonality of arms and equipment provides several benefits: it simplifies the commander's job of equipping his force, makes repair and maintenance easier, and improves the aesthetic of the organization on parade – a visual representation of a unified purpose. Most importantly, commonality provides a measure of predictability in individual and collective performance; allowing the commander to make informed decisions about the capabilities and limitations of his force that enables battlefield success and helps to avoid disaster. The practice of equipment uniformity and common supply persisted through Rome's transition to permanent standing armies in the Imperial period and subsequently served as a model for later state-sponsored military formations in the Renaissance and beyond.

Following the collapse of the Roman Empire, the Middle Ages saw a return to temporary armies raised by rulers for particular campaigns or fighting seasons. The resurgence of classical thought during the Renaissance brought with it a broader utilization of standing military organizations, both as mercenary units and as state armies. The old formations of the Greeks and Romans were resurrected and adapted to the needs of the contemporary battlefield, along with

basic tactics and regulations. The introduction of gunpowder to the battlefield also necessitated the rebirth of drill and discipline, as their most effective employment required massed musket volley fire.[23] The 1619 drill manual *The Exercise of Arms* sponsored by Maurice, Prince of Orange was copied widely in that era and persists in modified form even to the present day. One need only visit a Marine Corps Recruit Depot or the Officer Candidates School to see formations performing the manual of arms, marching in line and column, and executing barked commands with the crispness and discipline required for tactical success in the seventeenth and eighteenth centuries. Interestingly, this particular military anachronism remains the yardstick by which Marine recruits are often measured – even to the extent that those responsible for Marine entry-level training are still identified as "Drill Instructors" – and preserves the western military ideal of unhesitating obedience and individual discipline.

The characteristics of the pre-industrial military culture and tradition, specifically those of uniformity, drill, and discipline, persisted into the industrial armies of the nineteenth and twentieth centuries. As with the Spartans, successful armies became exemplars to be copied, and the refinement of the western military tradition continued into the industrial age. It was during this period that emergent technologies like wire communications and fossil fuel engines forever changed the character of war, allowing states to raise, outfit, transport, sustain, and control the largest armies ever fielded. Eli Whitney's concept of interchangeable parts and the assembly line model that produced endless copies of military equipment items with such efficiency would be adapted to produce soldiers as well.

When considering the service culture of the modern Marine Corps and the Department of Defense writ large, many of the characteristics of military organizations that emerged over centuries of military history are readily observable. The trappings of everything from a heavy

emphasis on drill and instant obedience to orders at the Recruit Depots, to the systems of supply and manpower management, and even to the inculcation of the individual warrior ethos and ethical conduct in war appear in daily practice around the Corps. A warfighting philosophy based on adaptability, irregularity, and nonlinearity cannot be brought into full effect without first breaking down these elements, evaluating their usefulness and coherence with regard to the overarching philosophy, and rebuilding the foundations of the Marine Corps military culture.

The Inherent Contradiction

> *If you're regulated, you're non-adaptable. With that adaptability then, then you can go after the chink in your foe's armor, in other words strength against weakness. So the idea here is adaptability, strength against weakness. That's the whole message of the whole thing.*[24]
>
> – John Boyd, *Patterns of Conflict*

John Boyd's consistent emphasis on adaptability highlights the disparity between the human pursuit of order and control and what is arguably the central concept of maneuver warfare. If war is in fact a human endeavor as *Warfighting* states, it is imperative to recognize how human tendencies originating from nature and socialization have shaped, and continue to shape, military institutions and how those institutions must change to support an evolving concept of warfighting. This is Boyd's central theme in *Destruction and Creation*: the destruction of existing mental models is simply part of the continuous process by which individuals and organizations may recombine the components of those models into wholly new concepts. Furthermore, the modern military – the Marine Corps in particular – does not exist as a single homogenous entity. It is by nature a complex system of systems, a type of organism that must continually adapt to its ever-changing environment or perish.

The qualities that Boyd determined to be most relevant to any organism attempting to survive in a competitive environment are variety, rapidity, harmony, and initiative.[25] In his

conception, an organism must possess a variety of responses to environmental stimuli and employ them rapidly enough to obtain sustenance, avoid or counter threats, and reproduce. Furthermore, organisms pursuing common goals are best served if they relinquish a portion of their capacity for independent action and join in a harmonious effort – the cooperative pursuit of a common goal – to benefit all involved. Lastly, an organism cannot remain passive in adapting to its environment but must take initiative to pursue its goals or risk being overwhelmed by the environment or competitors. The essence of maneuver warfare embodied in Marine Corps warfighting doctrine lies in the fundamental adaptability enabled by these four qualities.

Despite its centrality to maneuver warfare and somewhat regular practice at the tactical level, adaptability is a quality that generally decreases as the echelon of command increases in the American military system. Just as it is difficult to turn a battleship on a dime, the larger an organization, the greater the institutional inertia and the greater the difficulty in changing direction. Where Boyd calls for harmony and variety, the system is designed to support control and uniformity. All of the services come by this naturally as the product of human nature and over a millennium of western military tradition.

One of Boyd's major complaints about the Army's 1982 FM 100-5 *AirLand Battle* doctrine was the inclusion of "synchronization" as one of its foundational concepts. He viewed synchronization as but one element of harmony and reinforced the idea that that war is fundamentally a human endeavor; stating that "You don't synchronize human beings, you synchronize watches."[26] This may seem like mere semantics, but the Greek etymology of *syn*, meaning "with," and *kronos*, meaning "time," indicates an emphasis on elements or individuals performing simultaneous action. Emphasizing the temporal aspect of coordination misses much of the nuance of Boyd's Confucian concept of harmony, which emerged from an idea of

mutually promoting, complementing, and stabilizing interaction, as in music.[27] Synchronization emphasizes only uniformity of action and simultaneity, while harmony embraces the complementary interaction of diverse elements for a common purpose. An industrial military culture of standardized interchangeable people and equipment and repeatable processes may assist in providing predictable outcomes, but it does not support the adaptability required for the successful practice of maneuver warfare.

Perhaps the most crippling aspect of the adherence to the industrial military model is a focus on the physical aspect of war that exist in definitive time and space, rather than the mental and moral "mind" aspects that Boyd – and the theorists he referenced – described as being much more important. Within the focus on the physical an additional contradiction emerges: the proponents of maneuver warfare frequently refer to the German *blitzkrieg* as an exemplar of tactical/operational maneuver, and yet the Germans failed to coalesce their operational victories into strategic success. American firepower, industrial capacity, and available manpower won the day in Europe – but at an astonishing cost. Even following a strategic defeat in Vietnam and seeking a better operational construct to employ against the Soviets, the US only learned half of the lesson; recognizing the value of maneuver warfare but remaining wedded to the employment of firepower and the pursuit of physical destruction, rather than using every available capability to unhinge the enemy mentally and morally as Boyd emphatically professed.

Even with the highly effective execution of operational-level maneuver warfare by the United States in Operation Desert Storm, the fact that the Iraqi army came completely unglued before it was decisively engaged by ground forces was largely overshadowed by a fixation on the role of firepower and physical destruction in achieving that outcome. In adjacent articles in the June 1991 *Marine Corps Gazette* retired Marine Colonel J. J. Edson and Major Cary R. Cheston

wrote fawningly of the decisive role that firepower and attack aviation had in that conflict; however, only Cheston obliquely acknowledges that the true impact of the devastating air campaign was not overwhelming destruction of personnel and equipment, but of the enemy's will to fight.[28]

The goal of maneuver warfare philosophy, as stated in MCDP 1, is to "render the enemy incapable of resisting by shattering his moral, mental, and physical cohesion" and to induce "panic and paralysis."[29] It goes on to describe the process of the OODA Loop, and the need to achieve a higher operating tempo than the enemy in order to seize the initiative and relegate the enemy to a constant state of reaction. Part of the misapplication of this concept stems in large part from the overly simplistic way in which it is represented in Marine Corps doctrine, a point well explained by Major P. J. Tremblay in his paper, "Shaping and Adapting."[30] Franklin "Chuck" Spinney's "Evolutionary Epistemology" brief further details how the full and nuanced OODA Loop functions, and how it can be influenced to induce the "panic and paralysis" sought in maneuver warfare. The enemy's observation can be distorted through active deception, and by confirming his biases he can be induced to accept "incestuous amplification," thus preventing him from accurately orienting and determining the nature of the crises he faces.[31] This is an objective that must be pursued in the mental, moral, *and* physical realms – a fact that becomes more relevant in an age of conflict where physical confrontation is becoming less likely than engagement in the cyber, electromagnetic, and information domains.

To some extent, the Marine Corps has itself fallen captive to the "incestuous amplification" that Chuck Spinney describes – a tendency that is natural, but mitigable if recognized and addressed. The list of elements Boyd includes in the "orientation" step of the OODA Loop includes genetic heritage, cultural traditions, previous experiences, new

information, and the analysis and synthesis of all of these elements.[32] The Marine Corps must acknowledge the existence of an institutional OODA Loop and the significant impact of its own "genetic heritage," cultural traditions, and previous experiences on how maneuver warfare philosophy was introduced in the 1980s and how it has been practiced since.

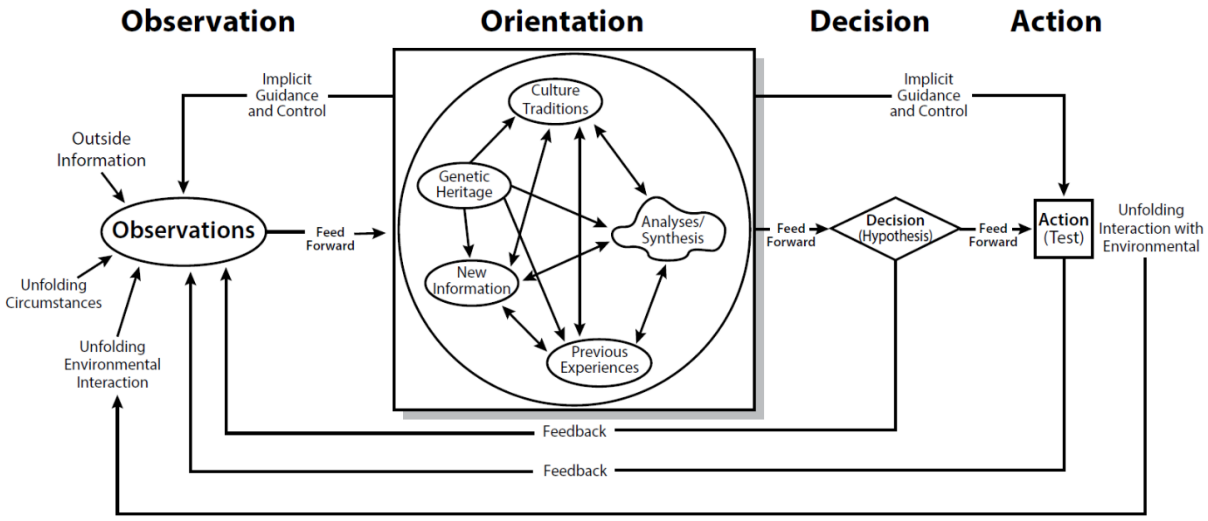

Figure 1: Boyd's OODA Loop

Maneuvering Manpower

> *I expect every officer to read and reread this book, understand it, and take its message to heart. The thoughts contained here represent not just guidance for actions in combat, but a way of thinking in general. This manual thus describes a philosophy for action which, in war and in peace, in the field and in the rear, dictates our approach to duty.*[33]
>
> – General Alfred M. Gray, 29th Commandant of the Marine Corps, Foreword to FMFM 1 *Warfighting*

In October 2016 Marine Corps Training and Education Command conducted a symposium at the behest of Commandant of the Marine Corps, General Robert B. Neller, to answer the question "Are we really doing maneuver warfare?" The conclusion was straightforward: "No. The Marine Corps can talk about maneuver warfare but has not institutionalized an ability to do maneuver warfare."[34] The report goes on to outline a variety of issues that contribute to this shortcoming, with a focus on the training and education programs

that support the Marine Corps' operational capabilities. As maneuver warfare philosophy centers on human will and decision-making, it is beneficial to look beyond just the training and education systems in particular and consider the broader area of manpower as a system and consider also the functions of officer selection, education, and promotion and retention.

The 1997 revision of *Warfighting*, redesignated as MCDP 1, provides a great deal of insight as to the characteristics that make a successful leader in maneuver warfare. In its chapter on the conduct of war, it concludes that traits such as endurance and courage are relevant to all warfare, but that maneuver warfare "puts a premium on certain particular human skills and traits," to include an ability to cope with uncertainty, flexibility of mind (adaptability), independence, willingness to act with initiative and boldness, a mindset to capitalize on fleeting opportunities, and the moral courage to accept responsibility for all of the above.[35]

From a personnel management perspective, it appears that little change was made at the time *Warfighting* was first introduced. The revised MCDP 1 states that "since war is at base a human enterprise, effective personnel management is important to success. This is especially true for a doctrine of maneuver warfare, which places a premium on individual judgment and action."[36] It is worth noting that FMFM 1 did not include this section on personnel management – a significant omission, given the centrality of human factors in maneuver warfare. The question is whether the Marine Corps' current programs for screening, selecting, educating, and promoting and retaining Marines – particularly officers – have been brought into alignment with the philosophy described in its capstone doctrine.

As previously discussed, western military history and traditions place a heavy emphasis on uniformity, drill, and discipline – particularly in entry-level training – however, a balance between these characteristics and those required to lead Marines in the conduct of maneuver

warfare is critical to the selection of the Marine Corps' prospective officers. The Marine Corps Officer Candidates School (OCS) lists as its mission "to educate and train officer candidates in Marine Corps knowledge and skills within a controlled and challenging environment in order to evaluate and screen individuals for the leadership, moral, mental, and physical qualities required for commissioning as a Marine Corps officer."[37] Credit is due OCS for recognizing the mental, moral, and physical realms of conflict in its mission statement; however, the school's methods for evaluating leadership qualities in these realms do not fully encompass what is required to meet the demands of its mission statement.

The evaluation guidelines for the school's Small Unit Leader Evaluation (SULE) II – essentially the culminating event in an officer candidate's leadership evaluation – do not mention adaptability, critical thinking, or problem-solving. Instead, the evaluation focuses almost wholly on a candidate's ability to "decide, communicate, and act" in a timely manner, in the proper format with appropriate "command presence," and with sufficient aggression.[38] To effectively screen and evaluate candidates with the potential to lead Marines in maneuver warfare, consideration must be given to the reason behind a particular decision and the appropriateness of that decision, with emphasis on substance over process. Upon completion of the evaluated event, the instructor's critique should follow the model described in the "Training" section of MCDP 1 and addresses the process by which the decision was made and the success of its results.[39] Deliberate evaluation of a candidate's adaptability, critical thinking, and problem-solving must be part of the process of identifying and evaluating Marine officers.

After commissioning, the education of Marine lieutenants continues at The Basic School (TBS), which states as its mission to "Train and educate newly commissioned or appointed officers in the high standards of professional knowledge, esprit-de-corps, and leadership to

prepare them for duty as company grade officers in the operating forces, with particular emphasis on the duties, responsibilities, and warfighting skills required of a rifle platoon commander."[40] The TBS website lists five "horizontal themes" that define a Marine officer, all of which are true and valuable; however, none of them describes any characteristics that relate specifically to the practice of maneuver warfare.[41]

Since *Warfighting* receives only a superficial introduction at OCS, it is fitting that the Marine Corps foundational doctrine would receive much deeper treatment at TBS, which serves as the foundational education for all Marine officers, regardless of commissioning source or contract type. A *Marine Corps Gazette* article written by The Basic School staff in March 1989 indicates that maneuver warfare was already part of the Program of Instruction (POI) at the time the new doctrine was published.[42] Since then, the emphasis on maneuver warfare has waned (as the author personally experienced in 2006) and waxed again. The Warfighting staff at TBS has developed a superb presentation on MCDP 1, and works maneuver warfare principles into its field exercises, Tactical Decision Games, and discussion groups.[43] Elements of the TBS POI are currently under review and revision, including its course on "Warfighting." The current learning objectives for that course include a description of maneuver warfare that is technically correct, but highlights only mission tactics, commander's intent, main effort, surfaces, gaps, and combined arms.[44] It is evident that the spirit and philosophical fundamentals upon which maneuver warfare are built are present and actively pursued at TBS.

Given the emphasis placed on professional education by General Gray and the establishment of Marine Corps University during his tenure as Commandant, it is unsurprising that officer Professional Military Education (PME) would play a central role in advancing the cause for maneuver warfare doctrine. Not only did it serve as a proving ground for maneuver

warfare concepts, but it also provided the Commandant with a means of leavening the officer corps with leaders who were well versed in those concepts. In his July 1989 letter to the Commanding General, Marine Corps Combat Development Command, General Gray provided the "Philosophical Direction" for the newly-formed Marine Corps University, placing maneuver warfare at the top of his list of dictums he considered important to win.[45] As of 2019, the production of "leaders capable of fighting with a maneuver warfare mindset in an expeditionary and amphibious environment" is listed as the fourth and final element of the "President's Strategic Intent" in the current Marine Corps University Strategic Plan; however, the word "maneuver" does not appear elsewhere in the document.[46]

Instruction in the tenets of maneuver warfare at PME schools seems to have tapered off, and as a result, those who truly understand its foundational concepts appear to be few and far between. Not only is Marine Corps doctrine not a primary subject taught at Marine Corps Command and Staff College (CSC), but the topic of maneuver warfare only receives a single academic day's treatment toward the end of the academic year.[47] As with OCS' SULE evaluations, opportunities to demonstrate the application of maneuver warfare in CSC planning exercises are often overshadowed by a focus on process and products rather than application of maneuver principles in the moral, mental, and physical realms of conflict. For the Marine Corps to gain full advantage of its chosen doctrine, maneuver warfare must be studied at each level of PME and its nuances explored through application at each successive level of war and echelon of command and in every available domain.

The introduction of maneuver warfare at The Basic School, Amphibious (later Expeditionary) Warfare School, and Command and Staff College provided a multi-level approach to spread the new philosophy to all ranks and levels of command. Difficulty in getting

the new concepts to "stick" in an environment of ignorance or misunderstanding of the new philosophy and its concepts, and in some cases outright hostility to them, remained a problem. As previously discussed, the military is in many ways a conservative, even hidebound organization that historically prizes conformity and uniformity. Without the support of senior officers and favorable fitness reports from them, the "disruptive thinkers," renegades, and mavericks who put their faith in maneuver warfare could not rise to positions of authority from which to continue its spread.

As is often the case, those who pursue something different often find themselves institutional pariahs, unable to rise to ranks and positions where they can have a more significant impact. Unfortunately, it does not appear that any significant changes were made to the Performance Evaluation System in conjunction with the adoption of maneuver warfare doctrine. This may indicate that as an organization, the Marine Corps viewed the qualities of officership and leadership as universal and unrelated to the operational philosophy espoused. It may be argued, however, that the fundamental differences between maneuver and attrition warfighting philosophies require fundamentally different leadership qualities for their successful practice.

A new set of evaluation criteria would have been appropriate at the time FMFM 1 was introduced; however, the much-maligned fitness report system was not modified until 1999, primarily due to the fact that nearly universal grade inflation had rendered the old system all but useless as an evaluation tool.[48] In the current NAVMC 10835B (Rev. 4-03) USMC Fitness Report, no particular criteria exists for evaluation of the characteristics most relevant to the successful practice of maneuver warfare. Reflecting the historical emphasis on order in the military, Block E.2, entitled "Effectiveness Under Stress," includes language that evaluates the Marine's ability to create order out of chaos, but does not mention the ability to operate

effectively in a chaotic environment. Block G.2, "Decision Making Ability" lauds the demonstration of "mental agility," but does not include any mention of adaptability, critical thinking, or resilience.[49] Further, the Marine Corps' capstone maneuver warfare philosophy is not mentioned anywhere in the report.

During the years of debate that surrounded and followed the development of Marine Corps maneuver warfare doctrine, those considered "disruptive thinkers" were often marginalized by the institution. The treatment Colonel Mike Wyly received at the hands of the Marine Corps, described in detail by Robert Coram, Grant Hammond, and Ian Brown in their respective books, provides a ready example. Addressing the issue of fostering disruptive ideas and those who cultivate them in a 1986 *Marine Corps Gazette* article, retired Lieutenant General Victor "Brute" Krulak discussed the benefit of fitness reports that capture an officer's ability to understand and willingness to evaluate new ideas, and refers disparagingly to a general who was "professionally long dead, frozen stiff under the icy hands of custom, convention, conformity, and timidity, a hazard to his Corps and best replaced."[50] Per the TECOM Workshop 2017-01 report, it appears that the Marine Corps has not yet landed on a solution to the fitness report discrepancy.[51]

Risk aversion and limited tolerance for disruptive thinking are additional manifestations of the military's affinity for order and control. Warfare in general, and maneuver warfare in particular, is inherently risk-laden. In many cases, two baseline assumptions of maneuver warfare are that the friendly force is at parity or outnumbered by its opponent, and that the battlefield is a dynamic and chaotic place. Given the human tendencies toward control and order, the conduct of maneuver warfare is understandably uncomfortable for many individuals – particularly commanders, who will undoubtedly be held accountable for any mishaps that occur

and potentially relieved of command as a result. A tendency for superiors to view the commander as "the man in the dock" for any misfortune that occurs under his command undermines the necessary comfort with risk required for the effective practice of maneuver warfare, and runs contrary to the clear mandate against a zero-defect mentality found in both FMFM 1 and its 1997 revision.[52]

Anecdotally, many commanders live with the daily fear of relief for cause hanging over their heads – an event that can come about from as simple an issue as a difference of opinion with a superior, a training accident, or an Equal Opportunity complaint. While the commander should, and must be held accountable for systemic problems in his/her unit and failures of command, far too often an opportunity to learn from or correct a mistake is not provided. If failure truly is the best teacher, "bayoneting the wounded" does nothing to improve the individual commander or the professional competence of the officer corps. Doing so simply rewards the fortunate and perpetuates timidity, risk-aversion, and maintaining the status quo – a mentality that does not lend itself to the aggressive and daring execution of maneuver warfare.

While some very necessary changes were already in progress at the time that FMFM 1 was adopted, it appears that many of those were introduced primarily to solidify the Marine Corps' amphibious emphasis, expand its operational model to include expeditionary operations, and adapt to the potential Soviet threat rather than to support the paradigm shift from a mass industrial model to maneuver warfare. The absence of a holistic approach to the adoption of the new warfighting philosophy hampered the complete infusion of maneuver warfare into every aspect of the service and allowed for mismatches to emerge between intent and reality.

Reducing the Mismatch

> *All taken together, what it does, it reveals the obsession for control by high-level superiors over low-level subordinates to get them to do what they want. And what it really does, it restricts imagination, initiative, and adaptability in order to confront a different situation than they'd had before.*[53]
>
> – John Boyd, *Patterns of Conflict*

This paper originated from a question: "Why does the Marine Corps not adhere to its foundational doctrine of maneuver warfare?" In his description of the OODA Loop in *Organic Design for Command and Control*, Boyd noted the significant influence that genetic heritage, cultural tradition, and previous experiences have on how human beings orient themselves to their environment.[54] These patterns and tendencies are so deeply ingrained that without recognition of their existence and concerted effort to overcome them, one cannot hope to effectively change a long-established paradigm. In the Marine Corps' case, it was deeply affected by the "Genetic heritage" of human nature, the "cultural tradition" of western military history, the "previous experiences" of the Marine Corps in its historical roles and responsibilities, "new information" in light of the emerging reality of the Cold War and American political environment, and the process of institutional analysis and synthesis by which these elements were considered in relation to one another. Far from an indictment, this institutional "blind spot" is understandable and could only be recognized within the context of a thorough understanding of the "orientation" step of the OODA Loop – an understanding that was (and is) not at all universal.

As the 2017 Training and Education Command workshop ascertained, institutional shortcomings remain in the implementation of maneuver warfare in training, PME, organizational culture, and manpower policies.[55] While that group focused specifically on reforming Marine Corps training and education to better reflect the principles of MCDP 1, it hints at the fact that a broader effort and a more holistic approach is required for the full infiltration of maneuver warfare philosophy into every corner of the organization. To achieve

this end, a deeper and more widespread understanding of that philosophy is required, followed by a deliberate effort to identify and reduce apparent mismatches between Marine Corps capstone doctrine and the realities of its existing manpower programs. The elements of that effort should include: adjustment of its screening criteria at OCS, improved continuity and increased emphasis on the study of Marine Corps doctrine within officer PME, and the adjustment of performance evaluation criteria to reflect the expectations and requirements of the maneuver warfare philosophies.

The careful selection and inculcation of new Marine officers at OCS is the Corps' first and most foundational requirement in narrowing the current mismatch. The school currently does an excellent job of creating a chaotic "controlled and challenging environment" and determining whether the officer candidate is able to remain steady under duress.[56] Likewise, it also does a suitable job of instructing and evaluating the candidates on their understanding of the nature of war and its inherent humanity. To better identify those with the capacity to think critically and imaginatively, a revision of the evaluation criteria for SULE and other leadership evaluations. Closer attention should be paid to the substance of decision-making instead of mastery of the process itself. Evaluators should focus on identifying those who can "make snowmobiles," and provide critique and reevaluation for those candidates who demonstrate potential, but need additional development of that capability. In refining its evaluation criteria, OCS can provide the Marine Corps with a pool of leaders proven to be adaptable, resilient, and capable of effective decision-making in a dynamic environment.

Improving continuity and emphasis on maneuver warfare philosophy within officer PME will allow the Marine Corps to further refine and develop those officers who remain beyond their initial contractual obligation. If maneuver warfare is the capstone doctrine and organizational

philosophy of the Marine Corps, then understanding of it must expand and deepen throughout an officer's career. The level of instruction of MCDP 1 at TBS is certainly sufficient to meet the demands of most company grade officers; however, to employ an analogy, the diet of doctrine must progress from liquid, to soft foods, to solid food at each stage of PME. Additionally, Marine Corps doctrine, within the context of joint doctrine, deserves more thorough treatment at each of the officer PME schools. It should be developed early utilizing a "building block" approach, and reinforced throughout each school's POI with consideration for the nuances relevant to the associated level of war and echelon of command.

Lastly, considerations for maneuver warfare philosophy must be applied to the Performance Evaluation System (PES) that informs the promotion, retention, and command screening boards by which the Marine Corps determines who best meets the needs of the service. In essence, the PES continues the screening and evaluation process begun at OCS by providing additional gateways through which each officer must pass in order to advance to positions of greater rank and authority. They must be evaluated against a set of criteria that reflect the aspects of military skill and leadership most appropriate to the practice of maneuver warfare at the next level of service, regardless of the form it takes or the domain in which it occurs. While specific revisions to the current Fitness Report are beyond the scope of this paper, the PES should be evaluated holistically by the Marine Corps' Manpower Branch to determine whether or not it reflects the demands of Marine leadership and ability to conduct maneuver warfare, and then revise the form as required.

In making changes, the Marine Corps as an institution must accept that even incremental changes can be painful, and recognize the human factors in that process. As explored previously in this paper, human beings desire stability and control. Recent surveys show that as of 2017 the

Millennial generation comprises approximately 81% of the active-duty military.[57] Additional surveys indicate that this generation feels little overwhelming loyalty toward employers, but holds work-life balance in high value.[58] Taken together, these may be interpreted to indicate that Millennials are comfortable with change, and are willing to sacrifice advancement or change employment in order to provide a more stable home life. The primary challenge for the Marine Corps is to provide the personal stability and balance desired by the bulk of its Marines, while developing in them the adaptability necessary to successfully conduct maneuver warfare. The obligation of the organization to keep faith with its Marines is often viewed as a moral imperative, but one that can be burdensome. The simple, one-size-fits all, enterprise solutions that have been applied in the past are no longer sufficient to retain the type of Marines needed by the Corps. A new paradigm is necessary.

Conclusion

As it has in the past, the Marine Corps again stands upon a fault line between old and new as it looks to the challenges of the present and future operating environments. This is as much an opportunity as a challenge. During the interwar years, the development of amphibious warfare doctrine provided a new mission and operational model – a process that was also fraught with difficulty. The creation of the MAGTF and expeditionary forces further refined the Marine Corps' amphibious doctrine in the Cold War era. The introduction of maneuver warfare doctrine built upon those foundations and provided a philosophical framework within which to employ them. Today, the Marine Corps must look to the concepts Boyd elucidated in *Destruction and Creation*; going beyond merely "thinking outside the box" to the complete disintegration of "the box" as a paradigm and looking for something new that better fits the emerging operating environment. The OODA process continues. As Boyd pointedly remarked to Captain John

Schmitt, author of FMFM 1, "it's great, now you have to change it."[59] Change must occur if the Marine Corps is to remain agile and adaptable enough to meet the demands of the nation and not only survive, but dominate in a highly dynamic operational environment.

Warfighting captures the central idea that while the nature of war is unchanging, the character of war is dynamic. Recent technological advancements have dramatically changed the battlefield, and the ever-accelerating rate of change increases the potential for ever-increasing uncertainty. The industrial-era models of selection, training, education, and manpower management are not sufficient to the task of keeping up with the modern operating environment. Humanity is caught in what Simon Sinek has called "the infinite game:" a game in which the objectives, rules, players, and even the field itself are in a constant state of change; a game in which winning and losing are relative and defined by the length of time a player is able to remain in the game.[60] The need for flexible and resilient Marines who are able to quickly adapt to this dynamic environment has never been more important. The ability of the Marine Corps, as an institution, to do the same is equally, if not more important. Thankfully, the Marine Corps already has the philosophical and doctrinal foundation required to support this – it simply needs to shore up the beams that hold up the entire enterprise in order to remain relevant, decisive, and postured for the battles of tomorrow.

MCDP 1 *Warfighting* is intended to serve as the Marine Corps' capstone doctrine. More than an operating concept, it represented – as General Gray stated in his forward to the 1989 edition – "not just guidance for actions in combat, but a way of thinking in general" and "a philosophy for action which, in war and in peace, in the field and in the rear, dictates our approach to duty."[61] If true, that philosophy should serve as the foundation of not only the Marine Corps' operational concept, but also for every system and program that supports it. While

several of those key systems and programs were updated concurrently with, or subsequent to the adoption of FMFM 1, others were not, and some of the areas in which maneuver warfare was originally emphasized have drifted from it. To be effective, the Marine Corps warfighting philosophy must be the thread that weaves the entire organization together and must be reinforced at every opportunity; in selection and entry-level training, in PME, in performance evaluation, and in the daily life of every Marine.

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